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**United States House of Representatives  
Committee on Natural Resources  
Subcommittee on Energy and Mineral Resources  
July 20, 2012**

**Hearing on  
Helium: Supply Shortages Impacting our Economy, National  
Defense and Manufacturing**

**Testimony of  
Walter L. Nelson  
Air Products and Chemicals, Inc.**

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**Introduction**

Mr. Chairman, Ranking Member Holt, and members of the Committee, I appreciate the opportunity to testify before you today. My name is Walter Nelson, Director of Helium Sourcing and Supply Chain, at Air Products and Chemicals, based in Allentown, Pennsylvania, and one of the world's largest industrial gas companies.

Until recently, it might have seemed odd to hold a hearing on helium. For the reasons I will explain below, however, many walks of life on which Americans depend – essential elements of our national defense, the assurance that patients can get an MRI when they need one, semiconductor and fiber optic cable manufacturers (and their customers) knowing that their products can be produced efficiently and effectively, scientists performing cutting-edge research – will be disrupted if Congress does not act in this area. Rural communities will be hit uncommonly hard because their residents will have to drive that much further to get an MRI or wait that much longer to get cable service.

As my testimony will explain at length, the current tightness in the helium market is unprecedented. Air Products and others in the industrial gas business are the victims here, along with our customers. The factors contributing to supply disruptions range from reduced extraction of helium-rich gases, planned and unplanned outages of both domestic and foreign helium processing plants and delays in commencing operations of new helium refineries. Shortages are especially acute as a result of the planned outage of the Bureau of Land Management system this July, the timing of which we consider non-negotiable on safety grounds.

The current supply crunch should serve as a warning, however, to those who doubt that new legislation is necessary. If the helium in the BLM system becomes off limits because there is no mechanism to pay for its continued operation, manufacturers merely feeling a major squeeze today could truly be unable to operate altogether. The statute that sets the framework for managing the nation's helium reserve, the Helium Privatization Act of 1996, expires at the end of 2014, but in fact the day of reckoning, under

the statute, is likely to come by the end of 2013. If it does, there will be chaos in the helium supply in the United States that could cause major disruption in people's lives and potentially to our national defense.

The solution is simple: legislation modeled after the Helium Privatization Act of 1996 can prevent future chaos in the helium market. Chances are that until recently, you have heard little or nothing from constituents about helium over the past 15 years. That's a good thing. With enactment of needed but limited legislation, chances are you still won't hear anything, a sure sign that the market will continue to function efficiently and effectively as it has since the creation of the Federal Helium Reserve. If, however, there are major changes to the system, and especially if Congress fails to enact an extension of our tested helium system in the United States relatively soon, constituents may indeed start grumbling, and with good reason, reasons I will explain in my testimony. The solution is straightforward, and does not cut on ideological or partisan lines. But time is not our friend here.

While some members of Congress may prefer to sever the federal government's role in helium as quickly as possible, ending the federal role in helium too quickly would be unwise, both for U.S. taxpayers and our nation's economy and its security. I will explain the reasons why in my testimony.

### **Air Products and its background in the helium market**

Air Products, with revenues of roughly \$10 billion per year, is an American-owned global industrial gas company. The company provides hydrogen for oil refineries so they can produce clean-burning gasoline, hydrogen for fuel cell cars and buses, liquid hydrogen for NASA's space launches, oxygen for patients in hospitals and to steel mills for use in blast furnaces, nitrogen to enable the manufacture of computer chips, and helium for MRIs and semiconductor manufacturing. In short, its core business is helping major industries operate more cleanly and efficiently. Air Products has 18,000 employees in 40 countries.

Air Products maintains the world's largest helium production and distribution system. It is THE industry leader in the helium field. We do not own gas fields that include helium-rich gas. We procure that gas from other companies, and then use our world-class technologies to refine out the helium. The Company's equipment processes more than half of the helium extracted from the earth globally, and it has pioneered many of the processes critical to getting helium from the ground to vital customers, such as extraction, production, distribution, and storage technologies used in the helium industry today. Air Products has experience second to none and that is recognized by virtue of the United States government's selection of Air Products to engineer and construct the first helium extraction units when the federal government began its helium conservation program in 1959. More recently, Air Products designed and constructed the helium enrichment plant in 2002 that supplies the Bureau of Land Management's helium pipeline system, which continues to operate to this day.

