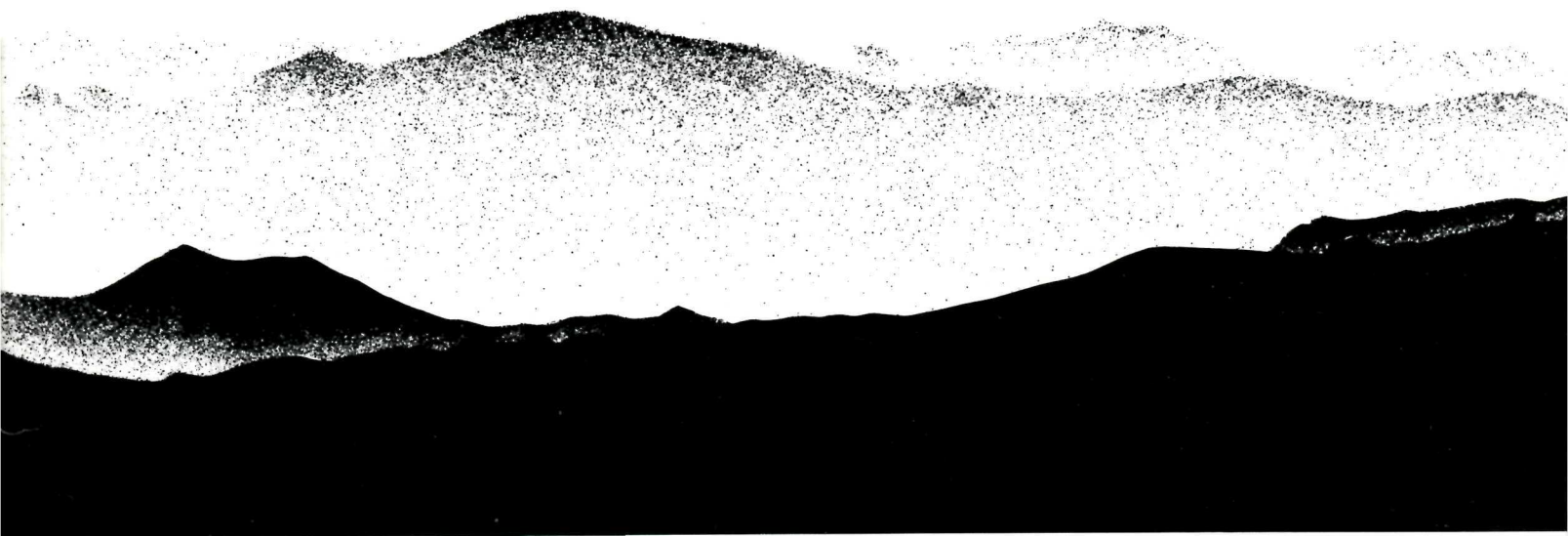


Permit Application Guidance for New Air Pollution Sources

John Bunyak

Natural Resources Report NPS/NRAQD/NRR-93/09



United States Department of the Interior • National Park Service
Air Quality Division



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Purpose

This document provides guidance to persons intending to submit a Prevention of Significant Deterioration (PSD) of Air Quality permit application for a new major source or major modification to an existing source, the emissions from which have the potential to impact a class I area managed by the National Park Service (NPS) or the U.S. Fish and Wildlife Service (FWS). This document also identifies to permitting authorities the NPS and FWS contacts, and provides NPS and FWS personnel background information on the PSD process and information and analysis requirements. In addition to this document, permit applicants should also use a copy of the Environmental Protection Agency (EPA) draft New Source Review Workshop Manual (Environmental Protection Agency 1990). The EPA manual describes all aspects of the PSD review process in detail.

Questions regarding the EPA manual, which was revised in October 1990, should be directed to the Environmental Protection Agency, New Source Review Section (919) 541-5591.

Under a memorandum of agreement with the U.S. Fish and Wildlife Service, the National Park Service, Air Quality Division, provides technical review of PSD permit applications that may affect FWS class I areas. Therefore, the guidance in this document also applies to both NPS and FWS class I areas.

For areas of the national park system, the National Park Service Organic Act of 1916 requires conserving resources "unimpaired for the enjoyment of future generations." The Clean Air Act of 1970, as amended in 1977, charges the federal land manager (FLM) with an affirmative responsibility to protect the air quality-related values of designated class I areas from adverse impact. Much of the information that the National Park Service and the U.S. Fish and Wildlife Service need to carry out these statutory responsibilities must be collected by the applicant well before the PSD permit application is submitted.

By delegation of authority from the secretary of the interior, the assistant secretary for Fish and Wildlife and Parks is the federal land manager for areas under NPS and FWS jurisdiction.

By following the guidance in this document, an applicant can prevent delays in the review process that are caused by an incomplete application and can obtain useful information from the National Park Service. For example, the National Park Service may provide the applicant with air quality and visibility data, data regarding ecological resources, and lists of NPS park-specific or FWS refuge-specific resources that are known to be sensitive to air pollution. Finally, although much of the discussion in this document pertains to class I areas, resources that are sensitive to air pollution may also exist in class II federal lands. Consequently, the federal land manager is concerned about potential impacts on class II sensitive resources as well.

Statutory Requirements Applicable to Class I Areas

Clean Air Act

In 1970, Congress passed the Clean Air Act, establishing a national policy toward protecting and enhancing air quality (42 *United States Code* (USC) 7401 *et seq.*). Upon amendment in 1977, the act became an important tool in protecting air quality and sensitive resources in national parks and national wilderness areas. The Clean Air Act Amendments of 1990 (Public Law No. 101-549) retained and enhanced the park and wilderness protection provisions (e.g., visibility studies and transport commissions).

Sections 160-169A of the act established the PSD program to protect the quality of the air in regions of the United States in which the air is cleaner than that required by the federal National Ambient Air Quality Standards.

Under the PSD provisions, Congress developed a classification approach for controlling the increase of air pollution in those areas of the country with air quality better than the National Ambient Air Quality Standards. Class I areas are afforded the greatest degree of air quality protection. Very little deterioration of air quality is allowed in these areas. Moderate deterioration, associated with well-managed industrial growth, is allowed in class II areas, while more deterioration is allowed in class III areas. In no case, however, may pollution concentrations violate any of the National Ambient Air Quality Standards.

One of the purposes of the PSD program is "to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value."

Congress designated certain areas as mandatory class I. This designation precludes reclassifying these areas to a less protective category.

The 1990 amendments clarified that class I area boundaries are to conform to boundary changes in the underlying park or wilderness area. The national park system includes 48 mandatory class I areas, and the national wildlife refuge system contains 21 mandatory class I areas.

Mandatory class I areas include the following areas that were in existence as of August 7, 1977:

1. international parks
2. national wilderness areas and national memorial parks in excess of 2,024 ha (5,000 acres)
3. national parks in excess of 2,428 ha (6,000 acres)

(42 USC 7472)

NPS-administered class I areas are shown on a map in Appendix A, and FWS-administered class I areas on a map in Appendix B.

The states and, in some cases, Indian tribes can redesignate lands in accordance with section 164 of the Clean Air Act. Certain class II areas, however, may not be redesignated to class III. These class II "floor" areas include national

wildlife refuges, wild and scenic rivers, lakeshores and seashores in excess of 4,047 ha (10,000 acres), and newly established national parks and wilderness areas in excess of 4,047 ha (10,000 acres). As with class I areas, the 1990 amendments clarify that the boundaries of class II floor areas are to conform to the boundaries of the underlying areas. All other clean air areas of the country were initially designated by the Clean Air Act as class II, and can be redesignated as either class I or class III.

Section 164(d) required the federal land manager to review all national monuments, primitive areas, and preserves, and to recommend for redesignation to class I any appropriate class II areas possessing air quality-related values as important attributes. The recommendations, with supporting analyses, were provided to Congress and the affected states and Indian tribes with authority for redesignation. These recommendations, published in the June 25, 1980, *Federal Register* (FR) (45 FR 43002) are listed in Appendix C.

Air quality-related values include visibility, odor, flora, fauna, and geological resources; archeological, historical, and other cultural resources; and soil and water resources.

Major sources of air pollution that propose to build new, or significantly modify, existing facilities in areas of the country with pollutant concentrations below the National Ambient Air Quality Standards (clean air regions) are subject to certain requirements generally designed to minimize air quality deterioration. Where emissions from new or modified facilities may affect class I areas, set aside by Congress for their pristine air quality or other natural, scenic, recreational, or historic values potentially vulnerable to air pollution, the act imposes special requirements to ensure that the new and existing pollution will not adversely affect such areas. In addition, Congress gave the federal land manager, and the NPS park superintendent or FWS refuge manager who is charged with direct responsibility for managing class I areas, an affirmative responsibility to protect all those values of an area that may be affected by changes in air quality. They are also to consider, in consultation with the permitting authority (the Environmental Protection Agency or the state), whether a proposed major emitting facility will have an adverse impact on such values.

The Clean Air Act establishes several tests for judging a proposed facility's impact on the clean air regions in general, and on the class I areas in particular. One such test is the PSD increment test. PSD increments represent the small amount of additional pollution that Congress thought, as a general rule, could be allowed in each classified area (class I, II, or III). Currently, area-specific increments have been established for particulate matter, sulfur dioxide, and nitrogen dioxide.

For class II areas, the permitting authority will not grant a permit if the proposed emissions would cause, or significantly contribute to, exceeding a class II increment. All PSD applicants must provide an analysis of the impairment to visibility, soils, and vegetation that would occur as a result of the proposed source, as well as an analysis of commercial, residential, industrial, and other growth associated with the source.

For class I areas no permit will be issued if an increment would be exceeded, unless the major emitting facility can convince the permitting authority and the federal land manager that no adverse impact to air quality-related values would occur. Congress realized, however, that in certain instances, sensitive air quality-related resources could be adversely affected at air pollution levels below the class I increments, or by pollutants for which increments do not exist.

Therefore, the act requires a determination of whether proposed emissions from a proposed major emitting facility would have an adverse impact on the air quality-related values, including visibility, of a class I area. If the federal land manager demonstrates to the satisfaction of the permitting authority that proposed emissions would adversely affect the air quality-related values of a class I area, even though the proposed facility would not cause or contribute to pollutant concentrations that exceed the class I increments, then the permitting authority may not authorize the proposed project.

The adverse impact test is critical for proposed facilities with the potential to affect a class I area.

