STATEMENT OF TEMPLE H. JOHNSON, JR., DEPUTY MANAGER, AIR TRAFFIC DIVISION, NORTHWEST MOUNTAIN REGION, FEDERAL AVIATION ADMINISTRATION, BEFORE THE HOUSE COMMITTEE ON GOVERNMENT OPERATIONS, SUBCOMMITTEE ON GOVERNMENT ACTIVITIES AND TRANSPORTATION, CONCERNING THE DENVER STANDARD INSTRUMENT APPROACH PROCEDURE. NOVEMBER 1, 1983.

Madam Chairwoman and Members of the Subcommittee:

I am pleased to appear before you today to discuss the Standard Instrument Approach Procedure (SIAP) we have proposed for Stapleton International Airport in a Notice of Proposed Rulemaking (NPRM) issued last July. I am sure you will understand that I must necessarily be constrained in my comments today, since the SIAP is in the rulemaking process and we are currently reviewing the comments received from the public so that a final determination may be made.

I would like to take a few minutes to describe what it is we have proposed for Stapleton, why we have proposed such an action, and the analyses that have been conducted leading up to our proposal.

Stapleton Airport is a key airport in our National Airspace System. As a major hub, it is the fifth busiest air carrier airport in the United States, accounting for about 500,000 aircraft operations each year, of which nearly 70% are air carrier flights. Clearly then, Stapleton Airport plays a

critical role in the movement of people by air in our Nation's air transportation system.

Stapleton Airport is particularly susceptible, however, to weather-related traffic delays. The number of weather-related delays at Stapleton ranked it second only to Chicago-O'Hare in 1982; in the first six months of this year Stapleton had the worst arrival weather-related delay record in the Nation. Unfortunately, delays at Stapleton are not a problem which can be isolated to Stapleton. When these delays occur, they have a domino-type effect on other airports throughout the system, causing inconvenience and costs to people and operators elsewhere in the country. Therefore, any improvement in delays at Stapleton Airport will have a beneficial effect for the air transportation system as a whole. Improvement in delays is important under present circumstances; it is imperative for the future. By the end of this decade alone, we project an increase in operations at Stapleton to about 576,000 operations.

Recognizing the national need to improve the efficiency of operations at Stapleton, the question becomes one of what can be done, given the existing runway structure where separation between the two parallel runways is limited. Some delay reduction has been possible through air traffic control procedural changes providing for multiple arrival flows and

dual approaches under certain meteorological conditions, but these changes have not countered the problems experienced during marginal weather conditions when north approaches are required at Stapleton. An indepth study was conducted by an ad hoc committee, composed of representatives from the Air Transport Association, the Air Line Pilots Association, the Airplane Owners and Pilots Association, Stapleton Airport management, and the FAA. This committee, which examined numerous alternatives, identified two potential means of reducing air traffic delays by providing Stapleton with the capability of handling simultaneous approaches to the two parallel runways. One possible solution was to reduce existing runway separation standards for simultaneous instrument approaches; the other approach, which was settled on, was the implementation of a Localizer Type Directional Aid/Distance Measuring Equipment (LDA/DME) approach procedure as contemplated in our rulemaking proposal.

To determine the feasibility and practicability of using an LDA/DME approach procedure at Stapleton, we examined a variety of factors including climatological data, flight restrictions, runway data, environmental impacts, and facility placement. Our initial consideration was of a "side step" approach in which lateral separation was achieved by offsetting the approach course by 4 degrees from the runway heading, and then calling upon the pilot to execute a visual manuever, called a side step, to runway 35R.

Six airlines and representatives of two pilot unions participated in an analysis of this side step procedure. Eighteen pilots conducted 90 approaches in a B-727 visual flight simulator. Each pilot flew four approaches with minimums of 1,000 feet ceiling and 3.5 miles visibility, and then one approach under conditions less than FAA safety standards would permit. Only one go-around resulted from over-shooting the extended runway centerline. None of the simulated approaches adversely affected simultaneous traffic to Runway 35L.

The pilots' comments confirmed that an LDA/DME approach to runway 35R, at minimums of at least 1,000 feet and 3.5 miles, was a safe navigational procedure. An actual flight test in a B-737 was also conducted of the side step procedure showing favorable results, but indicating that further improvements were achievable.

