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Report to the Chairman, Subcommittee on Mining and Natural Resources, Committee on Interior and Insular Affairs, House of Representatives

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MINERAL RESOURCES

Meeting Federal Needs for Helium

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Resources, Community, and
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The Honorable Nick J. Rahall, II
Chairman, Subcommittee on Mining
and Natural Resources
Committee on Interior and Insular Affairs
House of Representatives

Dear Mr. Chairman:

In response to your request, this report discusses (1) actions taken by the Department of the Interior's Bureau of Mines to meet the objectives of the Helium Act of 1960; (2) issues that should be considered when deciding how to meet federal needs for helium, including whether the program debt in the Helium Fund should be canceled or repaid; and (3) three alternatives for meeting federal needs for helium. These alternatives are to continue the existing Bureau program; require that all federal needs be supplied by private industry, as proposed in 1989 by H.R. 2541; and allow all federal agencies to choose to purchase helium from the Bureau or private industry, as proposed by Interior in 1992.

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time we will send copies to the Secretary of the Interior and other interested parties. We will make copies available to others on request.

This work was performed under the direction of James Duffus III, Director, Natural Resources Management Issues, who can be reached at (202) 275-7756. Major contributors to this report are listed in appendix I.

Sincerely yours,

J. Dexter Peach
Assistant Comptroller General

Executive Summary

Purpose

The Helium Act of 1960 requires, among other things, that federal agencies purchase their major requirements for helium from the Department of the Interior's Bureau of Mines. In response to a request by the Chairman, Subcommittee on Mining and Natural Resources, House Committee on Interior and Insular Affairs, this report discusses (1) actions that the Bureau has taken to meet the objectives of the 1960 act; (2) issues that should be considered when the Congress decides how to meet current and foreseeable federal needs for helium, including whether the program debt in the Helium Fund should be canceled or repaid; and (3) three alternatives for meeting federal needs for helium. These alternatives are to continue the Bureau's existing program; require that all federal needs be supplied by private industry, as proposed in 1989 by H.R. 2541, which was not enacted; and allow all federal agencies to choose to purchase helium from the Bureau or private industry, as proposed by Interior in 1992.

Background

Helium is an inert gas used for such purposes as the space program, weapons systems, and superconductivity research. The 1960 act authorizes Interior to conserve, buy, store, produce, and sell helium to meet federal and other needs. The objectives of the act are to (1) conserve helium for future use, (2) provide a sustained supply of helium sufficient for essential government activities, and (3) foster and encourage individual enterprise in the development and distribution of helium. The act further provides that Interior price federal helium to ensure that revenues from sales cover all program costs.

Crude helium is separated from natural gas and then refined. In the 1960s and 1970s, the Bureau purchased crude helium and stored it in Cliffside, a natural gas field in Texas connected by a pipeline to the Bureau's refining plant. In addition, the majority of the private helium industry that has developed since 1960—including crude producers and refiners in Kansas, Oklahoma, and Texas—is connected to the Bureau's pipeline. Because natural gas production varies to meet seasonal demands, the production of crude helium also varies. To smooth out these seasonal variations, the Bureau allows private companies to store helium in Cliffside.

The Helium Fund is used to account for the Bureau's program revenues and expenses. The program's net capital and retained earnings, and subsequent program borrowings from the U.S. Treasury used to purchase crude helium, were established by the 1960 act as debt in the fund. Under the act, this debt and accrued interest are to be repaid to the U.S. Treasury by 1995 from helium sales revenues. However, revenues were less than

anticipated, and as a result, the debt grew to about $1.3 billion, as of September 30, 1991. Of this amount, more than $1 billion was interest.

Results in Brief

Since the Helium Act was passed in 1960, the Bureau has acted to meet the act's objectives. The Bureau has met federal needs for helium. The Bureau has also conserved helium by purchasing and storing a large amount that would have otherwise been vented into the atmosphere. In addition, the Bureau has fostered the development of a private helium industry through crude helium purchases and other actions.

Clearly, many of the conditions that existed when the Congress passed the Helium Act of 1960 have changed. For example, a private helium industry has emerged that could meet federal needs for helium in the absence of a Bureau program. These changes have affected both the act's objectives and the Bureau's ability to realistically repay the program debt by 1995. Any decision on how to meet current and foreseeable federal needs for helium should consider not only the effects of the changes since 1960 but also (1) the interrelationship of the act's objectives, recognizing that a change to one could affect another, and (2) the decision's effect on the federal budget and the total cost of supplying helium to the U.S. economy.

The three alternatives that GAO evaluated for meeting federal needs for helium could affect the act's objectives, the program's debt, the federal budget, and the total cost of supplying helium to the U.S. economy differently. Ultimately, choosing among these and other alternatives to meet current and foreseeable federal needs for helium is a public policy decision.

Principal Findings

Actions Taken by the Bureau to Meet the Objectives of the Helium Act of 1960

The Bureau has met federal needs for helium and can continue to do so. The Bureau has conserved helium that would otherwise have been vented into the atmosphere by purchasing and storing a large amount; allowing private industry to store helium in Cliffside; and requiring the recovery of helium from the helium-rich, mostly federally owned Riley Ridge natural gas field in Wyoming. The Bureau has fostered and encouraged a private helium industry by purchasing the large amount of crude helium for storage; increasing its price for refined helium to the point where the

private industry believed it could succeed; and allowing the private industry to store helium in Cliffside.

