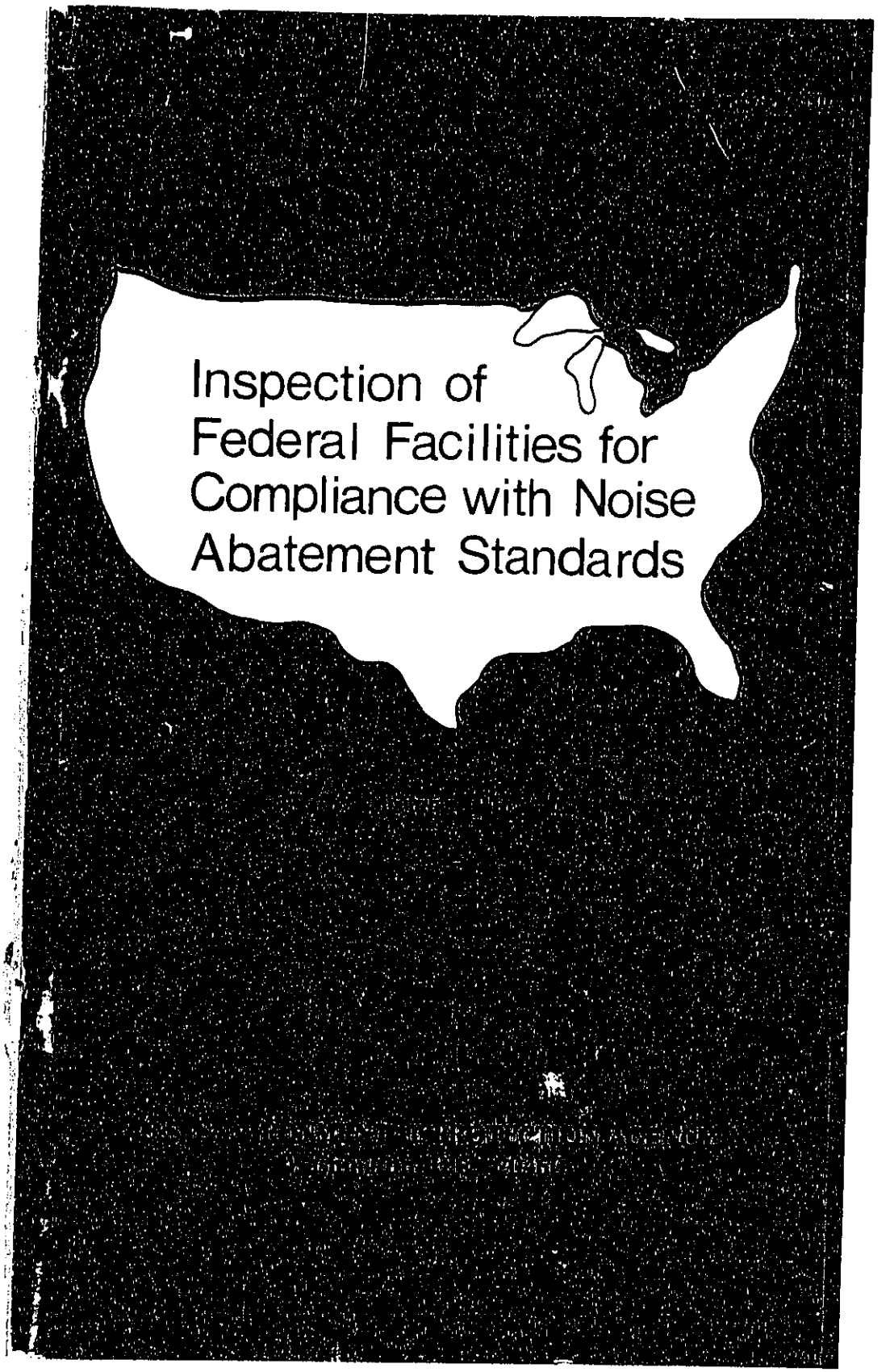
Inspection of
Federal Facilities for
Compliance with Noise
Abatement Standards

EPA MANUAL

EPA 550/9-77-350

INSPECTION OF FEDERAL FACILITIES FOR COMPLIANCE WITH NOISE ABATEMENT STANDARDS

December 1976

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Noise Abatement and Control
Washington, D.C. 20460

CONTENTS

TABLES

FIGURES

SECTION 1. INTRODUCTION

Purpose and Scope

The purpose of this manual is *to provide guidance* to the Environmental Protection Agency (EPA) Regional Offices for:

- identifying Federal facility environmental noise problems,
- selecting facilities to be inspected for compliance with environmental noise requirements, and
- conducting noise inspections at Federal facilities.

The extent to which regional resources should be expended on inspection of Federal facilities is a subject of the Agency's regional guidance each year. Inspections are not the only way and, in fact, are often not the most effective way to deal with Federal facility noise problems. This manual applies to those cases where it has been determined that a regional inspection of the facility is appropriate.

Occupational noise problems are not included within the scope of this manual; however, EPA should be aware of potential violations of occupational noise standards and should point these out to appropriate authority.

The manual is intended for use by technical as well as non-technical personnel in conducting inspections pursuant to Executive Order 11752 and EPA guidance. EPA inspects facilities[1] because of the need:

1) to verify the "accuracy and effectiveness of self-monitoring and reporting systems at the facilities." These are known as *verification inspections*. For "significant" sources of pollution, EPA will conduct such inspections annually (Considerations guiding the Regional Administrator in determining what is "significant" are discussed in Section 3),

---

[1] EPA Information Memorandum issued November 30, 1975, "Information and Strategy for Compliance Monitoring and Reporting by Federal Facilities."

2) to determine the actual compliance status of the facility. These are referred to as *compliance inspections* and are undertaken when EPA suspects an actual violation of a noise or other environmental standard.

Definition of Some Important Terms

The Federal establishment is so large and diverse that problems can arise as to which entities have to comply with noise standards. The definitions which follow should make it clear that Congress intended a broad interpretation.

1) *Federal agency*[2] – means either

   a) an Executive Department
   (i.e., an agency headed by a cabinet member);
   or
   b) a government corporation
   (a corporation owned or controlled by the Federal Government);
   or
   c) an "independent establishment"
   (all entities in the Executive Branch not a) and b) or subunits of a) and b); does not include the Postal Service and the Postal Rate Commission; in the Legislative Branch includes the General Accounting Office);
   or
   d) the U.S. Postal Service
   (this is explicitly included in Section 3(10) of the Noise Control Act of 1972 (PL 92-574).

EPA's authority to inspect under Executive Order (E.O.) 11752 includes only agencies in the Executive Branch (this topic is discussed in Section 2).

2) *Federal Facilities*[3] – means "the buildings, installations, structures, land, public works, equipment, aircraft, vessels, and other vehicles and property owned by, or constructed or manufactured for the purpose of leasing to, the Federal Government."*

---

[2]This definition is derived from Section 3(10) of the Noise Control Act and Section 105 of Title 5, United States Code.

[3]This definition is from Executive Order 11752. The Noise Control Act does not define the term.

*Facilities owned by the Federal Government but operated by non-Federal persons are required to comply. According to OMB Circular A-106 (para 6b), buildings and equipment *owned by non-Federal lessees on Federal land* are not covered by the reporting requirements of the Circular unless the responsible Federal agency attests that they are constructed and operated for a Federal purpose. (In cases where lease agreements provide for the Federal Government to provide pollution control measures, remedial measures are to be reported.)

3) *Federal Installations* – means the various building complexes owned by, or constructed for the purpose of leasing to, the Federal Government. (This definition is broader than the usual one given: a military camp, for or base.)

Importance of Federal Facilities' Compliance with Noise Requirements

The Federal establishment can be expected to generate noise into the community because of its tremendous size and diversity*. Such noise, apart from any legal requirements, can be defined as a public health problem (see Section 3). The important task of getting a facility to do something about such noise is the inspector's job.

Major potential noise generators found at Federal facilities include vehicles, power plants and generators, weapons firing and aircraft.

A dramatic increase in State and local noise laws (Section 2) in the last few years, together with a heightened sensitivity of the public to noise, augurs increased efforts for Federal facilities to be made quiet. Congress and the President have recognized this and have directed all facilities to comply with the substantive State and local noise laws "to the same extent as any person".

The EPA has been given specific authority in various statutes and an Executive Order (discussed in detail in Section 2) to assist Federal agencies in dealing with their noise problems and to apply considerable pressure, where needed, to assure compliance. EPA can facilitate the quieting of the Federal establishment by utilizing its energy wisely in conducting effective inspections.

---

*There are over 20,000 Federal installations. Federal lands compose one-third of the total land area of the United States, or 760 million acres.

SECTION 2. STATUTORY AUTHORITIES, EXECUTIVE ORDERS AND GUIDELINES

Statutes and Executive Orders

Federal facility noise inspectors should be familiar with the following key directives concerning environmental noise problems at Federal facilities.

1. Clean Air Act of 1970 (PL91-604).

2. Noise Control Act of 1972 (PL92-574).

3. Executive Order 11752 of December 17, 1973: "Prevention, Control and Abatement of Environmental Pollution at Federal Facilities."

Clean Air Act of 1970 (PL91-604)

This legislation sets forth a special role for EPA with respect to other agencies' noise problems. EPA invokes this authority if no standard is violated, or, as may be in the case of a military air installation, it is doubtful whether certain standards are applicable.

The statutory language is as follows:

> "In any case where any Federal department or agency is carrying out or sponsoring any activity resulting in noise which the (EPA) Administrator determines amounts to a public nuisance or is otherwise objectionable, such department or agency shall consult with the Administrator to determine possible means of abating such noise."

How to determine what noise is "objectionable" will be discussed in Section 3.

Noise Control Act (NCA) of 1972 (PL92-574)

Section 4(b)2

This, the first explicit statement made by Congress that Federal agencies must comply with noise standards, states:

> "(b) Each department, agency or instrumentality of the executive, legislative and judicial branches of the Federal Government –
>
> 1) having jurisdiction over any property or facility or
>
> 2) engaged in any activity resulting in or which may result in the emission of noise,
>
> shall comply with Federal, State, interstate and local requirements to the same extent that any person is subject to such requirements."