As a follow-on to our efforts on a possible side step approach at Stapleton, we designed a modified LDA/DME procedure. This is a straight-in, non-precision LDA/DME procedure with offset navigation facilities. Under this procedure, the LDA/DME approach would be terminated at the DME fix, three nautical miles from the approach end of Runway 35R, at which point aircraft would be laterally separated by 4,461 feet from

operations on Runway 35L. The proposed procedure is designed to require the pilot to remain on the localizer approach course until a visual approach is requested or abeam the Runway 35L threshold, at an altitude of about 320 to 350 feet above the runway. The pilot would be required to execute a slight right turn of 10 degrees from the localizer course for alignment and landing, with no side step or excessive maneuvering required.

In addition to establishing procedures to avoid wake turbulence, the FAA is proposing other measures to assure a high level of safety. For example, if the SIAP is adopted, we have proposed that for the first 60 days a ceiling of 1,300 feet or higher, but not exceeding 2,200 feet, and a visibility of 3 miles or greater reported at the airport would be the minima. After 60 days, if appropriate, the minima would be lowered to a 1,000 foot ceiling and 3 miles. Moreover, approach lights for Runway 35R must be operated when simultaneous ILS/LDA/DME approaches are in progress.

There has been some concern expressed about the potential use of the LDA/DME under other than very limited conditions. Let me assure you that the proposed approach would be used only when all three of the following conditions exist: 1) when the reported ceiling is at least 1,000 but less than 2,200 feet and the visibility is three miles or more; 2) when the airport

arrival demand exceeds 33 operations per hour; and 3) when simultaneous approaches cannot be conducted from the north and west because of wind and runway conditions.

When conditions are other than those I have just described, the navigational aid which is used to conduct the LDA/DME approach will be turned off, absolutely precluding selective use of the approach.

I would also like to assure the Subcommittee that this proposed approach has not, as some believe, been used in the past.

In October 1982, the FAA conducted an in-flight evaluation of the offset approach in turbojet aircraft to determine what operational impact, if any, would result from flying the proposed approach. The conclusion was that the approach procedure was safe.

In addition to the technical actions we have taken, we also consulted with system users concerning the potential impact of the construction of the navigation aids; met on numerous occasions with city, county, and state officials; offered a presentation of the procedure and its environmental consequences at a public meeting in Aurora; and have representatives serving on the technical committee of a noise

mitigation study being undertaken by local communities. I should add that we also performed an environmental assessment concerning the offset procedure and concluded that there would be no significant environmental impact as the result of the procedure.

Based upon these actions, we adopted the proposed SIAP last May. Subsequently, a court challenge and added public controversy to that SIAP ensued. Therefore, we withdrew the SIAP and committed the issue to the rulemaking process in order to provide further opportunity for public participation. That is where we stand today.

As indicated, in conjunction with the aviation community, we have undertaken substantial efforts to assure ourselves that the proposed SIAP is a safe and efficient procedure for use in the airspace system. We are now in the process of considering all input received in response to our NPRM before a final decision is reached.

Before closing, Madam Chairwoman, I would like to take a moment to highlight some of the findings we made in our environmental assessment of the impact of the proposed SIAP. This is significant because much of the controversy associated with the proposed SIAP has been generated by local community concerns about noise increases.

We had an independent environmental assessment conducted concerning the effects of the use of the LDA/DME approach which concluded that: changes in noise contours would be extremely small; the estimated change in the LDN level would be 1/2 decibel maximum; the noise level change would not be measurable under virtually any circumstance; and there would be no measurable change in noise effects.

In fact, the use of the SIAP could even have somewhat of an ameliorating effect from the perspective that airlines generally do not cancel delayed flights, meaning that during periods of substantial weather-related delays, aircraft arrivals and departures are extended into the late evening hours when noise annoyance is typically greatest. Use of the proposed SIAP would help prevent delays and reduce the late night traffic which would otherwise result.

I believe it is also significant that a statistical analysis of the climatological conditions at Stapleton from October 1979 through September 1982 indicates that use of the proposed SIAP for Runway 35R during that period of time would probably not have accounted for more than 1.64% of total landings at the airport.

Consequently, the FAA concluded that there would be no significant environmental impact from use of the proposed LDA/DME approach for Runway 35R.

Madam Chairwoman, that completes my prepared statement. I would like to turn now to John Wesler, FAA's Director of Environment and Energy, who will provide a short briefing to the Subcommittee on the noise impact of the proposed SIAP at Stapleton. Following that presentation, we would be pleased to respond to questions you may have.