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Part IV

Environmental Protection Agency

Truck-Mounted Solid Waste Compactors:
Noise Emission Standards

**ENVIRONMENTAL PROTECTION
AGENCY**

40 CFR Part 205

[FRL 1265-7]

**Truck-Mounted Solid Waste
Compactors: Noise Emission
Standards**

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency amends its regulations by establishing noise emission standards for newly-manufactured truck-mounted solid waste compactors (commonly referred to as refuse collection vehicles or garbage trucks).

The regulation also incorporates an enforcement program which includes production verification, selective enforcement audit, maintenance, compliance labeling and anti-tampering provisions. The Administrator has determined that the standards are feasible and represent those noise limits requisite to protect the public health and welfare.

This action is taken under authority of the Noise Control Act of 1972, 42 U.S.C. 4901 et seq. (the "Act"), as amended.

The regulation incorporates a number of clarifying changes to the regulation as proposed in response to testimony received at two public hearings and from written submittals during a 90 day public comment period. The major issues raised by these public comments and the subsequent regulation changes are summarized under "Supplementary Information" below and discussed in detail in EPA Document No. 550/9-79-257, entitled "Regulatory Analysis of the Noise Emission Regulations for Truck-Mounted Solid Waste Compactors."

EFFECTIVE DATES: Effective on October 1, 1980, such vehicles manufactured after this date shall not emit a noise level (A-weighted) in excess of 79 decibels (dB) when measured in the manner prescribed in the regulation; the not-to-exceed noise level is reduced to 78 decibels for vehicles manufactured after July 1, 1982.

ADDRESS: A copy of the regulatory analysis can be obtained from: Mr. Charles Mooney, U.S. Environmental Protection Agency, EPA Public Information Center (PM-215), Room 2104 D—Waterside Mall, Washington, D.C. 20460.

FOR FURTHER INFORMATION CONTACT: Mr. Fred Mintz, Program Manager, Office of Noise Abatement; and Control (ANR-400), U.S. Environmental

Protection Agency, Washington, D.C. 20460; or phone (703) 557-2710.

SUPPLEMENTARY INFORMATION:

1.0 Introduction

On August 26, 1977, notice was published in the Federal Register (42 FR 43226) that the Environmental Protection Agency (EPA) was proposing Noise Emission Standards for New Truck-Mounted Solid Waste Compactors distributed in commerce. The purpose of the present notice is to establish final noise emission standards for this product by adding a new Subpart F to amend Part 205 of Title 40 of the Code of Federal Regulations.

The legal basis and factual conclusions which support promulgation of this regulation were set forth in substantial detail in the Proposed Rule. In addition, the Agency solicited public participation and established a comment period extending from August 26, 1977 through November 26, 1977. During this time public issues related to the proposed regulation were addressed in public hearings held in New York, New York on October 18, 1977 and in Salt Lake City, Utah on October 20, 1977.

All public comments submitted with respect to the proposed regulation have been given careful review and consideration, and, as a result, a number of changes have been made to the regulation as proposed, mainly to clarify EPA's intent. These changes are identified in § 3.0 below.

The questions, comments, and issues raised in the public testimony and in written submittals to the docket are addressed in detail in the regulatory analysis EPA Document No. 550/9-79-257, entitled "Regulatory Analysis of the Noise Emission Regulations for Truck-Mounted Solid Waste Compactors."

The principal issues that emerged are discussed in § 4.0 below, together with the EPA's response.

All technical information in support of this rulemaking, as well as the written comments received during the comment period and transcripts of the public hearings, are available to the public at the EPA Headquarters Public Information Center, 401 M Street, S.W., Washington, D.C. 20460. Transcripts of the public hearing are also available for inspection at each of EPA's 10 regional offices.

2.0 Summary of the Regulation

The regulation establishes standards for noise emissions resulting from the operation of newly manufactured truck-mounted solid waste compactors. The standard specifies the logarithmic (energy) average of the noise levels measured at four locations around the

vehicle at a distance of 7 meters (approximately 23 feet) from the vehicle surface, with the vehicle stationary and operating through its loading and compacting cycle at the maximum engine speed allowable for that operation. The quantity measured at each location is the maximum A-weighted sound level (in decibels) with the instrument set to "slow" meter response. The measurement procedure used to obtain the data upon which the standards are based is presented in § 205.204 of the regulation. A detailed technical discussion is contained in the Regulatory Analysis.

Effective on the dates listed, truck-mounted solid waste compactors must not produce noise levels in excess of those shown in Table 2-1, when operated and evaluated according to the methodology provided in § 205.204 of subpart F.

Table 2-1—Regulatory Noise Emission Standards

Effective date	Not-to-exceed noise level
October 1, 1980	79 decibels
July 1, 1982	78 decibels

The second step of this regulation is in effect six months after the effective date for the second step of the noise regulation for medium and heavy trucks (41 FR 15538, April 13, 1976) to permit pre-production testing by body manufacturers. The reduced noise level limit for new truck chassis in 1982 should permit attainment of the reduced limit applicable to refuse collection vehicles during the compaction cycle, with no additional application of noise control technology and consequently minimal or no additional cost.

To ensure lasting benefits from this regulation, the Agency requires that manufacturers design and build each product so that, when properly maintained and used, its noise level will not degrade (increase) above the applicable levels in Table 2-1 for a specified period of time or use, from the date of the product's sale to the ultimate purchaser. This period is called the Acoustical Assurance Period (AAP). In the case of truck-mounted solid waste compactors, the Acoustical Assurance Period is 2 years or 5000 operating hours, whichever occurs first.

Under § 205.208-4 of Subpart F, a manufacturer must establish the amount of the anticipated increase in the noise level of his products during the AAP. He must take into account this anticipated increase in noise level, termed the Noise Level Degradation Factor (NLDF), when making test measurements to show compliance with the applicable

standard, and must demonstrate that his product's noise level does not exceed a level defined by the applicable standard indicated in Table 2-1 less the NLDF value.

The Administrator has determined, based upon studies of the noise control technology and alternative technologies for compactors, that the standards are feasible and represent those noise limits requisite to protect the public health and welfare, taking into account the magnitude and conditions of use of noise reduction achievable through the application of the best available technology, and the cost of compliance as required by section 8(c)(1) of the Noise Control Act.

Under the authority of Section 15 of the Act, a subsection of this regulation specifies a Low Noise Emission Product (LNEP) level of 71 dB, effective October 1, 1979. That is, for a product to be qualified as LNEP, its noise level must not exceed 71 dB.

The regulation also incorporates an enforcement program which includes production verification, selective enforcement audit, maintenance, compliance labeling and anti-tampering provisions. To avoid placing an excessive testing burden on distributors who assemble a compactor vehicle by mounting a compactor body on a truck chassis, such distributors (who are "manufacturers" under the Noise Control Act and therefore are otherwise subject to all provision of the regulation) are permitted to rely on the production verification tests of the compactor body manufacturer if the distributor faithfully follows assembly instructions provided by the compactor body manufacturer.

3.0 Summary of Changes to the Proposed Regulation

Section 205.200, *Applicability*

The definition of a "new compactor" was revised to apply only to vehicles comprised of a compactor body and truck chassis both manufactured after the effective date of the applicable compactor standard. The regulation does not apply to presently in-use garbage trucks, to new compactor bodies mounted on used (pre-regulatory) chassis or used (pre-regulatory) compactor bodies mounted on new chassis.

Section 205.201, *Definitions*

A definition was added for "Acoustical Assurance Period." A new definition, "Maximum Noise Level," was added to clarify EPA's intent relative to noise level readings.

The term "Noise Level Degradation Factor" replaces "Sound Level

Degradation Factor" for consistency in terminology.

Several definitions were modified for purposes of improving clarity, and a number of unessential definitions were eliminated.

Section 205.202, *Noise Emission Standards*

Reflecting a change in test procedure, from use of "fast" response of the sound level meter to "slow" response, as explained below, under § 205.204, the noise level standard was designated as "Maximum Noise Level" (§ 205.202(a)(8)), rather than "Maximum Steady Sound Level", and the requirement for meeting a separate maximum impact noise level limit was deleted. In keeping with this change, the not-to-exceed noise levels were increased one decibel to 79 and 78 dB. It should be noted that the difference in reported noise level reflects the difference in test procedure only. It does not change the degree of noise control required. Similarly, the LNEP level was changed to 71 dB from 70.

Under *In-Use Standard*, the Acoustical Assurance Period, originally proposed as 3 years or 7500 operating hours, was changed to 2 years or 5000 hours based on public comment. This change was made to reflect the fact, as noted from various manufacturers and users, that refuse collection vehicles, particularly those that deliver their contents to a landfill for dumping, are subjected to more severe operating conditions than other trucks. Such conditions could cause greater dynamic loads and consequent damage to key noise control related components, than the non-refuse collection truck would experience. Further, information that the city of Memphis, Tennessee was given two-year warranties on newly purchased refuse collection vehicles suggested that a two-year AAP is reasonable. This was supported by at least one compactor manufacturer's marketing ad stating that components proving to be defective within the first two years of operation would be replaced. Consideration of this information received during the public comment period has led to the Agency's decision to shorten the AAP.

Section 205.203, *Maintenance of Records: Submittal of Information*

Subparagraph (a)(1)(v) was added to require a record of the distributor to whom a compactor body is delivered for assembly.

Subparagraph (a)(2)(ii) regarding maintenance of records was modified with the intent of limiting recordkeeping to those instances where the kind of

repair, maintenance, or service might affect the results of a noise test.

A new subsection (d) was added, allowing distributors (subsequent manufacturers) to rely on the production verification testing of the body manufacturer to satisfy the requirements of subsections (a) and (b), if certain requirements are met.

A new subsection (f) was added, providing a sunset provision for reporting requirements, such that those requirements will no longer be effective after five years from the publication of the regulation unless the Administrator is, at that time, taking appropriate steps to re promulgate or modify those requirements.

Section 205.204, *Test Procedures*

Subparagraph (c)(5) was expanded to permit use of the vehicle instrument panel tachometer, and subparagraph (e)(4) was revised to clarify EPA's intent that the reflecting plane be free of material that might absorb sound.

Several subparagraphs of § 205.204(f) were revised to clarify test procedures, including the use of "slow" meter response in place of "fast" response and a change that allows the container-handling mechanism to be operated without the container during the noise measurement test.

These changes were made as a result of comments submitted, which pointed out difficulties with the test procedure as proposed. It became apparent that confusion existed in interpreting the "maximum steady sound level" and maximum impulse sound level using the "fast" response setting of the meter. These difficulties were obviated by using a single maximum reading with the "slow" setting of the meter. Further details are given in the discussion of issues, under Section 4.0 of this preamble.

Section 205.205, *Production Verification*

Section 205.205-1(d) was added. It provides that, for purposes of compliance with production verification requirements, distributors may rely upon body manufacturers' installation instructions and assurances that the vehicle will conform to the standard if properly assembled.

Section 205.205-2(a)(2) was rewritten to increase the time period for which a manufacturer may delay production verification (PV) while distributing products in commerce. As proposed, the regulation allowed up to a 45-day delay if weather prevented testing and a further delay for additional weather problems and problems beyond the manufacturer's control. The revision

makes weather and conditions beyond the manufacturer's control valid reasons for delays of up to 90 days.

Records of the conditions preventing testing must be maintained, and if testing cannot begin by the 45th day, the manufacturer must so notify the Administrator by the 50th day. If the Administrator so requests after such notification, the manufacturer must ship products to an EPA test facility for the required PV testing (§ 205.205-2(a)(3)).

In subparagraph 205.205-2(c)(1)(i), items (D) and (E) were deleted as parameters for grouping configurations of compactor vehicles into categories.

Section 205.205-3 was revised to reduce the number of parameters required to define a "configuration". The intent of this change was to minimize the amount of testing by the manufacturer without diminishing the Agency's ability to enforce the regulation effectively.

Section 205.205-4(b)(3) was revised so that information concerning some of the parameters eliminated from the actual category and configuration lists will remain available for enforcement purposes.

Section 205.205-4(b)(4)(ii) was modified to restrict the reporting requirement to those events which could affect the noise emissions of the product. Specifically, the normal early production quality control procedures of a manufacturer need not be reported unless they could affect the noise emission of the compactor.

Section 205.205-4(b)(8) was modified so that the authorized representative of the company certifies that all testing and data reported are accurate and in compliance with the applicable regulations to the best of the company's knowledge, rather than to his personal knowledge.

Section 205.205-4 (e) and (f) were added to define certain limited reporting requirements for distributors who mount compactor bodies on truck chassis.

Section 205.205-6 was revised specifically to include early production quality control as part of a manufacturer's prescribed manufacturing and inspection procedures. This is done in light of the fact that manufacturers typically employ increased quality control over early production products. EPA intends to monitor the selection of test compactors subject to such quality control so that the quality control program will not bias the resulting noise tests.

