



**Statement of David Joyner  
President  
Air Liquide Helium America, Inc.**

**Hearing On  
The Helium Stewardship Act of 2012**

**Before the  
Senate Committee on Energy and Natural Resources**

**May 10, 2012**

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**Air Liquide Helium America, Inc.**  
**Consideration of S. 2374: Helium Stewardship Act of 2012**  
**U.S. Senate Committee on Energy and Natural Resources**  
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Mr. Chairman and Members of the Committee, I appreciate the opportunity to testify today on S. 2374, the Helium Stewardship Act of 2012. My name is David Joyner and I appear today on behalf of American Air Liquide, one of the Nation's leading industrial gas companies. Headquartered in Houston, Texas, American Air Liquide has over 5,000 employees in the United States in more than 200 different locations all over the country. For decades, Air Liquide has offered industrial gases and related services to the Nation's large industries, manufacturers, electronics and healthcare marketplaces. As a company, Air Liquide is focused on technological innovation to help make our Nation's manufacturing and industrial sectors more efficient, environmentally friendly and productive. To that end, since 2007, Air Liquide has operated the Delaware Research and Technology Center (DRTC) which houses approximately one hundred employees specifically devoted to developing innovative applications for gas products in sectors such as electronics, healthcare, cosmetics, energy and food, as well as supporting helium specific initiatives such as recovery and re-liquefaction in support of conservation efforts. We would like to thank Senator Chris Coons for his strong and consistent support of technology innovation in Delaware and around the United States.

Most relevant to the topic of the Committee's hearing today, Air Liquide is a major supplier of refined helium in the United States and globally to customers that range from companies on the cutting edge of the electronics industry to health researchers, automotive suppliers, laboratories and manufacturing facilities all over the world. I have been with Air Liquide working in the industrial gas sector for over twenty years. For the last two of those years, I have served as the President of Air Liquide Helium America, Inc., our helium supply company. In this capacity, I have grown to appreciate the importance of helium—a non-renewable resource on our planet but one that's utility has only grown with the passage of time. I have also gained an in-depth understanding of the helium market both globally and domestically.

A stable supply of helium is crucial both to our customers as well as to our own research efforts at DRTC. We are especially pleased that S. 2374 recognizes and supports one of these areas of research—advanced membrane technology—which can eventually lead to breakthroughs in future helium recovery and supply.

As the Committee is aware, the issues surrounding the helium market are complex and the uses for helium—whether as part of magnetic resonance imaging (MRI), particle physics research, or airbags for the automotive sector—are of critical national importance. Accordingly, I commend the hard work done by the Members of this Committee and the Committee staff to ensure the reliability of our Nation’s helium supply. For today’s hearing, I would like to confine my remarks to two issues that we see as important as the Committee considers the current legislation: (1) accessibility and (2) pricing.

With regards to accessibility, currently 94 percent of the domestically available crude helium managed by the U.S. Department of Interior’s Bureau of Land Management (“BLM”) is allocated to just four companies. The rest of the marketplace is forced to compete for the remaining six percent and attempt to negotiate a reasonable agreement from one of the four refining companies—who are also direct marketers of helium like the non-refiners—to refine the crude helium (i.e. “toll”) for their use. Without an agreement for the refiner to toll, the crude cannot be used by a non-refiner to be sold to an end-user. Moreover, given the worldwide supply/demand balance of helium, individual market players will not be compelled to transfer tolling capacity to other players in the current structure.