A Decision on How to Meet Federal Needs for Helium Should Consider Many Issues

A decision on how to meet current and foreseeable federal needs for helium should consider many issues. Among them is recognition that changes that occurred since the act was passed in 1960 affect the relative priority of the act's objectives and the Bureau's ability to realistically repay the helium program debt by 1995. For example, in 1960 the Bureau was the sole producer of refined helium, but now a private helium industry supplies almost 90 percent of refined U.S. helium and could meet federal needs for helium if there were no Bureau program. Also, in 1960 there was concern that helium conservation was necessary to ensure that federal needs could be met. However, the Bureau has estimated that, if needed, the federally owned helium in Cliffside plus the helium in Riley Ridge Field could meet federal needs for helium for over 150 years. Another change is that the Bureau can no longer be realistically expected to repay the program debt by 1995. Although the Bureau was expected to price its helium to cover all program costs, including repayment of program debt, it has not yet done so. To repay the debt by the statutory deadline, the Bureau would have to charge federal agencies with major requirements for helium over $3,000 per thousand cubic feet, compared with the current price of $55.

Another issue to be considered is that the act's objectives are interrelated. For example, a decision that the conservation of helium is no longer an objective and, therefore, that the inventory of federally owned helium should be sold would most likely put the private crude helium industry out of business.

The remaining issue to be considered is the effects that each of the alternatives for meeting current and foreseeable federal needs for helium has on the federal budget and the total cost of supplying helium to the U.S. economy. Because alternative ways of meeting federal needs for helium would have different effects, tradeoffs may be necessary. For example, shifting federal purchases of helium from the Bureau to private industry would likely result in increased outlays in the federal budget to cover the difference between the price the Bureau would have to charge to cover its operating costs and currently higher private helium prices. On the other hand, holding the federally owned helium inventory incurs an opportunity cost of foregoing revenues to the federal budget, and if this occurs at the same time that federal purchases of helium are shifted from the Bureau to

private industry, it also increases the total cost of supplying helium to the U.S. economy because of the need for new private investment in helium production capacity. Finally, cancellation of the helium program's debt would not adversely affect the federal budget because the debt consists of outlays that have already been appropriated and interest that is a paper transaction, not an outlay.

Three Alternatives for Meeting Federal Needs for Helium

The three alternatives for meeting federal needs for helium that GAO was asked to evaluate demonstrate that tradeoffs must be made. For example, while the Bureau's program can meet federal needs, its selling price is supposed to recover the program's debt that resulted primarily from the Bureau's purchase of the large federal helium inventory to meet the act's conservation objective. However, if there were no program debt, the Bureau's helium price would likely be lower than the private helium industry's prices, which would adversely affect the private helium-refining industry, unless further actions were taken. Also, the Bureau's use of helium from storage, rather than recovering helium from current natural gas production, works against helium conservation. Yet holding the inventory has an opportunity cost.

H.R. 2541 would have required that all federal agencies purchase helium from private industry, the federally owned helium inventory be retained for use only if private industry could not meet critical requirements, and the Bureau's program debt be canceled. This bill would have increased government outlays for helium because private prices must cover capital and inventory costs and are currently higher than the Bureau's price would have had to be to cover operating costs once the program debt was canceled. The bill would have fostered the private helium-refining industry because it would have shifted purchases of helium from the Bureau to industry, and it would have increased helium conservation through additional recovery of helium from natural gas production. This would have required, however, new investment in crude helium production capacity, which would have increased the total cost of supplying helium to the U.S. economy.

Interior's 1992 proposed bill would remove the requirement that federal agencies purchase their major requirements for helium from the Bureau. However, the continuing requirement to repay the program's debt would require the Bureau to set an unrealistically high price for its helium. This would likely drive the Bureau's program out of business. Terminating the

Bureau's program in this manner would have the same results as H.R. 2541.

Recommendations to the Congress

GAO recommends that, because conditions affecting the Bureau's helium program have changed since the Helium Act of 1960 was passed, the Congress reassess the act's objectives in order to decide how to meet current and foreseeable federal needs for helium. GAO also recommends that the Congress cancel the debt in the Helium Fund because it is no longer realistic to expect the debt to be repaid by the statutory deadline of 1995 and because canceling the debt would not adversely affect the federal budget. Canceling the Bureau's helium program debt, however, would likely allow the Bureau to undercut private industry's refined helium prices, thereby adversely affecting the private helium-refining industry by taking away sales. Therefore, on the basis of a reassessment of the act's objectives, if the Congress decides that fostering the private helium industry is still an objective, additional actions would be needed, such as requiring the Bureau to price its helium comparably to private prices or requiring all federal needs to be met by the Bureau but prohibiting the Bureau from selling helium to nonfederal customers.

Agency Comments

We discussed the results of our work, including the facts and our conclusions, with the Director of the Bureau of Mines and other Bureau officials. These officials generally agreed that the report is accurate, and their comments were incorporated where appropriate. However, as requested, we did not obtain written comments from Interior on a draft of this report.

Contents

Abbreviations

GAO	General Accounting Office
NASA	National Aeronautics and Space Administration

Introduction

Helium is an inert element that occurs naturally in gaseous form and has a variety of uses. The federal government uses helium, among other things, in the space program, weapons systems, and superconductivity research. For example, helium is used to purge the fuel tanks and lines of the space shuttle. Helium is used commercially in medical equipment, welding, and leak detection.

Helium is presently economically recovered from natural gas fields that generally contain 0.3 percent or more of naturally occurring helium. The United States has 42 percent of the world's known helium reserves contained in natural gas, 96 percent of which are located in Kansas, Oklahoma, Texas, and Wyoming. The helium is separated from the natural gas and stored in a concentrated form that is referred to as crude helium because it has yet to go through the final refining process. The refining process purifies the crude helium to above 99 percent purity.