Congress also determined that visibility in mandatory class I areas required additional protective regulations. Section 169A sets, as a national goal, preventing of any future, and remedying of any existing, man-made visibility impairment in mandatory class I areas. The act requires that reasonable progress be made toward the national goal. In accordance with section 169A, the Environmental Protection Agency promulgated visibility regulations on December 2, 1980 (40 *Code of Federal Regulations* (CFR) 51 subpart P) that require those states with mandatory class I areas to submit implementation plans that ensure preventing of future and remedying of existing visibility impairment. All mandatory class I areas where visibility is an important value were identified in the November 30, 1979, *Federal Register* (44 FR 69122). The list includes all NPS and FWS class I areas.

To remedy existing visibility impairment, Congress mandated states to establish regulations requiring, among other things, major stationary sources that were in existence for 15 years or less on August 7, 1977, be retrofitted with controls representing the best available retrofit technology, if those sources cause or contribute to impairing visibility in a mandatory class I area.

This emission limitation is to be established on a case-by-case basis, taking into account such considerations as available technology and the costs of compliance.

Preventing future impairments is to be accomplished, in a large measure, through the new source permit review process.

Organic and Wilderness Acts

In addition to the Clean Air Act of 1970, the National Park Service Organic Act of 1916 (16 USC 1, *et seq.*) and the Wilderness Act of 1964 (16 USC 1131, *et seq.*) guide the protection of park and wilderness areas. The general mandates of the Organic Act state that the National Park Service will

promote and regulate the use of . . . national parks . . . by such means and measures as conform to the fundamental purpose of the said parks, . . . which purpose is to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations (16 USC 1).

The 1978 amendments to the Organic Act further clarify the importance Congress placed on protecting park resources, as follows:

The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by the Congress (16 USC 1a-1).

The Wilderness Act defines wilderness as

an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain . . . an area of undeveloped Federal Land retaining its primeval character and influence . . . which is protected and managed so as to preserve its natural conditions (16 USC 1131(c)).

The Wilderness Act also states that wilderness areas will be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use.

Role of Federal Land Manager in PSD Permit Review Process

Background

As indicated previously, the federal land manager and NPS park superintendent and FWS refuge manager have an affirmative responsibility under section 165 of the Clean Air Act to protect the air quality-related values of class I areas. One process used to meet this responsibility is reviewing permit applications for new and modified sources that may impact class I lands. The FLM role in the PSD permit review process and the information that the federal land manager requires to review the permit application are discussed in this section.

The primary regulations that affect new major sources and major modifications are the Prevention of Significant Deterioration regulations (40 CFR 52.21).

Federal Land Manager Notification

General

Section 165 of the act requires the Environmental Protection Agency or the state permitting authority to notify the federal land manager if emissions from a proposed project may impact a class I area. This notification includes the applicant's PSD application, which allows the federal land manager to review the application concurrently with the permitting authority. The Environmental Protection Agency provided guidance on FLM notification as follows.

Generally, the permitting authority should notify the federal land manager of all major facilities proposing to locate within 100 km (62 miles) of a class I area. In addition, the permitting authority should notify the federal land manager of very large sources proposing to locate at distances greater than 100 km (62 miles). These sources also may affect class I increments or the air quality-related values of a class I area due to the quantity or type of air emissions or the presence of certain meteorological conditions.

To minimize delays in the PSD permit review process, the federal land manager also encourages preapplication meetings with states and permit applicants to discuss air quality concerns for a specific class I area in question. Given preliminary information, such as the source's location and the types and quantity of projected air emissions, the federal land manager can discuss specific air quality-related values for an area and advise the applicant as to the level of analysis needed to assess potential impacts on these resources.

The federal land manager may request notification of major sources beyond 100 km (62 miles) in special circumstances (e.g., when increments are exceeded, or adverse impacts have been documented, or when resources are known to be sensitive).

The permitting authority should forward PSD applications to the federal land manager for review and analysis as soon as possible after receipt. For national park system areas, the application should be sent to the National Park Service, Air Quality Division, Policy, Planning and Permit Review Branch, and notice should be provided to the NPS regional director and park superintendent. If a national wildlife refuge is involved, the application should be sent to the U.S. Fish and Wildlife Service, Air Quality Branch, and notice provided to the FWS regional director and the refuge manager. Appropriate addresses are given in Appendixes D and E.

Visibility

As required by the visibility protection provision of the Clean Air Act, additional procedural requirements apply when a proposed source has the potential to impair visibility in a class I area (40 CFR 52.27 (d)). Specifically, the permitting authority (a state or the Environmental Protection Agency) must, upon receiving a permit application for a source that may affect visibility in any class I area, notify the federal land manager in writing.

Such notification should include a copy of all information relevant to the permit application, including the proposed source's anticipated impacts

on visibility in a class I area. The permitting authority should also notify the federal land manager within 30 days of receipt of any advance notification of any such permit application.

The federal land manager must be notified in writing within 30 days of receiving the permit application and at least 60 days before any public hearing on the application.

Additional procedural requirements apply if the federal land manager notifies the permitting authority of a finding that the proposed source may adversely impact visibility in a class I area, or may adversely impact visibility in an integral (scenic) vista which may have been identified by a state for a class I area.

If the permitting authority agrees with the federal land manager's finding that visibility in a class I area may be adversely affected, the permit may not be issued. However, if the permitting authority agrees

If the permitting authority does not agree with the federal land manager's finding, in the public hearing notice for the project, the permitting authority must either explain its decision or indicate where the explanation can be obtained.

with the federal land manager's adverse impact finding regarding integral vistas, the permitting authority may still issue a permit if the emissions from the source are consistent with reasonable progress toward the national goal of preventing or remedying visibility impairment. In making this decision, the permitting authority may take into account the costs of compliance, the time needed for compliance, the energy and non-air quality environmental impacts of compliance, and the useful life of the source.

Generally, the federal land manager will make a preliminary determination regarding possible adverse visibility impacts within 30 days of receipt of all relevant information. The permitting authority should consult with the federal land manager on the completeness of a permit application, and to officially notify the federal land manager as soon as the application is considered complete.

Federal Land Manager Review of Applications

The FLM review of a PSD application for a proposed project that may impact an NPS or FWS class I area consists of three main analyses:

1. a best available control technology (BACT) analysis to ensure that the emission increases from the proposed project are minimized
2. an air quality analysis to ensure that the pollutant levels do not exceed ambient air quality standards and PSD increments
3. an air quality-related values analysis to ensure that the class I area values (i.e., visibility, flora, fauna, etc.) are not adversely affected by the proposed emissions

Each of these analyses is described in detail.

Best Available Control Technology Analysis

The applicant should conduct the BACT analysis using a top-down approach. In brief, a top-down process ranks all available control technologies in descending order of control effectiveness. The applicant first examines the most effective, or top, alternative. That alternative is established as the best available control technology unless the applicant demonstrates, and the permitting authority agrees, that technical considerations, or energy, environmental, or economic impacts justify a conclusion that the most stringent technology is not achievable in that case.

The permit applicant must perform a case-by-case BACT analysis that considers environmental, energy, and economic impacts for each regulated pollutant emitted in significant amounts.

If the most stringent technology is eliminated in this fashion, then the next most stringent alternative is considered, and so on. Permit applicants should refer to chapter B of the EPA New Source Review Workshop Manual for a detailed discussion of the top-down policy.

Note: The Environmental Protection Agency is reviewing its top-down policy, and this policy may be revised. However, regardless of the outcome of this review, permit applicants should carefully evaluate all air pollution control options more efficient than that proposed as the best available control technology in their BACT analysis.

The federal land manager reviews the applicant's BACT analysis to determine if the best available pollution control technology is being proposed, thereby minimizing the proposed emission increases and their corresponding impact on a class I area in question. If the federal land manager disagrees with the applicant's BACT analysis, technical comments are submitted to the permitting authority who has the ultimate responsibility to make the BACT determination and issue the permit.

The environmental impacts analysis is not to be confused with the air quality impact analysis discussed later. The environmental impacts analysis of the BACT review should concentrate on impacts other than ambient air quality impacts of the regulated pollutant in question, such as solid or hazardous waste generation, discharges of polluted water from a control device, visibility impacts, or emissions of unregulated pollutants. Thus, the fact that a given control alternative would result in only a slight improvement in ambient concentrations of the pollutant in question when compared to a less stringent control alternative should **not** be viewed as a basis for rejecting the more stringent control alternative.

Regarding the economic impact analysis, given the special protection class I areas are afforded under the Clean Air Act, the federal land manager believes that the need to minimize potential impacts on a class I area should be a major consideration in the BACT determination for a project proposed near such an area. Therefore, if a source proposes

to locate near a class I area, additional costs to minimize impacts on sensitive class I resources may be warranted, even though such costs may be considered economically unjustified under other circumstances.

If a permit applicant wants to locate a source near a class I area, the federal land manager contends that the applicant should be expected to do more to reduce emissions than an applicant proposing to locate elsewhere.

or

2. demonstrate to the federal land manager that the estimated concentrations will not have an adverse impact on air quality-related values.

Only option 1 is available to applicants if the proposed emissions would cause or contribute to exceeding a class II increment.

Air Quality Analysis

General. The permit applicant must also perform an air quality analysis for each pollutant subject to PSD review. This analysis should show the contribution of the proposed emissions to the total PSD increment consumption and to the existing ambient pollution levels in a class I park or refuge. Because proposed sources are not yet operating, the air quality analysis must rely on mathematical dispersion models to estimate the air quality impact of the proposed emissions.

The applicant should base the air quality review on approved models and procedures as specified in 40 CFR 52.21(l) (*Guideline on Air Quality Models*, revised July 1986, Environmental Protection Agency 1986). All assumptions for the analysis should be explicitly stated, and sufficient information on modeling input should be furnished so that the National Park Service can validate and duplicate the model analysis.

The model must make maximum use of meteorological data as specified in the referenced *Guideline on Air Quality Models*. If analysis indicates that proposed emissions would cause, or significantly contribute to exceeding class I increments, the applicant may

1. apply better control technology; downsize, change emission-producing processes, or relocate the source; or obtain emission offsets such that the source (in conjunction with offsets) no longer contributes to increment exceedance

The applicant may discuss the air quality analysis methodology with the National Park Service, Air Quality Division, before performing the analysis to ensure that the dispersion model and meteorological data base chosen for the analysis will adequately predict the impact on a class I area and its values.

