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PSD GUIDANCE DOCUMENT

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NATIONAL PARK SERVICE AIR QUALITY DIVISION PERMIT REVIEW UNIT P.O. BOX 25287 DENVER, COLORADO 80225

#### APRIL 1981

CONTENTS

PurposePage 2Summary of the Clean Air Act as Amended<br/>(August 7, 1977)Page 3Summary of Requirements Applicable to Class I AreasPage 5AppendicesAA. NPS Permit Notification ListA 1-4

B. FWS Permit Notification List B 1-3

### PURPOSE

This document provides guidance to persons intending to submit a Prevention of Significant Deterioration (PSD) permit application for a Major Emitting Facility (MEF) that has the potential to impact a Class I area managed by the National Park Service (NPS). Much of the information needed by the NPS to adequately evaluate a permit application must be collected well before the permit is submitted. By following the guidance in this document, the applicant can prevent delays in the review process caused by an incomplete application. Also, under a cooperative agreement with the Fish and Wildlife Service (FWS), the NPS Air Quality Division is providing technical review of PSD permits that affect FWS Class I areas. Therefore, the guidance provided herein applies to the FWS Class I areas as well.

-2-

SUMMARY OF THE CLEAN AIR ACT, AS AMENDED (AUGUST 7, 1977)

The Clean Air Act (CAA), as amended in August, 1977, is a unique tool for use in the preservation of air quality and sensitive resources in the National Park and Wildlife Refuges.

Sections 160-169 of the Act established a detailed policy and regulatory program to protect the quality of the air in regions of the United States in which the air is cleaner than required by the National Ambient Air Quality

Standards (NAAQS) to protect public health and welfare. One of the purposes of the program of Prevention of Significant Deterioration (PSD) 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."

Under the PSD provisions, Congress established a land classification scheme for those areas of the country with air quality better than the NAAQS. Class I allows very little deterioration of air quality; Class II allows moderate deterioration; and Class III allow more deterioration; but n all cases, the pollution concentrations shall not violate any of the NAAQS. Congress designated certain existing areas as mandatory Class I which precludes redesignation to a less restrictive class, in order to acknowledge the value of maintaining these areas in relatively pristine condition. These mandatory Class I areas include: (1) international parks (2) national wilderness areas and national memorial parks in excess of 5,000 acres; and (3) national parks in excess of 6,000 acres existing as of August 7, 1977. The National Park System includes 48 mandatory Class I areas (see Appendix A) and The Fish and Wildlife Service manages 21 mandatory Class I areas (See Appendix B). All mandatory Class I areas with their respective Federal land Managers are given in the November 30, 1979, FEDERAL REGISTER.

Lands can be redesignated by the States and, in some cases, by Indian tribes, as explained in Section 164 of the Act. Congress also protected other nationally significant lands by originally designating them as Class II and restricting redesignation to Class I only. These areas include existing national monuments, national primitive areas, national preserves, national recreation areas, national wildlife refuges, national wild and scenic rivers, national lakeshores and seashores in excess of 10,000 acres, and newly established national parks or wilderness areas in excess of 10,000 acres. All other areas were initially classified as Class II, and can be redesignated as either Class I or Class III.

Section 164(d) required the FLM to review all national monuments, primitive areas, and national preserves and to recommend any appropriate areas for redesignation to Class I. The recommendations, with supporting analysis, were reported to the Congress and the affected States and Indian tribes, that were responsible for undertaking any redesignation. These recommendations may be found in the June 25, 1980, FEDERAL REGISTER.

Congress provided two methods for protecting air quality and resources sensitive to changes in air quality. Section 163 established maximum allowable increases in air quality over baseline concentrations of certain pollutants

- 3 -

for each class. These maximum allowable increases, or increments, cannot be exceeded by new or modified existing sources of those pollutants unless the owner or operator demonstrates to the satisfaction of the FLM, and the FLM certifies that air quality related values (AQRVs) of Class I areas will not be adversely affected. Such new or modified existing sources (Major Emitting Facilities - MEFs) are required to submit a preconstruction permit application to the Environmental Protection Agency (EPA) or to a State if permitting authority has been delegated to the state by the EPA or through an approved State Implementation Plan (SIP). The FLM is notified by the EPA or by the State the receipt of a permit application and has an opportunity to comment on the application if the MEF is to be located near a mandatory Class I area or if the pollutants from the facility would potentially violate the increments or affect the air quality related values of Class I areas. For the analysis, complete PSD applications should be forwarded to the National Park Service Air Quality Division, and the NPS Regional Director and Area Superintendent or the Air Quality Specialist at FWS and the Refuge Manager if a National Refuge is involved. The appropriate addresses are given in Appendices A and B.