Federal agencies' major requirements as well as other requirements for helium are met by the Department of the Interior's helium program managed by the Bureau of Mines. Since 1989 two legislative alternatives have been proposed for changing the way in which federal needs for helium are met. Each alternative would affect the federal budget, the private helium industry, and helium conservation.

The Helium Act of 1960

The federal government and private industry cooperatively produced helium before 1925, specifically for military uses. The Helium Act of 1925, as amended, assigned responsibility for producing helium for federal users to the Department of the Interior's Bureau of Mines. The act provided that funds from helium sales be used to finance the program. From 1937 until 1960, the Bureau was the sole producer of helium. Although the bulk of the Bureau's sales was to federal agencies, some commercial uses had developed, which the Bureau also supplied.

The Helium Act of 1960 (50 U.S.C. 167-167n) was passed in response to growing federal needs for helium, especially for the space program, and concern that the nation's helium reserves were being rapidly depleted as helium was vented into the atmosphere by natural gas producers. The 1960 act, which replaced the 1925 act, authorizes Interior to conserve, buy, store, produce, and sell helium to meet federal and other needs.[1] In addition, the act requires that federal agencies purchase their major

[1]Although helium has important defense uses, it is not stockpiled under the Strategic and Critical Materials Stock Piling Act.

requirements for helium from the Bureau. Bureau regulations define major requirements as at least 5,000 cubic feet a month. The act also provides that Interior's helium program be self-sustaining by pricing federal helium to ensure that revenues from helium sales cover all program costs, including the program's debt. Under the act, this debt must be repaid by 1995. Because no private helium industry existed in 1960, the act allowed the Bureau's sales to nonfederal users to continue.

The objectives of the 1960 act are to (1) conserve helium for future use, (2) provide a sustained supply of helium sufficient for essential government activities, and (3) foster and encourage individual enterprise in the development and distribution of helium. The legislative history of the act indicates how the Congress expected Interior to fulfill these objectives. To achieve conservation, Interior was to purchase and store an unspecified amount of helium that would otherwise have been vented into the atmosphere by private natural gas producers. To provide a sustained supply for essential government activities, Interior was to continue its helium production. Finally, to foster and encourage individual enterprise, Interior's purchases of helium were expected to result in the development of a private crude helium production industry.

The Bureau of Mines' Helium Program

In 1991 U.S. refined helium production was about 3.1 billion cubic feet, of which the Bureau supplied about 350 million cubic feet (about 11 percent). The Bureau's helium production and storage assets, located near Amarillo, Texas, include the Exell refining plant; the Amarillo facility; Cliffside Field, a natural gas field suitable for helium storage; a 425-mile helium pipeline; and a variety of transportation equipment. The Exell plant extracts crude helium from storage in Cliffside and refines it to above 99 percent purity. The plant produces both gaseous and liquid helium.

During the 1960s and early 1970s, to fulfill the conservation objective of the act, the Bureau purchased about 34 billion cubic feet of helium from private crude helium producers and stored it in Cliffside. The Bureau produced and stored an additional 3.5 billion cubic feet of helium from its other natural gas fields. Deciding that the Bureau had stored a sufficient quantity of helium, the Secretary of the Interior terminated the purchase contracts in 1973. The Bureau has been using helium stored in Cliffside to meet helium needs. As of September 30, 1991, the Bureau had an inventory of about 32.7 billion cubic feet of helium remaining in storage.

The pipeline connects Cliffside, Exell, and the majority of the U.S. private helium industry in Kansas, Oklahoma, and Texas, which is located in or near the Hugoton-Panhandle natural gas field. Originally built to transport the crude helium that the Bureau purchased to Cliffside, the pipeline is now used by private industry to deposit and withdraw its crude helium that is in the Bureau's storage.

Sales

The Bureau sold about 350 million cubic feet of helium in fiscal year 1991 directly to users or through contracts with private distributors. About 40 percent of this was sold to private distributors, who sold the helium to both federal and nonfederal users, and less than 1 percent was sold directly to nonfederal users. The remaining 60 percent was sold directly to federal users. According to the Bureau's data, the National Aeronautics and Space Administration (NASA), the Department of Energy, and the Department of Defense are the principal federal users, constituting about 97 percent of the Bureau's sales to federal users. About 86 percent of the Bureau's fiscal year 1991 helium sales were gaseous helium, and about 14 percent were liquid helium.

In 1960 the Bureau's helium price for federal users was $15.50 per thousand cubic feet. The Bureau raised that price to $35 in 1961 to cover the anticipated costs of conserving helium, principally purchasing helium for storage, and increased it in 1982 to $37.50 to cover increased operating costs. In 1991 the Bureau raised the price to $55; according to the Director of the Bureau, this was done in consideration of the value of the crude helium being used. The Bureau has added a $5 per thousand cubic feet surcharge for nonfederal purchases since 1986.

Funding

The 1925 act, as amended, established a revolving fund known as the helium production fund for the Bureau's program. Such revolving funds are used to finance a continuing cycle of government-owned business-type operations in which outlays generate receipts that are available for continuing operations. In the federal budget, this fund is now referred to as the Helium Fund and is used to account for the program's revenues and expenses.

The 1960 act stipulated that the price of federal helium cover all of the helium program's costs, including interest on the program's debt. Under the act, the Secretary of the Interior was to determine a value for net capital and retained earnings and establish this value as debt in the Helium

Fund, and to add subsequent program borrowings to that debt. The program's borrowings were actually authorized by subsequent appropriations acts and recorded as outlays in the federal budget in the years in which they were expended. In addition, the interest was added to the debt in the Helium Fund. However, the interest is simply a paper transaction, not a government outlay.