Air Products decided to build its first helium refining plant over 30 years ago, and the plant, in the northern panhandle of Texas, is one of the first of its kind in the United States. The plant, designed and built by Air Products with proprietary technology, was first operational in 1982, expanded in 1985, and it continues to operate to this day. Air Products subsequently constructed two more helium refining plants adjacent to third party natural gas processing plants, both near Liberal Kansas, in the southwestern part of the state, and not far from the Texas panhandle. At the time of completion, the second plant was the largest helium refining plant in the world. In 1995, Air Products became the first company to design and build a helium refining plant that used crude helium that had been extracted

during the production of liquified natural gas. More recently Air Products, through a joint venture with Matheson, constructed a helium refining plant in Wyoming. This plant was constructed in 2011 and it is expected to begin production by the end of this year when our supplier's natural gas plant becomes operational.

In short, Air Products is the most experienced company in the world to have designed, built, and operated large commercial helium refining plants. That said, there is nothing stopping any company from building its own helium refining plants near the Bureau of Land Management's pipeline system in the United States, and indeed, several companies have done just that.

### **Where does helium come from?**

Growing up, we never had to think about helium. It is at the party store if we want balloons. We see the helium-filled blimps at sporting events. Supplying helium, however, is anything but child's play. On earth, helium is found in natural gas, and in only a few spots on the planet does helium exist in high enough concentrations to make it worthwhile to separate it from the natural gas.

There are no naturally-occurring underground reservoirs of pure helium. Helium is a rare gas and it only forms in locations where the radioactive decay of uranium occurs with the formation of natural gas. Not all natural gas fields contain helium; indeed, most do not. The largest natural gas fields that are known to contain helium, other than in the United States, are in Algeria, Qatar, Australia, Iran and Russia.

Air Products' role, like that of other industrial gas companies who are helium refiners, is to purchase crude helium both from the federal government and from energy companies that are extracting helium from natural gas. These helium refiners purify (clean up and remove contaminants), liquefy (cool to minus 452 degrees Fahrenheit so that the gas takes liquid form) and then transport and sell helium into the global retail market. Once helium is extracted, purified, and liquefied, it has a short shelf life of only 45 days before it begins to warm up and turn back into a gas, so Air Products has developed transportation technologies necessary to transport the liquid helium from the refining plant to market. Gardner Cryogenics, a division of Air Products, has designed and constructed most of the liquid helium transportation and storage equipment used by the industry today.

For Air Products and every other industrial gas company in the United States, the Bureau of Land Management's pipeline and storage system are an integral part of this global supply chain and infrastructure. Disrupt the Bureau of Land Management's pipeline, and it would be as if two-thirds of the world's supply of oil was instantly pulled off the market – chaos would ensue, and the price, in this instance specifically for helium, would skyrocket.

### **The history of Congress's role in assuring sensible management of helium supplies**

The recognition of the significance of helium to the national defense and for research and medical purposes prompted Congress to pass the Helium Conservation Act of 1925. From 1929 until 1960, the federal government was the only domestic producer of helium. The majority of the helium originally produced was used to support the Navy's rigid airship program, the precursor to today's blimps. During World War II, some helium was used in the Manhattan Project. Helium, in short, was vital to national defense.

After World War II, Congress advanced the cause of helium conservation through the Helium Act Amendments of 1960, pursuant to which Air Products constructed all nine of the original helium extraction units, a testament to the company's leadership in the field. The federal government then purchased all of the helium that was extracted and stored it in the Bush Dome, a geological structure within the Cliffside natural gas field located north of Amarillo, Texas. In 1973, after helium was stockpiled for 10 years in the Bush Dome, the federal helium purchase contracts were terminated early because the federal government had accumulated more than enough helium for strategic uses as well as accumulating in excess of one billion dollars of debt over the ten year conservation period to recover and store the helium.