Section 205.205-9 was revised to clarify the intent of this provision, so that the production verification requirements for a particular configuration need not be satisfied prior

to the start of the model year so long as they are satisfied prior to the start of distribution in commerce.

The first clause of § 205.205-11(b) was revised to clarify the Administrator's intent that compactors manufactured solely for use outside the United States be clearly labeled "For Export Only", but need not contain the other information specified in § 205.205-11(u)(4).

Section 205.206 Testing by the Administrator

Section 205.206(a)(3) was added to clarify that manufacturers are allowed to observe tests conducted by the Administrator under § 205.206.

Section 205.206(b)(1) requires that site disqualification be based on the test site requirements specified in § 205.204-1 (a) and (b) rather than on a general judgment of inappropriateness. Also, the manufacturers may now request, within 15 days of the Administrator's notice of intent to disqualify, a formal hearing on the possible disqualification of their site. Disqualification will take effect 15 days after receipt of the Administrator's notice or at the conclusion of a hearing if one has been requested and an adverse decision given (§ 205.206(b)(2)).

Section 205.206(c) was added detailing when the Administrator will pay the reasonable costs associated with shipment of compactors for testing.

Section 205.207 Selective Enforcement Auditing Requirements

This section was revised, incorporating a simplified sequential sampling plan, better suited to a low production-volume industry.

Section 205.208 In-Use Requirements

Section 205.208-1 (Warranty) has been reserved pending reproposal under the recent decision in *Chrysler Corporation v. EPA*.

Section 205.208-2(f) was added to define the limited responsibilities with respect to tampering lists of the distributor who assembles compactors.

Section 205.208-3(e) was added to define the limited responsibilities, with respect to maintenance instructions and log books, of manufacturers who only assemble compactors.

Section 205.208-4(f) was added to clarify the limited responsibilities relative to Noise Level Degradation Factor, of manufacturers who only assemble compactors.

Section 205.208-4(g) was added to specify the period of time for which records shall be maintained.

4.0 Discussion of Major Issues

The following is a summary of the principal issues raised in the public hearings and in the written submissions to the docket. See Appendix A of the Regulatory Analysis for detailed discussion.

4.1 Issue

Should the compactor body manufacturer be held responsible for the noise of the complete compactor vehicle?

Comments

Comments indicated strong opposition to holding the compactor body manufacturer responsible for the noise produced by the chassis-cab unit in addition to the noise produced by the compactor. Some commenters suggested that the compactor body manufacturer be held responsible only for the noise of the compactor body machinery. Under this approach, the noise level of the truck chassis would be assumed to conform to the level predicted by EPA for the engine speed used, and the noise level of the complete refuse collection vehicle would be calculated by logarithmic addition of the various component noise levels.

The Decision

EPA believes that the noise problem must be viewed in the context of the total compactor vehicle system, including the compactor body, hydraulic power systems, engine power take-off unit accessories, and chassis-cab unit.

Through its study of the noise control technology for garbage trucks, EPA has learned that the most effective way of reducing overall compaction cycle noise is to design the compactor vehicle system to operate at low engine speed during the waste-handling and compaction cycle.

Even if it were practical to measure the noise emissions of each component separately, we would have no assurance that this calculated noise level, based on summation of the component noise levels, would be correct. Unexpected interactions among the components, such as could be caused by resonant vibration of a panel at operating speeds, could lead to noise emissions of the total vehicle higher than the level calculated from the noise levels of the individual components.

The compactor body manufacturer has control over the total system design. He can design the system to operate effectively at low engine speed, and, by development testing, take into account the possible interaction of components. Therefore, EPA has decided that the

responsibility for meeting this noise requirement resides with the compactor body manufacturer.

4.2 Issue

Should distributors who mount compactor bodies on truck chassis be considered subsequent manufacturers and therefore held responsible for compliance?

Comments

A number of comments by distributors who mount compactor bodies on truck chassis indicated objection to being held responsible for compliance of the total vehicle. They maintained that they would be unable to assume the costs of testing, and suggested that responsibility for compliance should rest with the body manufacturer.

Decision

Recognizing that there are possible inequities when the distributor is considered to be the "manufacturer," EPA has carefully reviewed this issue. Under Section 3(f) of the Noise Control Act, a "manufacturer" is "any person engaged in the manufacturing or assembling of new products, or the importing of new products for resale, or who acts for, and is controlled by, any such person in connection with the distribution of such products." EPA believes that this definition encompasses a distributor who mounts a compactor body and attendant power take-off (PTO) equipment on a chassis and is the last person to have control of the completed vehicle before it enters the stream of commerce.

At the same time EPA recognizes the potential economic impact of placing total responsibility for compliance upon the distributor. EPA also is aware of the close relationship between the manufacturer and distributor and the implications it may have in relieving the distributor's burden. Distributors have stated that, in assembling a vehicle, they follow the manufacturer's detailed installation instructions. If an unusual configuration is encountered, the distributor generally consults with the body and/or chassis manufacturer. In view of this close relationship, § 205.205-1(d) has been revised to relieve distributors and any other manufacturers who only mount compactor bodies on chassis, of the requirement to perform production verification testing if 1) they rely in good faith upon the compactor body manufacturer's installation instructions, and 2) the instructions are accompanied by statements which assure that the total vehicle will conform to the

standard if assembled in accordance with the given instructions.

It should be noted, however, that the Act requires every manufacturer to warrant to the ultimate purchaser that the product meets the applicable EPA standard. It was held in *Chrysler Corp. v. EPA*, (D.C. Cir. No. 76-1589, decided April 9, 1979) that EPA does not have the authority to exempt any manufacturer from this requirement, regardless of its role in the manufacturing chain. The warranty section has been reserved pending reproposal due to the court decision.

If the distributor fails to follow the instructions given to him, then the responsibility for compliance with the requirements for production verification testing is shifted back to him.

4.3 Issue

Does the proposed measurement procedure for "Maximum Steady Sound Level" provide a noise level reading that is susceptible to subjective interpretation which might lead to inconsistent results?

Comments

Three compactor manufacturers expressed concern that different observers would read the meter differently. One commenter suggested using "equivalent sound level" (L_{eq}), which he maintained, would yield more consistent readings. Another commenter opposed the use of L_{eq} as being unworkable in certain cases.

Decision

EPA recognizes that the concept of "maximum steady sound level" is subject to misinterpretation. As a result, the measurement procedure has been modified, and the reading to be taken is "maximum noise level," which is now defined in § 205.201(a)(8) of the regulation.

To explain further, if the noise fluctuates irregularly by several decibels during the measurement, it may be difficult to determine the "maximum steady" level, either by observing the swings of a meter needle (or number on a digital display) or by viewing the trace on a graphic record. The intent was to record the "steady," or continuous, noise level associated with the noisiest segment characteristic of the compactor's operating cycle.

Through further testing and analysis of previously recorded data, it became evident that variation could be minimized by reading the maximum value of the noise level using the "slow" meter response setting, as the "slow" response averages out the rapid fluctuations and tends to reduce the

response of the meter needle to impact noises.

EPA reviewed in detail the data for 33 vehicles on which both "slow" and "fast" sound levels had been obtained. It was observed that all vehicles which had been found to comply with the original regulatory limits of 78 dB "maximum steady sound level" and 83 dB impulse (impact) sounds also were found to exhibit a maximum noise level of 79 dB or less in "slow" meter setting. Furthermore, all vehicles that failed to comply with the "maximum steady" (fast) level of 78 dB failed to comply with maximum slow level of 79 dB. Two of the vehicles which had impulse levels slightly above the proposed limit of 83 dB exhibited "slow" readings of 79 dB, thus passing. In view of the uncertainty in reading maximum impulse noise, the outcome appeared reasonable. From the foregoing results, EPA concluded that the use of a single measure, namely, the maximum noise level of 79 dB using "slow" meter setting, provided the same degree of noise control and consequently the same health and welfare benefits, as that intended in the proposed procedure (which required conformance to two limits, a "maximum steady" level of 78 dB and an "impulse" noise level of 83 dB), and at the same time provided a simpler test with more consistent results.

Consideration was also given to alternative methods of reducing the uncertainty of the meter readings, such as use of an integrating/averaging sound level meter, known as an " L_{eq} meter." Although this method has potential merit, it is not acceptable at present because there is no national or international standard for such meters. The Agency believes that to ensure consistency and accuracy of the primary measurement which establishes conformity to a regulatory limit, the instrument used must be governed by an acceptable consensus standard.

4.4 Issue

Does EPA have the legal authority to require an Acoustical Assurance Period (AAP) and the use of the Noise Level Degradation Factor (NLDF)?

Comment

Several commenters argued that the Noise Control Act does not give EPA authority to promulgate an Acoustical Assurance Period (AAP) or Noise Level Degradation Factor (NLDF).

Decision

The Agency believes that it does have such authority under the Noise Control Act. Section 6(c) of the Act requires EPA to promulgate a regulation, including a

noise emission standard, that is requisite to protect the public health and welfare (taking various factors into account). Nowhere does the Act restrict the standards to the time of sale. The projected health and welfare benefits from the compactor regulation would be negated if the noise attenuating elements of compactors were to degrade shortly after the product's distribution in commerce. If this can be prevented by planning and design on the part of the manufacturer, such effort is an integral part of conforming to the standards and should be required by EPA to implement § 6.

The AAP does not represent a requirement that manufacturers build products with noise-attenuating elements that last for the product's useful life, as was suggested in several comments. The AAP for compactors is a considerably shorter period of time than the useful life of this product.

In effect, the AAP sets the standard at a period two years or 5000 operating hours in the future, and requires the manufacturer to take whatever steps are necessary to assure that his product, if well maintained and properly used, will still meet the standard at that time. It projects forward a period of time for which a manufacturer can reasonably be expected to predict the noise performance of his product if properly used and maintained. It does not require him to make his noise control durable beyond good manufacturing practice. He can also hedge against degradation by building in a margin below the standard which in his judgment will assure that at the end of the AAP his product will meet the standard.

The comment also was made that it is not appropriate to place an AAP requirement upon a garbage truck, when no such requirement has been placed on the truck chassis itself. EPA intends to issue a proposed regulation which, when finalized, will impose an AAP requirement on the truck chassis manufacturer. However, even in the absence of an AAP for truck chassis, data obtained by the EPA show essentially no degradation in the noise control features of truck chassis, when properly maintained, for over 100,000 miles, which is considerably greater mileage than the typical garbage truck will accumulate over the AAP of two years.

4.5 Issue

Is the noise data base adequate?

Comment

It has been asserted that the data base is not large enough to be representative, that too many quieted

compactors have been included, and that the compactors have not all been tested under identical conditions.

Decision

EPA made measurements of what are believed to be representative vehicles. The noise data base contains examples of front, rear, and side loaders that can meet the proposed regulation, and includes both gasoline and diesel-fueled trucks. EPA undertook measurements of additional garbage trucks after receipt of those comments. The data obtained substantiate the original conclusions concerning product noise levels and are presented in the Regulatory Analysis.

EPA recognizes that data were collected under varying conditions. However, the measurements were made by trained acoustical personnel with high precision instruments. Through extrapolation and conversion factors, measurements taken under variable conditions were corrected to allow for comparison. In setting forth the regulation, test conditions are prescribed precisely because there is no assurance that the persons conducting the test have the experience and skills necessary to convert the data to correct for different testing conditions.

4.6 Issue

Is the regulatory level too stringent or not stringent enough?

Comment

Several commenters indicated concern that the noise levels selected for the standard were too high (not sufficiently stringent). This was based on the belief that at least one local ordinance (New York City) appeared to be more stringent than the proposed standard. One commenter objected that the proposed standard was too stringent.

Decision

The regulatory levels are directly related to the previously promulgated noise standards for medium and heavy trucks, and are attainable by applying currently available technology; consequently, we believe that they are not overly stringent from a cost or technology perspective.

Quieting of the refuse truck fleet by eventual replacement with new units conforming to the standard should result in substantial reduction of noise impact. Further reduction in regulatory levels would yield only marginal gains at substantially increased costs, largely because of other noises associated with trash collection, but not susceptible to Federal control. Therefore, EPA believes that the regulatory levels should not be

made more stringent. Communities desiring quieter garbage collection activities have the option of enacting complementary controls, such as curfews on collection, or, where the compactor vehicles are purchased by the community, specifying more stringent noise levels.

4.7 Issue

Should "newly manufactured product" include compactor bodies mounted on used or pre-regulation truck chassis or vice versa?

Comment

Two commenters argued that the regulation needed clarification regarding its applicability to newly manufactured compactor bodies which are mounted on used chassis, or on new chassis that are one or two years old and do not meet the Medium and Heavy Truck noise Standard for 1978. Another commenter urged that the regulation include refurbished truck-mounted solid waste compactors.