Accordingly, agencies are required to comply with *all* Federal noise standards.

The section goes on to discuss exemptions:

> "The President may exempt any single activity or facility, including noise emission sources or classes thereof, of any department, agency, or instrumentality in the execituve branch from compliance with any such requirement if he determines it to be in the paramount interest of the United States to do so; except that *no exemption, other than for those products referred to in section 3(3)(B) of this Act,* may be granted from the requirements of sections 6, 17, and 18 of this Act.* No such exemption shall be granted due to lack of appropriation unless the President shall have specifically requested such appropriation as a part of the budgetary process and the Congress shall have failed to make available such requested appropriation. Any exemption shall be for a period not in excess of one year, but additional exemptions may be granted for periods of not to exceed one year upon the President's making a new determination. The President shall report each January to the Congress all exemptions from the requirements of this section granted during the preceding calendar year, together with his reason for granting such exemption."

---

*This section excludes the following from the definition of product for purposes of regulation:

1) any military weapons or equipment,

2) rockets on equipment used in NASA research, and

3) to the extent provided by EPA, other experimental work done by the Federal Government.

Other Important Sections of NCA 72

Authority for applicable standards is found in the following sections of the Act.

1) New product standards – Section 6

2) Labeling regulations – Section 8

3) Interstate rail carrier emission standards – Section 17

4) Interstate motor carrier emission standards – Section 18

5) Imports – Section 9

6) Low noise emission products – Section 15

EPA also has authority, by Section 7 of the Act, to recommend aircraft and airport noise standards to the FAA.

Executive Order 11752 of December 17, 1973, "Prevention, Control and Abatement of Environmental Pollution at Federal Facilities"

This Order requires that all Federal facilities (including aircraft) be "designed, constructed, managed, operated, and maintained" so as to conform to various pollution abatement standards, including:

> "(5) Federal noise emission standards for products adopted in accordance with provisions of the Noise Control Act of 1972 and State, interstate, and local standards for control and abatement of environmental noise."

Differences between E.O. 11752 and the Noise Control Act of 1972 (PL92-574)

Executive Order 11752 and the Noise Control Act differ in the following important ways:

1) The Agencies Covered,

2) The Scope of Applicable Noise Control Requirements,

3) The Authority Given to EPA to Assure Compliance with Requirements, and

4) Policy on Exemptions.

a) *Agencies Covered*

The E.O. 11752 covers only agencies in the Executive Branch, while the Noise Control Act covers all Federal agencies (see definition in Section 1 of this manual).

b) *Scope of Applicable Noise Control Requirements*

While the Noise Control Act requires compliance with all Federal noise standards, the E.O. 11752 mentions only "product" standards issued under the Act. In other words, for purposes of the Executive Order 11752, agencies are not required to comply with aircraft and airport regulations promulgated by the FAA or with occupational noise standards issued by the Department of Labor. The Executive Order does not supersede the Noise Control Act: the agencies must still comply with these other Federal regulations. The practical effect is to be seen in the important difference between the two directives with respect to the authority given to EPA to assure compliance with environmental pollution requirements (discussed under 3 below).

The Executive Order also makes the important distinction between "substantive" standards and "administrative" procedures, not found in the Noise Control Act. While Federal agencies must comply with the substantive portion of noise control standards, they are not bound to comply with State or local administrative procedures.* The practical effect of this is illustrated by the following example: were a community to require a construction noise permit, Federal facilities would not be bound to comply since this is a procedural enforcement mechanism.

c) *Authority Given EPA to Assure Compliance with Requirements*

The Executive Order is much more specific than the Noise Control Act with respect to the authority of EPA to inspect Federal facilities, to monitor their progress, to review and report. In fact, the Noise Control Act contains no grant of authority to EPA – or any other Federal agency – to perform such

---

*This distinction has been upheld by the Supreme Court. In June 1976, the Court held that Federal Facilities are *not* subject to State and local air and water permit requirements. They are subject to air and water quality standards and to emission and discharge limitations.

functions. EPA's position, therefore, is that *the inspection and monitoring authority of EPA contained in E.O. 11752 does not apply with respect to Federal noise regulations promulgated under any authority other than the Noise Control Act of 1972.*[4]

d) *Policy on Exemptions*

Since the scope of applicable standards under Executive Order 11752 is more limited than the Noise Control Act (as noted above), the exemptions policy of the Order (see EPA's Role below) does not cover all situations under the Act. For noise regulations not covered by the Order (such as would apply to aircraft) the statutory language of the Noise Control Act applies (see heading Section 4(b)2 in Section 2).

EPA's Role

Section 3(d) of the Order directs EPA to:

"(1) Provide technical advice and assistance to the heads of Federal agencies in connection with their duties and responsibilities under this order.

(2) Maintain such review of Federal facilities' complaince with the standards specified in section 4 as may be necessary.

(3) Provide liaison as required to assure that actions taken by Federal agencies pursuant to this order are coordinated with State, interstate, and local programs for the prevention, control, and abatement of environmental pollution.

(4) Mediate conflicts between Federal agencies and State, interstate, or local agencies in matters affecting the application of, or compliance with, applicable standards specified in section 4.

(5) Develop in consultation with the heads of other Federal agencies a coordinated strategy for Federal facility compliance with applicable section 4 standards which incorporate, to the maximum extent practicable, common procedures for an integrated approach to Federal agency compliance with such standards, and issue such regulations and guidelines as are deemed necessary to facilitate implementation of that strategy and to provide a framework for coordination and cooperation among the Environmental Protection Agency, the other Federal agencies, and the State, interstate, and local agencies.

---

[4]This position is set forth in the EPA General Counsel memorandum of October 21, 1974 to the EPA Office of Noise Abatement and Control (ONAC).

(6) Maintain a continuing review of the implementation of this order and, from time to time, report to the President on the progress of the Federal agencies in implementing this order."

Section 4 of the Order gives EPA special authority to set standards:

"(b) In those cases in which there are no environmental pollution standards as specified in subsection (a) for a particular geographic area or class of Federal facilities, the Administrator, in consultation with appropriate Federal, State, interstate, and local agencies, may issue regulations, which shall be published in the *Federal Register* establishing environmental pollution standards for the purpose of this order."

Section 5 gives EPA an important role with respect to the exemption process:

"(b) In any case in which the Administrator does not agree with a determination to exempt a facility or use thereof from the provisions of this order, the head of the Federal agency making such a determination must have the approval of the Director of the Office of Management and Budget to exempt that facility or use thereof; except that, the Administrator is solely responsible for approval of exemptions under Section 18 of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended by the Federal Environmental Pesticide Control Act of 1972."

EPA has issued guidelines on this subject (see the discussion in Section 2, Various OMB and EPA Issuances).

EPA Noise Standards

To date, EPA has issued noise emission standards under Section 6, 17, and 18 of the Act. EPA expects to issue noise labeling regulations, under Section 8 of the Act, for various products over the next few years. Table 1 summarizes standards in effect, or soon to be effective, as well as those standards which are in the process of development. EPA will identify additional products for regulation from time to time.

Section 6: New Product Standards

These standards require the manufacturers and distributors of certain products to meet specified noise emission limits after specified dates.

TABLE 1. EPA NOISE STANDARDS AND REGULATIONS WITH WHICH FEDERAL AGENCIES MUST COMPLY

Title	NCA 72 Section	Final Regulation Published	Effective Date of Regulation
1. Certification procedures for low-noise-emission products	15	2/13/74	After Section 6 standards are promulgated
2. Motor carrier noise emission standard	18	10/29/74	10/15/75
3. Rail carrier noise emission emission standard	17	1/14/76	12/31/76
4. Portable air compressor noise regulation	6	1/14/76	1/1/78
5. Medium and heavy duty truck noise regulation	6	4/13/76	1/1/78
6. Wheel and track loaders	6	2/28/78	
7. Wheel and track dozers	6	2/28/78	
8. Truck transport refrigerator units	6	2/28/78	
9. Truck mounted solid waste compactors	6	2/28/78	
10. Motorcycles	6	2/28/78	
11. Buses	6	2/28/78	

There is little effort for an EPA facilities inspector envisioned here. Since the Federal Government must buy from manufacturers who meet the standards and guarantee that the noise emission levels are met, the EPA effort, it is expected, would be limited to determining whether the agency is maintaining its products in a way consistent with manufacturer's maintenance directives.

Section 8: Labeling

This section of the Act grants EPA authority to label products which emit hazardous noise *or* which are effective in attenuating noise.

As with the Section 6 standards, there is little for the EPA noise inspector to do apart from ascertaining whether labels on products at a facility have been removed.

Section 18: Motor Carrier Standards

In October 1974, EPA issued standards which specify that existing motor vehicles (trucks and buses) in interstate commerce above 10,000 pounds gross vehicle-weight rating (GVWR) are to be in compliance with prescribed noise emission levels by October 15, 1975. Agencies were notified of these requirements by Administrator Train in his letter of November 4, 1975. Table 2 shows Federal vehicle ownership by agency.[5]

EPA's position is that all Federal vehicles over 10,000 pounds GVWR must comply regardless of whether the vehicles actually travel interstate.

The EPA noise inspector should be aware that EPA is assisting GSA in modifying its maintenance program to allow for periodic noise emission checking.

Section 17: Rail Carrier Standards

EPA has also issued standards for rail carriers. It is expected, however, that the standards will pose little problem for Federal noise inspectors since apparently only a few agencies own or operate rail systems, including the Departments of Defense and Transportation. (Data concerning Federal ownership, however, are unavailable at present from the Federal Railway Administration.)

---

[5]This table is from the General Services Administration's *Federal Motor Vehicle Fleet Report* of July 1976.