In the early 1980's, private industry began to construct helium refining plants along BLM's pipeline, a 425 mile crude helium pipeline system that extends from northern Texas through the panhandle of Oklahoma and into Kansas, to produce high-purity gaseous and liquid helium from both private and federal crude helium supply. Between 1982 and 2000, private industry constructed six helium refining plants at different locations along BLM's pipeline system. In addition, these private companies began entering into storage contracts with the BLM to store helium in the Bush Dome, creating what became known as the BLM pipeline system, a system of helium operations unique to the United States: a series of helium extraction and refining plants are connected to a man-made helium reservoir by a very long interconnecting pipeline.

The commitment to privatization ushered in by Speaker Gingrich in 1995 prompted a reassessment of the historical federal role in helium, motivated by a desire to get the federal government out of enterprises that could be handled by the private sector. The result was the Helium Privatization Act of 1996. BLM was directed to shut down and close the government-operated helium refining plant near Amarillo, Texas, and to offer for sale the 30+ billion cubic feet of crude helium stored in the Federal Helium Reserve to private industry. Congress also directed that BLM's helium reserves were to be offered for sale over a 15 year period to pay off the \$1.3 billion debt to the United States Treasury that was accumulated over 10 years during the helium conservation program. Congress contemplated a more extreme and immediate exit from the helium business but realized that such a course of action would have disrupted the market and been imprudent from the standpoint of the taxpayer and the end users of helium.

The activities of BLM under the 1996 Act were also to be subject to review by the National Academy of Sciences. In 2000, NAS determined that BLM could sell off all the helium, except for 600,000 cubic feet to be left in the Federal Helium Reserve, without negatively impacting the helium market or national security. More recently, NAS issued a report in 2010 that included recommendations to the Secretary of the Interior for improved management of the Federal Helium Reserve, recommendations that for the most part should form the basis for helium legislation designed to succeed the Helium Privatization Act of 1996.

Finally, we should note that our experience with BLM has been quite positive. The helium reserve has been well managed, and we have no reason to believe that this will change in the future.

### **The Federal Helium Reserve is essential to a stable helium market**

BLM today operates as a natural gas producer at the Cliffside field, where it extracts natural gas from wells, separates the gas, and then sells the natural gas and helium to private industry. BLM produces approximately two billion cubic feet of crude helium annually, which is about 30 percent of the

worldwide supply. The BLM system consists of the Bush Dome, an underground storage reservoir where the United States government stockpiled helium during the conservation period and into which companies that have refined helium can deposit the helium until it is used; together with 29 natural gas wells that are used to extract natural gas from the ground and a gathering system of pipes which connects all the wells together; a helium enrichment plant to process the gas; and a 425 mile crude helium pipeline system that extends from northern Texas across the panhandle of Oklahoma and into Kansas.

The crude helium enrichment plant is operated by the BLM, but the plant is owned by an entity called the Cliffside Refiners Limited Partnership (CRLP), a partnership made up of helium refiners that owned facilities on the BLM pipeline in 2000. The CRLP partners include Air Products, Praxair, Linde (formerly the British Oxygen Company), and Colorado Industrial Gas (formerly owned by El Paso Energy and recently acquired by Kinder Morgan). The CRLP was formed in July 2000 with the charter to support the federal government in fulfilling the requirements of the Helium Privatization Act of 1996. The CRLP invested over \$26 million at the Cliffside field to fund design and construction of the crude helium enrichment plant. BLM operates the CRLP-owned plant today, enabling the sale of government helium and natural gas (methane, in this case) to private industry. The CRLP companies were honored for excellence by the Secretary of Interior in 2004.

The BLM pipeline infrastructure today supports private industry by connecting seven private crude helium extraction plants and six private liquid helium refining plants to the BLM's reservoir at Cliffside. Without this pipeline system, private industry would not be able to efficiently deliver crude helium from the extraction plants to the helium refining plants in the region. The BLM pipeline system and the private industry helium plants together supply approximately two-thirds of the worldwide helium supply.

