

**Statement of  
Marcilynn A. Burke  
Deputy Director  
Bureau of Land Management, Department of the Interior  
House Natural Resources  
Subcommittee on Energy and Mineral Resources  
Oversight Hearing:  
*“Up in the Air: The BLM’s Disappearing Helium Program”*  
May 13, 2010**

Mr. Chairman and members of the Subcommittee, thank you for the opportunity to testify on the Bureau of Land Management’s Helium Program. I am Marcilynn Burke, Deputy Director of the Bureau of Land Management. Tim Spisak, BLM’s Deputy Assistant Director for Minerals and Realty Management, is accompanying me today.

**Background**

Helium is a critical non-renewable natural resource. While best known for filling celebratory balloons and adjusting the pitch of the human voice, helium also plays an important role in medical imaging, space exploration, military reconnaissance, underwater diving, and fiber optics manufacturing. According to the National Academy of Sciences (NAS), helium’s best known property—being lighter than air—means “that every unit of helium that is produced and used today will eventually escape Earth’s atmosphere and become one less unit available for use tomorrow.” The BLM plays a key role in the careful management and stewardship of the nation’s important helium resource.

The most common and economical way of capturing helium is by stripping it from natural gas during gas production. Geologic conditions in Texas, Oklahoma, and Kansas make the natural gas in these areas some of the most helium-rich in the United States, ranging from 0.5 to 1.5 percent of the gas extracted during production. After World War I, recognition of the potential for helium recovery in the Texas Panhandle, Western Oklahoma, and Kansas area (collectively, the “Hugoton” field) led to the development of the Federal helium program focused in that area. In 1929, the Bureau of Mines built the Cliffside Storage Facility near Amarillo, Texas, to store helium in a naturally occurring geologic storage field known as the Bush Dome Reservoir.

**The Federal Helium Program/Congressional Authorities**

The Federal government’s interest in helium dates back to World War I and its potential to lift military reconnaissance devices high above battlefields. Recognizing this key military use for helium, the Mineral Leasing Act of 1920 reserved to the Federal government all helium produced on Federal lands—a reservation that remains in effect today. Soon after the passage of the Mineral Leasing Act, Congress recognized the need to ensure that helium would be available for defense needs, and created the Federal helium program in 1925. By 1929, the Bureau of Mines began operating helium extraction and purification plants in the Texas panhandle.

After World War II ended, Federal use of helium shifted towards space exploration, and in 1960 Congress passed the Helium Act. This Act changed the program's mandate from exclusive government production of helium to conservation of the resource by encouraging private natural gas producers to sell extracted helium to the Federal government for storage in the Bush Dome Reservoir. The Helium Act granted the Bureau of Mines the authority to borrow funds from the U.S. Treasury to purchase the helium, with the expectation that the proceeds from future sales of helium would allow the Bureau of Mines to repay the debt. This borrowing authority, established by Congress in lieu of a direct appropriation, required the Bureau of Mines to repay the loan by 1985. Subsequent legislation extended the deadline to 1995.

Demand for helium rarely, if ever, met the expectations underlying the terms of the Treasury's loan to the Bureau of Mines. When the 1995 deadline to pay off the debt arrived, the \$252 million the Bureau had spent on privately-produced helium had increased to \$1.3 billion (principal and interest), and the Bureau of Mines appeared to have little prospect of ever repaying the debt. In his 1995 State of the Union address, President Bill Clinton stated that it was his Administration's goal to privatize the Federal helium program.

Congress then passed the Helium Privatization Act of 1996 (HPA), which required the BLM (which assumed jurisdiction over the program after the termination of the Bureau of Mines) to make available for sale the vast majority of the stockpile of crude helium. The mandate allowed the BLM to begin selling helium as late as 2005, in order to avoid market disruption. The BLM was to make a consistent amount of helium available every year at a price based on the amount of remaining helium debt and the amount helium in storage. When Congress passed the HPA, there was approximately 30.5 billion standard cubic feet (scf) of helium in storage in the Bush Dome Reservoir. The HPA mandated the BLM to make available for sale all of the helium in excess of a 0.6 billion scf permanent reserve.

Additionally, the HPA required the BLM to cease all helium production, refining, and marketing activities to effectively privatize the refined helium market in the United States. Finally, the Act provided for the NAS to review the impacts of the 1996 Act. The NAS published its first study in 2000, and recently released a prepublication copy of its 2010 report.