Congress also gave the FLM an affirmative responsibility to protect AQRVs in mandatory Class I areas. AQRVs are all those values possessed by an area that may be affected by changes in air quality, and include all those assets of an area whose visibility, significance, or integrity are dependent upon the air environment. These values include visibility, odor, flora, fauna,

and geological resources; archeological, historical, and other cultural resources; and soils and water quality resources. In the permit review process, no permit shall be issued if the FLM can convince the permitting authorities that one or more AQRV will be adversely affected regardless of whether the PSD increments would be met. Conversely, if the major emitting facility can convince the permitting authority and the FLM that no damage to AQRVs will occur, the source may be allowed to exceed the Class I PSD increments.

Congress has determined that potential impacts on visibility in mandatory Class I areas are so serious that special provisions are necessary to protect this specific air quality related value. Under the requirements of Section 169A of the CAA, the EPA promulgated regulations (40 CFR 51 Subpart P) that require those States with mandatory Class I areas submit implementation plans that assure the prevention of future and the remedying of existing visibility impairment. Federal Land Managers have already determined that visibility is an important value in all 48 of the mandatory Class I areas managed by the National Park Service. A recommendation on the 21 mandatory areas managed by FWS has not as yet been made. In order to remedy existing visibility impairment, the states are to establish regulations requiring that major stationary sources that were in existence on August 7, 1977 (but that were not in excess of 15 years old on that date) be retrofitted with controls representing the best available retrofit technology if those sources pose a threat to visibility in a mandatory Class I area. Prevention of future impairment is to be accomplished under the new sources review process.

> - 4 -SUMMARY OF REQUIREMENTS APPLICABLE TO CLASS I AREAS

All the requirements of Title 40 of the Code of Federal Regulations, Part 52, section 52.21 (40 CFR 52.21) are applicable. Those requirements that the National Park Service will especially be reviewing are discussed in this section.

Air Quality Review [40 CFR 52.21(k)]

The permit application must contain an air quality analysis that analyzes the effect of the MEF on the Class I increment. The applicant shall base the air quality review on approved models as specified in 40 CFR 52.21 (1) (Guideline on Air Quality Models). All assumptions for the analysis should be explicitly stated, and sufficient information on modelling input should be furnished so that the model analysis can be duplicated by the NPS. The model must make maximum use of meteorological data as specified in the referenced Guideline on Air Quality Models. If the analysis indicates violations of Class I increments, the application must attempt to prove that there would be no damage to AQRVs. The applicant may wish to contact the National Park Service Air Quality Division (P.O. Box 25287, Denver, CO 80225) before doing the air quality review to be sure that the model will adequately predict the impact on the Class I area.

## Monitoring [40 CFR 52.21 (m)]

A complete permit application must contain preapplication air monitoring data. In general one year of data is required. The National Park Service Air Quality Division should be contacted to facilitate installation of monitoring equipment in NPS Class I areas. Initiation of air monitoring studies in the National Parks originates in this office which in turn seeks the cooperation of the appropriate NPS Regional Office and Park Superintendent. This office will also coordinate monitoring efforts with the appropriate FWS authorities, if applicable. Since there are monitoring programs underway in several parks, contacting the Air Quality Division can help avoid duplication of effort.

## Source Information [40 CFR 52.21 (n)]

The application must show that all sources have applied BACT for each pollutant emitted. In general, the source parameter information required by the State or EPA will suffice for the NPS permit review. However, by consulting with the Air Quality Division as soon as results of the air quality impact assessment are available, possible delays after permit submittal can be avoided should the NPS require additional information.

## Additional Impact Analyses [40 CFR 52.21 (0)]

Because the Federal Land Manager has an affirmative responsibility to protect air quality related values in Class I areas and to consider whether a proposed source or modification will have an adverse impact on such values, the NPS and FWS is most interested in additional impact analyses required under 40 CFR 52.21 (o). Specifically the applicant should provide an analysis of the impairment to visibility, soils, flora, and fauna that would occur as a

- 5 -

result of the source or modification and general commercial, residential, industrial, and other growth associated with the source or modification. Also, an air quality impact analysis is required to project the result of general commercial, residential, industrial, and other growth associated with the source or modification.

Analysis of the potential adverse impacts on soils, flora and fauna should include existing vegetation types, the percent cover and biomass, spatial distribution and land use. Rare and endangered species and acidic wetlands should also be identified. Ozone concentrations and estimates of fluoride and heavy metal emissions must be supplied with pollutant baseline concentrations and pollutant contribution from all sources.

