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The Special Counsel

**September 5, 2003**

The President  
The White House  
Washington, DC 20500

Re: OSC File No. DI-01-1549

Dear Mr. President:

In accordance with 5 U.S.C. § 1213(e)(3), I am transmitting a report provided to this office pursuant to 5 U.S.C. § 1213(c) and (d) from Jane Dana, Deputy General Counsel, Department of Commerce. The Honorable Donald L. Evans, Secretary of Commerce delegated authority to Ms. Dana to review and sign the report. The report sets forth the findings and conclusions of the agency upon investigation of disclosures of information allegedly evidencing a violation of law, rule, or regulation and a substantial and specific danger to public safety arising out of actions by employees at the Department of Commerce (Commerce), National Oceanic and Atmospheric Administration (NOAA), National Weather Service (NWS), Oxnard, California.

The whistleblower, Gary Ryan, a former Data Acquisition Program Manager and Automated Surface Observing System (ASOS) Commissioning Officer, consented to the release of his name. He also provided comments on the agency report to this office pursuant to 5 U.S.C. § 1213(e)(1), which I am also transmitting.

Mr. Ryan's allegations were transmitted to the Secretary of Commerce for investigation on December 20, 2002. We have carefully examined the original disclosures and reviewed the agency's response and Mr. Ryan's comments. Pursuant to 5 U.S.C. § 1213(e)(2), I have determined that the agency report contains all of the information required by statute and the findings appear to be reasonable.

**The Whistleblower's Disclosures**

Mr. Ryan's disclosures pertain to the replacement of human weather observers with an ASOS unit at Paso Robles International Airport (PRB) in Paso Robles, California. Mr. Ryan was employed by NWS for over thirty years until he retired in 2001. He has extensive experience with both human and automated weather observation procedures and systems. In 1996, Mr. Ryan became an ASOS Commissioning Officer and was responsible for commissioning approximately twenty-five ASOS units in Southern California. The only site at which Mr. Ryan

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recommended against the commissioning of an ASOS unit to avoid degradation in service was PRB.

Mr. Ryan alleged that the decision to use ASOS as the only means of weather observation at PRB resulted in a degradation of service, thereby violating the Weather Service Modernization Act of 1992. Mr. Ryan also alleged that this decision created a substantial and specific danger to public safety for two primary reasons: (1) the ASOS unit at PRB was unreliable at the time it was commissioned; and (2) the weather in the Paso Robles area, especially the fog conditions, is too hazardous and rapidly changing to allow the ASOS unit to operate accurately without human monitors.

The 1992 Weather Service Modernization Act authorized the NWS to modernize its technical systems and restructure its field office organization. Weather Service Modernization Act of 1992 (WMSA), Pub. L. No. 102-567, 106 Stat. 4270 (codified as a note to 15 U.S.C. § 313). This effort included automating, or replacing human weather observers with automated equipment in certain field offices. However, the law prohibited the Secretary of Commerce from automating any field office unless the Secretary certified that such action would not result in any degradation of service. *Id.*, at § 706(b). In certifying that no degradation of service would result from proposed changes, the Secretary was required to address specified concerns, including: the local weather and weather-related concerns; any change in services that would result from the certification; and operational evidence of modernized NWS operations. *Id.*, at § 706(b).

According to Mr. Ryan, the ASOS unit at PRB had a long and clearly documented history of unreliability at the time it was commissioned. He indicated that many discrepancies were observed when the ASOS unit was being tested at PRB and, as an example, provided records showing ASOS results compared with manual observations during several months preceding the date the unit was commissioned. These comparisons showed that the ASOS unit reported the presence of clouds when it was clear, and snow when there was no precipitation. Despite several repairs and upgrades to the equipment, the discrepancies persisted. Mr. Ryan contrasted the performance of the PRB ASOS unit with ASOS units in other field offices, such as San Luis Obispo, which provided consistently accurate readings. Nevertheless, Mr. Ryan further states that on June 5, 2000, he was ordered to stop the human weather observers from documenting comparisons between their observations and those made by the ASOS unit.