The Bureau determined that the value of the program's net capital and retained earnings was about $40 million in 1960. Subsequent borrowings from the U.S. Treasury totaling about $252 million were used to purchase helium for storage. As of September 30, 1991, the program had returned about $48 million in excess revenues to the U.S. Treasury, repaying a portion of the debt in the Helium Fund. However, by September 30, 1991, the debt had grown to about $1.3 billion, of which more than $1 billion consisted of interest because the interest has accrued faster than the Bureau has been able to repay the debt.

The Private Helium Industry

Before 1937 a nominal private helium industry existed in the United States, but in 1960 there was no such industry. In the 1960s, private industry began to produce crude helium, originally for sale to the Bureau. Subsequently, a private helium-refining industry grew.

As the private helium industry grew in the 1960s, companies sought to store their excess crude helium in Cliffside. Officials of the three private helium refiners that are connected to the Bureau's pipeline told us that they depend on natural gas production for their crude helium supply. Because natural gas production is seasonal (greater in the winter months to meet domestic heating needs than in the summer months), seasonal fluctuations in the supply of crude helium occur. To smooth out these seasonal fluctuations, excess crude helium must be stored so that the private refiners can maintain a steady supply for their market. The company officials told us that crude helium storage is critical to their operations.

The Bureau allows private companies to store helium in Cliffside, where it is commingled with the federally owned helium. Companies use the Bureau's pipeline to add helium to and extract it from Cliffside as needed. The Bureau charges the private companies a fee for this service. About 1.7 billion cubic feet of privately owned helium were stored in Cliffside as of September 30, 1991.

No privately owned long-term storage capacity exists. According to officials from the Bureau and private industry, the most feasible method of long-term storage of helium is in a natural gas field such as Cliffside. They said that private industry uses Cliffside because replicating such storage capacity for private industry's use could cost millions of dollars.

Today, the majority of the U.S. private helium industry consists of the crude helium producers that operate in or near the Hugoton-Panhandle Field in Kansas, Oklahoma, and Texas, and the three helium refiners connected to the Bureau's pipeline. In addition, Exxon Corporation operates the mostly federally owned Riley Ridge Field in Wyoming, where it extracts and refines helium.

In 1991 private industry supplied 89 percent of the refined helium produced in the United States. The private helium refining industry primarily ships liquid helium from production points because it is more economical to transport than gaseous helium. To accommodate users of gaseous helium, the liquid is converted to gaseous form either at other locations for short-distance delivery or at a user's location.

Since the 1960s the Bureau's price for helium has always been higher than or equal to the private market price, and from 1983 to 1991 it appears to have acted as a ceiling for private industry prices. Private prices were initially set at the Bureau's $35 per thousand cubic feet level in 1962. Although private prices fell as low as $21 in 1970, they gradually returned to the Bureau's $37.50 price by 1983. Since the Bureau's 1991 price increase to $55, private prices have gradually increased to about $45, according to the Bureau.

Proposals to Change How Federal Needs for Helium Are Met

Since the Helium Act of 1960, the requirements for meeting federal needs for helium have not been legislatively changed. However, since 1989 two legislative proposals have been put forth for congressional consideration.

In 1989, H.R. 2541 proposed that, beginning on October 1, 1993, all federal agencies would have had to purchase their helium from private industry. The bill also provided that, to promote helium conservation, the federal helium inventory would have been used only if private industry could not meet critical domestic requirements or to ensure national defense or security. In addition, the bill provided for canceling the program's debt but did not address private storage of helium at Cliffside. This bill was not enacted by the Congress.

In January 1992 Interior proposed a bill to the Congress that would remove the requirement that federal agencies purchase their major requirements for helium from the Bureau. Thus, all federal agencies could choose whether to meet their needs through either the Bureau or private industry. The proposal does not address the helium program's debt, helium conservation, or private storage of helium at Cliffside.

Objectives, Scope, and Methodology

The Chairman, Subcommittee on Mining and Natural Resources, House Committee on Interior and Insular Affairs, asked us to evaluate three alternatives for meeting federal needs for helium: to continue the Bureau's existing program; to require that all federal needs be supplied by private industry, as proposed in 1989 by H.R. 2541; and to allow all federal agencies to choose to purchase helium from the Bureau or private industry, as proposed by Interior in 1992. In order to do this, we evaluated (1) actions that the Bureau has taken to meet the objectives of the Helium Act of 1960; (2) issues that should be considered when the Congress decides how to meet current and foreseeable federal needs for helium; and (3) the three alternatives' effects on the federal budget, the private helium industry, and helium conservation.

To evaluate actions taken by the Bureau to meet the objectives of the 1960 act, we reviewed the act and its legislative history. We also interviewed Bureau officials on actions taken and reviewed appropriate documentation. Furthermore, we interviewed officials of NASA and other federal agencies to determine if the Bureau was meeting their needs. In addition, our discussions with officials of the private helium industry provided insight into the effects of the Bureau's actions.

To evaluate the issues that should be considered when deciding how to meet federal needs for helium, we interviewed officials of the Bureau; the Treasury Department; the Office of Management and Budget; federal agencies that use helium; and the private helium industry, including the Helium Advisory Council, a private helium industry association, and we reviewed appropriate documentation. We also toured the Bureau's facilities in and around Amarillo, Texas, and visited industry offices and plant locations in Kansas, New Jersey, New Mexico, New York, Oklahoma, Pennsylvania, and Texas. In addition, we consulted two prior GAO reports on the Bureau's helium program. Our March 1979 report, Unique Helium Resources Are Wasting: A New Conservation Policy Is Needed (EMD-78-98), focused on the need to conserve helium from natural gas fields that are helium rich; our November 1991 report, Mineral Resources:

Federal Helium Purity Should Be Maintained (GAO/RCED-92-44), discussed the need for the Bureau to protect the purity of federally owned helium stored in Cliffside.