Decision

EPA agrees that clarification was needed, and the "applicability" paragraph of the regulation (§ 205.200) has been revised accordingly. The law intends that Federal regulatory action under section 6 be directed at "newly" manufactured products, as defined by the Act. EPA believes that, as the noise level of the garbage truck is determined by the noise from both the truck chassis components and compactor components, the regulation should apply only to a vehicle that is totally new, that is, having both a compactor body and chassis-cab manufactured after the effective date of this regulation. We are aware of the industry's occasional practice of placing new compactors on used truck chassis, and vice versa. We do not intend that this practice be changed.

4.8 Issue

Should there be a different standard for different types of compactors?

Comment

Two comments were submitted suggesting that it did not seem appropriate to group all types of compactors under one standard in view of different in-use applications.

Decision

Although each type of refuse collection vehicle may be intended primarily for a specific type of application, all three major types of compactors are used in areas where



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

OFFICE OF
AIR, NOISE, AND RADIATION

ERRATA SHEET

Noise Emission Standards for Surface Transportation Equipment:
Regulatory Analysis of the Noise Emission Regulations for Truck-
Mounted Solid Waste Compactors

EPA 550/9-79-257
August 1979

- Page 5-9, Paragraph 2, Line 1: Change "Reference 5-1" to "Reference 5-29"
- Page 5-15, Footnote, Line 2: Change "0.5 dB(A)" to "0.5 dB"
- Page 5-30, "Very Dense Urban Apartments" column, Line 5: Change "37.5349" to "7.5349"
- Page 5-35, Second full paragraph, Line 4: Change "single" to "simple"
- Page 5-47, Second full paragraph, Line 8: Change "40" to "35"
- Page 5-55, Third full paragraph, Line 3: Change "critera" to "criteria"
- Page 5-55, Third full paragraph, Line 6: Change "gibility" to "gibility"
- Page 5-62, Last paragraph, Line 2: Change "5-12 5-10", to "5-12, 5-6,"
- Page A-39, Second response, Line 4: Change "(loudness and duration) and extent (population affected)" to "(severity) and extent (number of people affected)"
- Page B-3, Paragraph 1, Line 7: Delete the word "Average"
- Page B-3, Paragraph 1, Line 11: Add the word "exposure" between "tion" and "distributions."
- Page B-3, Paragraph 1, Line 12: Add the words "exposure of the " between "the" and "population"
- Page B-3, Paragraph 1, Line 17: Add the words "shift in distribution of population exposure attributable either to increased or" between "the" and "lessened"
- Page B-3, Paragraph 1, Line 18: Add the word "exposure" between "population" and "distributions"

their noise has an adverse impact on public health and welfare.

The standard is set at a level intended to protect the public health and welfare, taking into consideration the available technology and the cost of compliance. Our data and analysis show that the noisiest refuse collection vehicles—the front loaders—can be designed and built to meet the standard. EPA's analysis also has shown that the benefits of the standard in reducing environmental noise impact are limited by the noise (including vehicle noise) other than that due to compaction which occurs during the collection cycle. In the present situation, reducing the standard below the level now specified in the regulation would provide little additional benefit. (It should be noted, however, that if the noise standards for medium and heavy trucks are made more stringent, the collection cycle noise would be reduced, and it might be appropriate to reduce the requirement for the noise level during compaction below the present standard.)

Therefore, we believe that a single standard is appropriate for all types of refuse collection vehicles.

4.0 Issue

Should the noise of refuse containers be regulated?

Comment

Comments were received from several sources concerning the noise caused in handling containers during trash collection operations. Four persons commented that some regulation of the noise due to containers was important to the overall effectiveness of the regulation. On the other hand, three compactor body manufacturers, a trade association, and a chassis manufacturer objected to including containers which are mechanically hoisted, on the basis that body manufacturers had no control over containers used and the wide variety of container designs and materials made testing impractical. Furthermore, the potentially higher noise levels emitted when containers are used were not given full consideration in the EPA noise tests and hence were absent from the data base supporting the proposed standards.

Decision

This regulation does not apply to containers. In some cases, container noise contributes to refuse collection noise. However, its presence does not diminish the benefits of controlling the noise of the vehicle and the compaction process. EPA believes that container noise problems can best be alleviated by local regulations rather than a

national standard, since container noise arises primarily from the handling by collection personnel. Encouraging such practices as the use of plastic trash containers may result in significant noise reduction.

The comments that follow are intended to provide background information for the guidance of local officials in planning possible action to abate container noise.

Two general classes of containers are used. One is a relatively small capacity container such as a garbage can, used by individual households. The other is substantially larger in capacity, frequently used by multiple-family residential buildings and commercial and industrial firms.

The first type, traditionally of galvanized steel construction, usually is dumped by hand into the hopper of the refuse collection vehicle. In recent years use of plastic cans and bags has increased.

The large commercial refuse container, which ranges in capacity up to eight cubic yards, must be manipulated by container-handling machinery built into the compactor vehicle. This equipment engages the container, lifts, rotates and dumps it, then returns it to the ground.

Impact noises occur due to contact of the container with the handling mechanism, truck hopper surfaces, and the ground. For the large containers with lids, banging of the metal lid against the hopper surfaces and the container body is one of the most prevalent causes of noise in container handling.

Although plastic is practical for individual household containers, large commercial containers must be made of durable material; fiber-reinforced plastics may be practical for such units. However, the application of suitable mechanical damping materials or the use of damped sandwich panels, especially for lids, can substantially reduce the noise from container lids impacting on container bodies, or against vehicle hopper surfaces. Reductions of 15 dB or greater are achievable by suitable application of damping materials to steel panels.

EPA strongly recommends that compactor manufacturers apply elastomeric materials, such as rubber or polyurethane pads, to those portions of the hopper where impacts with refuse containers and container lids are apt to occur, and that municipalities require the use of such materials in their communities where noise from this source continues to be a problem.

4.10 Issue

Was the economic impact estimated correctly and do the benefits of the regulation justify the costs?

Comment

Thirteen comments were received opposing the regulation on the basis that the cost of regulation was believed to be too high or because the regulation was not believed to be cost-effective. Five expressed doubt that the economic impact had been estimated properly, because certain costs were omitted, including:

- Cost of quieting containers;
- Cost related to the presumed requirements for distributors to conduct noise tests;
- Costs due to presumed decreased productivity of quieted refuse collection vehicle;
- Costs of not regulating compactors (these are presumed costs such as medical bills that would be accrued if there were no regulation).

Decision

The Agency believes that its economic analysis, presented in detail in the Regulatory Analysis (and summarized in Section 5.0 of this preamble) provides a valid estimate of the regulation's potential economic impact which we believe to be reasonable in light of the benefits to public health and welfare that the regulation is expected to achieve.

With respect to the specific cost elements, which some commenters asserted were omitted from the Agency's analysis, the following is provided.

This regulation does not specifically require the quieting of containers.

As regards the costs that would result from the presumed need for distributors to conduct production verification testing there will be no such costs incurred. The regulation as published specifically relieves distributors of this responsibility when the distributor satisfies certain limited requirements.

The cost item related to decreased productivity of equipment appears to be based on the presumption that slowing down the truck engine to reduce compactor noise will cause an increase in compaction cycling time. Technology information obtained by EPA shows that manufacturers can compensate for reduced engine speed by providing increased capacity hydraulic pumps. Consequently, noise control can be achieved without increasing compaction cycling time.

With regard to the costs of not regulating compactors, the Agency has

given careful thought and analysis to the question of estimating the dollar cost of noise impact on the public health and welfare. The Agency view is that noise pollution costs the American taxpayer many millions of dollars in hidden costs associated with decreased productivity, higher medical costs, and property value depreciation. One of the effects of a standard-setting noise regulation is, by reducing the noise pollution, to reduce the hidden costs and simultaneously to impose visible costs on those responsible for the pollution. EPA's statutory mandate is to protect the public health and welfare, and so long as costs are not unreasonable, they are not an overriding concern. We expect the costs to be passed through to the ultimate consumer of refuse collection services, at a level not exceeding 50 cents per household annually. This level of cost does not appear unreasonable.

4.11 Issue

Is a curfew on refuse collection an acceptable alternative to a noise emission standard for refuse collection vehicles?

Comment

Testimony from the City of Chicago contended that their starting-time limitation (curfew) or refuse collection operations was effective, and, being cost-free, was a preferable alternative to a national noise emission standard for RCVs.

Decision

Although curfew transfers some of the noise impact from nighttime hours to daytime hours, thus reducing sleep disturbance, for example, it is not a substitute for a noise emission standard in reducing total noise exposure. In any event, curfew is a practice that can be implemented only at the local level.

In addition, although represented as being cost-free, curfew can be costly by impairing the operating efficiency of trash collection activity. For example, a refuse collectors' trade association in Chicago estimates increased costs of operation due to inefficiencies caused by the curfew at \$50.00 per refuse collection vehicle per day. For the estimated 2000 RCV's in Chicago this represents a cost of \$100,000 per day or about \$30 million annually. Even allowing for some exaggeration of the cost factors, this clearly indicates that a curfew is not cost-free.

In addition, it is likely that in heavily concentrated metropolitan areas (where much of the noise impact of refuse collection occurs) it is not feasible to invoke curfew because of traffic

problems. New York is the prime example.

4.12 Issue

Will the number of category and configuration parameters necessitate excessive testing?

Comment

Five comments were received concerning the category and configuration parameters. Comments suggested that the proposed parameters would require extensive testing to comply with the Production Verification (PV) requirement.

Decision

It was not the intent of EPA to require extensive testing, and the list of parameters for determining categories and configurations under § 205.205-3 has been revised to reflect this. These changes should greatly reduce the amount of testing needed to comply with the regulation without diminishing the enforcement ability of EPA. The costs of PV testing are thus significantly reduced.

4.13 Issue

Can the 45-day delay for production verification testing be extended?

Comment

Comments were received that the 45-day delay for production verification testing was insufficient for some areas of the country due to weather conditions. In addition, one commenter believed that the extended periods of inclement weather, especially during the winter months, would result in work layoffs because of the amount of production verification testing required.

Decision

Two changes have been made in the regulation to alleviate these potential problems. The revised category and configuration lists should ease the concern for work lay-offs due to extensive testing. § 205.205-2 has been revised to allow for a 90-day delay in production verification due to weather or other conditions beyond the control of the manufacturer, providing the manufacturer complies with certain conditions. Testing must begin on the first available day. The manufacturer must document the conditions preventing testing. If testing has not been performed at the end of 45 days, the manufacturer has 5 days to notify the Administrator and, if the Administrator so requests, the manufacturer must ship the test products to the EPA facility for testing.

As proposed, the regulation allowed up to a 45-day delay if weather prevented testing and a further delay for weather or other reasons beyond the manufacturer's control. The revision makes conditions beyond the manufacturer's control a valid reason for delay during the entire 90-day period.

4.14 Issue

Is a manufacturer required to report all possible configurations?

Comments

One group suggested that § 205.205-4 required the manufacturer to report all possible configurations which could be produced and stated that this was unreasonably burdensome.

Decision

Reporting all possible configurations is not required; rather § 205.205-4 requires that the manufacturer maintain a list of all configurations that are actually produced. Product sales literature may be sufficient. In cases where it is not, the sales literature must be supplemented.

4.15 Issue

Are the statistical methods of Selective Enforcement Audit (SEA) valid for this industry?

Comment

One group stated that EPA should conduct a new study to validate the statistical methods of Selective Enforcement Audit (SEA) and their applicability to the compactor industry. They maintain that the SEA procedure is totally inappropriate for this industry.

Decision

As a result of comments to the proposed regulation and Internal Agency consideration, § 205.207 has been revised. The Agency has developed a single (one at a time) sequential sampling plan to fit better the enforcement needs in auditing a low production volume industry. The new sampling plan has been incorporated in the revised § 205.207.

The single sequential sampling has the same statistical capability to determine noncompliance as plan B of the fixed batch sampling plan contained in the proposed compactor regulation. The acceptable quality level (AQL) remains at 10% in the new plan.

While the fixed batch sampling plan originally proposed would be valid when applied to the compactor industry, the new plan should provide determinations of compliance or noncompliance with less testing.

4.16 Issue

Should the compliance label include the not-to-exceed level?

Comment

The compactor trade association suggested that the compliance labeling should not include the not-to-exceed level because of the confusion it would cause to State and local governments if they endeavor to enforce that level with inadequate test environment controls and understanding of the standard.

Decision

The compliance label does not require that the regulatory noise level limit be shown. However, the applicable effective date must appear.

4.17 Issue

Do the tampering provisions affect the ability of the compactor manufacturer to make necessary alterations in the truck chassis?

One manufacturer was concerned that it would be necessary to alter the chassis to achieve noise control and that this would constitute tampering under the medium and heavy truck regulation.

Decision

Only those modifications which would result in an increase in noise emissions to a level above the standard are considered tampering. The truck chassis manufacturer develops, and the Administrator approves, tampering lists. If a subsequent owner or manufacturer modifies any item which is on the list, that modification would create a rebuttable presumption of tampering.