Misuse of Significant Impact Levels.

In instances where cumulative impact analyses are lacking, permit applicants do not perform an analysis of the proposed source, plus all other PSD increment-consuming and background sources. The applicants often incorrectly claim that the proposed project would result in insignificant impacts, and therefore, no further analysis is required. Permit applicants generally cite two references to significant levels.

One common problem with air quality analyses submitted for FLM review is the lack of cumulative impact analyses.

The first reference is the term "significant" as defined in the PSD regulations (40 CFR 52.21(b)(23)) and used in pollutant-specific PSD applicability determinations. A PSD review applies to new major stationary sources and major modifications to existing major stationary sources (40 CFR 52.21). A major modification is defined as any physical change or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Clean Air Act. The Environmental Protection Agency establishes significant emission rates individually for each regulated pollutant (40 CFR 52.21(b)(23)(i)).

Consistent with the special emphasis Congress has placed on class I areas in developing amendments to the Clean Air Act, more stringent criteria apply to modifications at major stationary sources located near class I areas. Any net emission increase of a regulated pollutant at a major stationary source that is located within 10 km (6.2 miles) of a class I area must be examined for impacts with an air quality modeling analysis. If the maximum predicted impact on the class I area exceeds 1 microgram per cubic meter ($\mu\text{g}/\text{m}^3$) on a 24-hr basis, the emissions increase is considered significant and constitutes a major modification subject to PSD review (40 CFR 52.21(b)(23)(iii)).

This 1 $\mu\text{g}/\text{m}^3$ significance level is to be used only for PSD applicability determination purposes.

This level is used to determine if a proposed modification at a source located within 10 km (6.2 miles) of a class I area is major, and therefore, subject

to PSD review. This level should not be used to determine whether air quality impacts in class I areas are significant. Once a source is determined to be subject to PSD review, the federal land manager's responsibility is to determine if the proposed project would significantly impact a class I area. This determination is made on a case-specific basis, whereby the federal land manager may consider the existing air quality conditions, the sensitivity of the resources, and other relevant data.

The second reference to significance levels is discussed in the preamble to the Environmental Protection Agency PSD regulations (June 19, 1978), in terms of impacts to air quality (43 FR 26398 (1978)). In performing dispersion modeling analyses, the Environmental Protection Agency provides permit applicants with guidance in using the dispersion models. Generally, for PSD analyses in class II areas, the Environmental Protection Agency limits the application of air quality models to a downwind distance of 50 km (31 miles) due to limitations of the methods used to establish commonly used dispersion parameters. Also, since the air quality impact of many sources decreases rapidly with distance away from the sources, the Environmental Protection Agency usually extends

the analysis of impacts of a source only to the point where the concentrations from the source fall below certain class II area significant impact levels. For example, the sulfur dioxide significance levels are 25, 5, and 1 $\mu\text{g}/\text{m}^3$ for the 3-hr, 24-hr, and annual averaging times, respectively.

Oftentimes, permit applicants use the 1978 significance levels as a screening tool to determine the level of detail necessary in the air quality analysis. They neglect the agency's caution that this approach does not apply when a proposed source could be reasonably expected to

impact a class I area. For example, in non-class I situations, the significance levels are used to define the impact area of the proposed source. Accordingly, the impact area of a source is established by a circular area whose radius is equal to the greatest distance from the source to which approved dispersion modeling shows the proposed emissions will be at the significance levels. The permit applicant would then perform a cumulative modeling analysis that includes all air pollution sources affecting air quality in the impact area. Based on EPA guidance, if a proposed source is found to have no impact area (i.e., dispersion modeling demonstrates that proposed emissions will not exceed the referenced significance levels), further air quality analysis of that pollutant will generally not be required.

In the case of a class I area, however, an air quality analysis should be performed for each pollutant subject to review irrespective of the significance levels. This analysis should be cumulative, considering pollutant concentrations present in the class I area, the pollution contribution of sources permitted but not yet operating, and the concentration of pollutants contributed by the proposed source and any associated secondary growth.

The Environmental Protection Agency added, "since the 1977 amendments to the Clean Air Act provided special concern for class I areas, any reasonably expected impacts for these areas must be considered irrespective of the 50 km model limitation or the above significance levels."

The Environmental Protection Agency further clarified the use of significant impact levels in a September 10, 1991, policy memorandum from John Calcagni, Director of Environmental Protection Agency, Office of Air Quality Planning and Standards, Air Quality Management Division, to Thomas J. Maslany, Director of Environmental Protection Region III, Air, Radiation, and Toxics Division. Furthermore, although Mr. Calcagni's memorandum allows the state of Virginia to use alternative significant impact levels for class I increment analyses on a case-by-case basis, the memorandum prohibits their use for determining whether a source should conduct an adverse impact analysis for any air quality-related value in a class I area, or whether a source would have an adverse impact on a value.

Mr. Calcagni makes it clear that the significant impact levels that the agency established for use in some cases (e.g., sulfur dioxide 24-hr impact of $5 \mu\text{g}/\text{m}^3$) were never intended to be used for evaluating impacts on the class I increments or values.

Mr. Calcagni concludes by stating, "a determination concerning the need for a full assessment of an air quality-related value is made by the Federal Land Manager based on an analysis of the proposed source's (and other cumulative) potential impacts on a value for that particular class I area. This analysis is independent of the inquiry into whether a proposed source would have a significant impact on any applicable class I increment."

The problem with using predetermined significant impact levels, from a resource impact standpoint, is discussed in detail later in the Air Quality-related Values Analysis section. However, the following discussion illustrates the problem with the misuse of these levels from a class I increment consumption perspective.

The class I 24-hr and 3-hr sulfur dioxide increments are 5 and $25 \mu\text{g}/\text{m}^3$, respectively. As indicated previously, the 24-hr and 3-hr significance levels cited in the preamble to the 1978 PSD regulations are also 5 and $25 \mu\text{g}/\text{m}^3$. Using significant levels

that are equivalent to the respective class I increments makes little sense. Using these significance levels for class I areas would allow two insignificant sources, each contributing $4.99 \mu\text{g}/\text{m}^3$ (24-hr average), to cause concentrations nearly double the allowable class I increment, and yet both would be exempt from a detailed increment analysis.

Similarly, a source contributing $0.99 \mu\text{g}/\text{m}^3$ (24-hr average) at a class I area would consume nearly 20% of the class I increment, but still would be less than the $1 \mu\text{g}/\text{m}^3$ significant value cited in 40 CFR 52.21(b)(23)(iii), and would be exempt from detailed review. Applying the $5 \mu\text{g}/\text{m}^3$ or the $1 \mu\text{g}/\text{m}^3$ significance levels in these instances would preclude a cumulative impact analysis from being required, in essence, allowing potential class I increment violations. Using these levels would also preclude the federal land manager from making an informed decision regarding the potential impacts on a class I area resources. In addition, using a 24-hr significance level to determine the need for cumulative analyses may allow increment exceedances for the 3-hr or annual averaging times. In other words, the proposed source claiming to be insignificant (i.e., misapplying the $1 \mu\text{g}/\text{m}^3$ criteria) for the 24-hr averaging time could cause or contribute to increment violations for the 3-hr or annual averaging times.

Some applicants and state permitting agencies have misinterpreted the EPA guidance, and have used either of the significance criterion even though a source is proposing to locate near a class I area.

In technical review comments to the permitting authority, the federal land manager points out this misuse of significance levels and requests that applicants perform both cumulative increment and ambient analyses to assess the total im-

pacts on class I air quality. The federal land manager is considering a size and distance screening criteria for class I analysis. In the meantime, permit applicants should be aware of this problem, and to minimize potential delays in the permit review process should consult with the federal land manager to determine the need for, and extent of, detailed cumulative air quality impact analyses.

Modeling Distance Criteria. Regarding the distance limitation for using dispersion models in assessing class I area impacts, as referenced previously, although the Environmental Protection Agency limits the application of air quality models listed in the *Guideline on Air Quality Models, Appendix A*, to a downwind distance of 50 km (31 miles) in non-class I situations, any reasonably expected impacts for class I areas must be considered irrespective of the 50-km model limitation. Nevertheless, some state permitting agencies and permit applicants limit class I analyses to sources located within 100 km (62 miles) of a class I area.

The possibility of impacts from sources located more than 100 km from a class I area has long been recognized in EPA guidance, and limiting analysis to an area within 100 km is inconsistent with this guidance.

For example, in the March 19, 1979, guidance memorandum regarding federal land manager notification of pending permit applications for major new sources, the Environmental Protection Agency states that

notice should be provided [to the federal land manager] for any facility which will be located within 100 km of a Class I area. Very large sources, however, may be expected to affect air quality related values at distances greater than 100 kilometers. The appropriate Federal Land Manager should be notified if such impacts are expected on a case-by-case basis.

If the Environmental Protection Agency intended that the federal land manager be notified of certain projects located more than 100 km from a class I area, the potential impacts of these sources are to be assessed (i.e., modeled). In fact, the EPA *Guideline on Air Quality Models* also acknowledges the potential for impacts from more distant sources and indicates that the federal land manager should be consulted regarding the selection of an appropriate model to use in the analysis. Section 7.2.6. states in part that

section 165(e) of the Clean Air Act requires that suspected significant impacts on PSD class I areas be determined. However, the useful distance to which most Gaussian models are considered accurate for setting emission limits is 50 km. Since in many cases class I areas may be threatened at distances greater than 50 km from sources, some procedure is needed to (1) determine if a significant impact will occur, and (2) identify the model to be used in setting an emission limit if the class I increments are threatened (models for this purpose should be approved for use on a case-by-case basis as required in Section 3.2). **This procedure and the models selected for use should be determined in consultation with the EPA Regional Office and the appropriate federal land manager** (emphasis added).

The notification and consultation requirements are consistent with, and incorporated into, the EPA New Source Review Workshop Manual, which has been widely disseminated to permitting agencies. This recent guidance supports modeling of major sources beyond 100 km, as indicated on page E.16 of the manual:

Also, if a major source proposing to locate at a distance greater than 100 km is of such size that the reviewing agency or the federal land manager is concerned about potential emission impacts on a class I area, the reviewing agency can require the applicant to perform an analysis of the source's potential emissions impact on the class I area. This is because certain meteorological conditions, or the quantity, or type of air emissions from large sources locating further than 100 km, may cause adverse impacts on a class I area. A reviewing agency should not exclude a major new source or major modification from performing an analysis of the potential impacts if the federal land manager identifies some reason to believe that the source would affect a class I area.