To evaluate each alternative's effects on the federal budget, the private helium industry, and helium conservation, we analyzed information gathered for the other objectives. We also interviewed recognized experts on the helium market to determine the potential effects on the helium market of any changes in how federal needs for helium are met, and we reviewed their studies and other documents. In addition, we used an existing econometric analysis to analyze the effect on the market price of helium if federal helium purchases were shifted to the private market.

We conducted our work for this report between November 1990 and April 1992 in accordance with generally accepted government auditing standards. We discussed the results of our work, including the facts and our conclusions, with the Director of the Bureau of Mines and other Bureau officials. These officials generally agreed that the report is accurate; their comments were incorporated where appropriate. However, as requested, we did not obtain written comments from Interior on a draft of this report.

Actions Taken by the Bureau to Meet the Objectives of the Helium Act of 1960

The objectives of the Helium Act of 1960 are to (1) conserve helium for future use, (2) provide a sustained supply of helium sufficient for essential government activities, and (3) foster and encourage individual enterprise in the development and distribution of helium. The Bureau has acted to conserve helium, for example, by purchasing and storing a large amount of helium that would have otherwise been vented into the atmosphere. In addition, the Bureau has provided helium to meet federal needs and can continue to do so. Furthermore, the Bureau has fostered the development of a private helium industry.

Helium Has Been Conserved

Although the 1960 act did not specify what actions should be taken to conserve helium, the legislative history indicated that, because of concern about the venting of helium into the atmosphere during natural gas production, the Bureau was to conserve helium by purchasing from natural gas producers helium that would otherwise be vented into the atmosphere. However, the Congress did not specify the amount of helium to be purchased and stored.

During the 1960s and early 1970s, the Bureau purchased about 34 billion cubic feet of helium and stored it in Cliffside for current and future use. The purchase contracts were terminated in 1973 when the Secretary determined that the almost 37 billion cubic feet of helium that had been purchased, as well as produced by the Bureau from its own fields, and stored in Cliffside would meet federal needs for at least 30 years. As of September 30, 1991, the Bureau estimated that, at the then-current rate of use, the 32.7 billion cubic feet of helium that remained in storage would last until about 2050.

In addition, the Bureau has taken other actions to achieve helium conservation. For example, the Bureau allows private industry to store excess helium in Cliffside. Thus, helium that would otherwise be vented if no private storage existed is conserved until private industry needs it to meet demand.

Furthermore, when production of the helium-rich Riley Ridge Field, which is more than 90 percent federally owned, began in 1986, the Bureau stipulated that the helium must be recovered. The recovered helium can be and has been sold by the field's operator to any customer. If the helium from this field were used only to meet federal needs, the Bureau estimates that it would meet those needs for about 100 years in addition to the Cliffside inventory.

The helium market currently does not warrant the recovery of all helium contained in natural gas. For example, it is estimated that private industry vents about 55 percent of the helium in natural gas produced from the Hugoton-Panhandle Field.

Federal Needs for Helium Have Been Met

The Bureau has met federal needs for helium since 1960. No federal users that we interviewed expressed any dissatisfaction with the Bureau's ability to meet their needs. The Bureau's 32.7 billion cubic feet of helium in Cliffside could last until about 2050. In addition, the Bureau has managed its helium program with the expectation of continuing operations, so its facilities have been maintained.

A Private Helium Industry Has Been Fostered

The 1960 act did not specify what actions the Bureau should take to foster and encourage individual enterprise in the development and distribution of helium. However, the act's legislative history indicated that the Bureau's helium purchase contracts would encourage private natural gas producers to produce crude helium. During the terms of these contracts, a private helium refining industry also developed, enabling crude helium production to continue once the Bureau's contracts were terminated.

Although the act did not specify that the Bureau should foster the development of a private refining industry, indirect and direct Bureau actions did. First, in 1961, the Bureau increased its refined helium price from $15.50 to $35 per thousand cubic feet, a 126-percent increase, to cover helium conservation costs, principally to finance helium purchases. The new price was sufficiently high to cause private industry to believe that it could economically produce and sell refined helium. Once a private helium refining industry developed, it was able to successfully compete with the Bureau.

In addition, the Bureau began allowing private industry to store its seasonally excess crude helium in Cliffside in the 1960s. No private storage facility exists, and this action allows private industry to smooth out seasonal fluctuations in helium supply.

A Decision on How to Meet Federal Needs for Helium Should Consider Many Issues

How to meet current and foreseeable federal needs for helium is a public policy decision that should be based on the consideration of many issues. First, the objectives of the Helium Act of 1960 are interrelated; for example, a decision that conservation is no longer an objective, and therefore, that the federal helium inventory should be sold to generate revenues to the federal government, would most likely adversely affect the private helium industry by putting the crude helium industry out of business. Second, changes have occurred since 1960 that affect the relative priority of the act's objectives as well as the Bureau's ability to realistically repay the program's debt by 1995. For example, unlike in 1960, there is now a private helium industry that is capable of meeting federal helium needs and a large supply of helium available to meet federal needs for many years. In addition, the program debt is now so large that to repay it by 1995 would require an unrealistically high price. Third, any decision affects the federal budget and the total cost of supplying helium to the U.S. economy. For example, shifting federal purchases of helium to private industry would likely result in increased outlays in the federal budget. Yet holding the federally owned helium inventory at the same time would incur an opportunity cost, while also increasing the total cost of supplying helium to the U.S. economy.

Federal Needs for Helium Can Be Met by the Bureau or Private Industry

An objective of the 1960 act is to meet federal needs for helium. On the basis of our work, we believe that either the Bureau's helium program or the private helium industry can meet current and foreseeable federal needs.