### **Helium is essential in many vital walks of life, especially the nation's defense**

Helium has certain properties that make it essential to modern life in many respects. It is lighter than air, which is why it is used not just in balloons and blimps but in other applications such as military communications and surveillance. Helium's properties make it vital to our national defense in many other respects. It is used in connection with space launches, both by NASA and by private defense companies that are committed to launching their own vehicles. Considerable amounts of helium are used for welding in the manufacture of nuclear fuel rods.

Because it is such a small element, it is used in leak detection. Liquid helium is the coldest substance on earth, so it is used to keep the electrical coils in magnetic imaging machines cold, as well as for special scientific research. There are no substitutes in connection with MRIs. If there is a shortage of helium, doctors and their patients would be unable to routinely avail themselves of MRI technology. Rural patients in particular would be at a disadvantage because they will have to travel even further to reach the nearest functioning MRI scanner.

Helium is used in many welding applications. Imagine a trip to the auto repair shop or any large manufacturer without the ability of workers to engage in welding. Without access to helium, manufacturers of fiber optic cable would not be able to use existing processes for making the cable that is the foundation of modern communications capacity. This could represent yet another real burden to rural residents in particular who are still waiting to have their communities serviced by cable companies. Semiconductor manufacturers would not be able to make their products without helium.

The BLM pipeline system supports approximately two-thirds of the world's supply, and allowing that system to expire by failing to enact successor legislation to the Helium Privatization Act of 1996 would produce a country without ready access to MRIs, the ability to manufacture semiconductors or fiber optic cable, or much or anything else that requires welding, among other highly essential processes.

### **Maintaining independence from foreign sources**

In any conversation about energy, much is made of the need for the U.S. to be energy self-sufficient to the extent possible. That is true in connection with rare earth metals and other essential elements to maintaining our commerce and our standard of living. Helium is no different. Our country is blessed with helium, and we should be thankful that Congresses almost a century ago had the foresight to make sure that such an essential element was not frittered away.

If the BLM system was off limits to helium refiners because the governing statute was allowed to expire, the U.S. would not only face the calamity of a chaotic market, but also would be dependent on helium imports from foreign countries. No Congress would purposely make a decision that such dependency was a wise course of action, yet failing to enact a successor to the current helium statute would have exactly those implications.

### **What is causing the helium shortage, and when will it end?**

We estimate that helium production worldwide was operating in excess of 95% of capacity in 2011. Production was just sufficient to meet global demand; however, any blip in supply caused by a planned or unplanned outage anywhere in the world would have an immediate impact on the market by tightening up supply.

Beginning in late 2011 and continuing thus far in 2012, the industry has seen crude helium supplies decline; at the same time there have been disruptions affecting most of the world's helium refining plants. These supply disruptions have been caused by many factors primarily outside the control of the helium refiners, resulting in reduced helium supply to consumers. In the United States we have seen a decline in helium production as energy companies focus their drilling plans on natural gas that is rich in liquids rather than the dry gas which typically has more helium.

There have been planned and unplanned maintenance outages at natural gas processing plants, as well as continuing pipeline allocations on the BLM system during well maintenance that have restricted the supply of crude helium to the U.S. refiners. In Algeria and Qatar, production of helium has decreased due to the fragile worldwide economy, as well as maintenance work at gas plants. In addition, new helium refining projects have been slow to develop. The delayed start-up of one particular plant in Wyoming has postponed access to major new supplies of helium. Combined, these issues have reduced the global helium supply by as much as 5% to 10%.

On top of this, the industry will experience an unprecedented helium shortage this summer. Beyond the developments cited above, there are currently three US plant outages or curtailments that are severely limiting the short-term supply of helium today. First, one company reduced its helium production in Wyoming by approximately 20% beginning early June while performing critical maintenance activities. Full production is not expected to resume until sometime later this summer. The impact of this curtailment is almost five percent of global supply capacity. Second, the crude helium enrichment plant

that supplies the BLM pipeline system was shut down July 15<sup>th</sup> for a planned 10 day safety critical outage. During this outage helium deliveries are limited to pipeline inventory reducing global supply capacity by an additional 25%. Third, a natural gas plant in Kansas experienced an unplanned helium equipment outage at the end of June and that outage continued through this week. The impact of this outage was another five percent reduction in global supply capacity. In helium circles this has been “the perfect storm.”