The Environmental Protection Agency further clarified its guidance regarding class I area modeling in an October 19, 1992, policy memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards. Mr. Seitz states that "the Agency's position is that generally a 100 kilometer range is an acceptable modeling domain. However, impacts from large sources located at distances greater than 100 kilometers need to be considered when such impacts reasonably could affect the outcome of the Class I analysis." Mr. Seitz concludes that "circumstances may warrant consideration of other sources (initially using various screening techniques) which are located more than 100 kilometers from a Class I area. . . ." and the modeling protocols should be "determined on a case-by-case basis in consultation with the appropriate EPA Regional office and **Federal Land Manager**" (emphasis added).

Therefore, the federal land manager recommends that the analysis of increment consumption and impacts on air quality-related values not be limited to 100 km, but should include all increment-consuming sources and other large sources that could impact the class I area. In fact, such analysis is required by section 165(d)(2)(c)(i) of the Clean Air Act.

The federal land manager, on a case-by-case basis, may recommend that the applicant perform a refined modeling analysis using a long-range transport model. The use of long-range transport models requires the approval of the EPA regional office. Advances in the science of long-range transport modeling continue to result in more refined models being developed.

In appropriate cases, the federal land manager and the Environmental Protection Agency will recommend using these more refined long-range transport models to assess impacts beyond 50 km. The applicant should consult with the federal land manager before using a long-range transport model.

Air Quality-related Values Analysis

In addition to the control technology and air quality analyses discussed in the previous sections, the federal land manager's review of a PSD application includes an analysis of potential effects to class I area air quality-related values.

General. Air quality-related values (AQRV) are generally expressed in broad terms. The impacts of increased pollutant levels on some air quality-related values may be assessed by measuring specific parameters that reflect the status

of these values. For instance, the projected impact on the presence and vitality of certain species of plants or animals may indicate the potential impact of pollutants on air quality-related values associated with species diversity, or with possible impacts on certain endangered species. Similarly, a value associated with water quality may be measured by the pH or acid neutralizing capacity of a water body, or by the level of certain nutrients in the water. The air quality-related values of various class I areas may differ, depending on the purposes and characteristics of a particular area. Also, the concentration at which a pollutant adversely impacts a value may vary among class I areas.

When evaluating the effects of air emissions from a proposed source on a class I area's air quality-related values, the federal land manager is not concerned solely with the proposed project's estimated air quality impact, but rather with the total pollutant concentration the air quality-related values will experience.

A cumulative air quality analysis in which the proposed source and any recently permitted (but not yet operating) sources in the area are modeled is an important part of any AQRV analysis. This total modeled concentration is then added to measured ambient levels in order to assess the effect of the anticipated ambient concentrations on air quality-related values. Without such an analysis, the total pollutant level to which the air quality-related values would be exposed cannot be esti-

mated, and the federal land manager cannot make an informed decision regarding potential impacts on the class I area resources. As required by law, the federal land manager's responsibility is to conserve and protect the resources for present and future generations.

Effects Versus Significant Impact Levels.

Frequently the AQRV analysis, which an applicant must prepare, lacks a cumulative analysis. As with the air quality analysis, applicants often use the EPA significance levels, discussed in the previous section, as guidance for assessing air quality impacts to air quality-related values. If the proposed emissions alone result in estimated concentrations below the EPA significance levels, applicants often conclude the proposed emissions will have an insignificant impact on class I area air quality-related values, and a cumulative modeling analysis is not performed. Again, this is misinterpreting the EPA guidance regarding significance levels.

Using the EPA significance levels, in an absolute sense, does not provide the assurance the federal land manager needs to be convinced that a particular class I area will be adequately protected. Therefore, an applicant should not conclude that just because an impact is less than the significant impact level for class I increments, that such an impact is insignificant with respect to effects on air quality-related values. However, the federal land manager believes the converse to be true. In other words, if an impact is considered significant with respect to a class I increment, it seems reasonable to conclude that such an impact is also significant with respect to effects on air quality-related values, especially in the case where air quality-related values are being adversely impacted by current air pollution levels (e.g., at Shenandoah and Great Smoky Mountains national parks).

The Environmental Protection Agency did not intend using significance levels for sources locating near class I areas to be the only criterion in reaching this conclusion, and they deferred to the federal land manager to determine the need for a full assessment of impacts on air quality-related values.

The federal land manager's assessment of potential effects on air quality-related values considers the sensitivities of specific air quality-related values found in a class I area and the existing air pollution effects on these resources. Consequently, significance levels may differ depending on the conditions that currently exist at a particular class I area. If the threshold concentration for effects on sensitive class I area resources is being approached, a significant impact could possibly occur at concentrations below the EPA significance levels. Once the effects threshold is actually reached, any increase in class I area pollutant concentrations may be significant.

For example, the federal land manager has expressed concern that visibility, aquatic, and terrestrial resources at Shenandoah National Park, a class I area in Virginia, are currently being adversely impacted by air pollution (September 18, 1990, *Federal Register*, 55 FR 38403). The federal land manager also is concerned that the effects of additional emissions proposed for the area would contribute to, and exacerbate, the existing adverse effects and are, therefore, unacceptable. Consequently, the federal land manager recommended that no new major emission sources be permitted near Shenandoah National Park unless such sources would be assured of not contributing to the adverse impacts. The federal land manager expressed similar concerns about Great Smoky Mountains National Park, a class I area in Tennessee and North Carolina (February 5, 1992, *Federal Register*, 57 FR 4465).

As another example, because of the relatively high sulfur dioxide concentrations estimated at Theodore Roosevelt National Park, and the specific air quality-related values found at the park that are known to be sensitive to sulfur dioxide (e.g., lichens), the North Dakota State Department of Health and the federal land manager agreed that the 24-hr significance level for sulfur dioxide should be $0.2 \mu\text{g}/\text{m}^3$ for proposed projects impacting the park. Pollutant concentrations at the park were below the effects threshold for lichens. As conditions change, based on scientific data, the significant impact level for Theodore Roosevelt National Park may even be lower for future applications.

Significance levels for air quality-related values must be based on scientific data on a case-by-case basis to reflect the particular facts and current knowledge in each situation over time. Therefore, the federal land manager recommends that permit applicants proposing to construct facilities that could potentially impact a class I area consult with the federal land manager to determine the specific sensitivities of air quality-related values and the requirements of the cumulative impact analysis in their PSD application.

Effects Versus Secondary National Ambient Air Quality Standards (NAAQS). Some applicants claim that a proposed source would not cause any adverse impacts on class I resources because emissions from the project would not cause or contribute to a violation of the secondary National Ambient Air Quality Standards that have been established to protect public welfare. Such a statement by the applicant is not acceptable. In fact, an express purpose of the PSD regulations is to protect public welfare from any actual or potential adverse effects, notwithstanding attainment and maintenance of all National Ambient Air Quality Standards.

The reasons for this distinction are clear. The NAAQS-setting process does not necessarily focus on the types of diversity of vegetation set aside for protection in national park areas or wildlife refuges. The secondary National Ambient Air Quality Standards are typically based primarily on effects on cash crops, such as wheat and tobacco, rather than sensitive park or refuge soils or vegetation. In addition, the secondary National Ambient Air Quality Standards are national levels that protect against effects from multiple and diverse sources. These standards do not necessarily provide adequate protection for sensitive species found in only certain areas of the country, and they do not address deposition effects or synergistic effects of multiple pollutants. Similarly, the secondary National Ambient Air Quality Standards do not adequately protect visibility, which is an important air quality-related value in most class I areas. In areas that are relatively pristine, small increases in pollutant concentrations can cause significant visibility degradation. For example, a $1 \mu\text{g}/\text{m}^3$

addition of fine particulate matter in a clear atmosphere may reduce visual range by 30%. Therefore, as research continues to confirm, instances exist where adverse effects to air quality-related values can occur at levels below the secondary National Ambient Air Quality Standards.

A summary of the literature on the relevant air pollution effects for ozone, nitrogen oxide, and acidifying nitrates and sulfates is provided in the technical support document for the FLM adverse impact determination for Great Smoky Mountains National Park (U.S. Department of the Interior, National Park Service 1992, unpublished report). This document is accessible through the EPA new source review electronic bulletin board, or from the Air Quality Division.

Effects on Visibility. Regarding the visibility analysis, the federal land manager recommends that the applicant first use the VISCREEN model as recommended in the EPA *Workbook for Plume Visual Impact Screening and Analysis* (Environmental Protection Agency 1988), rather than the EPA original 1980 Visibility Workbook. To satisfy specific FLM needs with respect to impacts on the visual resources of NPS and FWS lands, the permit applicant should consider the following guidance in the visibility impact demonstration.

The federal land manager has consulted with the Environmental Protection Agency, Office of Air Quality Planning and Standards, regarding the background visual range values included in the VISCREEN model. Where available, these more appropriate values should be used in the analysis, which should also address the seasonal variability in background visibility.

The National Park Service is very concerned about protecting the best visibility days from degradation because those days are the most sensitive to impairment (i.e., visibility is more rapidly and perceptibly

The National Park Service now has site-specific data for many class I areas which, in some cases, (e.g., Colorado Plateau, Great Basin) indicate greater background visual range values than those cited in the 1988 workbook.

affected if the atmosphere is initially "clean"). This policy is supported by the national visibility goal of preventing any future and remedying any existing visibility impairment. Therefore, the federal land manager has been recommending that permit applicants use the top 10% background visual range values. The National Park Service is working with the Environmental Protection Agency to document this approach in a revised VISCREEN manual.

If the permit applicant fails the VISCREEN visibility analyses, the applicant should then perform a more sophisticated visibility analysis using the EPA PLUVUE II model. The National Park Service is available to discuss the use of the VISCREEN and PLUVUE II models.

The National Park Service also recommends that applicants consider visibility impacts on scenic views from class I areas as part of the visibility analysis. Applicants should be aware of state requirements for analysis of impacts on integral vistas which, at a minimum, includes vistas that have been appropriately identified by the federal land manager. These analyses should be in accordance with the regulations published in the December 2, 1980, *Federal Register*. Pictorial presentation of the results using photographs, computer simulations, or artist's conceptions would be beneficial.

In addition to potential plume impacts, potential exists for proposed sources to contribute to existing regional haze levels.