TABLE 2. SUMMARY OF FEDERALLY OWNED MOTOR VEHICLES ON HAND AS OF JUNE 30, 1975 (ALL AGENCIES–WORLDWIDE)

	Sedans	Station Wagons	Total Sedans and Station Wagons	Ambulances	Buses 11 or More Passengers	Trucks and Truck Tractors - By Gross Vehicle Weight				Total
						Less Than 12,500 (1 Ton and Under)		12,500 to 16,999 (1½ - 2½ Tons)	17,000 and Over (3 Tons and Over)	
						4 x 2	4 x 4			
LEGISLATIVE BRANCH										
Government Printing Office	2	6	8		2	29		4	16	39
Library of Congress	1		1							1
EXECUTIVE BRANCH										
DEPARTMENTS										
State	711	189	900		15	698	(1)	88	81	1,782
Treasury	4,366	84	4,450		1	382	43	16	4	4,898
Justice	7,847	222	8,069	2	84	1,052	406	155	62	9,830
Interior	1,108	509	1,617	10	236	4,926	2,071	1,241	1,496	11,601
Agriculture	3,351	632	3,983	1	144	21,519	2,524	603	703	29,477
Commerce	27	19	46	2	2	354	88	55	59	606
Labor		3	3		2					5
Health, Education, and Welfare	46	21	67	9	10	118	64	70	62	400
Transportation	47	31	68	10	33	449	190	88	212	1,040
ACTION	36	246	282		23	88	113	6	2	516
Agency for International Development	222	165	387		6	236	189	40	16	874
American Battle Monuments Commission	10	1	11			36	3	13		63
Canal Zone Government	38		38	9						47
Energy Research and Development Administration	1,735	185	1,920	55	291	5,581	578	259	735	9,399
Federal Communications Commission	5	2	7			53		8		68
General Services Administration	30,887	4,090	40,977	250	1,411	21,812	5,031	1,191	1,410	72,103
International Boundary and Water Commission						1	2	5	12	20
National Aeronautics and Space Administration	88	65	153	13	11	769	66	109	97	1,193
National Gallery of Art		1	1			1				2
Nuclear Regulatory Commission	2	1	3					3		6
Panama Canal Company	54	8	62		40	501	36	33	83	755
Railroad Retirement Board	1		1							1
Smithsonian Institution	6	15	21			53	10	13	9	106
Tennessee Valley Authority	942	942	942	13	7	1,425	298	130	347	3,162
United States Information Agency	136	64	220		12	453	133	3		421
United States Postal Service	1,191	(1)	1,191	(1)	(1)	109,320	308	1,257	2,957	115,133
United States Soldiers' and Airmen's Home	7	2	9	2	4	21			6	42
Veterans' Administration	46	6	52	3	26	112	30	103	3	329
TOTAL CIVILIAN AGENCIES	58,912	6,567	65,479	379	2,360	170,189	12,087	5,477	8,372	264,343
DEPARTMENT OF DEFENSE										
Army	14,032	1,449	15,481	1,122	4,484	31,555	(3)	1,857	11,138	65,937
Navy	3,836	1,532	5,368	664	1,511	21,875	(3)	3,562	1,801	34,841
Air Force	2,929	2,084	5,013	1,133	2,774	26,373	(3)	5,015	2,794	43,162
Civil Works, Corps of Engineers	768	70	838	4	11	3,752	776	518	204	6,123
Cemetorial Expenses, Army	5	2	7	2[2]	3	43	(3)			54
Defense Agencies	1,873	91	1,966	13	47	1,019	(3)	422	172	3,639
Defense Civil Preparedness Agency						3	(3)	2		5
Defense Security Assistance Agency	248	62	310	4	31	295	(3)	23	17	680
TOTAL MILITARY AGENCIES	23,691	5,292	28,983	3,142	8,920	84,915	776	11,579	18,126	156,441
TOTAL ALL AGENCIES	82,603	11,859	94,462	3,521	11,280	255,104	12,863	17,056	26,498	420,784

[1] Includes Ambulances.

[2] 4 x 4's included in 4 x 2's.

[3] These types not separated in USPS data system.

[4] Hearses.

The following two sections of the Noise Control Act will probably be of little concern to EPA inspectors, but are included for reference.

Section 9: Imports

This section directs the Secretary of the Treasury to carry out the provisions of the Noise Control Act with respect to new products imported or offered for importation. To date, no regulations have been issued pursuant to this section.

Section 15: Low-Noise-Emission Products

This section sets forth a plan for incorporating noise considerations in Federal purchasing of products which EPA is regulating under Section 6 of the Noise Control Act. Were a manufacturer to meet certain requirements, he could have his product certified as a low-noise-emission product and receive from the Government up to 125 percent of the retail price for each item purchased by the Government.

State and Local Environmental Noise Standards

Since 1971, the rate of enactment of noise control laws on both State and local levels has been dramatic. Today over 500 municipalities have some kind of noise control law. Large cities that have been most active include Chicago and New York. While over half of the States have legislation incorporating noise related provisions, the States of California, Illinois, New York, New Jersey, Florida, Oregon, Maryland, and Minnesota have the most significant noise control programs.

Ordinances and laws can be generally categorized as to whether they contain non-quantitative or quantitative provisions.

Nonquantitative Noise Laws

These are generally the older laws, which because of their ineffectiveness are being superseded by quantitative laws. They are often referred to as nuisance ordinances, and in some cases are still appropriate. For example, nuisance criteria are useful for control of general noise sources and many activities associated with excessive noise in the community (e.g., street sales) for which quantitative regulations are not feasible. Further, they provide additional flexibility in controlling the less definable and infrequently occurring noise sources. They are based on the common law approach to noise control designed to prevent

noise causing public annoyance or menace to the public safety. Under nuisance provisions, it is unlawful to emit unreasonably loud, disturbing, or unnecessary sounds. The following examples are common nuisance provisions found in municipal ordinances.

1) Unreasonable sounds by machines and construction equipment are illegal during certain hours.

2) It shall be unlawful to sound any horn or signaling device except in an emergency.

3) It shall be unlawful to play any radio, phonograph, musical instrument, or operate outdoor amplifying equipment during the nighttime hours (10 ap.m. – 7 a.m.) so as to disturb any persons.

4) Mufflers may not be in poor working order emitting unusually loud noises.

5) The creation of excessive noise adjacent to a school, hospital, or church which may interfere with ongoing activities is prohibited.

6) Animals shall not cause frequent or long continued noise.

In these examples, the determination of violation is based on subjective assessment, thereby precluding the scientific verification of the disturbing qualities of noise sources in a court of law. The potential for sustainable enforcement actions based on nuisance provisions is often doubtful.

Quantitative Noise Laws

These laws have standards which fall into three broad categories:

1) source regulations

2) land use/zoning regulations

3) building codes

EPA inspectors should, in general, be especially aware of the property line ordinances discussed under the second category above, since it can be expected that these will be most commonly encountered. Noise regulations incorporating acoustical criteria are referred to as performance standards. Such standards specify maximum permissible sound levels. If

these are exceeded, the responsible person is subject to enforcement action. Performance standards have been included in the following types of legislative provisions:

1) *Source Regulations* – These regulations are directed at the control of noise from specific sources such as motor vehicles, construction equipment, and recreational vehicles. Often performance standards are promulgated for both the sale and operation of sources. The first type of standard, which may be subject to pre-emption by Federal regulations, is enforceable at the point of sale and requires manufacturer compliance. The second type is designed to control noise emissions from the product in use. The following is an example of in-use regulations applicable to motor vehicles:

> No person shall operate a motor vehicle on the public right of of way within the speed limits specified in this regulation at any time or under any condition of grade, load, acceleration or deceleration in such a manner as to exceed the following noise levels for the category of motor vehicles . . .

These vehicular regulations are supported by well defined measurement methodologies. The acoustical criteria specified vary according to the speed of the vehicle, with higher maximum permissible levels for speed greater than 35 mph (for example).

2) *Land Use/Zoning Provisions* – Incorporation of performance standards in land use planning provisions may be used to ensure that no new residences, institutions, or recreational areas are constructed in high noise areas. Conversely, these provisions may be used to ensure that no new noise producing structures, such as industrial and manufacturing plants, airports, or highways, may be constructed in noise sensitive zones.

In some instances, municipal officials instituting land-use controls may recommend the placement of an environmental buffer zone if it is determined that ambient levels will exceed sound level limits and, therefore, be deleterious to the health and welfare of citizens within existing developments. The buffer zone may serve as a means of noise attenuation by increasing distance between the noise source and the receiver. Many municipal zoning laws designate noise sensitive zones and require noise analyses prior to zoning approvals.

Within zoning provisions, maximum sound values are specified for the regulation of noise crossing property lines. Sound levels are usually measured at the boundaries of the property lot. See Figures 1, 2, and 3 for data giving the range of boundary line requirements. In districts zoned for manufacturing, noise is measured