The combination of these issues has resulted in a significant short-term reduction in global helium supply capacity over the summer months. Global inventories would have normally served as a buffer during short-term outage events, minimizing the supply impacts. Unfortunately that’s not the case this time. Air Products has had to allocate our customers and I suspect that all helium suppliers have had to do the same. We are caught in a crunch not of our making.

We expect some relief soon. Most of the maintenance outages will be completed within weeks, in the U.S. and abroad. That said, it will most probably take months for the global helium supply chains to recover from these summer outages.

Helium supplies will continue to remain tight through 2012 and into 2013, when new helium production is expected in Wyoming and Qatar. The Wyoming project is expected to add four percent helium capacity and the Qatar II project may add up to 18% capacity. Only after these two new plants are operational in 2013 and existing plants are running back at full output will the global supply begin to fully stabilize.

This recent history of supply problems proves one thing: if the entire BLM system is off limits as soon as 2013, current shortages will be considered modest compared to the dire situation that helium users will face.

### **Enactment of a successor to the Helium Privatization Act of 1996 by 2013 is essential**

Air Products and virtually all stakeholders consider it essential for Congress to pass a successor statute that would preserve a system that for the most part has accomplished important objectives: assuring supply to essential uses of helium, preserving a BLM system that has many moving parts that need to work as a whole, and at stable prices. We see no reason to tinker with the essential functioning of the BLM system. But we don’t have time to spare, and here’s why.

The Helium Privatization Act of 1996 directed BLM to cease pure helium production and to sell off the helium remaining in the reservoir. The Act expires at the end of 2014. The best available modeling predicts that there will still be 10-12 billion cubic feet of recoverable helium remaining in the reservoir at the end of 2014. At current production rates of about two billion cubic feet per year, the reservoir could continue to produce helium for five to six more years.

This same modeling, however, has determined that the reservoir production rates will begin to decline to approximately one billion cubic feet per year after 2014. As a result, the usable life of the reservoir may be extended beyond 2020. This is sufficient time for new planned helium projects to become operational, replacing the lost Federal Reserve helium, but unless there is a successor statute to the expiring Helium Privatization Act of 1996, the BLM system will not be able to continue operations beyond December 31, 2014. To repeat: unless BLM has the authority to continue to operate the federal reservoir – which it won’t if there is no successor statute – all of the helium that remains in the reserve

will be inaccessible. That means that 30 percent of the worldwide supply will be essentially locked up, causing prices to skyrocket, some users with no ability to access helium, and chaos in the economic sectors that now rely on helium.

In fact, though, the time pressure is even worse. Under the statute, once BLM pays off the \$1.3 billion debt accumulated by the federal government during the helium conservation period, pursuant to the Helium Privatization Act of 1996 the self-funded United States Treasury account will be closed and BLM could then only continue operations with appropriated funds. Otherwise, there will be no funding mechanism to allow BLM to operate the federal reservoir or the 425 mile pipeline that acts as a vital supply chain for private industry. When the 1996 Act was written, Congress projected that the reservoir would be depleted by the end of 2014, when the Act expires. Helium has been removed from the reservoir at rates lower than those projected at the time, which is why there remains helium to be managed and a successor statute necessary. Thus, the various walks of life that would come to a halt without helium would be affected not upon the expiration of the Helium Privatization Act of 1996 on December 31, 2014, but when there is no funding mechanism beyond 2013.

That said, we are confident that with new helium sources becoming operational over the next few years, we will not be back here, petitioning Congress for yet another extension of the helium legislation. As far as we are concerned, once the 1996 Act is extended to account for the sell-off of the remaining helium in the reserve – and we are fairly confident now that we know by when the reserve will be essentially depleted – the federal government will be out of the helium business for good (other than supplying limited helium supplies to federal research and defense needs).