Regional haze is a problem that impairs visibility in many class I parks and refuges. Preliminary work on methods for assessing single-source impacts on regional haze has

been conducted, and the federal land manager is willing to provide guidance to permit applicants on conducting acceptable haze impact analyses.

In summary, a complete permit application should include a thorough AQRV analysis, including analysis of the impacts on visibility, soils, water, odor, flora, and fauna, that would occur as a result of the source or modification, in conjunction with all other emission sources affecting an area. Also, an air quality impact analysis is required to predict

the effects of general commercial, residential, industrial, and other growth associated with the source or modification.

To assist the applicant in performing these additional impact analyses, the National Park Service will provide the applicant, within 60 days of the applicant's request, a list of sensitive resources in the potentially impacted class I area. The applicant should submit the request to the National Park Service, Air Quality Division.

Ambient Air Quality and Air Quality-related Values Monitoring Requirements

A complete permit application must also contain representative ambient air monitoring data. In general, at least one year of data is required. For projects located in the proximity of NPS or FWS class I areas, the National Park Service, Air Quality Division, should be contacted to facilitate installing monitoring equipment in the class I areas. The Air Quality Division initiates most air monitoring studies in the national parks, with the cooperation of the appropriate NPS regional office and park superintendent. The division will also coordinate monitoring efforts with the appropriate FWS authorities, if applicable. The National Park Service currently conducts monitoring in each of its 48 class I parks, and these data may be appropriate for using in permit applications. A summary of the NPS air quality monitoring activities is included in Appendix F. The NPS-collected data are in the EPA Aerometric Information Retrieval System (AIRS) and can be readily retrieved from this system. Contacting the Air Quality Division can help avoid duplication of effort with respect to ambient air quality monitoring.

In addition to preconstruction ambient monitoring, in certain instances, permit applicants may have to conduct pre- or postconstruction visibility or biological effects monitoring or studies. Permit applicants should consult with the federal land manager regarding the need for additional AQRV monitoring or studies.

Adverse Impact Considerations

The legislative history of the Clean Air Act provides direction to the federal land manager on how to comply with the affirmative responsibility to protect air quality-related values in class I areas:

The Federal land manager holds a powerful tool. He is required to protect Federal lands from deterioration of an established value, even when class I numbers are not exceeded. . . . While the general scope of the Federal Government's activities in preventing significant deterioration has been carefully limited, the Federal land manager should assume an aggressive role in protecting the air quality values of land areas under this jurisdiction. . . . In cases of doubt the land manager should err on the side of protecting the air quality-related values for future generations (Senate Report No. 95-127, 95th Congress, 1st Session, 1977).

The assistant secretary for Fish and Wildlife and Parks, as federal land manager for NPS- and FWS-managed class I areas, has stated that air pollution effects on resources in class I areas constitute an unacceptable adverse impact if such effects

1. diminish the national significance of the area
2. impair the quality of the visitor experience
3. impair the structure and functioning of ecosystems

Also, the federal visibility protection regulations (40 CFR 51.300, *et seq.*, 52.27) define adverse impact on visibility as

visibility impairment which interferes with the management, protection, preservation or enjoyment of the visitor's visual experience of the Federal class I area. This determination must be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency and time of visibility impairment, and how these factors correlate with: (1) times of visitor use of the Federal class I area, and (2) the frequency and timing of natural conditions that reduce visibility.

. . . (Id. 51.301(a))

The internal procedures used by the federal land manager for determining adverse impact under section 165(d)(2)(C)(ii) and (iii) of the Clean Air Act are presented in Appendix G; see also 47 FR 30223, July 12, 1982. The procedures have been modified in some cases. Such modifications have been necessary because the federal land manager often does not have sufficient time after being notified that a permit application is complete to publish a *Federal Register* notice, solicit and consider comments, and make a final adverse impact determination. Permitting authorities typically provide the federal land manager 60 days or less to submit comments on a complete application. Although decisions on particular permits are always made on a case-by-case basis, public comments may be solicited in advance on a range of issues or recommendations (e.g., 55 FR 38403, September 18, 1990, and 57 FR 4465, February 5, 1992).

Factors that are considered in determining whether an effect is unacceptable, and therefore adverse, include the projected frequency, magnitude, duration, location, and reversibility of the impact.

Literature Cited

Environmental Protection Agency. 1986. Guideline on air quality models. Revised. EPA-450/2-78-027R.

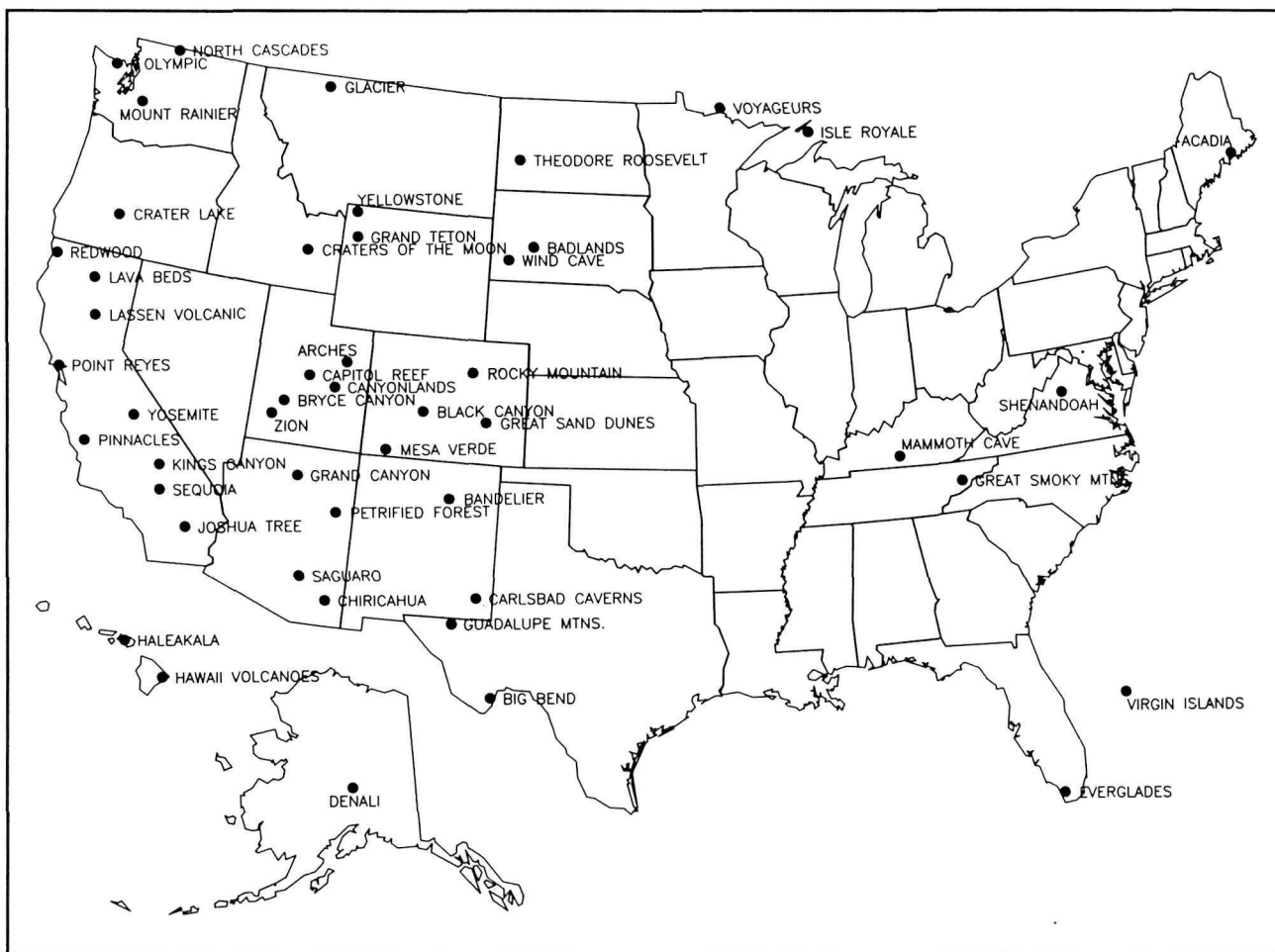
Environmental Protection Agency. 1988. Workbook for plume visual impact screening and analysis. EPA-450/4-88-015.

Environmental Protection Agency. 1990. New source review workshop manual. Draft.

U.S. Department of the Interior, National Park Service. 1992. Technical support document regarding adverse impact determination for Great Smoky Mountains National Park. Unpublished report.

Appendix A.

NPS Class I Areas



Appendix B.

FWS Class I Areas



Appendix C.

Class II Areas Possessing Air Quality-related Values as Important Attributes

Area Name	State or Territory
Glacier Bay National Park and Preserve	AK
Katmai National Park & Preserve	AK
Canyon de Chelly National Monument	AZ
*Chiricahua National Monument	AZ
Organ Pipe Cactus National Monument	AZ
*Saguaro National Monument	AZ
Sunset Crater National Monument	AZ
Wupatki National Monument	AZ
Channel Islands National Park	CA
Death Valley National Monument	CA, NV
*Joshua Tree National Monument	CA
*Lava Beds National Monument	CA
Muir Woods National Monument	CA
*Pinnacles National Monument	CA
*Black Canyon of the Gunnison National Monument	CA
Colorado National Monument	CO
Dinosaur National Monument	CO, UT
*Great Sand Dunes National Monument	CO
Big Cypress National Preserve	FL
Biscayne National Park	FL
Fort Jefferson National Monument	FL
*Craters of the Moon National Monument	ID
*Bandelier National Monument	NM
Capulin Volcano National Monument	NM
El Morro National Monument	NM
Gila Cliff Dwellings National Monument	NM
White Sands National Monument	NM
John Day Fossil Beds National Monument	OR
*Badlands National Park	SD
Cedar Breaks National Monument	UT
Natural Bridges National Monument	UT
Buck Island Reef National Monument	VI
Devil's Tower National Monument	WY
Fossil Butte National Monument	WY

*Federal wilderness areas already designated class I.

Appendix D.