The Bureau has maintained its helium production and storage assets with the expectation that the program will continue. While the Bureau has deferred some maintenance and capital expenditures because of the possibility that the Congress may terminate the program, the Bureau has a cash reserve to cover the deferred expenditures. On the other hand, private industry officials told us that, with adequate transition time and with adjustments to accommodate certain federal needs, the private helium industry could also meet federal needs for helium.

Although private industry can meet federal needs for helium, NASA has a unique requirement for large volumes of gaseous helium sporadically, sometimes on short notice, for its space shuttle launches. The private helium-refining industry, however, primarily transports liquid helium from production plants because liquid helium is more economical to transport than gaseous helium. Therefore, NASA would have to build facilities to

receive liquid helium and convert it to gaseous form, which a NASA study estimated would cost about $6 million plus annual operating expenses. Alternatively, private helium refiners could invest in the equipment necessary to transport gaseous helium and pass that cost on to NASA in the form of a higher helium price. In either case, NASA would incur higher costs then other federal users.

Canceling the Helium Program's Debt Would Not Adversely Affect the Overall Federal Budget

Under the 1960 act, the Bureau is required to repay the $1.3 billion debt in the Helium Fund from program revenues by 1995. At this time, the only way to do so would be to charge federal agencies with major requirements for helium (for example, NASA and the Departments of Energy and Defense) over $3,000 per thousand cubic feet of helium, compared with the Bureau's current price of $55 per thousand cubic feet. Because those agencies are required by the 1960 act to purchase their major requirements for helium from the Bureau, they would have no choice but to pay a higher price if they continue purchasing helium. This would have no net effect on the overall federal budget if those agencies receive additional appropriations to pay for helium at a higher price because the appropriations would offset the increased revenues to the Bureau. However, if those agencies do not receive additional appropriations and spend more than they previously did in order to buy the higher-priced helium, they would have to reduce other expenditures in their budgets. Because agency purchases of the Bureau's helium are a wash transaction in the overall federal budget, whereas other expenditures are mostly outlays in the budget, the overall effect on the federal budget would be favorable. Furthermore, unless private customers were charged a much lower price, private purchases of the Bureau's helium would likely cease entirely at a high price, reducing revenues to the federal budget. Of course, if the Bureau charged a lower price to private customers, it would be done solely to retain those sales, which would be counter to the act's objective of fostering the private helium industry, which would otherwise garner those sales.

A simpler alternative for eliminating the helium program's debt would be to cancel it. The debt can be canceled with no adverse effect on the overall federal budget. The $252 million borrowed from the U.S. Treasury to purchase helium for storage to meet the 1960 act's conservation objective was authorized in appropriations acts, recorded in the federal budget as outlays in the years in which the funds were expended, and recorded by Interior as debt in the Helium Fund. Similarly, the debt associated with the program's capital assets was previously appropriated. Appropriations for

federal agencies' programs and activities generally are not assessed interest charges, even though the U.S. Treasury incurs interest expense when borrowing from the public to fund appropriations. However, agency borrowings from the U.S. Treasury are usually assessed interest, although the interest is not an outlay by the federal government.

The $252 million borrowed to purchase the large inventory of federal helium was to meet a policy objective of the act—conservation. Purchasing such a large inventory of raw material and covering that cost, plus interest, with revenues from routine operations is not normal business practice. Normally, a business limits its raw materials inventory to just enough to reasonably ensure continued operations, thereby holding down expenses that need to be covered by revenues. Thus, eliminating the debt would allow the Bureau's helium program to be evaluated in terms of its actual operating expenses, rather than in terms of the cost of a national policy.

The Bureau's capital assets and large inventory of crude helium have already been paid for with government outlays. Therefore, if the debt is canceled or repaid, and barring inefficiencies in its program, the Bureau could sell its refined helium at a price below what private industry would have to charge. For example, as of February 1991, the Bureau's operating costs were being covered at a price of $37.50 per thousand cubic feet, compared with the current private prices of around $45. If the Bureau were to charge a lower price than private industry's prices, some customers that now purchase helium from private industry would likely purchase helium from the Bureau. Federal outlays for helium would decrease by the extent to which federal agencies that previously purchased refined helium from private industry shifted their purchases to the Bureau. Furthermore, if the Bureau can set a sales price that covers all of its expenses other than capital asset and inventory costs, but is still lower than private industry's prices, increased sales to nonfederal customers would increase federal revenues. However, the extent to which canceling or repaying the debt in the Helium Fund would allow the Bureau to undercut private refined helium prices and thereby take away sales would adversely affect the private helium-refining industry.

Fostering Private Industry Could Still Be Accomplished

Another objective of the 1960 act is to foster and encourage a private helium industry. Through the Bureau's purchase of a large inventory of crude helium and other direct and indirect actions, a viable private helium industry has emerged. Although the act's legislative history did not specify

actions to be taken to foster and encourage a private helium-refining industry, by using the broad language of the act, Interior has taken such actions. However, if the Bureau's program is to continue and if the helium program's debt is canceled or repaid, because the Bureau could undercut private refined helium prices, additional actions would be needed if the private helium-refining industry is still to be fostered and encouraged.

One alternative would be to require the Bureau to price its helium comparable to private prices. This could be done in several ways. For example, the Bureau could simply ascertain private prices and use a comparable price. Or the Bureau could be required to set a sales price for refined helium that would cover its capital costs, operating expenses, estimated costs of a normal level of inventory, and an industry-like rate of return on this investment. To the extent that this action results in the meeting of federal needs by private industry, federal outlays for helium purchases would be higher because outlays to cover the operating expenses of the Bureau's program would have been less than outlays to pay the higher private prices. Assuming that federally owned crude helium is not sold into the market in order to generate revenues that could offset the additional outlays, the overall federal budget would be adversely affected.