If a subsequent owner or manufacturer makes a modification to an item on the tampering list, the modification is presumed to be tampering until rebutted by test results. The modified chassis is to be tested in accordance with the Medium and Heavy Truck Regulation.

If a subsequent owner or manufacturer modifies an item not on the tampering list, in such a way as to cause the noise level of the truck to rise to a level above the standard, that modification also is tampering. The modification is not presumed to be tampering because no change was made to an item on the tampering list. Modifications to items not on the tampering list must be proved to be tampering by a showing of non-compliance in the Federal truck noise test.

4.18 Issue

Do the investigative and other provisions of the regulations violate statutory or constitutional authority?

Comment

The opinion was expressed by one group that the search provisions are violative of statutory and constitutional authority.

Decision

Since the EPA Production Verification system leaves the manufacturer in control of many aspects of the compliance program, it is essential that EPA Enforcement Officers have access to manufacturers' plants and records in order to determine whether the requirements of the regulation are being met and whether vehicles being distributed in commerce conform to the standard. Thus, EPA has promulgated inspection and monitoring regulations (40 CFR § 205.4) to allow duly designated EPA Enforcement Officers access to a manufacturer's facility.

The EPA inspection and monitoring regulation is narrowly structured. The EPA Enforcement Officer is limited to inspecting only facilities where: (1) products to be distributed in commerce are manufactured, assembled or stored; (2) Noise tests are performed; (3) Test products are present; or (4) records, reports, or documentary information required to be maintained or provided to the Administrator are located.

Examination of the limited inspection authority in the EPA regulation, its reasonableness, and the reasons for the requirements, make clear that the regulation is fully authorized by section 13(a) of the Noise Control Act. Section 13(a) specifically authorizes EPA to require such tests as are necessary to assure compliance with the promulgated standard and to have access to the results of such tests and other records that the manufacturers are required to maintain under § 205.203 of the regulation.

The recent U.S. Supreme Court decision in the case of *Marshall v. Barlow's Inc.*, U.S. 46 USLW 4483, has prompted EPA to promulgate changes to § 205.4 of Subpart A, General Provisions, of 40 CFR Part 205, Noise Emission Standards for Surface Transportation Equipment. Published in the Federal Register on June 28, 1978, these changes incorporate the spirit of the *Barlow's* decision and provide that EPA Enforcement Officers may not inspect a manufacturer's property unless (1) the manufacturer consents or (2) the officers have obtained a warrant. For the text of the revised § 205.4, interested parties are referred to 43 FR 27988.

4.19 Issue

Does the EPA have the authority to recall products and issue cease-to-distribute orders?

Comment

A trade association and a chassis manufacturer submitted comments objecting to the authority claimed by the EPA to recall products and issue cease-to-distribute orders, on the basis that these provisions appear to exceed the authority granted in the Noise Control Act.

Decision

The Administrator is given the authority to issue remedial orders under section 11(d) of the Noise Control Act. These orders supplement the criminal and civil penalties of section 11(a) and will be issued only after notice and opportunity for a hearing.

Recall and cease-to-distribute orders are examples of orders the Administrator could find appropriate in certain circumstances. Different circumstances may warrant remedial orders other than those described in the regulation. The Administrator is given the authority to fashion remedial orders in such situations to protect the public health and welfare.

4.20 Issue

Is there a simplified test procedure that a local community may use in monitoring for enforcement purposes?

Comment

Two commenters were concerned that local communities would be unable to enforce the regulation due to the proposed test procedure.

Decision

EPA recognizes that the prescribed test procedure may be too complex for regular use by local communities for monitoring or enforcement purposes. Nevertheless, EPA deems this procedure as necessary to characterize accurately the noise emissions of the compactor. For purposes of local enforcement monitoring EPA suggests that a sound level reading (with the meter in "slow" setting) be taken during the compaction cycle with a microphone 7 meters from the truck surface on the side farthest from nearby reflecting surfaces. Preferably, the microphone is to be in line with the junction area between the cab and the compactor body.

If, under these conditions the maximum noise level observed does not exceed the standard, it may be inferred that the vehicle meets the Federal new-product standard. If the noise level exceeds the standard, this does not

necessarily mean that the vehicle is in violation of the standard. At this point, the vehicle should be taken to some suitable location such as an empty shopping center parking lot, and measurements made in conformity with the procedure described in the regulation. The result of this measurement should establish whether or not the vehicle is in compliance with the standard. Thus, local enforcement may utilize a single point measurement for screening purposes only; if the screening test indicates doubt as to compliance, then the complete test procedure should be run at a suitable location. If it is impractical to unload the compactor before testing, the test may be run with contents in the body. In such a situation, any sudden noises due to crushing of objects such as bottles may be ignored.

5.0 Estimated Effects of the Regulation

5.1 Health and Welfare

The EPA estimates that approximately 19.7 million persons currently are exposed to residential neighborhood noise levels above a day-night sound level (L_{dn}) of 55 dB due substantially to operation of truck-mounted solid waste compactors. It is estimated that compliance with the proposed standards will result in a reduction in the number of persons so exposed to about 6 million persons by 1991, representing about a 70 percent decrease. It should be noted that these 6 million persons also receive benefits in the form of reduced noise levels.

The reduction in extensiveness and severity of impact can be evaluated in terms of effects due to individual noise events, such as sleep and activity interference, as well as effects due to generalized adverse response (annoyance) which can be assessed by reductions in day-night sound levels (L_{dn}). Detailed information on these impacts is provided in the Regulatory Analysis. From fractional impact analysis of general annoyance, EPA estimates that the "level-weighted population" (a measure that takes into account partial impact on people at different levels of noise exposure) will decrease from about 2,100,000 in the base year, 1978, to about 540,000 in 1991, a reduction in impact of about 74 percent. Part of the estimated reduction in impact is due to the effect of recently promulgated noise standards for medium and heavy trucks; in 1991, the reduced truck noise alone will account for an estimated reduction of 830,000 in "level-weighted population" impacted by refuse collection noise. The balance of the estimated reduction, 940,000 in

level-weighted population, is due entirely to the compactor noise regulation.

Recognition of the intrusive nature of the noise impact of refuse collection vehicles led the Agency to a single-event noise exposure analysis for assessing the health and welfare benefits of the noise control of these vehicles. The benefits of the compactor noise regulation in terms of reduction of single-event impacts, relate to potential effects on sleep awakening, sleep disturbance, and speech interference. This analysis confirms that the reduction in noise impact is more than 70 percent. Thus, in conjunction with the benefits brought about by the medium and heavy truck noise regulation, the TMSWC noise regulations will provide health and welfare benefits of major proportions.

5.2 Cost and Economic Effects

The cost impact of quieting compactors to meet the regulatory standard may be expressed in terms of increased list price. The Agency's studies indicate that average list price increases for the refuse collection vehicle will range from 6.4 to 12.8 percent, depending on vehicle type and size, resulting in an overall average list price increase of about 10.3 percent for all regulated vehicles. These estimates are based on the premise that the products are designed and built to comply with the standard during the Acoustical Assurance Period. There are indications that a few small firms in the industry, by virtue of their small market share and related financial and operation factors, would incur higher manufacturing costs resulting in slightly higher list price increases. The price elasticity of demand for this equipment is estimated to be -0.2 which could possibly result in a decrease in demand of about 2 percent.

Price increases should leave manufacturers' total revenues essentially unchanged. Some pre-buying is expected to occur prior to the effective date(s) of the regulation. However, the Agency believes this activity will be limited by the available excess production capacity of about 4,000 units, almost entirely rear loaders.

In terms of societal resources, annualized cost for national compliance with the standard is estimated at \$21.5 million, taking into account fuel savings estimated at about \$100 annually per vehicle. Costs are expected to pass through to the end user of waste collection services and ultimately to the consumer. Because capital costs for vehicles represent a small portion of the total costs of solid waste collection, the

consequent cost increase for service is expected to be small, an estimated 0.5 percent or less (e.g., 50 cents or less annually per household).

Other aspects of potential economic impact due to promulgation of this regulation are detailed below.

1. Impacts on manufacturers and employment. Employment is not expected to change significantly. Persons who might be affected by reduction of production amount to less than two percent of the employed population of about 2900 persons within the industry and produce less than three percent of the total units estimated. An offsetting increase in employment is expected to occur due to testing and compliance activity and to procurement of noise control components and materials resulting from the regulation.

2. Impacts on exports and imports. As the noise control treatment generally represents add-on materials or substitute components, or both, machines for export generally can be produced without noise control treatment, if desired. Units produced solely for export need not comply with U.S. noise standards; consequently, impact on exports should be minimal. All imported compactors will be subject to the regulation. Consequently, domestic and foreign manufacturers will be affected equally and no adverse competitive impact will result. Therefore, the regulation should have no appreciable impact on the U.S. balance of trade.

3. Impact on energy use and costs. The changes in compactor operating conditions associated with the noise control treatment are expected to result in fuel savings due to the slower speed of the engine. The estimated annual savings are about 2 million gallons of gasoline and 1.2 million gallons of diesel fuel for a fully converted fleet of refuse collection vehicles. This should be reflected in a net savings in operating costs, taking into account possible increases in maintenance costs.

5.3 Summary

The Agency has concluded that at this time the regulatory levels and schedule selected represent optimal noise reduction standards for truck-mounted solid waste compactors. Implementation of the regulations is expected to result in a substantial reduction in the number of people impacted by compactor noise.

Technology to achieve the selected levels has been demonstrated.

The effective dates for the noise level limits are coordinated with those for the truck noise standards. The Agency believes that the time schedule for application of the noise standards,

corresponding with reduced noise limits for trucks, should allow the manufacturers the lead time requisite to incorporate the necessary design and component changes without disruption to production or the market.

The cost of compliance and possible economic effects have been considered and are believed to be reasonable.

6.0 Enforcement

The EPA enforcement strategy assigns to the manufacturers a major share of the responsibility for pre-sale testing to determine the compliance of truck-mounted solid waste compactors with this regulation and its noise emission standards. This approach leaves the manufacturer in control of many aspects of the compliance program and imposes a minimal burden on the industry. The effectiveness of this strategy is contingent on EPA monitoring the tests conducted and actions taken by the manufacturers in compliance with this regulation.

The enforcement strategy in this regulation consists of three parts: (1) Production Verification; (2) Selective Enforcement Auditing; and (3) In-Use Compliance. For a more detailed description and explanation, please see Section 8, Enforcement, of the regulatory analysis as well as the rule text.

7.0 Future Intent

The Agency is pursuing a strategy through which major contributors to overall residential neighborhood noise will be identified and subsequently controlled. This coordinated approach is necessary because a number of different noise sources may be operating in residential neighborhoods at the same time, and the quieting of only one such source may not in itself be sufficient to reduce the environmental noise to a level the Agency believes is requisite to protect the public health and welfare.

As indicated in the first EPA Report on Identification of Major Sources of Noise (39 FR 22207-09, June 21, 1974), the principal candidates for potential future regulatory efforts are known.

The Agency has underway or plans further regulatory action on other noise sources. These include wheel and crawler tractors, buses, motorcycles, pavement breakers and rock drills, and lawnmowers. The levels designated for the time-phased standards in this rulemaking, while believed to be optimal at present, may be lowered in the future, to be consistent with the overall objective to quiet all major noise sources in order to reduce noise in residential areas.

The Agency believes that the standards are necessary to protect the

public health and welfare and are achievable through use of best available technology, taking into account the cost of compliance. However, as technological advances occur, lower levels may be achievable. The Agency will consider all new information and data which become available or are presented to it, and may subsequently revise this regulation published herein.

8.0 Reporting and Recordkeeping Requirements

The reporting and recordkeeping requirements of this regulation are detailed in § 205.203.

Under the EPA's new "sunset" policy for reporting requirements in regulations, the reporting requirements in this regulation will automatically expire five years after implementation unless the Administrator extends them. This provision is prescribed in § 205.203(f).

9.0 Evaluation Plan

We intend to review the effectiveness and need for continuation of the provisions contained in this action no more than five years after the effective date of the second step standard of this regulation. In particular, we will solicit comments from affected parties with regard to actual costs incurred and other burdens associated with compliance, and will also review noise data to evaluate the effectiveness of the regulation after it has gone into effect.

10.0 Supporting Documentation

I have determined that promulgation of this regulation constitutes a significant action. Accordingly, the Agency has prepared the regulatory analysis required by Executive Order 12044. This analysis is entitled "Regulatory Analysis of the Noise Emission Regulation for Truck-Mounted Solid Waste Compactors", EPA 550/9-79-257. The Agency has also prepared an Environmental and Economic Impact Statement, EPA 550/9-79-258, which presents the effect of the regulation. These documents may be obtained from Mr. Charles Mooney, U.S. Environmental Protection Agency, EPA Public Information Center, (PM-215), Room 2194 D—Waterside Mall, Washington, D.C. 20460.

Dated: September 14, 1979.

Douglas M. Costle,
Administrator.