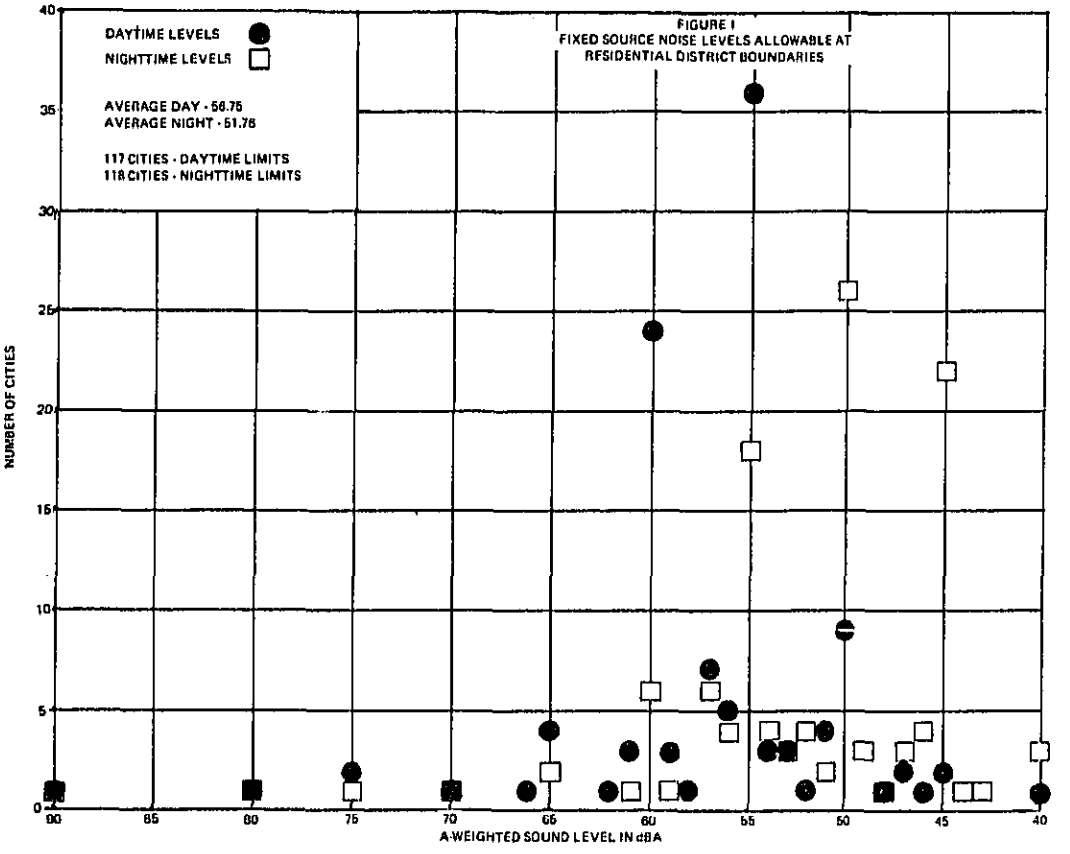

Figure 1. Fixed Source Noise Levels Allowable at Residential District Boundaries

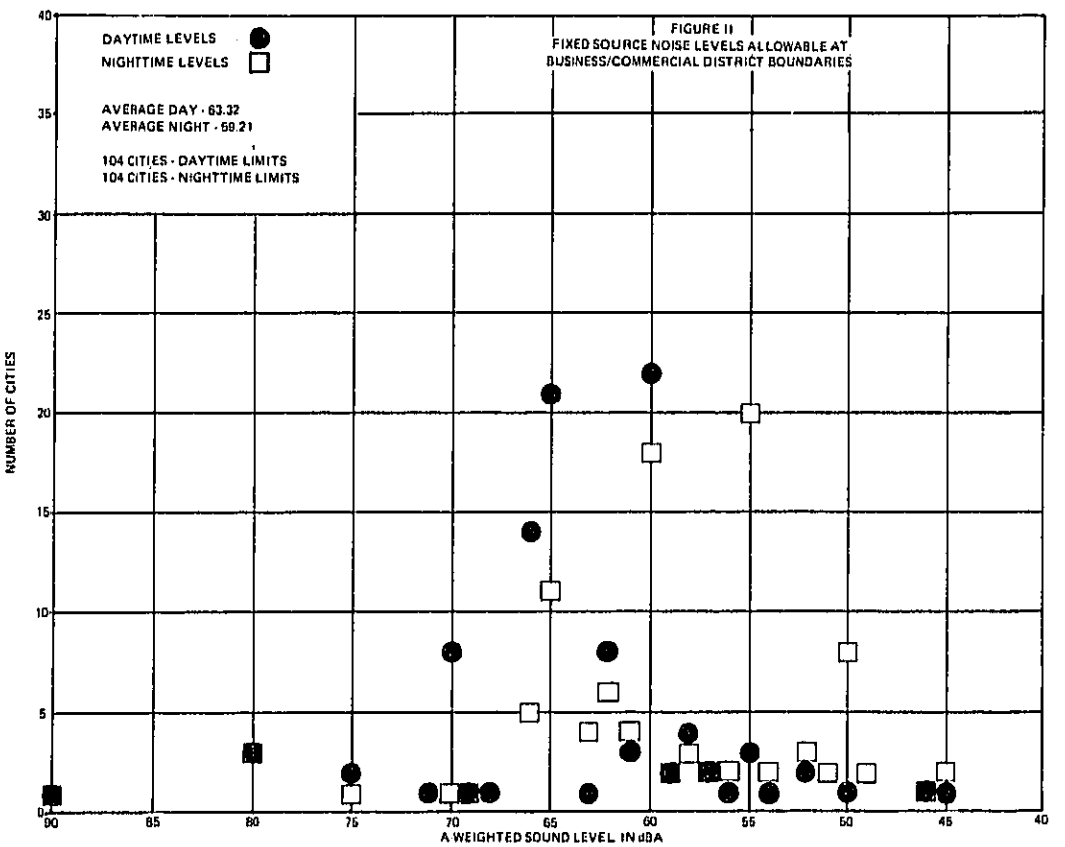

Figure 2. Fixed Source Noise Levels Allowable at Business/Commercial District Boundaries

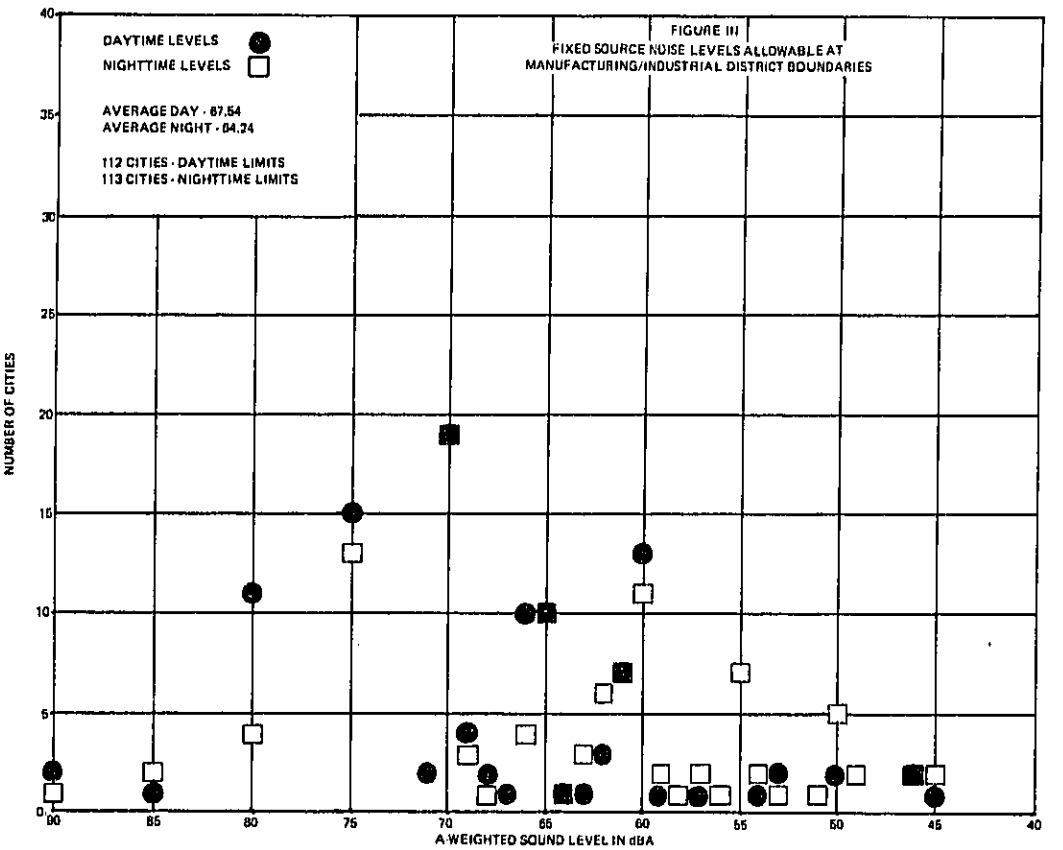

Figure 3. Fixed Source Noise Levels Allowable at Manufacturing/Industrial District Boundaries

at district boundaries. Decibel limits are often specified in octave bands for the various types of districts, with correction factors for the intermittency of the noise, impulse noises, pure tones, and the time of day. The most common performance measure used is dBA.

In controlling property line noise, it is important to determine whether the existing land use/zoning code accurately reflects the actual use of the land. If there are numerous discrepancies between the way the land is zoned and the way it is actually used (e.g., commercial establishments in a residential zone), or if there are large tracts of unzoned land, then greater protection for impacted properties is provided by property line limits based on land use.

3) *Building Codes* – Inclusion of acoustical criteria in building codes is designed to prevent the intrusion of exterior noise beyond prescribed levels into noise sensitive structures. In some cases, performance regulations establishing uniform minimum noise insulation standards are promulgated, which may be enforced through issuance of building permits.

Various OMB and EPA Issuances

OMB A-106 Circular

On January 7, 1975, OMB published a circular, OMB A-106, "Reporting Requirements for Environmental Pollution at Existing Federal Facilities," in the *Federal Register*, pursuant to E.O. 11752, Section 4. A-106 circular requires reports on environmental pollution at existing Federal facilities to include submission of pertinent details of each noise abatement project as well as overall plans for noise abatement and control. The reports are to be submitted semi-annually to the EPA Administrator on forms designated by him. (These forms are set out in the issuance discussed below.)

EPA Guidelines to Agencies for Reporting Pollution Abatement Projects to EPA

In response to the A-106 circular, EPA published (*Federal Register* on January 17, 1975) procedures for reporting pollution abatement projects at Federal facilities including noise abatement projects. The heads of Federal agencies are required to prepare annual plans for bringing their facilities into compliance with applicable noise (and other) standards. The EPA guidelines provide guidance for submitting to the EPA Administrator plans of each noise pollution project and a summary report of the overall plan.

EPA Guidelines to Federal Agencies on Exemptions[6]

EPA's responsibility regarding exemptions of Federal facilities from applicable noise pollution standards pursuant to E.O. 11752 is specified in EPA guidelines.

In sum, after the Federal agency identifies the source of noise pollution for which an exemption is justifiable, it is to consult with representatives of the EPA regional office to explore possible alternatives to an exemption. If an acceptable alternative is unavailable, the responsible official of the Federal agency is to forward a formal request for concurrence to EPA, Office of Federal Activities. If EPA concurs, the decision concerning the matter is final. When EPA disagrees, the Federal agency must obtain approval by the Director of the Office of Management and Budget.

EPA's "Information Memorandum, Information and Strategy for Compliance Monitoring and Reporting by Federal Facilities"[7]

This document "provides a general explanation of existing and future EPA strategies and procedures for compliance assessments by EPA and State and local pollution control agencies."