### **Establishing a market price for helium must be done right**

In the context of enacting legislation in a timely manner, Air Products advocates that the Department of the Interior must develop and adopt a mechanism to establish a fair and reasonable market price for the remaining crude helium sold by the BLM from the reservoir. We believe the Secretary of Interior should be given authority to conduct a confidential survey and to collect data from private industry, which would be used in conjunction with federal helium royalty data, in order to determine market pricing.

We strongly recommend that Congress make clear that the Department of the Interior must follow specific principles when using the confidential survey data to establish the market price. First, the pricing considered must be for volumes of helium that are similar in size to those volumes currently offered for sale by the Secretary. Helium purchases of small volumes will attract spot pricing, which may be higher and therefore will distort the survey data. Second, the pricing considered must be limited to sourcing transactions where the helium is being purchased for the first time. Any prices for the re-sale of wholesale helium in secondary or tertiary transactions must not be considered because these prices will include profit, which will distort the survey data. The confidential survey data collected must be comprehensive enough to characterize all pricing escalation indexes, including any index or reference to the BLM's posted price for conservation helium.

Clear guidance must be provided to the Department of the Interior on which companies must be included in the survey, when the survey must be conducted, what data must be submitted, how the data must be classified, how the data should be interpreted, what the qualifications of the individuals to analyze the data must be, how confidentiality will be maintained, how to address non-compliance, and how to audit or validate the data to ensure falsification does not occur. Including all these requirements in any legislation is impractical. Instead, we recommend that these details be incorporated into the



Committee report and in all other reports accompanying this legislation. We look forward to working with the Committee to achieve this important objective.

### **Current price and supply perturbations are unrelated to the federal statute**

Price for and supply of (and demand for) helium are a function of many factors, but recent price increases – unwelcome to Air Products, incidentally – and supply constraints are unrelated to implementation of the Helium Privatization Act of 1996 and unrelated to Congress’s current consideration of a path forward.

Over the past three years, the price for BLM crude helium has increased by 30%. Almost all sources of helium, both domestic and foreign, are indexed to the BLM price. As a result, helium prices have increased not just in the U.S. but abroad as well. Coincidentally, transportation costs have risen dramatically over the same three year period. On top of the BLM-set price, this increased cost is now a fact of life for us.

On top of those fundamental factors in establishing the price for helium, new helium refining plants have not come on-stream as had been projected several years ago. A plant in Wyoming has been delayed three years, another in New Mexico delayed over five years. A plant in Qatar has been set back one year, and plants in Algeria and Russia have been delayed for many years. The circumstances are different in the case of each delay, and I am positive that in none of these cases is the project developer pleased about the delays.

The good news is that with many of these plants poised to be operational in the not too distant future, the strains currently experienced in the helium market should be behind us. The bad news is that these delays have had the effect of driving up the world price of helium. We have become familiar with this in the context of gasoline prices. When there have been outages at petroleum refineries, the price of gasoline has gone up considerably in a short period of time, only to go back down once facilities are operating normally. We are not happy with this state of affairs in the helium context, and we know it creates uneasiness among consumers of helium.

Most helium (>99% of the worldwide volume) is purchased from energy companies under long-term supply contract. This helps to stabilize pricing. Spot purchases of small volumes of helium are another story, and spot pricing today is significantly higher than historical market prices for helium.

In addition to the cost increased that I have described, Air Products, for one, is investing large sums in transportation and new helium refining capacity to offset the decline in supplies. No one in the industrial gas business take any pleasure in dealing with the current shortages or the cost increases.

### **Why not simply extricate the federal government from the helium business?**

It would be natural for a Congress motivated by a desire to shrink government to explore the opportunity for the federal government to exit the helium business altogether, and soon. No more gradual drawing down of the helium reserve through auctioned sales, as is currently the case, but a law that would direct BLM to sell all its helium, its pipeline, its buildings, and any other part of the BLM helium system, within a short period of time.