In consideration of the foregoing, 40 CFR Part 205 is amended by adding Subpart F as follows:

PART 205—TRANSPORTATION EQUIPMENT NOISE EMISSION CONTROLS

Subpart F—Truck-Mounted Solid Waste Compactors.

Sec.	
205.200	Applicability.
205.201	Definitions.
205.202	Noise Emission Standards.
205.203	Maintenance of records; submittal of information.
205.204	Test procedures.
205.205	Production verification.
205.205-1	General requirements.
205.205-2	Production verification: compliance with standards.
205.205-3	Configuration identification.
205.205-4	Production verification report: required data.
205.205-5	Test sample selection.
205.205-6	Test preparation.
205.205-7	Testing.
205.205-8	Addition of, changes to, and deviation from a compactor configuration during the year.
205.205-9	Production verification based on data from previous years.
205.205-10	Cessation of distribution.
205.205-11	Labeling-compliance.
205.206	Testing by the Administrator.
205.207	Selective enforcement auditing requirements.
205.207-1	Test request.
205.207-2	Test sample selection.
205.207-3	Test sample preparation.
205.207-4	Testing procedures.
205.207-5	Reporting of the test results.
205.207-6	Passing or failing under SRA.
205.207-7	Continued testing.
205.207-8	Prohibition of distribution in commerce; manufacturer's remedy.
205.208	In-use requirements.
205.208-1	[Reserved].
205.208-2	Tampering.
205.208-3	Instructions for maintenance, use and repair.
205.208-4	Noise Level Degradation Factor (NLDF) and retention of durability data.
205.209	Recall of non-complying compactors.

Appendix 1—Sample Tables.

Authority: Sec. 6 of the Noise Control Act (42 U.S.C. 4905) [except where otherwise specified].

Subpart F—Truck-Mounted Solid Waste Compactors.

§ 205.200 Applicability.

(a) This regulation sets noise emission standards for new truck-mounted solid waste compactors. Except as otherwise provided for herein, the provisions of this subpart apply to the manufacturer of any truck-mounted solid waste compactor (hereinafter "compactor") which meets the definition of the term "new product" in the Noise Control Act (the "Act") and, where appropriate, to the compactor itself. For purposes of this regulation, a new compactor is one which comprises an engine-powered

truck cab and chassis or trailer manufactured after the effective date of the standard, equipped with a compactor body (with associated machinery) manufactured after the effective date of the standard.

(b) The provisions of the subpart do not apply to:

- (1) Non-compacting vehicles that pick up solid waste containers
- (2) Non-compacting collection vehicles
- (3) Stationary trash compactors
- (4) Solid waste containers.

§ 205.201 Definitions.

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

(1) "Acceptable Quality Level" (AQL) means the maximum allowable average percentage of compactors that fail sampling inspection.

(2) "Acoustical Assurance Period" (AAP) means a specified initial period of time or use during which a product must continue in compliance with the Federal standard provided it is properly used and maintained according to the manufacturer's recommendations.

(3) "Category" means a group of compactor configurations which are identical in all material aspects with respect to the parameters listed in § 205.205-2.

(4) "Compactor" means a truck-mounted solid waste compactor, which comprises an engine powered truck cab and chassis or trailer, equipped with a compactor body and associated machinery for receiving, compacting, transporting and unloading solid waste.

(5) "Configuration" means the basic classification unit of a manufacturer's product line and is comprised of all compactor designs, models or series which are identical in all material aspects with respect to the parameters listed in § 205.205-3.

(6) "Exhaust system" means the system comprised of a combination of components that provide for the enclosed flow of exhaust gas from the engine exhaust port(s) to the atmosphere.

(7) "Low noise emission product" (LNEP) means a product which emits noise in amounts significantly below the levels specified in the noise emission standards under the applicable regulation.

(8) "Maximum noise level" means the maximum reading in decibels (dB) obtained with a sound level meter, with the meter set for A-weighting and "slow" meter setting, using the test and measurement procedure set forth in § 205.204.

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

(10) "Noise Level Degradation Factor" (NLDF) means the increase in A-weighted sound level which the product configuration is projected to undergo during the Acoustical Assurance Period when the product is properly maintained and used.

(11) "Noise control system" means all parts, components or systems the primary purpose of which is to control or cause the reduction of noise emitted from a compactor.

(12) "Noise emission test" means a test conducted pursuant to the measurement methodology specified in this subpart.

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

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

(15) "Tampering" means those acts prohibited by Section 10(a)(2) of the Act, as follows:

"(A) The removal or rendering inoperative by any person, other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any product in compliance with regulations under section 8, prior to its sale or delivery to the ultimate purchaser or while it is in use or

(B) the use of a product after such device or element of design has been removed or rendered inoperative by any person."

(16) "Test compactor" means a compactor in a test sample or a production verification compactor.

(17) "Warranty" means the warranty required by Section 6(d)(1) of the Act, as follows:

"(d)(1) On and after the effective date of any regulation prescribed under subsection (a) or (b) of this section, the manufacturer of each new product to which such regulation applies shall warrant to the ultimate purchaser and each subsequent purchaser that such product is designed, built, and equipped so as to conform at the time of sale with such regulation."

§ 205.202 Noise Emission Standards.

(a) *Time-of-Sale Standard.* Truck-mounted solid waste compactors which are manufactured after the dates listed below shall be designed, built, and equipped so that at the time of sale they will not produce noise emissions in excess of the limits specified as follows, when measured in accordance with the procedures prescribed in § 205.204.

Effective date	Maximum noise level ¹ limit
October 1, 1980	79 decibels
July 1, 1982	76 decibels

¹ See § 205.201(a)(8).

(b) *In-Use Standard.* Following the effective date of the applicable standard, truck-mounted solid waste compactors must continue to meet the standard for an Acoustical Assurance Period of 2 years or 5000 operating hours after sale to the ultimate purchaser, provided that the product is properly maintained and used in accordance with the manufacturer's recommendations and there has been no tampering with noise control components. At the time of product verification (PV) testing prescribed in § 205.205 and selective enforcement auditing (SEA) testing prescribed in § 205.207, new truck-mounted solid waste compactors must comply with the standards set forth in paragraph (a) of this section minus the noise level degradation factor (NLDF) developed in accordance with § 205.208-4.

(c) *Low Noise Emission Product.* For the purpose of Low Noise Emission Product (LNEP) Certification under 40 CFR Part 203, truck-mounted solid waste compactors subject to this subpart F which are procured after October 1, 1979, must not produce a maximum noise level in excess of 71 decibels as determined using the procedures prescribed in § 205.204. LNEP products must meet all requirements contained in paragraph (b) of this section.

(Sec. 10, 15 of the Noise Control Act (42 U.S.C. 4909, 4914)).

§ 205.203 Maintenance of records: submittal of information.

(a) Except as otherwise provided for in the regulation, the manufacturer of any new compactor subject to any of the standards or procedures prescribed in this subpart 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 compactors in the manufacturer's product line for which testing is required under this subpart, and the identification and description of all devices incorporated into the compactor for the purpose of noise control and attenuation;

(ii) A description of any procedures other than those contained in this regulation used to perform noise tests on any test compactor;

(iii) A record of the calibration of the acoustical instrumentation as required by § 205.204;

(iv) A record of the date of manufacture of each compactor subject to this subpart, keyed to the serial number or other coded identification appearing on the label affixed to each compactor pursuant to § 205.205-11; and,

(v) For those compactor bodies delivered to a distributor for assembly, a record of the name and address of the distributor to whom such compactor body was delivered, keyed to the serial number or other coded identification of that compactor body.

(2) Individual records for test compactors:

(i) A complete record of all noise emission tests performed for PV and SEA (except tests performed by EPA directly), including all individual worksheets and/or other documentation relating to each test, or exact copies thereof; and,

(ii) A record and description of all repairs, maintenance and other servicing which were performed before successful testing of the compactor pursuant to these regulations and which could affect the noise emission of the product; giving the date and time of the maintenance or service, the reason for it, the name of 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 in § 205.205-4 fulfills the requirements of paragraphs (a)(1) (i), (ii), and (iii), and (a)(2) (i) and (ii) of this section.

(b) The manufacturer shall keep for a period of three (3) years from the production verification date, all records required under this part. 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, when an alternative method is used, all information contained in the hard copy must be contained in the copy made by the alternate method.

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

(1) Number of compactors, by category or configuration, scheduled for production for the time period designated in the request; and,

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

(d) A manufacturer who only assembles a compactor as defined in § 205.201(a)(11) in accordance with the

assembly instructions supplied by the compactor body manufacturer shall maintain the following records:

(1) A statement from the compactor body manufacturer that the completed compactor complies with the applicable standard when such compactor body is mounted on a specific truck chassis using specific operating components (e.g., hydraulic pump) according to detailed assembly instructions supplied by the compactor body manufacturer; and,

(2) The following information on each compactor vehicle assembled by the manufacturer:

(i) Cab and chassis serial number;

(ii) Compactor body serial number, type and date of manufacture;

(iii) Manufacturer and serial number of the components of the compactor power system including the PTO or auxiliary engine, and hydraulic pump; and,

(iv) A description of any variations from the body manufacturer's detailed assembly procedures that occur during assembly of the compactor vehicle; and the name of the person authorizing any variation.

(e) Any manufacturer under paragraph (d) of this section shall keep the required records for a minimum of three (3) years from the date that the compactor is assembled.

(f) The reporting requirements of this regulation will no longer be effective after five (5) years from the date of publication; however, the requirements will remain in effect if the Administrator is taking appropriate steps to repromulgate or modify the reporting requirements at this time.

[Section 13 of the Noise Control Act (42 U.S.C. 4912)]

§ 205.204 Test procedures.

Conformity of compactors with the standards specified in § 205.202 must be determined according to the test procedures specified in this section.

(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 determine the maximum noise level of truck-mounted solid waste compactors.

(b) *Test site description.* The test site shall consist of an open area above a hard reflecting plane. The reflecting plane shall consist of a surface of sealed Portland cement or bituminous concrete flat to within ± 0.05 meters, and shall extend 1.0 meter beyond each microphone location. The microphone shall be located at least 15 meters from any reflecting surface, such as a

building, signboard, hillside, etc. The test site may be graded to permit drainage, provided the elevation difference does not exceed one-half ($\frac{1}{2}$) of the microphone elevation tolerance of 0.15 meter.

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

(1) A sound level meter and microphone system conforming to the requirements of American National Standards Institute (ANSI) S1.4-1971, "American National Specification for Sound Level Meters".

(2) As an alternative to making direct measurements using a sound level meter, a microphone or sound level meter may be used with a magnetic tape recorder and/or a graphic level recorder or indicating meter, providing the system meets the requirements of SAE Recommended Practice J104, Qualifying a Sound Data Acquisition System.

(3) A windscreen, to be used with the microphone during all measurements of compactor noise. The windscreen must not affect sound level readings in excess of 0.5 decibel.

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

(5) An anemometer or other device accurate to within ± 10 percent of full scale which shall be used to measure wind velocity.

(6) An indicator accurate to within ± 5 percent of full scale, to measure speed in RPM of the engine used as a prime mover for the compactor operation. If the vehicle is equipped with an engine tachometer on the instrument panel, that tachometer may be used.

(7) A barometer accurate to within ± 5 percent of full scale, for measuring atmospheric pressure.

(8) A stopwatch having an accuracy of better than 1 percent of the time interval reading, to measure time intervals.

(9) A thermometer accurate to within ± 1 degree Celsius, to measure ambient temperature.

(d) *Microphone locations.* The microphone shall be located 1.2 ± 0.15

meters ($4 \pm \frac{1}{2}$ feet) above the reflecting plane and 7 ± 0.3 meters (23 ± 1 feet) from the mid-point of the surface of the compactor. The microphone shall be oriented such that the surface of the diaphragm is perpendicular to the axis from the midpoint of the surface of the compactor to the microphone, unless the instructions for use of the sound level

meter prescribe some other orientation. In the latter case, the microphone shall be oriented as prescribed in the sound level meter instructions. Measurements shall be made at four microphone positions corresponding to the front, rear, and sides of the vehicle. (See Figure 1 for layout of microphones at test site.)