NPS Permit Notification List

In all cases notify:

Chief, Policy, Planning and Permit
Review Branch
National Park Service
Air Quality Division
P.O. Box 25287
Denver, CO 80225-0287

	Region	State
Notify regional director at:	Alaska Regional Office National Park Service 2525 Gambell Street Anchorage, AK 99503	Alaska
	Mid-Atlantic Regional Office National Park Service 143 South Third Street Philadelphia, PA 19106	Pennsylvania, Maryland, West Virginia, Delaware, Virginia, excluding parks assigned to National Capital Region
	Midwest Regional Office National Park Service 1709 Jackson Street Omaha, NE 68102	Ohio, Indiana, Michigan, Wisconsin, Illinois, Minnesota, Iowa, Missouri, Nebraska, Kansas
	National Capital Regional Office National Park Service 1100 Ohio Drive, S.W. Washington, D.C. 20242	District of Columbia, some units in Maryland, Virginia, West Virginia

Region**State**

North Atlantic Regional Office
National Park Service
15 State Street
Boston, MA 02109

Maine, New Hampshire,
Vermont, Massachusetts,
Rhode Island,
Connecticut, New York,
New Jersey

Pacific Northwest Regional Office
National Park Service
83 South King Street, Suite 212
Seattle, WA 98104

Idaho, Oregon,
Washington

Rocky Mountain Regional Office
National Park Service
P.O. Box 25287
Denver, CO 80225-0287

Montana, North Dakota,
South Dakota, Wyoming,
Utah, Colorado

Southeast Regional Office
National Park Service
75 Spring Street, S.W.
Atlanta, GA 30303

Kentucky, Tennessee,
North Carolina, South
Carolina, Mississippi,
Alabama, Georgia,
Florida, Puerto Rico,
Virgin Islands

Southwest Regional Office
National Park Service
P.O. Box 728
Santa Fe, NM 87504

Arkansas, Louisiana,
Texas, Oklahoma, New
Mexico, northeast corner
of Arizona

Western Regional Office
National Park Service
600 Harrison Street, Suite 600
San Francisco, CA 94107-1372

California, Nevada, most
of Arizona, Hawaii

**Notify NPS class I
area superintendent at:**

Parks

Acadia National Park
P.O. Box 177
Bar Harbor, ME 04609

Arches National Park
P.O. Box 907
Moab, UT 84532

Badlands National Park
P.O. Box 6
Interior, SD 57750

Bandelier National Monument
HCR 1, Box 1, Suite 15
Los Alamos, NM 87544

Big Bend National Park
Big Bend National Park, TX 79834

Black Canyon of the Gunnison
National Monument
P.O. Box 1648
Montrose, CO 81402

Bryce Canyon National Park
Bryce Canyon, UT 84717

Canyonlands National Park
125 West 200 South
Moab, UT 84532

Capitol Reef National Park
Torry, UT 84775

Carlsbad Caverns National Park
3225 National Parks Highway
Carlsbad, NM 88220

Chiricahua National Monument
Dos Cabezas Route, Box 6500
Willcox, AZ 85643

Crater Lake National Park
P.O. Box 7
Crater Lake, OR 97604

Craters of the Moon
National Monument
P.O. Box 29
Arco, ID 83213

Denali National Park and
Preserve
P.O. Box 9
McKinley Park, AK
99755

Everglades National Park
P.O. Box 279
Homestead, FL 33030

Glacier National Park
West Glacier, MT 59936

Grand Canyon National
Park
P.O. Box 129
Grand Canyon, AZ
86023

Grand Teton National
Park
P.O. Box 170
Moose, WY 83012

Great Sand Dunes
National Monument
11500 Highway 150
Mosca, CO 81146

Great Smoky Mountains
National Park
Gatlinburg, TN 37738

Guadalupe Mountains
National Park
HC 60, Box 400
Salt Flat, TX 79847-9400

Haleakala National Park
P.O. Box 369
Makawao, HI 96768

Parks

Hawaii Volcanoes National
Park, HI 96718

Isle Royale National Park
87 North Ripley Street
Houghton, MI 49931

Joshua Tree National
Monument
74485 National Monument
Drive
Twentynine Palms, CA 92277

Kings Canyon National Park
c/o Sequoia and Kings Canyon
National Parks
Three Rivers, CA 93271

Lassen Volcanic National Park
P.O. Box 100
Mineral, CA 96063-0100

Lava Beds National Monument
P.O. Box 867
Tulelake, CA 96134

Mammoth Cave National Park
Mammoth Cave, KY 42259

Mesa Verde National Park
Mesa Verde National Park,
CO 81330

Mount Rainier National Park
Tahoma Woods, Star Route
Ashford, WA 98304-9801

North Cascades National Park
2105 Highway 20
Sedro Woolley, WA 98284

Olympic National Park
600 East Park Avenue
Port Angeles, WA 98362

Petrified Forest National Park
Petrified Forest National Park,
AZ 86028

Pinnacles National Monument
Paicines, CA 95043

Point Reyes National Seashore
Point Reyes, CA 94956

Redwood National Park
1111 Second Street
Crescent City, CA 95531

Rocky Mountain National Park
Estes Park, CO 80517

Saguaro National Monument
3693 South Old Spanish Trail
Tucson, AZ 85730-5699

Sequoia National Park
c/o Sequoia and Kings Canyon
National Parks
Three Rivers, CA 93271

Shenandoah National Park
Route 4, Box 348
Luray, VA 22835

Theodore Roosevelt National
Park
P.O. Box 7
Medora, ND 58645

Virgin Island National Park
#10 Estate Nazareth
St. Thomas, VI 00802

Voyageurs National Park
P.O. Box 50
International Falls, MN 56649

Wind Cave National Park
Hot Springs, SD 57747

Yellowstone National Park
P.O. Box 168
Yellowstone National Park, WY
82190

Yosemite National Park
P.O. Box 577
Yosemite National Park, CA
95389

Zion National Park
Springdale, UT 84767

Appendix E.

FWS Permit Notification List

In all cases notify:

Chief, Air Quality Branch
U.S. Fish and Wildlife Service
c/o National Park Service
Air Quality Division
P.O. Box 25287
Denver, CO 80225-0287

Notify regional director at:

Region

States

Fish and Wildlife Service Region 1
911 NE 11th Avenue
Eastside Federal Complex
Portland, OR 97232

Washington, Oregon,
Idaho, Nevada, Hawaii,
California

Fish and Wildlife Service Region 2
P.O. Box 1306
Albuquerque, NM 87103

Arizona, New Mexico,
Oklahoma, Texas

Fish and Wildlife Service Region 3
Federal Building, Fort Snelling
Twin Cities, MN 55111

Minnesota, Wisconsin,
Illinois, Indiana, Ohio,
Iowa, Missouri, Michigan

Fish and Wildlife Service Region 4
75 Spring Street, S.W.
Atlanta, GA 30303

Arkansas, Louisiana,
Mississippi, Alabama,
Georgia, Florida, North
Carolina, South Carolina,
Tennessee, Kentucky,
Puerto Rico

Region**States**

Fish and Wildlife Service
Region 5
One Gateway Center, Suite 700
Newton Corner, MA 02158

Virginia, West Virginia, Maryland,
Delaware, Pennsylvania, New Jersey,
New York, Vermont, New Hampshire,
Massachusetts, Connecticut,
Rhode Island, Maine

Fish and Wildlife Service
Region 6
P.O. Box 25486
Denver Federal Center
Denver, CO 80225

Montana, Wyoming, North Dakota,
South Dakota, Nebraska, Utah,
Colorado, Kansas

Fish and Wildlife Service
Region 7
1011 E. Tudor Road
Anchorage, AK 99503

Alaska

**Notify FWS class I area
refuge manager at:**

Refuge Areas

Bering Sea
Alaska Maritime National
Wildlife Refuge
202 West Pioneer Avenue
Homer, AK 99603

Breton
Bogue Chitto National
Wildlife Refuge
1010 Gause Blvd., Bldg. 936
Slidell, LA 70458

Brigantine
Edwin B. Forsythe National
Wildlife Refuge
Great Creek Road, Box 72
Oceanville, NJ 08231

Bosque del Apache
Bosque del Apache National
Wildlife Refuge
Box 1246
Socorro, NM 87801

Cape Romain
Cape Romain National
Wildlife Refuge
390 Bulls Island Road
Awendaw, SC 29429

Chassahowitzka
Chassahowitzka National
Wildlife Refuge
7798 S. Suncoast Blvd.
Route 2, Box 44
Homosassa, FL 32646

Lostwood
Lostwood National
Wildlife Refuge
Rural Route 2, Box 98
Kenmare, ND 58746

Medicine Lake
Medicine Lake National
Wildlife Refuge
HC 51, Box 2
Medicine Lake, MT
59247

Mingo
Mingo National
Wildlife Refuge
Rural Route 1, Box 103
Puxico, MO 63960

Moosehorn (Edmunds
and Baring Units)
Moosehorn National
Wildlife Refuge
Box 10077
Calais, ME 04619

Okefenokee
Okefenokee National
Wildlife Refuge
Route 2, Box 338
Folkston, GA 31537

Red Rock Lakes
Red Rock Lakes National
Wildlife Refuge
Monida Star Route
Box 15
Lima, MT 59739

Salt Creek
Bitter Lake National
Wildlife Refuge
Box 7
Roswell, NM 88202-0007

Seney
Seney National
Wildlife Refuge
Seney, MI 49883

Simeonof
Alaska Maritime National
Wildlife Refuge
202 West Pioneer Avenue
Homer, AK 99603

St. Marks
St. Marks National
Wildlife Refuge
Box 68
St. Marks, FL 32355

Swanquarter
Mattamuskeet National
Wildlife Refuge
Route 1, Box N-2
Swanquarter, NC 27885

Tuxedni
Alaska Maritime National
Wildlife Refuge
202 W. Pioneer Avenue
Homer, AK 99603

UL Bend
Charles M. Russell National
Wildlife Refuge
Box 110
Lewistown, MT 59457

Wichita Mountains
Wichita Mountains National
Wildlife Refuge
Route 1, Box 448
Indiahoma, OK 73552

Wolf Island
Georgia Coastal Complex
Box 8487
Savannah, GA 31412

Appendix F.