This approach has a surface appeal, but in our view it would be unworkable, would be a bad deal for U.S. taxpayers, and would lead to precisely the same catastrophic consequences that we anticipate if the BLM helium were to be off-limits once the debt is paid off.

First, we are convinced that a fire sale, or even a highly structured auction, of the entire BLM system – helium, natural gas, equipment and pipeline – would be highly unworkable and impossible to transact without creating a monopolistic position for the buyer. A complete sell-off to one buyer would violate US antitrust laws and put that buyer in control of 30% of the worlds helium supply without any controls to ensure that position wouldn't be used to manipulate the global supply/demand balance and pricing.

Second, if BLM were to auction off just the helium in the reservoir, it would be impossible for the US government to deliver the helium to the buyer. The delivery rate of helium is limited by the design characteristics of the helium enrichment plant and the physical attributes of the reservoir. In theory, the BLM could sell off all the helium immediately, but BLM could not actually deliver it to the buyer.

Third, it would be possible for BLM to auction off the helium in quarterly or annual blocks, but we are convinced this method would have negative consequences for the US taxpayers. For one, the number of qualified bidders would be limited to only those who have helium refining plants on the BLM pipeline system. In addition, none of the helium refiners on the pipeline system have the capacity to receive and process the total volumes of helium that would be offered for sale. As a result, the helium refiners could only bid for a portion of the helium offered for sale which undoubtedly will result in a lower than market purchase price. If one refiner did purchase all of the volume without the capacity to process it, it would create a monopolistic position; the one refiner could hoard volume to secure a major price increase. This auction method would still not get BLM out of the helium business altogether. BLM would still have to act as the industry's "bookkeeper" as it doles out the remaining helium from the Federal Helium Reserve at prices below market value, robbing the US treasury of this revenue.

Clearly, it is in the best interests of the US taxpayer and the industry to let BLM continue its mission for the next few years and to complete its sell-off of the helium reserves at market prices while maximizing the delivery of helium to industry and maximizing the revenue to the US treasury.

### **The government serves an essential role**

Congress actually considered an immediate sell-off of the BLM helium system in 1996, but instead of legislation that would have led to a fire sale, the consequence was the Helium Privatization Act of 1996, which reflected Congress's support for privatization to the extent possible. Getting the government out of the helium business altogether, however, is no more possible today than it was in 1996.

The 1996 statute directed BLM to cease pure helium production and marketing. This resulted in the closure of the United States helium production plant that previously sold helium directly into the private sector market. BLM was also directed to offer for sale the approximately 30+ billion cubic feet of crude helium that had been stored in the reservoir. This sale, however, could not happen overnight. The helium in the reservoir is mixed with natural gas, and it is a complex operation to manage the geologic dynamics of the reservoir as the gas is being extracted from the ground. If the valve was simply left wide open to deplete the entire supply at once, valuable helium would be stranded in the ground and never recovered.

Today, the federal government retains ownership and management of the mineral rights for the reservoir, and the government owns the production wells, the gathering system, and the 425 mile pipeline distribution system. The helium enrichment unit and pipeline compressor stations are owned by private industry, but they are operated by employees of BLM under contract with the CRLP. In our opinion, BLM is the only entity that can oversee the drawdown of this strategic asset to the benefit of the government and private industry.

### **Legislation should not mandate allocations of helium**

Some have been heard to argue that BLM has set up what is essentially an oligopoly, and that Congress, in statute, should therefore force refiners on the BLM pipeline to allocate a percentage of their refining capacity to process helium owned by non-refiners, at set fees. The answer to this is simple: any party can negotiate to buy helium from a refiner, but Congress should not insert itself into the middle of commercial transactions. Commercial arrangements are entered into all the time that allow those without helium refineries to buy agreed-upon quantities of helium from those that do have refineries. These are referred to as tolling arrangements. But surely it is not the role of Congress to pass statutes that force refiners to sell at a set price, or to force refiners to share their substantial investment in refining capacity with companies that have made their own strategic choice not to build their own refinery.