As to pricing, because the original base pricing of federal helium started at below market levels, the BLM, at the recommendation of the National Academy of Sciences (“NAS”), is now making unpredictable increases to adjust the base pricing up to market levels and to incorporate additional fees for costs that are specific only to the operation of the BLM reserve. Unfortunately, over the last several years, these increases have often been sudden, significant jumps, leading to an irregular domestic pricing mechanism. To complicate matters further, helium sourcing agreements beyond the closed BLM system reference the BLM crude price as an index for their own pricing formulas. This, in effect, drives up the price of helium for all

consumers not only here in the United States but also around the world whenever the BLM crude price is readjusted. This contractual reality creates a system in which the global source prices increase in parallel with BLM prices and thus perpetually remain higher priced. If no action is taken to address this issue, this result would be contrary to the objective of triggering increased conservation of the BLM crude. To be clear, we understand the objective for the BLM to attain market pricing for helium, however, we recommend achieving that objective without artificially distorting market driven factors at other sources in the U.S. and around the world. This would ultimately result in artificially driving other sourcing prices above market pricing which will negatively impact consumers.

With minor tweaks to the current system, Air Liquide believes both of these issues can be addressed to the betterment of industry, consumers and society. Accordingly, we propose the following solutions to the two issues of (1) accessibility and (2) pricing.

#### **I. ACCESSIBILITY OF THE U.S. HELIUM SUPPLY**

The Federal Helium Reserve was created in 1925. As helium began to be recognized as critical to the Nation's defense industry, the United States accumulated a large supply of the gas during the height of the Cold War. As previously stated, the supply of helium is non-renewable and the Federal Helium Reserve, managed by BLM, now produces nearly 50 percent of the helium in the domestic market and one-third of the helium used in the global market, making it a significant player and consumer in the world helium market.

As the Committee is aware, the helium stored at the Federal Helium Reserve is "crude" helium which must be refined before it is transported to end-users. The process of refining helium involves the transport of the crude helium from the Federal Helium Reserve through the Helium Pipeline—a system that runs through Kansas, Oklahoma, and Texas—to one of six refining facilities that are located on the pipeline where further purification and liquefaction takes place prior to redistribution to consumers. These six refining facilities are owned by just four companies. Thus, these four refiners have an almost exclusive use of 30 percent of the world's helium supply via the BLM reserve. As the National Research Council's 2010 report, *Selling the Nation's Helium Reserve*, (the "NRC 2010 Report") notes: "given that refining the helium must

take place at one of the facilities connected to the Helium Pipeline, the limited number of potential processors of federally owned crude helium place significant restrictions on alternatives to the current sale procedures being followed by BLM.” These restrictions include the fact that potential private bidders for BLM helium—outside of the four companies that own the refineries on the Helium Pipeline—are entirely dependent upon the ability to have these refiners process the BLM crude helium at a refinery on the Helium Pipeline in order to get the gas to end-users in the market. This system prevents an open market where outside companies can compete for the BLM crude helium for federal user’s business as well as open market uses.

The consequences of the situation described above have important implications for domestic end-users of helium. Adopting a more market-based approach was recommended by the NRC 2010 Report which stated the following:

The Bureau of Land Management (BLM) should adopt policies that open its crude helium sales to a broader array of buyers and make the process for establishing the selling price of crude helium from the Federal Helium Reserve more transparent. Such policies are likely to require that BLM negotiate with the companies owning helium refining facilities connected to the Helium Pipeline the conditions under which unused refining capacity at those facilities will be made available to all buyers of federally owned crude helium, thereby allowing them to process the crude helium they purchase into refined helium for commercial sale.

Utilizing this approach would result in a more accurate and transparent helium market and would benefit consumers by increasing the number of suppliers competing for the business of federal users and open market users. To attain these goals, we would recommend that S. 2374 include measures to open the Federal Helium Reserve to a wider range of buyers and establish policies to ensure greater access to crude helium exists within the market. In exchange for a suitable tolling fee paid to the refiners, non-refiners would therefore be able to buy BLM helium and, through arrangements with existing refiners, be able to utilize previously unavailable refining capacity at facilities on the Helium Pipeline.

One solution for increasing access may be to adjust the unusually high 94 percent helium allocation referenced earlier to a more reasonable distribution between refiners and non-refiners and requiring the refiners to toll an equivalent ratio of crude helium on the behalf of other buyers. This would allow the existing refiners on the pipeline to continue to benefit from their

preferred status but would ensure the marketplace around them more accurately reacts to changing issues of supply and demand. In exchange, the refiners would receive an appropriate tolling fee. This solution would expand the number of suppliers competing for the business of consumers and federal users, meaning a more robust and competitive market place.