NPS Air Quality Monitoring Activities

UNIT	--CAA--	T	N	C	FP	MET	S02	O3	TSP	N02	W	COMMENTS
ACADIA NP	I	X		X	I	X	i	X			X	N02/ROC COLLECTED 1991 (S02 88-91)
ARCHES NP	I			*	*	*	*	*				GPM REMOVED 7/92 (1987-92)
BADLANDS NP	I	X		X	I	*	i	*				GPM REMOVED 10/92 (1987-92)
BANDELIER NM	I	X		X	I	X	i&c	X				S02/O3 OPERATED AT LANL BY STATE
BERING LAND BRIDGE N PRES		II			S							
BIG BEND NP	I	X		X	I	X	i	X			X	
BIG THICKET NP		II				*		*				GPM REMOVED 6/92 (1985-92)
BLACK CANYON OF THE GUNNISON NM	I			X								BLM FUNDING
BRYCE CANYON NP	I			X	I	X					X	
BUFFALO NR		II		*	*				X		X	
CANYONLANDS NP	I	X		X	I	X		X				GPM INSTALLED 8/92
CAPE COD NS		II						X			X	N02/ROC COL.'91, STATE/NPS OPER.
CAPITOL REEF NP	I			*								
CAPULIN VOLCANO NM		II		*	*						X	
CARLSBAD CAVERNS NP	I			*	*							FP
CHACO CULTURE NHP		II		*	*							
CHANNEL ISLANDS NP		II					c	X		X		OPERATED BY VENTURA COUNTY
CHIRICAHUA NM	I	X		X	I	X	i	X				NDDN
COLORADO NM		II		*		*	*	*				GPM REMOVED 7/92 (1989-92)
CONGAREE SWAMP NM		II					c	X	X	X		OPERATED BY STATE
CRATER LAKE NP	I		X	X	I							
CRATERS OF THE MOON NM	I			X	*	X		X			X	GPM INSTALLED 9/92
CUYAHOGA VALLEY NM		II				*	c	*				GPM REMOVED 5/92 (1989-92)
DEATH VALLEY NM		II		*	*	X			X			
DENALI NP	I			X	I	X	i	X			X	
DINOSAUR NM		II		*	*	X						
EVERGLADES NP	I			*	I	X	i	X			X	(S02 86-88)
GATES OF THE ARCTIC NP & PRES		II			S							
GLACIER NP	I	X		X	I	X	i	X			X	NDDN
GLEN CANYON NRA		II										
GRAND CANYON NP	I	X		X	I	X	i	X			X	NDDN-NPS COMPARABILITY SITE
GRAND TETON NP	I			*	*							
GREAT BASIN NM		II	X	X	I						X	
GREAT SAND DUNES NM	I			X	I	*	*	*				GPM REMOVED 10/91 (1988-91)
GREAT SMOKY MOUNTAINS NP	I		X	X	I	X		X	X		X	3 OZONE SITES (1 SEASONAL)
GUADALUPE MOUNTAINS NP	I	X		X	I	X	i	*			X	GPM REMOVED 10/92 (1987-92)
HALEAKALA NP	I			X	I	X	i	X				
HAWAII VOLCANOES NP	I			X	I	X	c	X				
INDIANA DUNES NL		II				X	c	X	X		X	
ISLE ROYALE NP	I			*	*	X	i	*			X	OZONE (1987-91)
JOSHUA TREE NM	I			*	*	X		X				
KATMAI NP & PRES		II			S							
KINGS CANYON NP	I							X				SEE SEQUOIA NP
LAKE MEAD NRA		II										
LASSEN VOLCANIC NP	I			X	I	X		X				
LAVA BEDS NM	I			*	*							
LITTLE BIGHORN BNM		II									X	
MAMMOTH CAVE NP	I		X	X	I	X		X	X			
MESA VERDE NP	I	X		X	I	X		X			X	GPM TO BE INSTALLED FY93
MOUNT RAINIER NP	I		X	X	I	X		X				GPM INSTALLED 11/92
NATIONAL MALL		II		X	I							

UNIT	--CAA--	T	N	C	FP	MET	SO2	O3	TSP	NO2	W	COMMENTS
NAVAJO NM	II			*								
NORTH CASCADES NP	I			*	*						X	
NORTHWEST ALASKA AREA	II				S							
OLYMPIC NP	I			*		X	c	X			X	
ORGAN PIPE CACTUS NM	II										X	
PETRIFIED FOREST NP	I	X		X	I	*	*	*				GPM REMOVED 4/92 (1987-92)
PINNACLES NM	I	X		X	I	X	i	X				
POINT REYES NS	I			X	I	*	i	*				GPM REMOVED 11/92 (1988-92)
REDWOOD NP	I			X	I	X	i	X				
ROCKY MOUNTAIN NP	I	X		X	I	X		X			X	
SAGUARO NM	I			X	I	X	i&c	X				
SANTA MONICA MOUNTAINS NRA	II							*				GPM REMOVED 4/92 (1987-92)
SEQUOIA NP	I				I	X		X	X		X	4 SITES, ONLY 1 W/MET
SHENANDOAH NP	I	X	X	X	I	X	c	X			X	NDDN-NPS COMPAR. SITE. 3-O3, 2-SO2
STEAMTOWN NHS	II											SHORT-TERM SO2 & PM-10 STUDY 90/91
THEODORE ROOSEVELT NP	I			*	*	X	c	X	X		X	OPERATED BY STATE; ALSO H2S
TONTO NM	II	X		X	I							SUBSTITUTION FOR USFS IMPROVE SITE
VIRGIN ISLANDS NP	I				I							
VOYAGEURS NP	I			X	I	X	i	X				VISIBILITY FUNDED BY BOISE CASCADE
WIND CAVE NP	I			*	*							
WRANGELL/ST. ELIAS NP & PRES	II				S							
YELLOWSTONE NP	I	X		X	I	X	i	X			X	
YOSEMITE NP	I	X		X	I	X		X	X		X	4 SITES(3-NPS 1-ST) 1 MET (CO-92)
YUKON-CHARLIE RIVERS N PRES	II				S	X						
ZION NP	I			*								
TOTAL/CURRENT MONITORING	48	28	18	5	35	42	36	26	34	9	2	27
TOTAL/DISCONTINUED MONITORING			0	0	20	15	8	4	11	0	0	0

C = CAMERA	MET = METEOROLOGICAL STATION	SO2 = SULFUR DIOXIDE
CAA = CLEAN AIR ACT CLASSIFICATION	N = NEPHELOMETER	T = TRANSMISSOMETER
FP = FINE PARTICLE	NO2 = NITROGEN DIOXIDE	TSP = TOTAL SUSPENDED PARTICULATE
I = IMPROVE PARTICLE SAMPLER (I- TO BE INSTALLED)	O3 = OZONE	W = PRECIPITATION CHEMISTRY
ROC = REACTIVE ORGANIC COMPOUNDS	S = STACKED FILTER UNIT	X+ = TO BE INSTALLED
* = REMOVED DUE TO LACK OF FUNDS NEEDED TO MAINTAIN NECESSARY EQUIPMENT.	c = CONTINUOUS SAMPLING	i = 7-DAY INTEGRATED

Appendix G.

Internal Procedures for Determining Adverse Impacts

Register
Federal Register

Monday
July 12, 1982

Part VI

Department of the Interior

Office of the Secretary

Internal Procedures for Determinations of
Adverse Impact Under Section
165(d)(2)(C)(ii) and (iii) of the Clean Air
Act

DEPARTMENT OF THE INTERIOR

Internal Procedures for Determinations of Adverse Impact Under Section 165(d)(2)(C)(ii) and (iii) of the Clean Air Act

AGENCY: Interior Department.

ACTION: Notice of internal procedures on adverse impact determinations under section 165(d)(2)(C)(ii) and (iii) of the Clean Air Act.

SUMMARY: The Federal Land Management for class I air quality areas under the jurisdiction of the National Park Service and U.S. Fish and Wildlife Service has established internal procedures to govern the processing of adverse impact determinations under section 165(d)(2)(C)(ii) and (iii) of the Clean Air Act. These procedures represent the steps through which the determination must go within the Department, including procedures for reaching a preliminary determination on adverse impact, procedures for obtaining public comment whenever possible, and procedures for reaching a final determination. The Department is publishing these internal procedures for general information purposes, i.e., to let the public know how the Department will process adverse impact determinations.

FOR FURTHER INFORMATION CONTACT: John P. Christiano, Air Quality Division, National Park Service—AIR, P.O. Box 25287, Denver, CO 80225, telephone number (303) 234-6620.

SUPPLEMENTARY INFORMATION: Part C of the Clean Air Act ("Act"), as amended, entitled the "Prevention of Significant Deterioration of Air Quality," includes requirements for major new facilities which wish to locate in relatively unpolluted areas of the country ("clean air regions"), where the new pollution might affect certain Federal conservation areas ("class I areas"), valued for their pristine air quality or other natural, scenic, recreational, or historic resources sensitive to air pollution. In this situation, the Act imposes special responsibilities on the managers of such class I areas to ensure that no major new facility will have an unacceptable, adverse impact on the areas' protected resources. The "Directive on Procedures" printed below sets forth the internal procedures which the Assistant Secretary for Fish and Wildlife and Parks, who is the Federal Land Manager for areas under the jurisdiction of the National Park Service and U.S. Fish and Wildlife Service, has instructed the bureaus to follow in processing such an adverse impact determination.

Section 165 of the Act governs the permitting of proposed major facilities in clean air regions. 42 U.S.C. 7475. It sets forth several "standards" or "tests" for analyzing a proposed facility's impact on the clean air regions in general, and on the class I areas in particular. These standards or tests include, among others, the National Ambient Air Quality Standards: class I, II, and III air pollution increments; and the adverse impact determination for class I areas, which is the subject of the internal procedures published in this notice. Knowledge of the relationship among these three standards or tests is necessary in order to understand the role of the third one, the adverse impact determination.

In brief, *National Ambient Air Quality Standards*, which must not be exceeded under any circumstances, are standards applicable to the entire country. These standards represent those pollution levels appropriate for protecting the public health and national welfare. Attainment and maintenance of these National Ambient Air Quality Standards constitute one of the fundamental purposes of the Clean Air Act: All areas presently not in compliance with the standards must improve their air quality to meet them, and all areas cleaner than the standards must not deteriorate so as to exceed them.

The two remaining standards or tests—class I, II, and III increments and adverse impact determinations—are the primary tools of section 165 for preventing the significant deterioration of the air quality in the clean air regions of the country. The class I increments apply to clean air regions containing areas such as national parks and wilderness areas. Under the Clean Air Act, Congress designated 158 natural, scenic, or historic areas of special national significance as class I. The class I increments represent the extremely small amount of additional pollution that Congress thought, as a general rule, should be allowed in class I areas. The class I increments also represent the restriction on additional pollution which Congress thought necessary in most cases for protection of the resources in class I areas. Typically, therefore, a proposed facility must not violate the class I increment.

