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Resources, Community, and
Economic Development Division

B-256004

July 29, 1994

The Honorable John D. Dingell
Chairman, Subcommittee on Oversight
and Investigations
Committee on Energy and Commerce
House of Representatives

Dear Mr. Chairman:

This correspondence responds to your request that we provide you with information on the processes that were followed at Denver International Airport, Washington National Airport, and Boston's Logan Airport to assess the effects of construction or expansion projects on air quality. In brief, each airport used a different environmental planning approach because of individual differences in the timing or scope of the projects. Currently, all three airports are in different phases of approval or construction.

-- In Denver, an environmental assessment and an environmental impact statement were prepared that analyzed the effects of the new airport on air quality. On the basis of the results of these evaluations, the Federal Aviation Administration (FAA) approved the project, conditioned on Denver's continued compliance with state plans to reduce air pollution. These plans may require Denver to reduce vehicle traffic in and around the airport. Because of problems with the baggage system, the airport's opening day is unscheduled at this time.

-- The Washington National Airport expansion project consists of several improvement initiatives, including the relocation of the airport traffic control tower and the construction of a terminal. A recently prepared environmental assessment concludes that the planned expansion will not adversely affect air quality; FAA concurs with this determination.

-- At Boston, FAA recently approved two projects under special regulations that allow certain types of airport safety facilities and passenger terminals to be modified without an environmental assessment.

We reviewed the National Environmental Policy Act's and the Clean Air Act's requirements, as well as FAA's and the Environmental Protection Agency's procedures regarding air quality controls and environmental assessments. For each of the three cities, we spoke with representatives of the project sponsors.

Enclosure I summarizes the key federal laws and regulations that govern air quality planning for airport construction or expansion projects; enclosures II through IV summarize the processes followed at each airport.

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Unless you publicly announce its contents earlier, we plan no further distribution of this correspondence until 30 days after the date of this letter. At that time, we will send copies of this correspondence to the Secretary of Transportation and to the Administrator, FAA. We will also make copies available to others on request.

Please contact William McGee, Assistant Director, at (919) 829-3500, or me, at (202) 512-6111, if you or your staff have any questions.

Sincerely yours,

Peter F. Guerrero
Director, Environmental Protection
Issues

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FEDERAL LEGISLATION PROVIDES GUIDANCE FOR COMMUNITIES' AIR QUALITY PLANNING PROCESS

Two major acts govern how the Federal Aviation Administration (FAA) and communities evaluate the effects of airport construction or expansion on regional air quality: the National Environmental Policy Act of 1969 (NEPA) and the Clean Air Act, as amended. Essentially, NEPA governs major federal actions, including FAA processes, and the Clean Air Act sets air quality standards for states and communities to follow.

Under NEPA and its implementing regulations, FAA must develop and enforce regulations that address the environmental effects of major FAA actions. Specifically, if federal funds are used to aid construction of a new airport or major expansion of an existing airport, FAA must ensure that the project sponsors (1) consider and analyze the project's environmental consequences and (2) consider actions that may avoid or minimize adverse environmental effects.

FAA generally performs analyses in the form of environmental assessments and environmental impact statements to fulfill these requirements. FAA uses environmental assessments, prepared by the airport sponsor, to determine whether the potential effects of a particular project might be significant. Generally, when FAA judges the potential effects to be significant, it prepares an environmental impact statement, which comprehensively evaluates the project's effects; proposes project alternatives; and evaluates the alternatives' effects.

Under the Clean Air Act and its implementing regulations, states must comply with air quality standards for six pollutants: ozone, carbon monoxide, nitrogen oxide, sulfur dioxide, particulate matter, and lead. Each state must develop a plan that specifies how it will maintain compliance with each standard. This plan, the State Implementation Plan (SIP), is reviewed and approved by the Environmental Protection Agency (EPA) and adopted by the state.

In addition, the Clean Air Act requires that federal agencies providing financial assistance for projects ensure that the proposed project operations will conform to the SIP. Specifically, the agencies must ensure that the project will not (1) cause or contribute to any new violations of air quality standards in any area, (2) increase the frequency or severity of any existing violation of the standards in any area, or (3) delay the attainment of any standard.

This conformity determination is required under two conditions: (1) when pollutants caused by the proposed project will exceed levels established by EPA and (2) when pollutants have a regionally significant effect. For the first case, EPA issued a final rule in November 1993 that set maximum levels (in tons per year) for air quality pollutants in nonattainment areas.[1] These levels are fixed amounts of each pollutant that the project may not exceed and were intended to ensure that a project does not worsen pollution in an area that already has serious problems.

In the second case, EPA has established a formula to determine whether a pollutant will have a regionally significant effect. Under this formula, when a pollutant level reaches 10 percent or more of an area's total concentration of that pollutant--even if it does not exceed the maximum level--then the effect is considered to be regionally significant, and a conformity determination is required.

[1]The final rule provides that a conformity determination need not be performed where the federal agency completed its analysis under NEPA prior to January 31, 1994.

ENCLOSURE II

DENVER ASSESSED AIR QUALITY EFFECTS IN PLANNING ITS NEW AIRPORT

Denver International Airport is located in the Metropolitan Denver Intrastate Air Quality Control Region. The Denver region is a nonattainment area for carbon monoxide and particulate matter.