---

[6]This guidance was promulgated in an enclosure to a letter from the EPA Office of Federal Activities (OFA) to Federal agency heads on November 21, 1975 (Appendix A).

[7]This guidance was promulgated by OFA to the regions in an enclosure to a memorandum on November 20, 1975 (Appendix A).

SECTION 3. HOW TO SELECT FACILITIES FOR INSPECTION

Basic Considerations

In order to make as rational a decision as possible for allocating resources to making an inspection for noise, the EPA regional office should, ideally, know:

- Number, types and locations of facilities in the region,
- Noise control laws applicable in the region,
- Known and/or anticipated noise problems at various facilities,
- Number and types of complaints received by EPA and other bodies for noise problems at Federal facilities, and
- Noise projects in the region for which an A-106 has been filed.

EPA noise inspections should be directed to the significant problems at Federal facilities. Preferably they should be integrated into EPA's inspection activities for compliance with air and water pollution requirements and other media. What are the significant noise problems requiring inspection in a particular EPA region is, of course, determined by the EPA regional administrator. The basic point is that a "noise problem" can be defined in several ways and while EPA inspectors are primarily concerned with compliance with legal requirements, EPA is concerned with all aspects. EPA can be simply *responsive* in this area (i.e., inspect only as a result of public complaint or Congressional inquiry) or can assume a more active posture by seeking out potential noise problems at facilities. If complaints are the only consideration to be made in determining when to conduct an inspection, some very important problems may be overlooked.

Classification of Federal Facilities

For our purposes, although, it appears that no satisfactory scheme for classifying Federal facilities exists, the General Services Administration has developed a categorization scheme

for all facilities in its annual publication, *The Annual Reports of Real Property Owned by the United States.** Each region has a copy of this publication. If used properly, this can be a useful tool.

Table 3 lists the major sources and their anticipated ranges in noise emissions associated with the GSA facility categories. Using the GSA publication just referred to, the region can locate information concerning the number, sizes and locations of facilities in the region. Table 3's format can also be used as a first step in developing your own information on individual facilities that have already been identified for possible inspection.

Complaint File

EPA's own complaint file is a valuable source of information in determining when to inspect. EPA also can and should consult other complaint files such as:

- Regional headquarters of other Federal agencies,
- State and local agency files, and
- Citizen's groups.

The complaint file, however, is a feedback mechanism with certain important biases, and it does not usually contain data needed to estimate the true public health and welfare impact (e.g., the person complaining may be virtually the only one affected).

Criteria for Defining "Objectionable" Noise – Basis of Public Health and Welfare Impacts

EPA's position is that it cannot recommend to communities noise criteria which are inflexible and applicable to all places and situations. Each community has its own set of environmental, health, economic and other goals it wishes to attain. Each community has its own configuration of noise sources and their impacts that it wishes to control. This is not an abstract hope, but fact, as witnessed by the wide range of permissible noise levels in current ordinances (figures 1, 2, and 3). This important reality – what is feasible in one place and time may not be in another – must be considered when noise problems at Federal facilities are studied.

---

*GSA also maintains a similar report on properties leased by the United States,(generally unavailable because of its size). Current efforts at selecting Federal facilities for inspection of noise problems may be limited to the first report, which lists Federally-owned properties only.

TABLE 3. FEDERAL FACILITY CLASSIFICATION FOR NOISE INSPECTION

GSA Usage Code	Type of Facility	Type of Noise Source			Noise Levels
		In-Facility		Community	
		Occupational	Nonoccupational		
01	Agriculture	Tractors	Tractors	Tractors	83-105 dBA at op. ear
		Airplanes used for crop dusting	Airplanes used for crop dusting	Airplanes used for crop dusting	95-100 dBA at op. ear 82 dBA at 1000 ft
04	Grazing		Aircraft operations	Aircraft operations	77-100 dBA in cabin 85-105 dBA at 1000 ft
07	Forest and Wildlife	Aircraft operations	Aircraft operations	Aircraft operations	77-100 dBA in cabin 85-105 dBA at 1000 ft
		Firearms			163-173 dB impulse
		Firefighting equipment			95-120 dBA op. ear
		Lumbering operations	Lumbering operations	Lumbering operations	
		– Sawing	– Sawing	– Sawing	≤ 115 dBA op. ear 64-85 dBA at 50 ft
		– Heavy trucks	– Heavy trucks	– Heavy trucks	84-89 dBA at 50 ft
		– Helicopters	– Helicopters	– Helicopters	105-110 dBA at op. ear
		Mining operations	Mining operations		
		– Blasting	– Blasting		1 lb TNT = 120 dBA[a] overall at 10,000 ft
		– Drilling	– Drilling		100-120 dBA at op. ear 98 dBA at 50 ft
		– Generators	– Generators		100+ dBA at op. ear
		– Railroad cars	– Railroad cars		60-110 dBA interior 80-95 dBA at 50 ft
		– Scrapers	– Scrapers		84-93 dBA at op. ear 82-90 dBA at 50 ft

TABLE 3. FEDERAL FACILITY CLASSIFICATION FOR NOISE INSPECTION (Continued)

GSA Usage Code	Type of Facility	Type of Noise Source			Noise Levels
		In-Facility		Community	
		Occupational	Nonoccupational		
07	Forest and Wildlife (continued)	Off-road vehicles	Off-road vehicles	Off-road vehicles	
		– Motorcycles	– Motorcycles	– Motorcycles	90-115 dBA at op. ear 73-92 dBA at 50 ft
		– Snowmobiles	– Snowmobiles	– Snowmobiles	100-115 dBA at op. ear 73-92 dBA at 50 ft
		– All-terrain vehicles	– All-terrain vehicles	– All-terrain vehicles	74-83 dBA at op. ear
		– Recreation boats	– Recreation boats	– Recreation boats	79-115 dBA at op. ear 65-110 dBA at 50 ft
08	Parks and Historic Sites	Off-road vehicles	Off-road vehicles	Off-road vehicles	
		– Motorcycles	– Motorcycles	– Motorcycles	90-115 dBA at op. ear 70-93 dBA at 50 ft
		– Snowmobiles	– Snowmobiles	– Snowmobiles	100-116 dBA at op. ear 73-92 dBA at 50 ft
		– All-terrain vehicles	– All-terrain vehicles		74-83 dBA at 50 ft
		– Recreation boats	– Recreation boats		79-115 dBA at op. ear 65-110 dBA at 50 ft
			Cannon firing		163-173 dB impulse near cannon
10	Office				
	– NASA Research Center – Post Offices – Postal sorting facilities – Court Houses	Postal equipment			80-90 dBA at op. ear
		Heating and refrigeration plants			50-68 dBA at 3 ft
		Office machines			71-95 dBA at op. ear
		Delivery trucks	Delivery trucks	Delivery trucks	80-100 dBA at 50 ft

TABLE 3. FEDERAL FACILITY CLASSIFICATION FOR NOISE INSPECTION (Continued)

GSA Usage Code	Type of Facility	Type of Noise Source			Noise Levels
		In-Facility		Community	
		Occupational	Nonoccupational		
10	Office (continued)				
	– Federal buildings – Postal garages – Hospital administration buildings	Incinerator	Ventilation fans Cooling towers	Ventilation fans Cooling towers	40-105 dBA at 3 ft 75-77 dBA at 80 ft
11	Military (except airfields)	Machine shops			82-115 dBA at op. position
	– Naval shipyards – Military manufacturing facilities	Vehicle testing	Vehicle testing	Vehicle testing	70-84 dBA at 50 ft
		Helicopters	Helicopters	Helicopters	105-110 dBA at op. ear
		Compressors	Compressors	Compressors	81 dBA at 50 ft
		Generators	Generators	Generators	100 dBA at op. ear
		Sirens	Sirens	Sirens	100 dB overall measured on road
		Drydocking operations	Drydocking operations		
		Shipbuilding operations	Shipbuilding operations		
		Blasting	Blasting	Blasting	1 lb TNT = 120 dB overall, peak level at 10,000 ft
12	Airfields	Helicopters	Helicopters	Helicopters	105-110 dBA at op. ear
		Aircraft	Aircraft	Aircraft	77-110 dBA in cabin 85-105 dB at 1000 ft
		Generators	Generators		100+ dBA at op. ear
		Pumps	Pumps		68-72 dBA at 50 ft

TABLE 3. FEDERAL FACILITY CLASSIFICATION FOR NOISE INSPECTION (Continued)

GSA Usage Code	Type of Facility	Type of Noise Source			Noise Levels
		In-Facility		Community	
		Occupational	Nonoccupational		
13	Harbors and Port Terminals	Ship signalling devices	Ship signalling devices	Ship signalling devices	
		Shipping activities	Shipping activities		
		– Loading/unloading	– Loading/unloading		
		– Repair	– Repair		
		Ships			43-65 dBA interior
		Tugs			
		Barges			
		Outer Continental Shelf operations			
			Recreational boats	Recreational boats	79-115 dBA at op. ear 65-110 dBA at 50 ft
15	Power Development and Distribution	Transformers	Transformers	Transformers	75 dBA at 3 ft
		Power stations	Power stations	Power stations	85-108 dBA near source
		Cooling towers	Cooling towers	Cooling towers	75-77 dBA at 80 ft
		Machine shops	Machine shops		82-115 dBA at op. position
			Recreation facilities	Recreation facilities	70-110 at 50 ft
16	Reclamation and Irrigation	Pumps	Pumps		68-72 dBA at 50 ft
18	Flood Control and Navigation	Barges			
			Recreational boats	Recreation boats	79-115 dBA at op. ear 65-110 dBA at 50 ft

TABLE 3. FEDERAL FACILITY CLASSIFICATION FOR NOISE INSPECTION (Continued)

GSA Usage Code	Type of Facility	Type of Noise Source			Noise Levels
		In-Facility		Community	
		Occupational	Nonoccupational		
29	Other Institutional Uses				
30	Housing	Construction site	Construction site	Construction site	71-89 dBA at 50 ft
			Delivery operations		80-100 dBA at 50 ft
			Dogs		
40	Storage	Delivery/removal operations	Delivery/removal operations	Delivery/removal operations	80-100 dBA at 50 ft
50	Industrial	Factory operations			75-118 dBA in work environment
	– U.S. Mint – Printing and Engraving	Warehouse operations			80-100 dBA at op. position
		Delivery operations	Delivery operations	Delivery operations	80-100 dBA at 50 ft
		Heating			55-90 dBA at 50 ft
		Air Conditioning			50-68 dBA at 3 ft
60	Service	Delivery operations	Delivery operations	Delivery operations	80-100 dBA at 50 ft
70	Research and Development	Test sites	Test sites	Test sites	
		Wind tunnels	Wind tunnels	Wind tunnels	
71	Utility Systems	Heating systems			55-90 dBA at 3 ft
	– Heating systems – Sewage systems – Water systems – Electrical systems	Electrical systems			85-108 dBA near source

CORRECTION!