The refiners made enormous investments at the time they built refineries on the BLM pipeline. Several industrial gas companies chose not to make such an investment. Those industrial gas companies that chose not to make similar investments presumably made what to them were sound business decisions, and spent their capital elsewhere. For Congress in 2012 to give those companies the ability to force the refiners to sell at a set price would be totally un-American and contrary to the basic principles of capitalism. Nothing in law stands in the way of any company entering into a tolling arrangement at a mutually agreed-upon price.

Consider the analogy of a petroleum company, lacking its own refinery, but looking to get its hands on petroleum out of the Strategic Petroleum Reserve and getting that to market as gasoline. If that company petitioned Congress to force Exxon-Mobil in statute to use some of Exxon's refining capacity to process petroleum of its competitor, no one would conceivably take this position seriously, and it has no more merit in the context of helium. Of course, the petroleum company could negotiate with Exxon to have its petroleum refined at an Exxon plant, which has happened for years in the helium context. But forcing refiners to use scarce capacity for a competitor in statute? No one could possibly think this is an appropriate role for Congress.

The 1996 Act did not restrict access to the BLM pipeline or impose restrictions on who could purchase helium from the federal government. Any third party company that wanted to enter the helium refining business and purchase helium from the federal government could have made investments as early as 1996, and could do so to this very day and into the future. Surely, it is not the role of Congress to turn back the hands of time and allow companies that opted not to make such investments to enjoy the benefits accruing to those who did.

The 1996 Act does not impose any restrictions on who can purchase helium from the federal government. Instead, the Department of Interior, under Administrations of both parties, limits the sale of helium from the federal reservoir to what it calls "qualified buyers" – an entity that must have the ability to receive and process the crude helium sold by the government. Any company can enter the

helium refining business with the requisite commitment of its resources. BLM's interest in selling to qualified buyers is to prevent companies from stockpiling crude helium. BLM determined that helium refiners were in the best position to process the crude helium, which requires purification and liquefaction prior to being introduced into the helium wholesale or retail market.

Interestingly, BLM initially offered 90 percent of the helium in the reservoir to the refiners and left 10 percent as unallocated, to be purchased by companies that were not refiners. But there was very little demand for the unallocated portion. Since BLM's desire was not to sit on unnecessarily large quantities of helium in the reservoir, BLM raised the allocated amount to 94 percent. Any suggestion that this level poses an obstacle to any company wishing to purchase helium for its customers simply does not comport with the facts. The 1996 Act and any successor statute does not and should not set the allocation level; BLM does, and for reasons that benefit the U.S. taxpayer and the users of helium.

**Conclusion: The time for Congress to act on helium is now**

Congress got it right when it established the federal helium reservoir and the surrounding infrastructure managed by BLM. The system has worked well for decades. Congress got it right yet again in the Helium Privatization Act of 1996, when it set in motion a process for selling off the helium previously captured in the federal reservoir. End users have had helium when they need it, and price and access have been stable. The public does not think much about helium – aside from party balloons and blimps – because the system has worked so well.

We believe that with few changes, the Helium Privatization Act of 1996 should be amended and extended to enable the BLM to continue its mission of selling off and delivering the remaining helium left in the Bush Dome. This would continue this tradition of a system that works so well that hardly anyone even knows it exists. But let the 1996 Act expire without enactment of a successor statute, and helium will be a household word, and not in a good way. Doctors and patients needing MRIs will panic. Semiconductor manufacturers, the nation's leading exporters, will be caught short. Our nation's defense will be compromised. And the list will go on. These problems will unfold by the end of 2013 if there is no mechanism in place to fund BLM's helium operations, and BLM will indeed be out of business regarding its management of the Cliffside reservoir unless Congress acts.

Air Products appreciates the opportunity to share its knowledge of the helium industry with the Committee, and looks forward to working with the Members of the Committee and staff to make sure a bill is crafted that will spare our country needless problems. We will do whatever we can to see to it that this issue is addressed by Congress before catastrophe strikes.

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