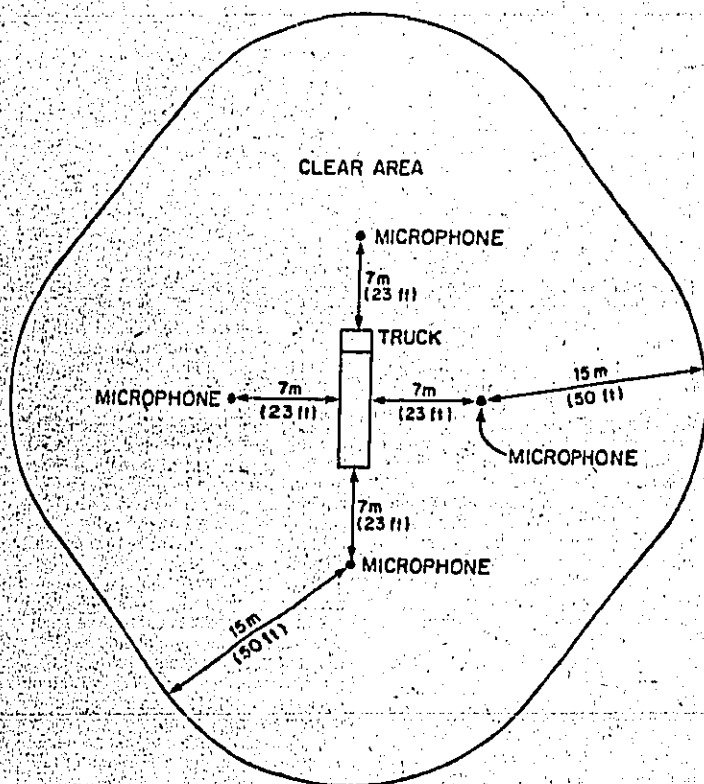


Figure 1
Noise Measurement Site

(e) *Test conditions.* Noise standard compliance testing must be carried out only when:

- (1) There is no rain or other precipitation.
- (2) The wind speed is less than 10 km/hr. (approximately 12 miles/hr.).
- (3) There is no observer or obstruction located within 2 meters (approximately

6 1/4 feet) in any direction of any microphone location, nor between the compactor and microphone(s).

- (4) The reflecting plane, described in paragraph (b) of this section, is free of snow or other porous or absorptive covering and any extraneous materials such as gravel.

(5) The test site background noise level at each microphone location is at least 10 decibels below the noise levels produced by the test compactor.

(f) *Test procedure.* (1) The compactor must be operated with the vehicle stationary.

(2) The compactor engine must be started and allowed to reach its recommended operating temperature and conditions. If the ambient temperature is below 16° C (about 60° F), the container handling and compaction equipment shall be operated through enough cycles to ensure that hydraulic oil and components have reached a stable temperature and operating condition.

(3) The compactor must be operated empty.

(4) The compaction equipment and container handling mechanism (where appropriate) must be operated in accordance with their normal operating procedures except that no container shall be used. The vehicle engine must be operated at a speed in rpm corresponding to the maximum allowable speed of the hydraulic pump (or other power device, as appropriate) which powers the compactor mechanism. If the compactor includes an engine speed control or governor which is operational during the container handling and compaction cycle, the test must be run at governed speed, provided that the governor cannot be overridden by an operator during normal in-use operation.

(5) The sound level meter must be set for "slow" response and on the "A" weighting network.

(6) The container handling and compaction equipment must be operated through two complete cycles for each noise measurement taken. If the test results (4-position energy-average) differ by more than 2 dB, further tests must be run until the two results agree within 2 dB and the average of the two will be reported.

(7) Noise level measurements must be taken at each of the four microphone positions around the compactor, and the following data will be reported, using a data sheet similar to that shown in Table I of Appendix I:

- (i) Maximum noise level during a complete cycle of container handling and compaction at each microphone position;

¹ See § 205.207(a)(4).

(ii) The four-position energy average noise level, computed according to the equation:

$$L = 10 \log \sum_{i=1}^4 [\text{ant}(L_i/10)] - 6 \text{ dB}$$

where:

L_i is Energy average noise level, in decibels;
 L_i is the A-weighted noise level corresponding to the i th microphone location;
 and $\text{ant}(x)$ means antilogarithm(x), which equals 10^x .

(iii) The time from the beginning to the end of each operational cycle.

(f) The entire acoustical instrumentation system including the microphone and cable must be field-checked before and after each test series.

(g) The Administrator may approve applications from manufacturers for the use of test procedures which differ from those contained in the subpart so long as the alternate procedures have been demonstrated to correlate with the prescribed procedure. Acceptable alternate testing procedures must identify all those test units which would not comply with the noise emission limit prescribed in § 205.202 when tested in accordance with the procedures contained in § 205.204(a). Tests conducted by manufacturers under approved alternate procedures may be accepted by the Administrator for all purposes, including, but not limited to, production verification testing and selective enforcement audit testing.

§ 205.205 Production verification.

§ 205.205-1 General requirements.

(a) Each manufacturer of new compactors manufactured for distribution in commerce in the United States which are subject to the standards prescribed in this subpart and not exempted in accordance with § 205.5:

(1) Shall verify each compactor configuration in accordance with the production verification procedures described in this subpart;

(2) Shall submit a production verification report for each compactor configuration, as required by § 205.205-4 of this subpart;

(3) Shall label each compactor in accordance with the requirements of § 205.205-11 of this subpart; and

(4) Shall ensure that each compactor conforms to the applicable noise emission standards established in § 205.202 of this regulation.

(b) The manufacturer of a new product shall comply with the requirements of paragraph (a) of this section from the time the product first

fits the definition of truck-mounted solid waste compactor in this regulation.

(c) A subsequent manufacturer of a truck-mounted solid waste compactor need not fulfill the requirements of paragraph (a)(1), (2) or (3) of this section if the compactor, when received by the manufacturer, fits the definition of a new truck-mounted solid waste compactor in the regulation, and the prior manufacturer had already complied with these requirements.

(d) Manufacturers who only assemble compactors need not fulfill the requirements of paragraph (a)(1) or (2) of this section if they follow the detailed assembly instructions of the compactor body manufacturer, and do not use any parts not authorized by the compactor body manufacturer. Any such manufacturer who uses unauthorized parts or who deviates from the body manufacturer's assembly instructions is responsible for fulfilling the requirements of paragraph (a)(1) and (2) of this section.

(Secs. 8, 10 and 13 of the Noise Control Act (42 U.S.C. 4905, 4909, 4912))

§ 205.205-2 Production verification: compliance with standards.

(a)(1) Prior to distribution in commerce of a compactor of a specific configuration, the first manufacturer of the compactor shall verify the configuration in accordance with this subpart.

(2) Notwithstanding paragraph (a)(1) of this section, the manufacturer may distribute in commerce products of that configuration for up to 90 days if weather or other conditions beyond the control of the manufacturer make production verification impossible, if the following conditions are met:

(i) The manufacturer shall perform the tests required under paragraphs (b) or (c) of this section on such configuration as soon as conditions permit;

(ii) The manufacturer shall maintain records of the conditions which make production verification impossible; and,

(iii) If, on the 45th day following distribution in commerce of products of that configuration, the manufacturer has not performed the tests required by paragraphs (b) or (c) of this section, the manufacturer shall within 5 days notify the Administrator in writing that such products have been distributed in commerce and shall provide to the Administrator documentation of the conditions which have made production verification impossible.

(3) At any time following receipt of notice under paragraph (a)(2)(iii) of this section with respect to a configuration, the Administrator may require that the manufacturer ship test products to an

EPA test facility in order for the Administrator to perform the tests required for production verification.

(b) The production verification requirements with regard to each compactor configuration consist of:

(1) Testing in accordance with § 205.204 of a compactor selected in accordance with § 205.205-5;

(2) Compliance of the test compactor with a noise level such that the arithmetic sum of the Noise Level Degradation Factor (NLDF, determined in accordance with § 205.208-4 of this Subpart) and that noise level does not exceed the applicable standards, when tested in accordance with § 205.204; and,

(3) Submission of a production verification report pursuant to § 205.205-4.

(c)(1) In lieu of testing products 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) Truck Engine Type

- (1) Gasoline;
- (2) Diesel; or,
- (3) Other.

(D) Compactor Type

- (1) Front Loader;
- (2) Side Loader; or,
- (3) Rear Loader.

(C) Compactor Power System

- (1) Direct Drive;
- (2) Auxiliary Engine; or,
- (3) Power Take Off.

(ii) (A) Identifying the configuration within each category which emits the highest noise level (in dB) at the end of the defined Acoustical Assurance Period, based on best technical judgment, emission test data, or both;

(B) If two or more configurations emit the same noise level described in paragraph (c)(1)(i)(A) of this section, then identifying the configuration that emits the highest noise level when distributed into commerce;

(iii) Testing in accordance with § 205.204 of a compactor, selected in accordance with § 205.205-5, of the configuration identified pursuant to paragraph (c)(1)(ii) of this section as having the highest noise level (estimated or actual) within the category;

(iv) Demonstrating compliance by showing that the arithmetic sum of the NLDF and the measured noise level does not exceed the applicable standard;

(v) Submission of a production verification report pursuant to § 205.205-4.

(2) If there has been compliance with the requirements of paragraph (c)(1) of this section, all those configurations within a category are considered to be represented by the tested compactor, and are therefore considered to be production verified.

(3) If there has been compliance with all other requirements of paragraph (c)(1) of this section, except that the manufacturer tests a configuration which does not have the highest noise level in a category (as identified in (c)(1)(ii)), all those configurations in the category which have noise levels no greater than that of the tested compactor are considered to be production verified. However, a manufacturer must production verify according to the requirements of (b)(1) or (c)(1) of this section any configurations in the category which have a higher noise level than that of the compactor configuration tested.

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

(e) The manufacturer has the following alternatives with respect to any compactor determined not to be in compliance with applicable standards:

(1) Deletion of that configuration from the production verification report. Configurations so deleted may be included in a later report under § 205.205-4. However, in the case of representative testing, a new test compactor 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 category represented by the compactor that does not comply; or

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

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

(Secs. 6 and 13 of the Noise Control Act, (42 U.S.C. 4905, 4912))

§ 205.205-3 Configuration identification.

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

- (1) Category parameters listed in § 205.205-2; and
- (2) Power take-off:
- (i) Transmission mounted;
 - (ii) Flywheel mounted; or,
 - (iii) Crankshaft mounted; and,
- (3) Truck Exhaust System:
- (i) Horizontal; or,
 - (ii) Vertical.

(Secs. 6 and 13 of the Noise Control Act (42 U.S.C. 4905, 4912))

§ 205.205-4 Production verification report required data.

(a) Prior to distribution in commerce of any product to which these regulations apply, the manufacturer shall submit a production verification report to the Director, Noise Enforcement Division (EN-387), U.S. Environmental Protection Agency, Washington, D.C. 20460, unless production verification is waived in accordance with § 205.205-2(a)(2). A manufacturer may submit separate production verification reports for different parts of his product line.

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

(1) The name, location and description of the manufacturer's noise emission test facilities used to conduct testing pursuant to this subpart, except that if a test facility has been described in a previous submission under this subpart it need not be described again, but must be identified as such;

(2) A description of normal pre-delivery maintenance procedure;

(3) A description of all compactor configurations, as determined in accordance with § 205.205-3, to be distributed in commerce by the manufacturer, including for each configuration, the Noise Level Degradation Factor (see § 205-200-4) and a list of the following:

(i) Identification or definition of any device or element of design (including its location and method of operation) incorporated into the compactors for the purpose of noise control and attenuation;

(ii) Hydraulic Power System:

- (A) Pump manufacturer; and,
- (B) Manufacturer's model designation;

(iii) Compactor Capacity; and,

(iv) Any device that affects noise emission from the compactor and does

not operate during the normal operating modes of the compactor.

The manufacturer may satisfy the compactor configuration description requirements of this paragraph (b)(3) by submitting as part of the production verification report a copy of his technical sales literature that describes his product line including options, provided that this literature is supplemented with any additional information necessary to fulfill the requirements of this section. If a manufacturer elects to production-verify pursuant to § 205.205-2(c), the configuration within each category which is estimated to have the highest A-weighted noise level at the end of its Acoustical Assurance Period must be identified. The manufacturer may estimate the average sound level based on his best technical judgment or data. The criteria used to estimate each noise level must be stated with the estimates;

(4) The following information for each noise emission test conducted:

(i) The completed data sheet reporting the data required by § 205.204 for all official tests conducted in accordance with § 205.205-7, including for each invalid test the reason for invalidation;

(ii) A complete description of any preparation, maintenance or testing which could affect the noise emissions of the product, and which was performed on the test compactor and which will not be performed on all other production compactors; and,

(iii) The reason for replacement where a replacement compactor was necessary, and test results, if any, for replaced compactors;

(5) A complete description of the sound data acquisition system if other than those specified in § 205.204;

(6) The following statement and endorsement:

This report is submitted pursuant to section 6 and section 13 of the Noise Control Act of 1972. To the best of (company name)

knowledge, all testing for which data are reported here was conducted in strict conformance with applicable regulations under 40 CFR 205.1 et seq., all the data reported here are a true and accurate representation of such testing, and all other information reported here is 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. Information necessary to

update or make current previously submitted information must be submitted.

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

(e) Manufacturers who only assemble compactors shall, upon request by the Administrator, submit the following data to the Director, Noise Enforcement Division (EN-387), U.S. Environmental Protection Agency, Washington, D.C. 20460:

(1) The number of compactors assembled by the manufacturer during the time period specified in the request; and

(2) A copy of the records that the manufacturer is required to maintain under § 205.203(c) of this subpart.