### **The BLM's Helium Operations**

The BLM currently operates the Federal Helium program with a primary goal of paying off the "helium debt." To this end, the BLM has paid over \$750 million dollars to the Treasury, a substantial step towards eliminating the helium debt, which the HPA froze at approximately \$1.3 billion dollars. BLM anticipates repaying the helium debt by the end of 2015. According to the HPA, once the helium debt is retired, the Helium Fund (used to fund the BLM's helium program operational expenses) would be dissolved and all future receipts would be deposited directly into the Treasury.

The BLM's current helium program, with its 55 full-time employees, operates not only the original storage and pipeline system, but also a crude helium enrichment unit, owned by private industry refiners that facilitates transmission of helium to private helium operations on the BLM's helium pipeline.

The BLM is responsible for administering helium extracted from Federal resources, including management of fees and royalty contracts. These operations are not limited to the Hugoton gas field, but also occur in fields in Colorado, Wyoming, Utah, and any other state where producers extract helium from natural gas. Additionally, the BLM is responsible for administering the sale of crude helium to private refiners. These sales make the most significant contributions toward paying off the helium debt. The agency also conducts domestic and, to a lesser extent, international helium resource evaluation and reserve tracking to determine the extent of available helium resources.

Another major part of BLM's helium program is the "In-Kind" program, which supplies helium to Federal agencies (e.g., the Department of Energy and NASA) for operations and/or research. Before the Helium Privatization Act, Congress required Federal agencies to purchase their helium supplies from the Bureau of Mines. Under the current In-Kind program, Federal agencies purchase all of their refined helium from private suppliers who, in turn, are required to purchase an equivalent amount of crude helium from the Federal helium reserve. In 2009, Federal agencies purchased just over \$8 million of helium through the In-Kind program, down from \$11.6 million in 2008.

Finally, the program is in the final stages of disposing of facilities no longer needed for the storage and transmission of crude helium as required by the HPA.

### **The National Academy of Sciences Reports**

In 2000, the NAS published its first analysis of the impacts of the HPA. Its general finding was that the Act would not have an impact on helium users. Additionally, the NAS report concluded that because the price-setting mechanism was based on the amount of the helium debt, and not the market for helium, the government's significantly higher price would mean the helium refining industry would buy crude helium from the BLM only as a last resort for fulfilling private contracts. However, private helium refiners would still be required to purchase crude helium from the BLM under the In-Kind program.

Over the course of the last decade, however, it has become apparent that assumptions underlying the 2000 NAS Report are not accurate. First, the NAS's assumption that "[t]he price of helium [would] probably remain stable through at least 2010" has proven faulty. The market for helium has seen significant fluctuations on both the demand side—which dropped significantly in 2008 after peaking the prior year—and on the supply side, which experienced a significant decline in private supplies between 2006 and 2008. In the face of this volatility, prices for helium rose steadily over the course of the decade. By 2008, the market price for helium began to hover near the BLM's price, leading to greater withdrawals from the Federal reserve than the 2000 NAS Report anticipated.

Another market impact that the 2000 NAS Report did not address was international supply and demand for helium. According to the U.S. Department of Commerce, domestic consumption of helium decreased 2.7 percent per year from 2000-2007, while exports to the Pacific Rim grew 6.8 percent annually, exceeding the 5.1 percent growth rate in Europe. The international market

also experienced supply issues because of refining capacity problems at plants in Qatar and Algeria, which would normally help supply both Europe and Asia.

In February 2010, the NAS released a prepublication copy of an updated assessment of the impact of the HPA. The BLM is currently reviewing the NAS's prepublication document, and are providing feedback. The BLM welcomed the recommendations in the 2000 NAS report, and we anticipate working closely with the authors of the 2010 report. Additionally, the BLM looks forward to working with this Committee, its counterparts, and partners in discussing NAS's recommendations related to the helium program.

### **Conclusion**

The BLM welcomes further discussion about the BLM's helium program and the Bureau's role in meeting future helium needs for the country, especially for Federal agencies that depend on helium for scientific research, aerospace projects, and defense purposes. Since its discovery in the early 20<sup>th</sup> Century, helium has proven to be an increasingly important resource for scientific, medical, and engineering purposes. The expansion of helium-dependent technology and declining domestic reserves means the importance of helium as strategic resource is likely to increase. The BLM continues to serve the country by effectively managing the Federal helium reserve, and working with natural gas producers to efficiently extract helium from natural gas.