The application must include an analysis of potential visual impairment caused by the project including effects on visual range, contrast changes, and atmospheric discoloration. The magnitude, frequency, and duration of the impairment must be specified. Guidance for estimating visibility impairment is available from the EPA (Workbook for Estimating Visibility Impairment, EPA 450/4-80-031). Pictorial presentation of the results using photographs, computer simulations or artist's conceptions would be beneficial.

To assist the applicant in performing these additional impact analyses, the NPS and FWS will provide to the applicant, within 60 days of his request, a list of sensitive receptors in the potentially impacted Class I area. The applicant should submit his request to the Park Service Air Quality Division.

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APPENDIX A

NPS PERMIT NOTIFICATION LIST

| Notify Regional Director at:  | Jurisdiction   |
|---|--|
| Midwest Regional Office   | Ohio, Indiana, Michigan,   |
| National Park Service   | Wisconsin, Illinois, Minnesota,  |
| 1709 Jackson Street   | Iowa, Missouri, Nebraska,  |
| Omaha, Nebraska 68102   | Kansas   |
| Mid-Atlantic Regional Office  | Pennsylvania, Maryland, West   |
| National Park Service   | Virginia, Delaware, Virginia,  |
| 143 South Third Street  | excluding parks assigned to  |
| Philadelphia, PA 19106  | National Capital Region  |
| North Atlantic Regional Office<br>National Park Service<br>15 State Street<br>Boston, MA 02109      | Maine, New Hampshire, Vermont,<br>Massachusetts, Rhode Island<br>Connecticut, New York, New Jersey |
| National Capitol Region<br>National Park Service<br>1100 Ohio Drive, S.W.<br>Washington, D.C. 20242 | District of Columbia, some units<br>in Maryland, Virginia,<br>West Virginia                        |
| Rocky Mountain Regional Office  | Montana, North Dakota,   |
| National Park Service   | South Dakota, Wyoming,   |
| 655 Parfet Street   | Utah, Colorado   |

Denver, CO 80225 Southeast Regional Office Kentucky, Tennessee, North Carolina National Park Service South Carolina, Mississippi, 1895 Phoenix Blvd. Alabama, Georgia, Florida, Puerto Rico, Virgin Islands Atlanta, GA 30349 Southwest Regional Office Arkansas, Louisiana, Texas Oklahoma, New Mexico, northeast corner of Arizona National Park Service P.O. Box 728 Santa Fe, New Mexico 87501 Pacific Northwest Regional Idaho, Oregon, Washington, Alaska Office National Park Service 601 Fourth and Pike Bldg. Seattle, Washington 98101 California, Nevada, most of Western Regional Office National Park Service Arizona, Hawaii 450 Golden Gate Avenue, Box 26063 San Francisco, CA 94102 In All Cases Notify: National Park Service Air Quality Division Permit Review Unit P.O. Box 25287 Denver, CO 80225 Notify NPS Class 1 Area Superintendant at: Acadia National Park Route 1, Box 1 Bar Harbor, ME 04609 Arches National Park 446 South Main Street Moab, Utah 84532 Badlands National Monument P.O.Box 6 Interior, South Dakota 57750 Bandelier National Monument Los Alamos, NM 87544 Big Bend National Park Big Bend National Park, Texas 79834 Black Canyon of the Gunnison, National Monument P.O. Box 1648 Montrose, CO 81401 Bryce Canyon National Park Bryce Canyon, Utah 84717 Canyonlands National Park 446 South Main Street, Moab, UT 84532 Carlsbad Caverns National Park 3225 National Parks Highway Carlsbad, NM 88220 Capitol Reef National Park Torry, Utah 84775 Chiricahua National Monument

P.O. Box 25287

A-2

and Wilderness Area Dos Cabesas Star Route Willcox, AZ 85643 Crater Lake National Park P.O. Box 7 Crater Lake, Oregon 97604 Craters of the Moon National Monument P.O. Box 29 Arco, Idaho 83213 Everglades National Park P.O. Box 279 Homestead, Florida 33030 Glacier National Park West Glacier, Montana 59936 Grand Canyon National Park P.O. Box 129 Grand Canyon, Arizona 86023 Grand Teton National Park P.O. Box 67 Moose, Wyoming 83012 Great Smoky Mountain National Park Gatlinburg, TN 37738 Great Sand Dunes National Monument P.O. Box 60 Alamosa, CO 81101 Guadalupe Mountains National Park 3225 National Parks Highway, Carlsbad, Texas 88220 Haleakala National Park P.O. Box 537 Makawao, Hawaii 96768 Hawaii Volcanoes National Park Hawaii National Park, Hawaii 96768 Isle Royale National Park 87 North Ripley Street Houghton, MI 49931 Joshua Tree National Monument 74485 Palm Vista Drive Twentynine Palms, CA 92277 Kings Canyon National Park Three Rivers, CA 93271 Lassen Volcanic National Park Mineral, CA 96063 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 McKinley National Park P.O. Box 9