(f) Manufacturers who only assemble compactors need not fulfill the requirements of paragraph (a) of this section unless they are required to fulfill the requirements of § 205.205-1 (a) (1) and (2) of this subpart. (Sec. 13 of the Noise Control Act (42 U.S.C. 4912)).

§ 205.205-5 Test sample selection.

Test compactors of a configuration for which production verification testing is required by § 205.205-2 must be assembled using the manufacturer's normal production processes and intended for sale in commerce.

(Secs. 6 and 13 of the Noise Control Act (42 U.S.C. 4905, 4912))

§ 205.205-6 Test preparation.

(a) Before the official test, the test compactor selected in accordance with § 205.205-5 must not be prepared, tested, modified, adjusted, or maintained in any manner unless such adjustments, preparation, modification or tests are part of the manufacturer's prescribed manufacturing and inspection procedures, and are documented in the manufacturer's internal compactor assembly and inspection procedures, or unless such adjustments or tests are required or permitted under this subpart or are approved in advance by the Administrator. For purposes of this section and § 205.205-5, prescribed manufacturing and inspection procedures include quality control testing and assembly procedures normally performed by the manufacturer on like products during early production, if the resulting testing is not biased by this procedure. In the case of imported products, the manufacturer may perform adjustments, preparations, modifications or tests normally performed at the port of entry by the manufacturer, to prepare the compactor for delivery to a dealer or customer.

(b) Equipment or fixtures necessary to conduct the test may be installed on the compactor, if such equipment or fixtures have no effect on the noise emissions of the compactor, as determined by the measurement methodology.

(c) In the event of a compactor malfunction (e.g., failure to start) the manufacturer may perform the maintenance that is necessary to enable the compactor to operate in a normal manner. This maintenance must be documented and reported in the final report prepared and submitted in accordance with this subpart.

(d) No quality control, quality assurance testing, assembly or selection procedures may be used on the test compactor or any portion thereof, including parts and subassemblies, that will not normally be used during the production and assembly of all other compactors of the 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.

(Secs. 6 and 13 of the Noise Control Act (42 U.S.C. 4905, 4912))

205.205-7 Testing

(a) The manufacturer shall conduct one valid test in accordance with the test procedures specified in § 205.204 for each compactor selected for verification testing.

(b) The manufacturer shall not perform maintenance of the test compactors, except as provided for by § 205.205-6.

(c) If a compactor is unable to complete the noise test, the manufacturer may replace the compactor. Any replacement compactor must be a production compactor of the same configuration as the replaced compactor and will be subject to all the provisions of these regulations. Any replacement must be reported in the production verification report along with the reason for the replacement.

(d) If a compactor 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 § 205.205-2(e) of this subpart.

(Secs. 6 and 13 of the Noise Control Act (42 U.S.C. 4905, 4912))

§ 205.205-8 Addition of, changes to, and deviation from a compactor configuration during the year.

(a) Any change to a configuration with respect to any of the parameters stated in § 205.205-3 constitutes 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 § 205.205-2.

(b) If the configuration to be added can be grouped within a verified category, and the new configuration is estimated to have a lower A-weighted noise level than a previously verified configuration within the same category, and if the manufacturer submits a report pursuant to § 205.205-4 with respect to the new configuration, the configuration is to be considered verified.

(Secs. 6 and 13 of the Noise Control Act, (42 U.S.C. 4905, 4912))

§ 205.205-9 Production verification based on data from previous years.

(a) Production verification of each configuration will be required when production of that configuration commences each 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 may include, but are not limited to:

(1) The level of the standard in effect for the year in question;

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

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

(4) The number and type of changes in the design of noise control features incorporated in the new models that affect the noise emission level.

(Secs. 6 and 13 of the Noise Control Act (42 U.S.C. 4905, 4912))

§ 205.205-10 Cessation of distribution.

(a) If a category or configuration is found not to conform to this subpart because it has not been verified properly pursuant to § 205.205-2, the Administrator may issue an order to the manufacturer to cease to distribute in commerce compactors of that category or configuration. This order will not be issued if the manufacturer has made a good faith attempt to properly production verify the category or configuration, and can prove good faith.

(b) Any such order shall be issued after notice and opportunity for a hearing held in accordance with Title 5 of the U.S. Code, section 554.

(Sec. 11 of the Noise Control Act (42 U.S.C. 4910))

§ 205.205-11 Labeling—compliance.

(a)(1) The manufacturer of any compactor subject to the standards prescribed in § 205.202 shall, at the time of manufacture, affix a permanent, legible label, of the type and in the manner described in paragraphs (a) (2), (3) and (4) of this section, to all such compactors to be distributed in commerce.

(2) A plastic or metal label shall be welded, riveted, or otherwise permanently attached in a readily visible position, on the forward driver's side of the compactor unit body.

(3) The compactor manufacturer, who has verified the compactor pursuant to § 205.205-2, shall affix the label in such a manner that it cannot be removed without destroying or defacing the label. He shall not affix the label to any piece of equipment that is easily detached from the compactor.

(4) Labels must 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 "Product Noise Emission Control Information;"

(ii) Full corporate name and trademark of manufacturer;

(iii) Identification number;

(iv) Date of manufacture, which may consist of a serial number or code in those instances where records specified in § 205.203(a)(1)(iv) are maintained; and

(v) The statement:

This compactor when new, is warranted not to exceed the noise level of the applicable standard effective on (month/year) when measured in accordance with the Federal test procedure of 40 CFR 205.204 prescribed by U.S. EPA. Tampering with any product noise control device or element of design (see owner's manual), or use of this product after such tampering, is prohibited by Federal Law.

(b) Compactors manufactured solely for use outside the United States and not conforming to the noise emission standards for this regulation need not be labeled as prescribed in paragraph (a) of this section, but must be clearly labeled "For Export Only."

(Sec. 13 of the Noise Control Act, (42 U.S.C. 4912))

§ 205.206 Testing by the Administrator.

(a)(1) The Administrator may require that any products to be tested pursuant to the Act be submitted to him, at such place and time as he may reasonably designate, and in such quantity and for such time as he may reasonably require, for the purpose of conducting tests in accordance with test procedures described in § 205.204, to allow the Administrator to determine whether

such products or a manufacturer's test facility conform to applicable regulations. The manner in which the Administrator conducts such tests, the EPA test facility itself, and the test procedures the Administrator employs will be based upon good engineering practice and will meet or exceed the requirements of § 205.204 of the regulation.

(2) If the Administrator specifies that he will conduct such testing at the manufacturer's facility, the manufacturer shall make available instrumentation and equipment of the type required for test operations by this regulation. The Administrator may conduct such tests with Agency equipment, having specifications equal to or exceeding the performance specifications of the instrumentation and equipment required in this regulation.

(3) The manufacturer may observe tests conducted by the Administrator pursuant to this section on products produced by the manufacturer and may copy the data accumulated from such tests. The manufacturer may inspect any of the products before and after testing by the Administrator.

(b)(1) If, based on tests conducted by the Administrator, or other relevant information, the Administrator determines that the test facility does not meet the requirements of § 205.204-1(a) and (b), he will notify the manufacturer in writing of his determination and the reasons therefor.

(2) The manufacturer may at any time within 15 days after receipt of a notice issued under paragraph (b)(1) of this section request a hearing conducted in accordance with 5 U.S.C. 554 on the issue of whether his test facility met the requirements. Such notice will not take effect until 15 days after receipt by the manufacturer, or if a hearing is requested under this paragraph, until adjudication by the hearing examiner.

(3) After any notification issued under paragraph (b)(1) of this section has taken effect, no data thereafter derived from that test facility will be acceptable for purposes of this Part.

(4) 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 that those changes have resolved the reasons for disqualification.

(5) The Administrator will notify the manufacturer of his determination and an explanation of the reasons underlying it with regard to the requalification of the test facility within 10 working days after receipt of the

manufacturer's request for reconsideration pursuant to paragraph (b)(4) of this section.

(c)(1) The Administrator will assume all reasonable costs associated with shipment of products to the place designated pursuant to paragraph (a) of this section, except with respect to:

(i) Any production verification testing performed at a place other than the manufacturer's facility as provided for in § 205.205-2(a)(3), or as a result of the manufacturer's not owning or having access to a test facility;

(ii) Testing of a reasonable number of compactors, for purposes of selective enforcement auditing under § 205.207, or if the manufacturer has failed to establish that there is a correlation between its test facility and the EPA test facility or the Administrator has reason to believe, and provides the manufacturer with a statement of reasons, that the products to be tested would fail to meet the standard prescribed in this subpart if tested at the EPA test facility, but would meet the standard if tested at the manufacturer's test facility;

(iii) Any testing performed during a period when a notice issued under paragraph (b) of this section, is in effect;

(iv) Any testing performed at a place other than the manufacturer's facility as a result of the manufacturer's failure to permit the Administrator to conduct or monitor testing as required by this Part; and

(v) Testing of up to 50 percent of the manufacturer's production verification test products to be tested during a year, if the Administrator determines it is necessary to test those vehicles at the EPA test site to assure that a manufacturer has acted or is acting in compliance with the Act.

(Secs. 6, 11 and 13 of the Noise Control Act (42 U.S.C. 4905, 4910, 4912))

§ 205.207 Selective enforcement auditing requirements.**§ 205.207-1 Test request.**

(a) The Administrator will request all testing under § 205.207 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 compactor category, configuration or subgroup selected for testing, the manufacturer's plant or storage facility from which the compactors shall be

selected, and the time at which a compactor shall be selected. The test request will also provide for situations in which the selected configuration, category or subgroup is unavailable for testing. The test request may include an alternative category, configuration or subgroup selected for testing in the event that compactors of the first specified category, configuration or subgroup are not available for testing because the units are not being manufactured at the specified plant, are not being manufactured during the specified time, or are not being stored at the specified plant or storage facility.

(d) Any manufacturer shall, upon receipt of the test request:

(1) If the manufacturer projects a yearly production of less than 50 compactors of the specified category, configuration or subgroup to be tested, notify the Administrator within five (5) days of receipt of the request. The Administrator will then provide a test request specifying a testing plan to determine compliance or noncompliance in the SEA which imposes no greater risk of failure (5%) at the acceptable quality level (10%) than the plan in Appendix I;

(2) If the manufacturer produces 50 or more of the specified category, configuration or subgroup per year, select and test a sample of compactors from the category, configuration or subgroup 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 under a test request shall be initiated within the time period specified in the test request; except that initiation may be delayed for increments of 24 hours or one business day where ambient test site weather conditions, or other conditions beyond the control of the manufacturer, in any 24-hour period do not permit testing. The manufacturer must insure that the conditions for this period are recorded.

(2) The manufacturer shall complete noise emission testing on a minimum of five compactors per day unless otherwise provided for by the Administrator or unless ambient test site conditions permit only the testing of a lesser number. In the event a lesser number are tested, the ambient test site weather conditions for that period must be recorded.

(3) The manufacturer shall be allowed 24 hours to ship compactors from a 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 in commerce compactors of a specified category, configuration or subgroup being manufactured at a particular facility if:

(1) The manufacturer refuses to comply with the provisions of a test request issued by the Administrator under 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 the 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. These 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 order to cease to distribute shall be issued only after a notice and opportunity for a hearing held in accordance with 5 U.S.C. § 554.

(Secs. 11, 13 of the Noise Control Act (42 U.S.C. 4010, 4912))

§ 205.207-2 Test sample selection.

(a) Compactors comprising the sample which are required to be tested under a test request in accordance with this subpart will be selected consecutively as they are produced. The provisions of §§ 205.205-7(b) and (c) shall also pertain to this section.

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

(c) The compactors of the category, configuration or subgroup selected for testing shall have been assembled by the manufacturer for distribution in commerce using the manufacturer's normal production process in accordance with § 205.205-5(a).

(d) Unless otherwise indicated in the test request, the manufacturer will initiate testing with the compactor next

scheduled for production after receipt of the test request, of the category, configuration or subgroup specified in the test request.

(e) The manufacturer will keep on hand all products in the test sample until the sample is accepted or rejected in accordance with § 205.207-6; except that compactors actually tested and found to be in conformance with this regulation need not be kept.

(Sec. 13 of the Noise Control Act (42 U.S.C. 4012))

§ 205.207-3 Test sample preparation.

Prior to the official test, the test compactor selected under § 205.207-2 will be prepared under § 205.205-6.

(Sec. 13 of the Noise Control Act (42 U.S.C. 4012))

§ 205.207-4 Testing procedures.

(a) The manufacturer shall conduct one valid test in accordance with the test procedures specified in § 205.204 of this subpart for each compactor selected for testing under this subpart.

(b) No maintenance will be performed on test compactors except as provided for by § 205.207-3. In the event a compactor is unable to complete the emission test, the manufacturer may replace the compactor. Any replacement product shall be a production compactor of the same configuration or subgroup as the replaced compactor, selected in the same manner as the replaced compactor, and shall be subject to all the provisions of these regulations.