THE PREVIOUS DOCUMENT(S) MAY HAVE BEEN FILMED INCORRECTLY . . .

RESHOOT FOLLOWS!

B&B Information & Image Management
300 Prince George's Boulevard
Upper Marlboro, Maryland 20772
(301) 249-0110

TABLE 3. FEDERAL FACILITY CLASSIFICATION FOR NOISE INSPECTION (Continued)

GSA Usage Code	Type of Facility	Type of Noise Source			Noise Levels
		In-Facility		Community	
		Occupational	Nonoccupational		
19	Vacant Land		Off-road vehicles	Off-road vehicles	
			– Motorcycles	– Motorcycles	90-115 dBA at op. ear 70-93 dBA at 50 ft
			– Snowmobiles	– Snowmobiles	100-116 dBA at op. ear 73-92 dBA at 50 ft
			– All-terrain vehicles	– All-terrain vehicles	74-83 dBA at 50 ft
20	Institutional		Delivery trucks	Delivery trucks	80-100 dBA at 50 ft
21	Hospitals	Ambulances	Ambulances	Ambulances	100 dB overall for sirens
				Delivery trucks	80-100 dBA at 50 ft
22	Prisons	Textile mills			60-108 dBA in work environment
		Machine shop			85-115 dBA at op. position
		Siren	Siren	Siren	100 dB overall
		Blasting			1 lb TNT = 120 dB overall, peak level at 10,000 ft
23	Schools	Buses	Buses	Buses	80-95 dBA at 50 ft
		School activities			102-117 dBA in room behind rifle team area

TABLE 3. FEDERAL FACILITY CLASSIFICATION FOR NOISE INSPECTION (Continued)

GSA Usage Code	Type of Facility	Type of Noise Source			Noise Levels
		In-Facility		Community	
		Occupational	Nonoccupational		
29	Other Institutional Uses				
30	Housing	Construction site	Construction site Delivery operations Dogs	Construction site	71-89 dBA at 50 ft 80-100 dBA at 50 ft
40	Storage	Delivery/removal operations	Delivery/removal operations	Delivery/removal operations	80-100 dBA at 50 ft
50	Industrial – U.S. Mint – Printing and Engraving	Factory operations Warehouse operations			75-118 dBA in work environment 80-100 dBA at op. position
		Delivery operations Heating Air Conditioning	Delivery operations	Delivery operations	80-100 dBA at 50 ft 55-90 dBA at 50 ft 50-68 dBA at 3 ft
60	Service	Delivery operations	Delivery operations	Delivery operations	80-100 dBA at 50 ft
70	Research and Development	Test sites Wind tunnels	Test sites Wind tunnels	Test sites Wind tunnels	
71	Utility Systems – Heating systems – Sewage systems – Water systems – Electrical systems	Heating systems Electrical systems			55-90 dBA at 3 ft 85-108 dBA near source

TABLE 3. FEDERAL FACILITY CLASSIFICATION FOR NOISE INSPECTION (Continued)

GSA Usage Code	Type of Facility	Type of Noise Source			Noise Levels
		In-Facility		Community	
		Occupational	Nonoccupational		
72	Communication Systems				
73	Navigation and Traffic Aids	Fog horns	Fog horns	Fog horns	
		Whistles	Whistles	Whistles	90-114 dBA at 50 ft
		Sirens	Sirens	Sirens	100 dB overall
76	Roads and Bridges	Road construction	Road construction	Road construction	85-110 dBA at op. ear
		Vehicle traffic	Vehicle traffic	Vehicle traffic	70-84 dBA at 50 ft
77	Railroads	Railroad yard operations	Railroad yard operations	Railroad yard operations	65-110 dBA at 100 ft
		Railroad cars	Railroad cars	Railroad cars	60-110 dBA interior 80-95 dBA at 50 ft
		Locomotives	Locomotives	Locomotives	76-98 dBA at 50 ft
		Whistles	Whistles	Whistles	90-114 dBA at 50 ft
78	Monuments and Memorials	Cannon firing	Cannon firing	Cannon firing	163-173 dB impulse[b]
		Artillery salute	Artillery salute	Artillery salute	163-173 dB impulse[b]
79	Miscellaneous Military Facilities	Artillery	Artillery	Artillery	163-173 dB impulse[b]
		Helicopters	Helicopters	Helicopters	105-110 dBA at op. ear
	– Target ranges				
	– Proving grounds				
80	All other				

[a]Peak sound level.
[b]Duration 0.4-0.8 msec.

What to Do Where no Noise Standards Exist

It is expected that there are cases where no noise standards exist, yet where EPA determines that a noise problem does exist. In such cases, EPA can either:

1) Exercise its authority under E.O. 11752 to issue noise standards, or

2) Define the noise as "objectionable" under Title IV of the Clean Air Act and negotiate with the facility.

To date, EPA has not exercised the first option, but on various occasions has utilized the second. Title IV leaves it to the discretion of the EPA Administrator to determine what is "objectionable." EPA has developed public health and welfare criteria for noise that can be utilized when entering into negotiations with Federal agencies on "objectionable" noise problems.

What "Objectionable Noise Levels" Are

EPA has developed three sets of criteria for defining noise problems. These are to be used in the ways indicated below:

1) The first set of criteria is to be applied by a noise inspector in determining "immediate threats to the public health and welfare". Such threats should be the priority area of attention. Use the criteria contained in table 4. If EPA becomes aware of a facility emitting noise approaching the levels in table 4 at a property line, where people are exposed, *it should contact the facility immediately and negotiate with appropriate authorities to halt such noise.*

2) The second set of criteria shown in figure 4, is a "real world" general guide as to what is "objectionable". Inspectors should be familiar with this table when ranking serious noise problems to be dealt with on a practical basis (i.e., considering cost, technological and political realities), and in entering into negotiations with agencies where necessary.

3) The final set of criteria are those contained in table 5 (from EPA's "Levels Document"). These "levels" are the identified threshold values above which some adverse impact on public health and welfare exists. They should be used by EPA noise inspectors in helping sort out noise problems associated with potential hearing loss from those involving annoyance. (EPA headquarters uses these L_{dn} levels in applying a fractional impact methodology to determine priorities for regulation of products and for community noise assessments.)

TABLE 4. CONTINUOUS SOUND LEVELS THAT POSE AN IMMEDIATE THREAT TO HEALTH AND WELFARE*

Sound Level Limit (dBA)	Duration
90	24 hours
93	12 hours
96	6 hours
99	3 hours
102	1.5 hours
105	45 minutes
108	22 minutes

*Use equal energy time-intensity tradeoff if level varies; find energy equivalent over 24 hours.

TABLE 4. IMPULSIVE SOUND LEVELS THAT POSE AN IMMEDIATE THREAT TO HEALTH AND WELFARE

Sound Level Limit (dB)	Number of Repetitions per 24-hour Period
145	1
135	10
125	100