Alternatively, competition between the Bureau and the private helium-refining industry could be eliminated. The Bureau could be required to meet all federal needs but be prohibited from selling helium to nonfederal customers. This would end sales to federal users by private industry but leave private industry as the sole supplier for all nonfederal needs.

Helium Conservation Affects Private Industry and the Federal Budget

The third objective of the 1960 act is to conserve helium. The purchase of 34 billion cubic feet of helium that would otherwise have been vented into the atmosphere during natural gas production was a conservation measure. On the other hand, the use of the federally owned helium stored at Cliffside to meet the needs of the Bureau's customers, at the same time that private industry is venting helium that could otherwise be used to meet current federal needs, works against achieving conservation. However, any decision about increasing, holding, using, or selling the federal helium inventory will affect the federal budget and the private helium industry differently.

A federal helium inventory has associated costs. In addition to outlays for purchasing and storing the inventory, there is an opportunity cost to the federal government of foregoing revenue that could be generated because the contents of an inventory can be sold or used rather than stored. Furthermore, the market price of helium will depend on any decision on what to do with the inventory. If the federally owned crude helium inventory is released at least at the rate at which it is needed to maintain a stable price, the need for new investment in crude helium production capacity would be precluded. However, if less federally owned helium is released than needed, an increase in the market price of helium would occur, at least in the short run, stimulating investment in crude helium production capacity, which would increase the total cost of supplying helium to the U.S. economy.

Increasing the inventory of federally owned helium would require additional outlays for the acquisition and storage of crude helium. This would increase helium conservation, as the Bureau's purchases of helium in the private market would likely stimulate new production of crude helium. This increased demand for crude helium would likely increase private prices in the short run and would foster and encourage the private crude helium industry. But the increased demand could, in the short run, adversely affect the private helium-refining industry, which would be competing with the Bureau for supplies of crude helium.

Holding the federally owned helium inventory for the future would require outlays to purchase crude helium to meet current needs and continue costs to store the existing inventory. This would increase helium conservation because the helium purchased would otherwise have been vented from natural gas production. In addition, it would likely increase private prices in the short run but less than if the federal helium inventory were increased. As with increasing the inventory, this would foster and encourage the private crude helium industry but would adversely affect the private helium-refining industry in the short run because the Bureau and private industry would be competing for crude helium supplies.

The Bureau's current practice of using the Cliffside inventory to meet federal needs for helium works against conservation. Helium that could be used to meet current needs is being vented from current natural gas production. Continuing this practice would not affect private helium prices or the private helium industry.

Selling the federally owned helium inventory would generate revenues to the federal government that could be used for other purposes. However, once the inventory is completely sold, the Bureau would have to purchase helium to meet its needs. Selling the helium inventory would further work against conservation. In order to sell the federal helium inventory, the price would have to be lower than private prices for crude helium. If the price were this low, there would be no market for privately produced crude helium. As a result, the private crude helium industry would most likely be driven out of business until the federal helium inventory was depleted. The lower price of crude helium would, however, foster and encourage the private helium-refining industry.

Other Issues to Consider

In addition to considering potential effects on the federal budget, the private helium industry, and helium conservation, other issues need to be addressed when the Congress decides how to meet current and foreseeable federal needs for helium. Private access to federal helium storage fosters private industry but requires the Bureau's management to protect the federal helium. And if the Bureau's helium program is terminated, the Bureau's capital assets will have to be disposed of.

Private Access to Federal Helium Storage

Allowing the private helium industry to store helium at Cliffside fosters the industry. Storage helps smooth out fluctuations in market supply, thus avoiding significant price changes that may occur because of wide seasonal fluctuations in supply. Private industry officials told us that storage is critical to the well-being of their industry. They further told us that, even if the Bureau's program were terminated, they would want to continue to use Cliffside for storage.

The Bureau does charge fees for private helium storage in Cliffside. But because no private helium storage facility exists, there is no basis for comparison to determine to what extent it may be cheaper for private industry to pay for the use of Cliffside than to build private storage facilities. Private industry and Bureau officials told us that replicating Cliffside could cost private industry millions of dollars and that this type of storage facility is the only technologically feasible type of long-term helium storage. If private industry were denied access to Cliffside, it is uncertain whether the industry could charge prices high enough to provide sufficient incentive to create private storage.

Whether or not the Bureau's program continues, if private industry is allowed to continue storing helium in Cliffside, the Bureau's management of Cliffside, with appropriate controls, would be needed until the federal helium inventory stored there is depleted. For example, as we reported in November 1991, when private extractions of helium from Cliffside occur at an excessive rate, the purity of stored federal helium is degraded at an accelerated rate.[1] This results in additional cost to the Bureau for extracting and refining federally owned helium. We recommended, and the Bureau is taking action toward, either restricting the rate of private helium extractions from Cliffside or requiring an additional fee to cover potential future government costs resulting from excessive degradation.

Disposal of the Bureau's Capital Assets

The capital assets of the Bureau's helium program can be disposed of if the Congress decides to terminate both its refining and storage roles. The refining assets generally include the Exell plant, the Amarillo facility, and the transportation equipment. A 1988 study contracted by the Bureau found that, if the Bureau's refining capability were terminated, the private helium refining industry had no interest in buying these assets to produce and refine helium. Therefore, the study concluded that the assets would only have scrap value.

The storage assets generally include the Cliffside natural gas field and the helium pipeline connecting private industry to Cliffside. If the program's refining capability were terminated, the Bureau would have to retain the storage assets as long as a federal helium inventory existed in Cliffside. Also, because the pipeline connects private crude helium producers with private helium refiners, it would likely be salable to private industry at any time.