As part of his disclosure, Mr. Ryan identified the key discrepancies frequently observed between ASOS equipment and human weather observers: (1) wind; (2) cloud height/ceiling; (3) visibility; (4) temperature/dew point; (5) hazardous weather/safety concerns; and (6) altimeter setting. These ASOS system flaws can result in dangerous conditions at airports, such as PRB, that are subject to rapidly changing conditions. PRB is located in a shallow coastal mountain valley where the weather conditions can change from completely clear to completely foggy within 15 minutes. The Paso Robles area fog morphology and dissipation patterns are extremely complex from a meteorological standpoint, with unusual 'doughnut holes' opening near the airport, accompanied by rapid changes in operational ceilings and visibilities. This is

partially due to terrain irregularities within the Salinas Valley, and the significant elevation difference (more than 100 feet) between PRB and the Salinas River. Given this location, Mr. Ryan stated that it is not possible for an ASOS unit to adequately give notice of such rapidly changing weather conditions.

An additional factor that contributed to the danger of operating the PRB ASOS unit without human weather observers was that the nearest maintenance support for the equipment was located approximately three hours away. On February 22, 2001, shortly after the unit was commissioned, it crashed, leaving the airport without any weather observations for approximately 11 hours. During such outages, there is no source of weather observation because, unlike airports that have weather observers or commercial airline tenants, there are no employees at the airport who serve as a point of contact. PRB is the only major landing strip between San Jose and San Luis Obispo, a distance of approximately 185 miles. Accordingly, a prolonged outage resulting in no weather information could prove dangerous to public safety.

#### **The Department of Commerce Investigation and Report**

As part of the investigation, the agency solicited a written response or held initial consultations with several NOAA and NWS representatives, including the Director of the NWS, Brigadier General (retired) John J. Kelly, Jr. The agency also interviewed regional NWS officials, including Todd Morris, Mr. Ryan's former supervisor. Finally, the agency interviewed Mr. Ryan, and held telephone meetings with Tim Kellet, a former weather observer at PRB recommended by Mr. Ryan, and Roger Oxborrow, PRB Airport Manager.

The report substantiated Mr. Ryan's allegation that the ASOS unit installed at PRB did not perform reliably. According to the agency, the unit at PRB was initially scheduled for commissioning in the late summer or fall of 2000. However, the agency stated that the unit was not ready at that time. In August of 2000, after Mr. Ryan was no longer responsible for the PRB ASOS unit, repairs were made. In particular, wires that had been frayed during installation were replaced, and repairs were made to prevent water from leaking into the unit, which had caused short circuits. After the unit was repaired, it performed reliably during a 90-day monitoring period and was commissioned in January 2001.<sup>1</sup>

The report did not substantiate Mr. Ryan's allegation that reliance on ASOS at PRB resulted in a WSMA violation due to degradation in service because Commerce concluded that the WSMA section cited by Mr. Ryan only applied to NWS field offices, which did not include PRB. According to the report, the ASOS unit at PRB was owned by the Federal Aviation Administration (FAA) so the decision to automate that facility did not result in a violation. In 1996, FAA decided to rely solely on ASOS at PRB and designated the facility as a Class D

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<sup>1</sup> The agency requested comparison logs maintained during the monitoring period, but was informed that the logs had been lost.

airport.<sup>2</sup> NWS acted as the commissioning agent for ASOS units on behalf of FAA. As commissioning agent, NWS was required to certify that the ASOS unit at PRB met the commissioning criteria, which included certifying that: (1) the system involved would perform to government specifications; (2) the system had been tested on site and performed reliably; (3) satisfactory maintenance support was in place; and (4) the system satisfactorily supported field operations. The report makes clear that the agency believes no violation of WSMA occurred because NWS was acting only as a commissioning agent and because the PRB ASOS unit met the requirements at the time it was commissioned.