The "adverse impact" determination, however, provides the possible exception to the general rule that a proposed facility must not violate the class I increment described above. The adverse impact determination, which is the subject of the internal procedures printed below, is a site specific test which examines whether a proposed facility will, in fact, unacceptably affect

the resources of a class I area. If the Federal Land Manager of the class I area determines that a proposed facility will not adversely affect the class I area, then the permitting authority may authorize the facility even though the facility's emissions may cause a violation of the class I increment. (In this situation, the facility must, nevertheless, not exceed a revised set of class I increments established by section 165(d)(2)(C)(iv) of the Act.) Conversely, if the Federal Land Manager determines and convinces the permitting authority that a proposed facility will adversely affect the class I area even though it will not cause a violation of the class I increment, then the permitting authority may not authorize the facility. Thus, the adverse impact test is a critical test for a proposed facility desirous of locating near a class I national park or wilderness area.

The directive published below instructs the bureaus as to the processing of an adverse impact determination. It constitutes a procedural checklist for the bureaus. It also embodies the evolving policy of the Department to include the public in the decisionmaking on the adverse impact determination. In particular, the directive provides for a thirty-day public comment period on the preliminary determination whenever possible within the constraints of statutory and implementation plan deadlines. In this way, the Department seeks to allow full discussion of the issues involved and to ensure the best available information for the final determination.

The procedures listed in the directive published below are being followed in an ongoing adverse impact determination concerning five major new facilities in North Dakota proposing to locate in the vicinity of Theodore Roosevelt National Park and Lostwood National Wildlife Refuge (wilderness portion), both mandatory class I areas. A notice of the preliminary determination by the Federal Land Manager that these facilities will not adversely affect the class I areas is published elsewhere in today's Federal Register.

Directive on Procedures for Determinations Under Section 165(d)(2)(C)(ii) and (iii) of the Clean Air Act

To: Director, National Park Service,
Director, Fish and Wildlife Service
From: G. Ray Arnett, Assistant
Secretary for Fish and Wildlife and
Parks

The following procedures apply to determinations under section

165(d)(2)(C)(ii) or (iii) of the Clean Air Act of whether a proposed new source will have an unacceptable, adverse impact on the air quality related values established for a class I area. The steps listed below are to be carried out as expeditiously as possible, without jeopardizing sound decisionmaking, in order to enable the permitting authority (the State or the Environmental Protection Agency (EPA)) to make its decision on the overall PSD permit application within one year of the filing of the completed application as required by section 165(c) of the Act. The following steps are also to be carried out in consultation with EPA as appropriate. Whenever provisions of the permitting authority's implementation plan make execution of the listed steps impossible (e.g., inadequate time allotments for the Federal Land Manager's determination), the procedures shall be adjusted as appropriate, after consultation with the Solicitor's Office.

1. Receipt of PSD permit application.
2. Technical review of application to determine need for additional information.
3. Technical review of impact of proposed new source on air quality related values (including visibility) of class I area.
4. Compliance with other statutory authorities, as applicable, including the following:
 - a. Initiation of consultation with the U.S. Fish and Wildlife Service if required under Endangered Species Act, 16 U.S.C. 1536.

b. Determination of effect, if appropriate, on properties included or eligible for inclusion in the National Register, and solicitation of comment from the Advisory Council on Historic Preservation if required under National Historic Preservation Act, 16 U.S.C. 470f.

5. Technical review of "adverseness" of impact (if any), and submission of bureau recommendation on "adverse impact" or "no adverse impact" determination.

6. Assistant Secretarial review of bureau recommendation on "adverse impact" or "no adverse impact" determination, and formulation of Assistant Secretarial determination under section 165(d)(2)(C)(ii) or (iii).

7. Notification of preliminary determination by letters to owner/operator of proposed new source, State, and EPA.

Simultaneous with #7, publication of preliminary determination in "Notice" section of **Federal Register**, including—

- a. Statement as to availability of supporting documentation for inspection and copying at NPS Air Quality Division offices in Denver, Colorado, and in Washington, D.C., and at affected park and refuge headquarters; and
- b. Announcement of thirty-day public comment period (not to be extended except in the most unusual circumstances) on issues directly relevant to the determination in question.

9. Timely review and brief summarization of relevant comments

received within comment period, and responses thereto.

10. Final Assistant Secretarial determination, as soon as possible after end of comment period, of "adverse impact" or "no adverse impact", with a clear and concise statement of reasons supporting that determination.

11. Notification of final determination by letters to owner/operator of proposed new source, State, and EPA. If final determination in a section 165(d)(2)(C)(iii) situation concludes "no adverse impact", Assistant Secretary (in role as "Federal Land Manager") shall so "certify" in letter.

12. Simultaneous with No. 11, publication of final determination in "Notice" section of **Federal Register**, including—

- a. Clear and concise statement of reasons supporting that determination;
- b. Statement as to availability of supporting documentation for inspection and copying at NPS Air Quality Division offices in Denver, Colorado and in Washington, D.C.; and
- c. Statement as to immediate effective date (as of date signed) of final determination.

Dated: July 7, 1982.

G. Ray Arnett,

Assistant Secretary for Fish and Wildlife and Parks, and Federal Land Manager for Areas Under the Jurisdiction of the National Park Service and the Fish and Wildlife Service.

(FR Doc. 18745 Filed 7-9-82; 8:46 am)
BILLING CODE 4310-70-M



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

August 27, 1993

N3615 (475)

Dear State Air Pollution Control Director:

Enclosed please find a copy of our 1993 "Permit Application Guidance for New Air Pollution Sources" prepared by the National Park Service (NPS) Air Quality Division. The document describes the role of the Federal Land Manager (FLM) in the Prevention of Significant Deterioration (PSD) permit process for proposed new sources, or modifications to existing sources, that may affect Class I areas managed by the NPS or the U.S. Fish and Wildlife Service (FWS). This letter briefly summarizes some of the major concerns described in the document including the time allowed the FLM to provide comments on applications, the need to involve FLMs in projects proposed beyond 100 km of a Class I area, and the use of significance levels as they apply to Class I analyses.

Generally, for projects with potential visibility impacts, the Clean Air Act allows the FLM a minimum of 60 days to review all information relevant to the permit application in order to evaluate potential impacts on a Class I area and consult with the permitting authority on these potential impacts. If the FLM believes that the proposed facility may have an adverse impact on visibility, and so notifies the permitting authority within 30 days of receiving all relevant information (i.e., a complete application), then the public hearing notice must include certain information so that the public is fully apprised of the permitting authority's response to the FLM's information and can provide relevant comments at the hearing. We ask that you provide us an opportunity to attend any "pre-application" meetings, provide us a copy of the application as soon as you receive it, and notify us when the application is deemed complete. We also ask that you promptly forward copies of any supplemental information provided by the applicant, as well as your proposed permit conditions. Additionally, we would like to be notified when the public comment period begins so that we can be assured of having ample time to provide comments to your office.

We wish to clarify that FLM notification should not be limited to projects within a 100 km distance from the Class I area. Guidance provided by the Environmental Protection Agency (EPA) regarding FLM notification also recognizes the possible impacts of sources located more than 100 km from a Class I area. In a March 19, 1979, policy memorandum, EPA states:

".....notice should be provided (to the FLM) for any facility which will be located within 100 km of a Class I area. Very large sources, however, may be expected to affect air quality related values at distances greater than 100 kilometers. The appropriate Federal Land Manager should be notified if such impacts are expected on a case-by-case basis".

A more recent EPA memorandum (October 19, 1992) from John Seitz, Director, Office of Air Quality Planning and Standards, supports dispersion modeling of large sources beyond 100 km from a Class I area in order to evaluate their impacts. Therefore, we suggest that you consult with us in the future on our need to review applications received for large projects located more than 100 km from NPS or FWS Class I areas.

Finally, we would like to discuss the use by many applicants of the 1 microgram per cubic meter (ug/m^3) significant level used in PSD applicability determinations, and the use of other significant impact levels, in assessing potential impacts in Class I areas. This 1 ug/m^3 (24-hour average) significance level is for purposes of determining PSD applicability only. It is used to determine if a proposed modification at a source located within 10 km of a Class I area is major, and therefore subject to PSD review. Once a source is determined to be subject to PSD review, it is the FLM's responsibility to determine if the proposed project would significantly impact a Class I area. In this regard, there are currently no predetermined levels to define significant air quality impacts in NPS/FWS Class I areas. The FLM's assessment of potential effects on air quality related values (AQRVs) considers the sensitivities of specific AQRVs in the Class I area and the existing air pollution impacts on these resources. If the threshold concentration for effects on sensitive resources is being approached, it is possible that a significant impact could occur at a concentration of less than 1 ug/m^3 . In addition, once the effects threshold is actually reached, any increase in Class I area concentrations may be considered "significant".

The EPA has provided guidance on significance levels below which further analysis is not required. It should be noted, however, that an exception was made to these guidelines for cases when a Class I area might be impacted. Referring to significance levels, EPA states, "... since the 1977 Amendments provide special concern for class I areas, any reasonably expected impacts for these areas must be considered irrespective of the 50 kilometer limitation or the above significance levels." (See June 19, 1978, Federal Register, p. 26398).

The EPA further clarified the use of significant impact levels in a September 10, 1991, policy memorandum from John Calcagni, Director, Office of Air Quality Planning and Standards, Air Quality Management Division, to Thomas J. Maslaney, Director of Environmental Protection Agency Region III, Air, Radiation, and Toxics Division. Mr. Calcagni states "a determination concerning the need for a full assessment of an air quality-related value is made by the Federal Land Manager based on an analysis of the proposed source's (and other cumulative) potential impacts on a value for that particular class I area. This analysis is independent of the inquiry into whether a proposed source would have a significant impact on any applicable class I increment."

We hope the enclosed guidance document will be useful in future agency permit actions involving Class I areas. If you have any questions after reviewing the document, or would like additional copies, please contact me at (303) 969-2071.

Sincerely,

Tonnie G. Maniero *tn*

John Bunyak
Chief, Policy, Planning and Permit Review Branch

Enclosure

bcc: (w/enc.)
All AQC
All Class I area Supt. or Refuge Manager
AQD-DEN: Reading and Project File
AQD-DEN:TManiero:tm:8/27/93:x2071:GUIDOC.LTR