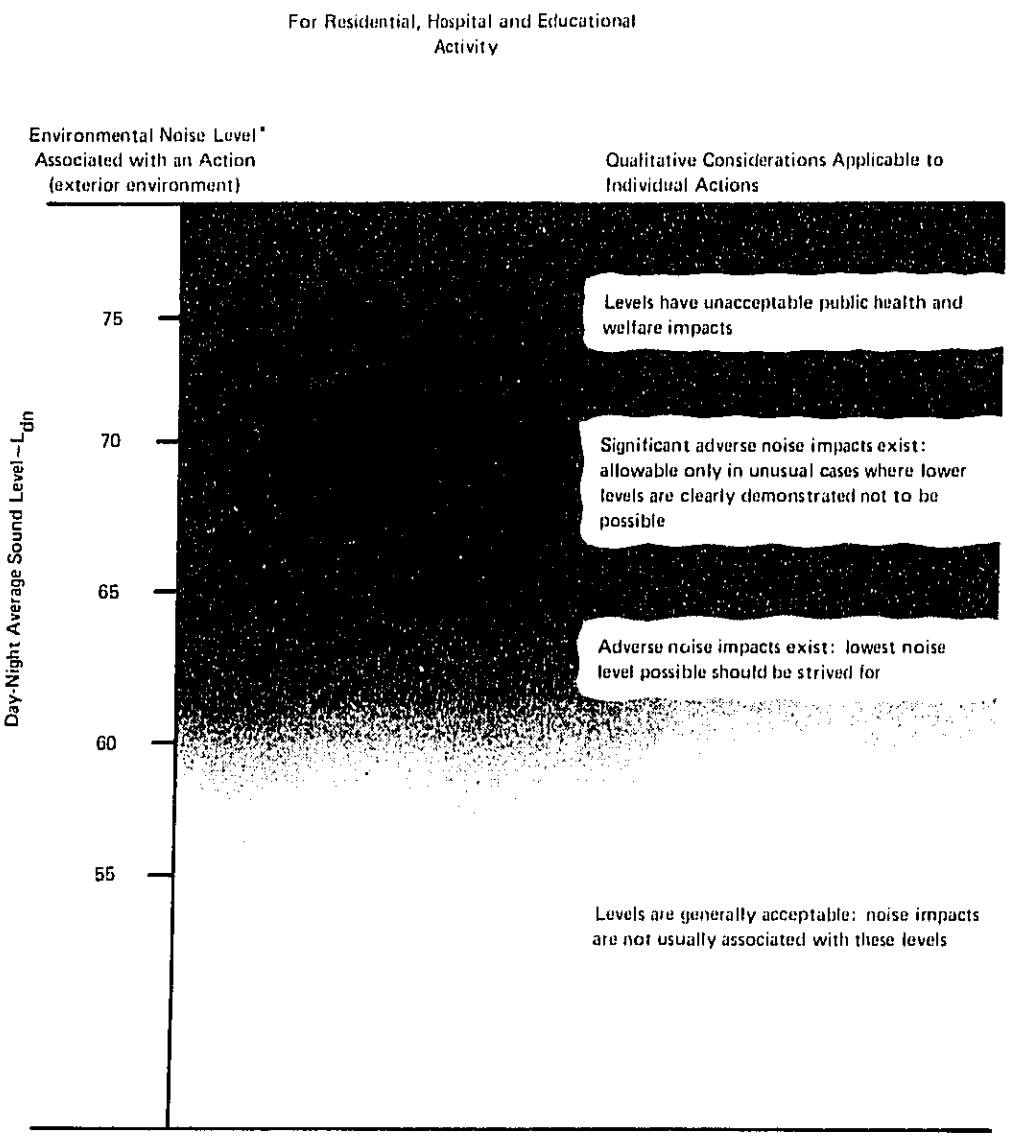

Figure 4. Representation of Land-Use Compatibility with Noise

TABLE 5. SUMMARY OF NOISE LEVELS IDENTIFIED AS REQUISITE TO PROTECT PUBLIC HEALTH AND WELFARE WITH AN ADEQUATE MARGIN OF SAFETY

Effect	Level	Area
Hearing Loss	$L_{eq\,(24)} \approx 70$ dB	All areas
Outdoor activity interference and annoyance	$L_{dn} = 55$ dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	$L_{eq\,(24)} \approx 55$ dB	Outdoor areas where people spend limited amounts of time, such as school yards, play grounds, etc.
Indoor activity interference and annoyance	$L_{dn} = 45$ dB	Indoor residential areas
	$L_{eq\,(24)} \approx 45$ dB	Other indoor areas with human activities such as schools, etc.

SECTION 4. PREPARATION FOR INSPECTION OF A FACILITY

Once facilities have been identified for inspection, some work can be done prior to visiting the facility ensuring that the use of time by both EPA and the facility is maximized. The preparation that is done prior to the inspection may, in large part, determine whether the inspection is successful. The following necessary phases for conducting a Federal facility compliance inspection are suggested.

1. Contact the facility in a way likely to lead to the results you want.

Although "surprise" inspections may be conducted at the Regional Administrator's discretion, in most cases, EPA will want to establish as smooth a relationship as possible and, therefore, schedule a coordinated inspection with the facility.

2. Collect additional information about the facility from them in a systematic way.

To the extent possible, a data sheet such as that in figure 5 may be prepared for noise problems at each facility prior to inspection. It is helpful to know the following prior to visiting the facility:

- Name(s) (and perhaps the titles or backgrounds) of the individual(s) responsible for noise problems,
- Level of awareness of the facility management concerning noise,
- Location(s) of sources as well as sensitive receptors (particularly those outside the facility),
- Noise surveys that the facility has conducted concerning the sources and receptors as well as other monitoring activities,
- Types and number of complaints received by the facility, and
- Details concerning applicable noise ordinances, including data from local news media. Table 6 may be useful in suggesting various kinds of data.

PRELIMINARY DATA SHEET FOR NOISE INSPECTION OF A FEDERAL FACILITY

1 EPA Region _____
2 Name of Facility _____
3 Federal Agency _____
4 Address _____
_____
_____
5 Local Jurisdiction (State, County, City) ___
_____
6 Adjacent Local Land Use (Residential, Commercial, Industrial, Institutional) ___
_____

Sketch of Facility Showing Adjacent Critical Receptors

7 GSA Usage Code	8 Area		9 Applicable Standards		10 Critical Receptors	11 Major Noise Sources	12 Source Noise		13 Distance From Receptor	14 Correction Factors			15 Estimated Noise Level at Receptor	
	Land	Bldg.	Day	Night			Level dBA	At		Distance Correction	Barrier Correction	Other Corrections	Day	Night

Probable Community Noise Level in Absence of Facility _____

FIGURE 5. FACILITY DATA SHEET FORMAT

TABLE 6. PRE-INSPECTION DATA FOR FEDERAL FACILITY NOISE INSPECTION

Information Item	Reasons for Asking for Data Item	Examples of How Data Will Be Used
Facility layout	To show relative location of buildings and activities	• The inspector will use the layout to familiarize himself with the facility prior to inspection • The layout will be marked up as a result of the inspection to show location of noise sources and where noise measurements and their levels were taken
Community action	To determine the extent and nature of the facility's interface and surrounding communities	• This data will be helpful in developing corrective action plans if there are major noise problems
Local noise control	To determine the extent of awareness the facility has for local noise control regulations	• This data will be helpful in developing corrective action plans if there are major noise problems
Number of noise complaints received	To provide some history and magnitude of noise problems of the facility	• Use this data as a baseline and develop a corrective program to reduce number of complaints to zero
Noise sources	To get a preliminary judgment of types of noise problems. To test what the facility considers is a noise problem	• May indicate need to educate facility personnel about what constitutes a noise problem • Will be used to calculate preliminary noise impacts • Provide initial indication of what to look for during inspection
Noise abatement measures	To identify types of noise abatement techniques used. To determine extent facility has gone to remedy noise problems	• These noise abatement measures will be inspected to see how effective they are
Land use	Have knowledge of areas of possible noise impact	• Used as a variable in calculating noise impact
Proximity of facility to noise sensitive areas	To find out if there are any schools, hospitals, residential areas within areas near facility which could be adversely impacted by noise emanating from the facility	• This data would be a factor in assessing noise impact from the facility, and may indicate corrective actions are needed depending on magnitude of noise sources from the facility

TABLE 6. PRE-INSPECTION DATA FOR FEDERAL FACILITY NOISE INSPECTION (Continued)

Information Item	Reasons for Asking for Data Item	Examples of How Data Will Be Used
Administrative and engineering controls to reduce noise exposures or noise levels	To know what measures have been taken by the facility to reduce noise levels or noise exposures. This will also indicate that there are noise sources at the facility	• This data will be used as items to be inspected. They will have to be checked for effectiveness in achieving their intended purposes
Property line noise problems	To find out if they have any property line noise problems or anticipate having any in the future	• To give inspector some information on what to expect during inspection of the perimeter of the facility. This data will also be helpful in assessing preliminary noise magnitude of facility
Hearing conservation programs	To find out extent and nature of the facilities' hearing conservation program, if they have one	• Data will be used as part of corrective action which may be recommended for the facility
Noise monitoring program	To find out if they have a noise monitoring program and to determine its extent and what they monitor	• This will form a basis for further investigation during inspection
Noise surveys conducted	To find out if any noise surveys have been conducted at the facility and, if so, what were the findings	• Baseline information which the inspector will further investigate during inspection • To pinpoint problem areas and streamline the inspection process

3. Ensure cooperation with other governments.

Cooperation with the State and local pollution control agencies is essential. EPA inspectors should consider inviting representatives of State and local agencies to participate in the inspection. Such invitations should be made with the approval of the head of the facility to be visited.

4. Planning and organizing your inspection.

The Regional Administrator should decide how many facilities present a noise pollution situation that merits extensive inspection. The inspection may include informal visits or formal inspection tours with or without sound measuring equipment. As a practical matter, the resources of the regional office in terms of manpower, equipment, and available funding will enter into the decisionmaking process. These factors should be estimated, and final selection and scheduling of Federal facilities made.

To aid in future planning, it is recommended that a report be prepared giving details for each facility selected for inspection even if the actual inspections are not conducted. The report should include recommendations on the need for inspection and estimates of needed resources for conducting the inspection. A copy of this report should be submitted to the EPA Office of Federal Activities.

Some useful guidelines are:

1) Choose an appropriate time for visiting the facility. The most important noise sources may operate only periodically.

2) Decide what noise equipment is appropriate to the facility being inspected. If possible, plan to bring a sound level meter. If it is found upon visiting the facility that more sophisticated noise measuring equipment is needed, then a followup visit can be arranged.

SECTION 5. NECESSARY PHASES FOR CONDUCTING A FEDERAL FACILITY COMPLIANCE INSPECTION

The reasons for EPA to utilize its energy in conducting an on-site inspection of a Federal facility are:

- To verify that the facility is taking care of its own noise problems, and
- To determine the compliance status of a project (or projects) which is, or is suspected to be, in violation of an applicable noise standard.

It has been already emphasized that EPA may exert considerable pressure on a facility to assure compliance. For EPA to be effective, the inspector, as the Regional Administrator's representative, should be well prepared prior to his visit and should generally adopt a courteous and cooperative attitude with facility personnel. The steps he will follow cannot be set out with precision but in general there are at least four phases to the inspection:

1) Conduct preliminary discussions with facility personnel.

2) Examine facility's environmental noise monitoring program.

3) Tour facility and potential or known noise problem areas.

4) Conduct post inspection interview.

Phase 1. Preliminary Discussions with Federal Facility Personnel

In the preparations made for inspection, the purpose and intent of the inspection should have been explained and certain information obtained from the noise official at the facility. It is well, however, to iterate in detail EPA's purpose in being there, what you hope to accomplish, and how you can, if necessary, help the facility* (including how you can help in obtaining funding for noise projects through the A-106 process). Convince them EPA's approach is reasonable.

*Some of the ways EPA can technically assist other Federal agencies are listed at the end of this section.

There may be State or local officials present. Proper planning will ensure a smooth integration of these people in the inspection party.

It can be expected that facility personnel will accompany inspectors through most phases of your visit.

Phase 2. Examiniation of Facility's Environmental Noise Monitoring Program

The logical place to start the inspection after preliminary discussions is with an examination of the facility's own program to control noise at the facility. The EPA noise inspector should already have obtained as much of this information as feasible in the preparation stage. Such information should include:

- Facility directives (e.g., shipyard instructions) setting forth goals, objectives and mechanisms to implement programs, and

- Records of actual environmental noise surveys, problems and complaints.