McKinley Park, Alaska 99755 Mount Rainier National Park Tahoma Woods, Star Routh Ashfor, WA 98304 North Cascades National Park 800 State Street Sedro Woolley, WA 98284 Sequoia National Park Three Rivers, CA 93271 Olympic National Park 600 East Park Avenue Port Angeles, WA 98302 Petrified Forest National Park Petrified Forest National Park, AZ 86028 Pinnacles National Monument Piacines, CA 95043 Point Reyes National Seashore Point Reyes, CA 94956 Redwood National Park Drawer N. Crescent City, CA 95531 Rocky Mountain National Park Estes Park, Co 80517 Saguaro National Monument P.O. Box 17210 Tucson, AZ 85731 Shenandoah National Park Route 4, Box 292 Luray, Virginia 22835 Theodore Roosevelt National Memorial Park Medora, ND 58645 Virgin Islands National Park P.O. Box 806 Charlotte Amalie St. Thomas, VI 00801 Voyageurs National Park P.O. Drawer 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 National Park Service Air Quality Program Manager Barbara D. Brown National Park Service

Main Interior Bldg. 18th & C Streets, N.W. Washington, D.C. 20240 Room 3311

#### APPENDIX B

Jurisdiction

Indiana, Ohio

Rhode Island

Washington, Oregon, Idaho, Nevada, Hawaii, California

FWS Permit Notification List

Notify Regional Director at:

U.S. Fish and Wildlife Service Lloyd 500 Building, Suite 1692 500 N.E. Multnomah Street Portland, Oregon 97232

U.S. Fish and Wildlife service P.O. Box 1306 Albuquerque, New Mexico 87103

U.S. Fish and Wildlife Service Federal Building, Fort Snelling Twin Cities, Minnesota 55111

U.S. Fish and Wildlife Service Richard B. Russell Federal Building 75 Spring Street, S.W. Atlanta, Georgia 30303

U.S. Fish and Wildlife Service One Gateway Center, Suite 700 Newton Corner, Massachusetts 02158

U.S. Fish and Wildlife Service P.O. Box 25486 Denver Federal Center Denver, CO 80225 Virginia, W. Virginia, Maryland, Delaware, Pennsylvania, New Jersey, New York, Vermont, New Hampshire, Maine, Massachusetts, Connecticut,

Carolina, South Carolina, Tennessee,

Arizona, New Mexico, Oklahoma, Texas

Minnesota, Wisconsin, Illinois,

Arkansas, Louisiana, Mississippi,

Alabama, Georgia, Florida, North

Kentucky, Puerto Rico

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

## ALASKA AREA OFFICE

U.S. Fish and Wildlife Service 1011 E. Tudor Road Anchorage, Alaska 99507

# In All Cases Notify:

National Park Service Air Quality Division Permit Review Unit P.O. Box 25287

Denver, CO 80225

DOI - FWS, Division of Refuges Branch of Planning Air Quality Specialist 18th & C Streets NW Washington, DC 20240

Notify FWS Refuge Manager at:

Bering Sea Clarence Rhode National Wildlife Range Box 346 Bethel, AK 99559

Simeonof Izembek Pouch #2 Cold Bay, AK 99571

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B-2

Kenia National Moose Range Box 2139 Soldotna, AK 99669 Chassahowitzka Route 2, Box 44, Homosassa, FL 32646 St. Marks Box 68 St. Marks, FL 32355 Wolf Island Georgia Coastal Complex Box 8487 Savannah, GA 31402 Okefenokee Box 117 Waycross, GA 31501 Mooshorn Box X Calais, ME 04619 Seney Seney, MI 49883 Delta-Breton Venice, LA 70091 Mingo Rural Route 1, Box 9A Puxico, MO 63960 UL Bend Charles M. Russell Box 110 Lewiston, MT 59457 Medicine Lake [a superscript "2" appeared here] Medicine Lake, MT 59247 Red Rock Lakes Monida Star Routh, Box 15 Lima, MT 59729 Brigantine Great Creek Road, Box 72 Oceanville, NJ 08231 Bitter Lake Box 7 Roswell, NM 88201 Bosque del Apache Box 1246 Socorro, NM 87801 Swanguarter Mattamuskeet Route 1, Box N-2 Swanquarter, NC 27885 Lostwood Rural Route 2 Kenmare, ND 58746 Wichita Mountains Wildlife Refuge Route 2, Box 448 Indiahoma, OK 73552

B-3

Cape Romain Route 1, Box 191 Awendaw, SC 29101