(Sec. 13 of the Noise Control Act (42 U.S.C. 4012))

§ 205.207-5 Reporting of the test results.

(a) Within 5 days after completion of testing of a sample, the manufacturer shall submit to the Administrator a final report which will include the information required by the test request in the format stipulated in the test request in addition to the following:

(1) The name, location, and description of the manufacturer's noise emission test facilities which meet the specifications of § 205.204 and were utilized to conduct testing reported under this section, 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 that facility;

(2) The following information for each noise emission test conducted:

(i) The completed data sheet required by § 205.204 for all noise emission tests including, for each invalid test, the reason for invalidation;

(ii) A complete description of any modification, repair, preparation, maintenance, or testing which could

affect the noise emissions of the product and which was performed on the test compactor but will not be performed on all other production compactors; and,

(III) The test results for any replaced compactor and the reason for replacement of the compactor;

(3) A complete description of the sound data acquisition system if other than those specified in § 205.204;

(4) The following statement and endorsement:

This report is submitted pursuant to section 6 and section 13 of the Noise Control Act of 1972. To the best of (company name)

knowledge, all testing for which data is reported here was conducted in strict conformance with applicable regulations under 40 CFR 205.200 *et seq.*, all the data reported here are a true and accurate representation of such testing, and all other information reported here is 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)

(b) Information required to be submitted to the Administrator under this section shall be forwarded to the following address:

Director, Noise Enforcement Division, (EN-387) U.S. Environmental Protection Agency, Washington, D.C. 20460.

(Sec. 13 of the Noise Control Act (42 U.S.C. 4912)).

§ 205.207-6 Passing or failing under SEA.

(a) A failing compactor is one whose measured noise level is in excess of the noise level equal to the applicable noise emission standard set forth in § 205.202 minus the noise level degradation factor as determined in § 205.208-4 for the category or configuration being tested.

(b) The sample will pass or fail based upon the number of failing compactors in the sample. A sufficient number of compactors will be tested until the cumulative number of failing compactors is greater than or equal to the rejection number, or less than or equal to the acceptance number appropriate for the cumulative number of compactors tested. The acceptance and rejection numbers listed in Appendix I will be used in determining whether a pass or failure of the SEA has occurred.

(c) Pass or failure of an SEA takes place when a decision that a compactor is a passing or failing unit is made on the last compactor required to make a decision under paragraph (b) of this section.

(d) If the sample passes, the manufacturer will not be required to perform any additional testing on

subsequent products under the initiating test request.

(e) 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 of compactors from the category, configuration or subgroup in question, manufactured at the plant which produced the products under test, provided, that before reinitiating distribution in commerce of products from that plant of that product category, configuration or subgroup, the manufacturer must take the action described in § 205.207-9(a)(1) and (a)(2).

§ 205.207-7 Continued testing.

(a) If an SEA failure occurs according to paragraph (b) of § 205.207-6, the Administrator may require that any or all products of that category, configuration or subgroup produced at that plant be tested before distribution in commerce.

(b) The Administrator will notify the manufacturer in writing of his intent to require continued testing of compactors under paragraph (a) of this section.

(c) The manufacturer may request a hearing on the issues of whether the selective enforcement audit was conducted properly; whether the criteria for sample rejection in § 205.207-6 have been met; and, the appropriateness or scope of a continued testing order. In the event that a hearing is requested, the hearing shall begin no later than 15 days after the date on which the Administrator received the hearing request. Neither the request for a hearing nor the fact that a hearing is in progress shall affect the responsibility of the manufacturer to commence and continue testing required by the Administrator pursuant to paragraph (a) of this section.

(d) Any tested compactor which demonstrates conformance with the applicable standard may be distributed into commerce.

(e) Any knowing distribution into commerce of a compactor which does not comply with the applicable standard is a prohibited act.

(Sec. 13 of the Noise Control Act (42 U.S.C. 4912))

§ 205.207-8 Prohibition of distribution in commerce; manufacturer's remedy.

(a) The Administrator will permit the cessation of continued testing under § 205.207-7 once the manufacturer has taken the following actions:

(1) Submits a written report to the Administrator which identifies the reason for the non-compliance of the compactors, describes the problem and

describes the proposed quality control or quality assurance remedies to be taken by the manufacturer to correct the problem or follows the requirements for an engineering change pursuant to § 205.205-8; and

(2) Demonstrates that the specified compactor category, configuration or subgroup has passed a retest conducted in accordance with § 205.207, and the conditions specified in the initial test request.

(3) The manufacturer may begin testing under paragraph (a)(2) of this section upon submitting the report, and may cease continued testing upon making the demonstration required by paragraph (a)(2) of this section, provided that the Administrator may require resumption of continued testing if he determines that the manufacturer has not satisfied the requirements of paragraphs (a)(1) and (2) of this section.

(b) Any compactor failing the prescribed noise emission tests conducted under this subpart may not be distributed into commerce until necessary adjustments or repairs have been made and the compactor passes a retest.

(Secs. 10, 11, 13 of the Noise Control Act (42 U.S.C. 4909, 4910, 4912))

§ 205.208 In-use requirements.

§ 205.208-1 [Reserved]

§ 205.208-2 Tampering.

(a) For each model year and for each configuration of compactor 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 compactor in use on more than an occasional basis, and result in an increase in noise emission levels above the standards prescribed in § 205.202. The manufacturer shall state his estimate, wherever possible, of 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 his judgment, constitute the removal or rendering totally or partially inoperative, other than for purposes of maintenance, repair, or replacement, of noise control devices or features of the compactor. This list will be provided to the manufacturer by the Administrator within 30 days of the date on which the information required in paragraph (a) of

this section is submitted by the manufacturer. The list must 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 person other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new compactor 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 compactor after such device or element of design has been removed or rendered inoperative by any person.

(2) The statement:

Among those acts presumed to constitute 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 prohibited act has been committed and it can be shown that such act resulted in no increase in the noise level of the unit, or that the unit still meets the noise emission standard of § 205.202, the act will not constitute tampering.

(f) Manufacturers who only assemble compactors need not fulfill the requirements of paragraphs (a), (b), (c), and (d) of this section. Such manufacturers shall provide ultimate purchasers of their compactors with the tampering list that the Administrator has forwarded to the compactor body manufacturer under paragraph (c) of this section for that particular compactor body and truck chassis combination. When such manufacturers of compactors are required to comply with § 204.205-4(a)(1) and (2) of this subpart, they shall fulfill the requirements of paragraph (a), (b), (c), and (d) of this section.

(g) 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 compactors subject to this part.

(h) All information required by this section to be furnished to the Administrator must be sent to the following address:

Director, Noise Enforcement Division (EN-387), U.S. Environmental Protection Agency, Washington, D.C. 20460.

(Secs. 10, 13 of the Noise Control Act (42 U.S.C. 4905, 4912))

§ 205.208-3 Instructions for maintenance, use and repair

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

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

(3) The instructions shall not be used to secure an unfair competitive advantage. They shall not restrict replacement equipment to original manufacturer equipment, or service to dealer service, unless such manufacturer makes public the performance specifications on such equipment.

(b) For the purpose of encouraging proper maintenance, the manufacturer shall provide a record or log book containing a schedule for the performance of 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 § 205.205-4, 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 sufficient to fulfill the

requirements of paragraph (a) of this section.

(a) Manufacturers who only assemble compactors are not required to fulfill the requirements of paragraphs (a), (b), and (c) of this section. Such manufacturers shall provide the maintenance instructions and log book developed by the compactor body manufacturer for that particular compactor body and chassis combination. When such manufacturers are required to comply with § 204.205-4(a)(1) and (2) of this subpart, they shall fulfill the requirements of paragraphs (a), (b), and (c) of this section.

(f) Information required to be submitted to the Administrator pursuant to this section shall be sent to the following address:

Director, Noise Enforcement Division (EN-387), U.S. Environmental Protection Agency, Washington, D.C. 20460.

(Secs. 6 and 13 of the Noise Control Act (42 U.S.C. 4905, 4912))

§ 205.208-4 Noise Level Degradation Factor (NLDF) and retention of durability data.

(a) Each manufacturer responsible for compliance with the standards specified in § 205.202 shall develop a Noise Level Degradation Factor (NLDF) for each of his compactor configurations, using the records compiled under paragraph (b) of this section.

(b)(1) The manufacturer shall establish and maintain records that demonstrate the increase in noise level which will occur for each product configuration during the specified Acoustical Assurance Period.

(2) The records may include, but need not be limited to, the following:

- (i) Durability data and actual noise testing on critical noise producing or attenuating components;
- (ii) Noise level deterioration curves on the entire product; and
- (iii) Data from products in actual use.

(c) The NLDF is to be used in all Production Verification testing and Selective Enforcement Audit testing to determine compliance.

(d) If the manufacturer determines that the product's noise level will not increase during the Acoustical Assurance Period when properly used and maintained, the NLDF is zero.

(e) If the manufacturer determines that a product's noise level does not increase, but rather decreases with use, yielding a negative NLDF, he shall use zero as the NLDF in all testing under these regulations, but shall determine and record the actual NLDF.

(f) Manufacturers who only assemble compactors are not required to fulfill the requirements of this section. Such

manufacturers, when they are required to fulfill the requirement of § 204.205-4(a) (1) and (2), shall use the NLDf as determined by the compactor body manufacturer for that particular compactor body.

(g) All records required under this section shall be maintained for three years.

(Secs. 6 and 13 of the Noise Control Act (42 U.S.C. 4905, 4912))

§ 205.209 Recall of non-complying compactors.

(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 compactor distributed into commerce which is not in compliance with this subpart.

(b) A recall order issued under this section shall be based upon a determination by the Administrator that compactors of a specified category or configuration have been distributed in commerce. This 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 the test prescribed in § 205.204 for testing prior to distribution in commerce, or any other test which has been demonstrated to correlate with the prescribed test procedure in accordance with § 205.204(g).

(d) Any order to recall shall be issued only after notification and an opportunity for a hearing.

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

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

(Sec. 11 of the Noise Control Act (42 U.S.C. 4910))

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TABLE I

**NOISE EMISSION TEST DATA SHEET
FOR TRUCK-MOUNTED SOLID WASTE COMPACTORS**

Test No. _____

I. Machine Characteristics

Body Manufacturer: _____ Model No. _____ Serial No. _____
 Truck Manufacturer: _____ Model No. _____ Serial No. _____
 Rate H.P. _____ at: _____ RPM; Maximum Engine Speed During Compaction _____ RPM

II. Test Conditions

Manufacturer's Test Site Identification and Location: _____
 Measurement Surface Composition: _____
 Ambient Sound Levels (a) Beginning of Test; _____ dBA
 (b) End of Test; _____ dBA

III. Instrumentation

Microphone Manufacturer: _____ Model No. _____ Serial No. _____
 Sound Level Meter Manufacturer: _____ Model No. _____ Serial No. _____
 Acoustical Calibrator Manufacturer: _____ Model No. _____ Serial No. _____
 Other: _____ Model No. _____ Serial No. _____

IV. Noise Level Data

Noise Levels (dBA)

Machine Reference Surface				Calculated Average Level	NLDF	Calculated Resultant Noise Level
Front	L.H. Side	Rear	R.H. Side			

V. Atmospheric Data

Temperature _____ °C _____ (°F)
 Wind Speed _____ km/hr.
 Barometric pressure _____ mm Hg

VI. Test Personnel and Witnesses

Tested by: _____ Date: _____
 Reported by: _____ Date: _____
 Checked by: _____ Date: _____

Table II.—Population 50-99

Stage	Acceptance No.	Rejection No.
1	.....	.....
2	.....	.....
3	.....	3
4	.....	3
5	.....	3
6	.....	3
7	0	3
8	0	4
9	0	4
10	0	4
11	1	4
12	1	4
13	1	5
14	1	5
15	2	5
16	2	5
17	2	5
18	2	5
19	2	5
20	4	5

Table V.—Population 100 and Greater

Stage	Acceptance No.	Rejection No.
1	.....	.....
2	.....	.....
3	.....	3
4	.....	3
5	.....	3
6	.....	4
7	0	4
8	0	4
9	0	4
10	0	4
11	0	5
12	1	5
13	1	5
14	1	5
15	1	5
16	2	5
17	2	5
18	2	5
19	2	5
20	4	5

Table III.—Population 100-199

Stage	Acceptance No.	Rejection No.
1	.....	.....
2	.....	.....
3	3
4	3
5	3
6	3
7	0	4
8	0	4
9	0	4
10	0	4
11	1	4
12	1	5
13	1	5
14	1	5
15	1	5
16	2	5
17	2	5
18	2	5
19	2	5
20	4	5

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Table IV.—Population 200-399

Stage	Acceptance No.	Rejection No.
1
2
3	3
4	3
5	3
6	3
7	0	4
8	0	4
9	0	4
10	0	4
11	0	5
12	1	5
13	1	5
14	1	5
15	1	5
16	2	5
17	2	5
18	2	5
19	2	5
20	4	5