In the course of his review, the inspector should be asking himself whether it appears that the directives are adequate and whether the records appear to reflect adequate implementation.

The EPA inspector should have access to any records required to be kept which he wishes to review, abstract or duplicate.

Phase 3. Tour of Facility with Potential, or Known, Problem Areas

Based upon conversations with facility personnel, upon examined records and directives, the inspector should tour the facility giving attention to the known problems and the areas where estimated potential problems exist. A successful tour may be largely dependent upon the good will of the personnel of the facility being visited.

The EPA noise inspector can take noise level measurements as deemed necessary. In the event he does not have a sound level meter, one of the subjective tests outlined in table 7 may be used. While these tests do not produce actual noise levels, they do provide some indication of the nature of some noise sources and environments.

The inspector should walk the perimeter of the facility where possible and appropriate, and identify boundary line noise levels where appropriate, as well as source noise levels. Where seriously high noise levels are identified (see Sections 3 and 4), this should be called to the attention of the facility's personnel at once. The inspector should carefully record all findings during the inspection so that a permanent record will be maintained by EPA.

TABLE 7. SUBJECTIVE NOISE TESTS

Distance Between Talker and Listener, ft (m)	Background dBA			
	Talker's Voice Effort			
	Normal	Raised	Very Loud	Shouting
0.5 (0.15)	74	80	86	92
1 (0.3)	68	74	80	86
2 (0.6)	62	68	74	80
4 (1.2)	56	62	68	74
6 (1.8)	52	58	64	70
12 (3.7)	46	52	58	64

1. Walk-Away Test. In a noisy area, engage a person in conversation. Pace apart until speech becomes unintelligible. Relate distance to noise level and talker's voice effort to determine background noise level of noisy area. Record noise level and description and location of noise source.

2. To determine the direction of a noise source, cup ear with hand. Using a diagram of the facility, document the place where the test was made and indicate the direction of the noise source and its relation to the test site.

3. Try to make a phone call in the noise area. Document difficulties, nature of noise sources, and description of noisy area.

4. Carry a tape recorder during the inspection, set it on a fixed gain position, and record noise source. Be sure to also describe the noise source being recorded, nature and location of noisy area, and distance from the noise source. These data may be useful for analysis after the inspection has been conducted.

Phase 4. Post-Inspection Interview

Upon completion of the inspection, the EPA inspector should review the findings with the key individual at the facility responsible for coordinating the inspection. At this time, the inspector can discuss actions necessary for resolution of noise problems at the facility or those actions planned by EPA in followup procedures. Depending upon the circumstances, the inspector may extend an offer to provide one or more of the following types of technical assistance:

1) Giving general information and advice,

2) Identifying additional sources of expertise to deal with problems,

3) Training Federal personnel in use of sound measuring equipment and measurement procedures,

4) Lending sound measuring equipment, and

5) Performing testing and measurement assistance on a limited basis.

SECTION 6. POST-INSPECTION PROCEDURE[8/]

Post-Inspection Report

Within a reasonable time following the inspection, EPA will provide the official in charge of the facility a written report. The report will list the inspector's findings, any discrepancies noted and recommendations for corrective actions. EPA will forward copies of this report to appropriate State and local noise pollution agencies and make them available to the public, unless confidentiality is deemed necessary.

EPA Requirements on Facility Reports

For identified violations of standards, the Regional Administrator can require that the facility report to him on the monitoring it is doing concerning the problem, and/or the results. Reports shall include information determined appropriate by the Regional Administrator, in a format suitable to him. Unless confidentiality is necessary in the interest of national security, these reports will be considered public information.

Followup Inspections

For facilities having significant noise problems, The Regional Administrator may wish to inspect annually. For other facilities, the Regional Administrator may conduct followup inspections as frequently as desired.

8/ This guidance is contained in OFA's memorandum of November 20, 1975 to the Regional Administrators.

SECTION 7. ADDITIONAL INFORMATION

Whether State and Local Governments Can Sue Federal Agencies for Noncompliance with Noise Regulations

Federal Noise Regulations

A State or local government *can* sue the Federal government for noncompliance with a Federal noise regulation, including violation of a noise control requirement under Section 611 of the Federal Aviation Act, under the citizens suit provision (Section 12) of the Noise Control Act of 1972 (PL92-574). In October 1974, EPA issued regulations pursuant to Section 12, establishing procedures for giving prior notice of citizen suits to EPA.

State and Local Noise Regulations

It is EPA's opinion that States and local governments *may not* bring suits against Federal agencies for violations of substantive provisions of State and local noise regulations unless the Federal government consents. (E.O. 11752, itself, states that Federal agencies are not required to comply with State and local administrative procedures relating to noise.) The essence of EPA's position is that the Federal Government's sovereign immunity prevents the bringing of an action.[9]

What EPA Regions Can Do if a Facility Continuously Fails to Achieve Compliance with Noise Requirements

The EPA region can resort to the "escalation" approach as stated by the Administrator of EPA.[10] In this approach, if satisfaction is not achieved on the regional level, then OFA will call the Federal agency's headquarters to assist in solving the problem. If this does not achieve the expected results, then the Deputy Administrator will be asked to refer the matter to the Office of Management and Budget. If after resolution by OMB, compliance is not reached within the time stipulated by OMB, EPA will take further action.

---

[9] This position is elaborated in the Office of General Counsel's memorandum to ONAC of September 19, 1974.

[10] This policy was outlined in the John Quarles memorandum of November 20, 1973 to the Regional Administrators. It was further defined in Sheldon Meyers' memorandum of September 16, 1975 to the Regional Administrators.

APPENDIX A. INVENTORY OF IMPORTANT EPA MEMORANDA

A. RE: 11752 AND FEDERAL FACILITY COMPLIANCE			
FROM	TO	DATE	SUBJECT
OFA[a]	Regional Administrators	November 20, 1973	Federal facilities' compliance with environmental statutes and regulations
ONAC[b]	Regional Noise Contacts	May 8, 1974	Regional noise contacts act as technical advisors – use of contract assistance
ONAC	Regional Noise Contacts	July 3, 1974	Query on compliance status of agencies – comments requested on technical guidelines outline
ONAC	Regional Noise Contacts	September 19, 1974	OGC's opinion concerning suits by States and local governments for non-compliance with noise pollution standards
OGC[c]	ONAC	October 21, 1974	Compliance of Federal facilities with Federal, State and local noise regulations
ONAC	Regional Noise Contacts	December 4, 1974	Information on role of regional noise contacts
OFA	Regional Administrators	September 16, 1975	EPA enforcement activities regarding Federal facilities
OFA	Regional Administrators	November 21, 1975	Guidelines for exemption of Federal facilities from compliance with environmental standards
OFA	Regional Administrators	November 20, 1975	Information memorandum: Information and strategy for compliance monitoring and reporting by Federal facilities

[a]OFA, Office of Federal Activities, EPA
[b]ONAC, Office of Noise Abatement and Control, EPA
[c]OGC, Office of General Council, EPA

APPENDIX A. INVENTORY OF IMPORTANT EPA MEMORANDA (Continued)

B. RE: RELATED MATTERS			
FROM	**TO**	**DATE**	**SUBJECT**
ONAC	OFA	October 10, 1975	Proper use of the EPA "Levels Document" in reviewing Environmental Impact Statements and other actions
OFA	Regional EIS Coordinators	December 5, 1975	Same subject as above.
C. RE: COMPLIANCE WITH INTERSTATE MOTOR CARRIER NOISE STANDARDS ISSUED PURSUANT TO SECTION 18 OF THE NOISE CONTROL ACT			
OGC	ONAC	August 19, 1975	Interpretation of Section 3 (3) (B) of NCA 72: Designed for Combat Use
DAA/Noise[d]	DOD/Office of the Deputy Assistant Secretary of Defense (Environment and Safety)	October 6, 1975	Exemptions from Compliance with Section 18 of NCA 72
EPA Administrator	Federal Agency Heads	November 4, 1975	Notification and Request for Report Concerning Compliance of Federal Vehicles with Section 18
Various Agency Heads	DAA/Noise	Late 1975	Plans for Achieving Compliance with Section 18 of NCA 72

[d]DAA/Noise, Deputy Assistant Administrator/Noise

TECHNICAL REPORT DATA
(Please read Instructions on the reverse before completing)

1. REPORT NO. EPA-550/9-77-350	2.	3. RECIPIENT'S ACCESSION NO.
4. TITLE AND SUBTITLE Inspection of Federal Facilities for Compliance with Noise Abatement Standards		5. REPORT DATE December 1976 6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S) Federal Programs Branch Technology & Federal Programs Division, ONAC		8. PERFORMING ORGANIZATION REPORT NO.
9. PERFORMING ORGANIZATION NAME AND ADDRESS U.S. Environmental Protection Agency Office of Noise Abatement and Control Washington, D.C. 20460		10. PROGRAM ELEMENT NO. 11. CONTRACT/GRANT NO.
12. SPONSORING AGENCY NAME AND ADDRESS		13. TYPE OF REPORT AND PERIOD COVERED 14. SPONSORING AGENCY CODE

15. SUPPLEMENTARY NOTES

16. ABSTRACT

This document provides guidance to the Environmental Protection Agency regional offices for identifying noise problems at Federal facilities, selecting facilities to be inspected for compliance with environmental noise requirements and conducting noise inspections at Federal facilities.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Federal facility noise abatement		

18. DISTRIBUTION STATEMENT	19. SECURITY CLASS *(This Report)*	21. NO. OF PAGES
	20. SECURITY CLASS *(This page)*	22. PRICE

EPA Form 2220-1 (9-73)

ENVIRONMENTAL PROTECTION AGENCY
Office of Noise Abatement and Control
AW-471
Washington, D.C. 20460

Official Business

POSTAGE AND FEES PAID
ENVIRONMENTAL PROTECTION AGENCY

EPA-335

SPECIAL 4th CLASS RATE BOOK

If your address is incorrect, please change on the above label; tear off; and return to the above address.
If you do not desire to continue receiving this technical report series, CHECK HERE ☐ ; tear off label, and return it to the above address.