The report also did not substantiate Mr. Ryan's assertion that reliance on an ASOS unit at PRB without human augmentation constituted a substantial and specific danger even in view of the unique meteorological conditions at Paso Robles. The agency acknowledged that there is a debate about the reliability of ASOS in measuring visibility and cloud ceiling. It concluded, however, that the prevailing scientific view is that these limitations do not represent an inherent degradation in service. The agency explained that this issue was debated for many years by FAA, NWS, DOD, the aviation community, and Congress "with the result that some ASOS systems required augmentation, and others, such as Paso Robles, did not." The report also stated that Mr. Oxborrow acknowledged that fog banks occasionally cover part of the airport which are not detected by the ASOS unit. However, according to Mr. Oxborrow, this failure does not create a significant problem and there have been no aviation accidents at the airport since the commissioning of the ASOS unit.

### The Whistleblower's Comments

Mr. Ryan criticized the agency's statement that NWS did not maintain a field office at PRB subject to WSMA because NWS established a weather office at PRB after World War II. Although FAA became responsible for the weather observers in 1951, NWS continued to own and maintain the weather observation equipment and provide quality control through 1987. At that time, Mr. Ryan states, FAA closed its operations at PRB and NWS established a contract weather office (CWO). NWS operated and staffed this CWO until October 1995, when responsibility shifted back to FAA. This transfer of responsibility was subsequent to the date the Weather Service Modernization Act was passed in 1992. Consequently, Mr. Ryan believes that PRB should be deemed a field office subject to the WSMA.

Mr. Ryan states that Commerce's reliance on FAA's classification of Paso Robles as a class D airport is misplaced. His objections to certification of the PRB ASOS were based largely on the belief that this classification was improper. Mr. Ryan believes Paso Robles should have been granted an exception based on an adjusted, "bad weather operations score," and that the information used by FAA to determine classification did not accurately reflect the dangerous fog anomalies that occur at Paso Robles Airport.

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<sup>2</sup> According to the report, FAA assigned a ranking to each airport in the country based upon the needs and requirements of the aviation community with regard to surface observations. In a Class D airport, ASOS observation constitutes the entire observation.

Mr. Ryan disagreed with the agency's conclusion that the ASOS at PRB gave accurate readings following commissioning of the unit. He stated that, for several months following commissioning, he had received unofficial and informal reports from weather observers and the media of faulty data and that the system had crashed completely in February of 2001. Moreover, Mr. Ryan was critical of the agency's investigation because it failed to distinguish between ASOS system flaws and defects with the particular ASOS unit at PRB. Even if the unit was functioning with 100% accuracy, which it is not, inherent system flaws would preclude the ASOS unit from reporting the rapid changes in ceiling and visibility that can occur at PRB. For this reason, Mr. Ryan believes that sole reliance on ASOS as a means of weather reporting at PRB represents a danger to public safety and a degradation of service

Finally, Mr. Ryan disagreed with the agency's conclusion that his allegations were based on outdated information and questioned the manner of the agency's investigation. He states that he continued to receive reports of inaccuracies during the months following commissioning from persons familiar with the PRB ASOS unit. Mr. Ryan stated that the report appeared to rely heavily on information provided by Mr. Roger Oxborrow, the PRB Airport Manager, who is not a certified weather observer or an ASOS technician. In closing, Mr. Ryan stated that the fact that there have been no aviation accidents at PRB does not mean that there will be no accidents in the future, particularly given the presence of the unique meteorological conditions at PRB.

#### Conclusion

Based on the representations made in the report and as stated above, I have determined, pursuant to 5 U.S.C. § 1213(e)(2), that the agency's report contained the information required by the statute and the findings appear reasonable.

As required by 5 U.S.C. § 1213(e)(3), I have sent a copy of the report and Mr. Ryan's comments to the Chairman of the Senate Committee on Commerce, Science, and Transportation and to the Chairman of the House Committee on Science. We have also filed a copy of the report and Mr. Ryan's comments in our public file and closed the matter.

Respectfully,



William E. Reukauf  
Acting Special Counsel

Enclosures