## **II. IMPLICATIONS OF BLM CRUDE PRICE FOR GLOBAL HELIUM CONTRACTS**

As discussed briefly above, one of the central problems S. 2374 seeks to address is the current distortion between the price of helium sold by the Federal Helium Reserve and the actual price such helium would be sold for under normal market conditions. Under the provisions of the 1996 Helium Privatization Act, the BLM was directed to sell off the helium from the Federal Helium Reserve at a price solely designed to pay down the Reserve's existing debt. Clearly, this has had the impact of distorting the sales price of BLM helium in comparison to the actual market price which is set by domestic and global supply and demand. Another impact, resulting from the fact that BLM has historically and still today, represents the largest single source of helium capacity in the world, is the widespread use of the "BLM crude price" as a benchmark in private helium sales contracts all over the world. To compensate for the artificially low benchmark price, as the NRC 2010 Report states, "[m]any if not all of the contract adjustments also include escalation terms that maintain the premium over BLM set in the adjusted price terms of the renegotiated crude contracts[.]"

The importance of this issue is that, while S. 2374 requires the Secretary of the Interior to adjust the price of helium from the Federal Helium Reserve, an increase in the BLM crude helium price in the existing format will trigger the escalation clauses in the sales contracts referenced above. The resulting increase in helium prices at other sources in the United States and around the world will be passed on to end-users who will be unduly harmed as an unintended consequence of a well-meaning change to the way BLM sells helium. An example of this downstream impact was recently seen when BLM announced an 11 percent increase for the BLM crude price in 2012 (the price increase in 2011 was just one percent). A BLM statement explained that the increase resulted from new pricing factors such as an "Enrichment Factor" and a "Conservation Factor" designed to encourage industry conservation of helium. The legislation indicates that proceeds are to be contributed to a Helium Production Fund that will be used to address investments

required in the BLM infrastructure to maintain the needed production rates. Such costs are unique to the BLM source only and not relevant to other global sources, however, as a result of the price increase from these non-market factors and because the BLM crude price is used as a benchmark in helium contracts around the globe, most global sources of helium will now see an 11 percent price increase, despite the fact that they were already at or above the actual market price. The impact of this increase will be non-market driven cost increases to end-users in the United States and abroad.

To prevent this undesirable result, we recommend the separation of the “fees” cited recently by BLM—i.e. for Enrichment and Conservation, as well as the Helium Production Fund—from the BLM crude price to reflect the wholesale change in the pricing mechanism envisioned by the proposed legislation. By clearly separating the non-market fees from the current BLM crude price—which has no relation to the actual helium market—private companies will be able to adjust existing contracts in accordance with true market drivers and avoid the artificial increases causing undue harm to end-users. Such a solution would allow the BLM to collect the full revenue stream and ensure that the federally supported Reserve maintains its ability to operate effectively while protecting helium end-users domestically and around the world from dramatic and unpredictable swings in price. Consumers of the BLM Reserve would still be paying for its continued maintenance, operation, and upgrades through this fee structure but would be doing so in a way that is directly accountable to the federal government’s investment. They would also be doing so through a fee system that the BLM itself has already begun to establish with its latest price increase. Similarly, consumers of other helium sources, both domestically and abroad, could be secure in the fact that simple supply and demand and business acumen will govern their price, not unrelated government actions that are specific to the BLM reserve and not relevant to other helium sources.

Once again, Air Liquide appreciates the Committee’s attention to this important issue and supports this legislation’s ultimate goal of ensuring the continuing viability of the Nation’s helium supply. We believe the changes to the legislation discussed above are achievable and fully consistent with the intent underlying the bill. I thank the Committee for inviting me to testify, and I would be pleased to answer any questions you may have.