The planning process for the construction of the new Denver International Airport began in 1986 and consisted of three major parts. First, the sponsor (the city and county of Denver) prepared an environmental assessment. Second, a consortium of state and local government agencies compared the air quality effects of building a new airport with the effects of continuing operations at the existing airport, using a comprehensive air quality modeling project.[2]

Overall, the project found that some pollutants will increase slightly but not so much as to jeopardize attainment or maintenance of air quality standards. Regionwide, carbon monoxide was estimated to increase slightly with construction of the new airport, as compared to continued operations at the existing airport. This is due in part to an increase in vehicle miles traveled, as the new airport will be located about 23 miles east of downtown Denver. Terminal area carbon monoxide was estimated to decrease as a result of lower delay periods and increased operational capacity. Both aircraft- and motor vehicle-related particulate matter are projected to decrease.

Third, FAA incorporated the results of the project into its environmental impact statement, concluding that no significant degradation of regional air quality would result from construction of the new airport.

Nonetheless, as a result of Denver's continuing problems with particulate matter and carbon monoxide, FAA made its project approval contingent on the sponsor's ability to meet several conditions. These conditions generally require Denver to take steps to reduce motor vehicle traffic to and from the airport. Such steps could include encouraging ridesharing, developing a regional rapid transit system, and increasing the use of high-occupancy vehicle lanes. Under the conditional approval, Denver must also implement further mitigation measures identified in future SIPs (e.g., measures to address predicted or existing

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[2]An important piece of the modeling project was a projection of infrastructure needs. Several environmental groups contend that much of the mass transit and roads that were planned will never be developed. As a result, the groups believe that much of the pollution abatement projected to result from the new roads and mass transit will not take place.

violations of standards caused by motor vehicle traffic to and from the airport).

ENCLOSURE III

THE METROPOLITAN WASHINGTON AIRPORTS AUTHORITY ASSESSED THE AIR QUALITY EFFECT OF WASHINGTON NATIONAL AIRPORT'S EXPANSION PROJECT

Washington National Airport is located in the National Capitol Interstate Air Quality Control Region, which has not attained EPA standards for ozone and carbon monoxide.

The Washington National Airport Capital Development Program consists of several improvement projects. These projects include relocating the airport traffic control tower, constructing a new terminal, reconfiguring selected surface transportation facilities to provide efficient parking and roadways, and constructing a modernized heating plant and new fuel storage facilities.

In September 1993, the airport project sponsor (the Metropolitan Washington Airport Authority) prepared an environmental assessment that compared the air quality effects of completing the project with the effects of continuing operations without the project. The assessment found that the project will result in future decreases in carbon monoxide emissions. The assessment also indicated that the primary precursors for ozone, nitrogen oxide, and hydrocarbons would also be reduced if the project is implemented. The predicted reduction in hydrocarbons was based on the improvement of vapor recovery controls in fuel storage facilities, and the reduction of nitrogen oxides was due to the planned installation of a new heating plant that will burn natural gas. However, the results of the air quality analysis show that with or without the project, carbon monoxide, hydrocarbons, sulfur dioxide, and particulate matter will decrease, primarily due to the required reduction of exhaust emission from motor vehicles and aircraft.

In November of 1993, FAA approved the sponsor's environmental assessment. An environmental impact statement was not needed.

THE MASSACHUSETTS PORT AUTHORITY ASSESSED THE AIR QUALITY EFFECTS OF LOGAN AIRPORT'S EXPANSION PROJECT

Logan Airport is located in the Metropolitan Boston Intrastate Air Quality Control Region, an area that has not attained air quality standards for ozone and carbon monoxide. The airport's expansion program, sponsored by the Massachusetts Port Authority (MassPort), consists of 12 separate construction and modernization projects targeted for completion over the next 7 years. The projects include such activities as constructing an airport rescue and fire fighting facility, modernizing the international terminal and replacing another, and consolidating on-airport parking and expanding remote parking facilities. Currently, two of the projects--development of an airport rescue and fire fighting facility and modernization of the international terminal--are under construction.

By FAA regulation, the two ongoing projects were categorically excluded from NEPA's environmental assessment requirement. FAA has determined that certain types of projects, by definition, will have little or no effect on the environment. These include construction activities, such as landscaping, building or modifying passenger handling facilities, installing or upgrading airfield lighting or visual approach systems, and constructing required safety and security facilities. If the other 10 projects are constructed later, FAA will determine, on a case-by-case basis, whether each project is subject NEPA's requirements or is excluded from them. These projects will also be subject to EPA conformity regulations.

Even though the two ongoing projects were exempt from federal NEPA requirements, the expansion program--in its entirety--was subject to strict state environmental planning requirements. In July 1993, in compliance with state regulations, MassPort prepared a Generic Environmental Impact Review for Logan Airport, including each of the airport expansion projects. The review (which will be reviewed annually) found that airport emissions of carbon monoxide and hydrocarbons will decrease by the turn of the century, while emissions of nitrogen oxide will increase.

As a result, Massport proposed measures to mitigate the program's predicted air quality effects--specifically the increases in volatile organic compounds, nitrogen oxides, and carbon monoxide. The proposed measures included reducing taxiing distances for inbound aircraft, encouraging Massport tenants to prepare ground service vehicle emission control plans, and installing vapor recovery systems for fuel storage and handling equipment.

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