Any of the capital assets could be sold as excess government property, either under the laws and regulations for such property or under any special terms and conditions legislated by the Congress. However, because they may only have scrap value, we believe that their disposal should not influence any congressional decision on how to best meet federal needs for helium.

[1]Mineral Resources: Federal Helium Purity Should Be Maintained (GAO/RCED-92-44, Nov. 8, 1991).

Three Alternatives for Meeting Federal Needs for Helium

We were asked to evaluate three alternatives for meeting federal needs for helium: (1) continue the Bureau's existing program, (2) require that all federal needs be supplied by private industry, and (3) allow all federal agencies to choose to purchase helium from the Bureau or private industry. Each alternative could affect the act's objectives, the program's debt, the federal budget, and the total cost of supplying helium to the U.S. economy differently. However, these are only three of the possible alternatives for meeting federal needs for helium. Ultimately, choosing among the alternatives to meet current and foreseeable federal needs for helium is a public policy decision that should consider many issues.

The Bureau's Program

The Bureau's helium program has met federal needs for helium for more than 60 years. And the program has the helium inventory and capital assets to provide a sustained supply of helium for essential government activities for many more years. Nevertheless, when deciding whether to continue the Bureau program, the Congress should note that, since the 1960 act was passed, issues affecting whether to continue the Bureau's program have changed. For example, since the act was passed, a private helium industry has developed that is capable of meeting federal needs.

The Bureau's helium program was supposed to function like a business, and the 1960 act required the program's revenues to cover all of the program's costs. However, since the act was passed, the accruing interest on the program's debt, established primarily by the cost of purchasing the large inventory of helium to meet the act's conservation objective, has caused the debt to grow to the extent that it can only be repaid by 1995, as required under the act, by charging federal agencies with major requirements for helium an extremely high price for federal helium. This would have no net effect on the overall federal budget because if those agencies receive additional appropriations to pay for the higher-priced helium, the increased appropriations would be offset by the increased revenues to the Bureau.

Moreover, as long as the Bureau's program and private industry compete for nonmajor federal sales and sales to nonfederal customers, as allowed by the 1960 act, the Bureau's helium pricing directly affects the private helium industry. If the Bureau's helium price is higher than industry prices, private industry can be expected to meet nonmajor federal and nonfederal requirements. Since the Bureau's 1991 price increase, the Bureau's price was higher—$55 per thousand cubic feet compared with about $45; and to

repay the debt in the Helium Fund by 1995, it would have to be much higher—over $3,000 per thousand cubic feet.

But if the debt is repaid or canceled, the only costs that the Bureau's program will need to cover with revenues are its outlays for operating expenses. Therefore, unless the program is quite inefficient, it is likely that the Bureau's helium price would be lower than private prices. This would allow the Bureau to adversely affect the private helium refining industry by capturing nonmajor federal sales and sales to nonfederal customers. This situation could be alleviated through congressional action, such as requiring all federal users of helium to be supplied by the Bureau and prohibiting the Bureau from selling to any nonfederal customers, or requiring the Bureau to charge a helium price comparable to private prices.

Finally, the federally owned helium inventory was purchased to meet the conservation objective of the 1960 act. But the Bureau is currently using that inventory to meet customers' needs, which actually works against helium conservation because helium that could be recovered from natural gas production to meet those needs is being vented into the atmosphere. On the other hand, an opportunity cost is associated with holding any inventory.

H.R. 2541

In 1989, H.R. 2541 proposed that as of October 1, 1993, all federal agencies would have had to purchase helium from private industry. The bill also provided that, to promote helium conservation and the development of private industry's helium supplies, the federal helium inventory would have been used only if private industry could not meet critical domestic requirements or to ensure national defense or security. In addition, the bill provided for canceling the program's debt. This bill was not enacted by the Congress.

By requiring that federal agencies purchase their helium from private industry rather than the Bureau, the bill would have effectively terminated the Bureau's program along with its ability to repay the debt. Canceling the debt would have had no effect on the federal budget because the debt consists of outlays that were previously recorded in the federal budget and interest that was not a government outlay.

However, the federal budget would have been affected by H.R. 2541 because government outlays for helium would have increased for several

reasons. First, federal agencies' expenditures to purchase helium would likely have been higher. As of February 1991 the Bureau's operating costs were being covered at a price of $37.50 per thousand cubic feet, compared with current private prices of around $45. Expenditures in excess of the Bureau's operating costs would not have been part of a wash transaction in the federal budget, where funds are simply moved from federal agencies to the Bureau. Instead, those expenditures would have become an increased outlay of appropriated funds for purchases of helium in the private market.

Next, shifting helium purchases from the Bureau to the private helium industry would have resulted in higher private prices for refined helium, at least in the short run, until new supplies of helium would have been brought to market. In addition, for private industry to have been willing to supply some federal needs, such as NASA's sporadic needs for large volumes of gaseous helium, appropriations to build and operate federal facilities to receive private helium and/or private prices higher than what other customers are charged may have been needed. Finally, the Bureau would have no longer been selling helium to nonfederal users, resulting in a loss of revenues to the federal government.

Enacting this bill would have further fostered the private helium industry because it would have shifted purchases of helium from the Bureau to the private helium refining industry. This bill would have also increased helium conservation. Shifting helium purchases from the Bureau to private industry, while not releasing an equal supply of federally owned helium from Cliffside, would have likely caused private industry to recover additional helium that would otherwise be vented from natural gas production. This would, however, have increased the market price of helium, at least in the short run. That would have stimulated new investment in crude helium production capacity, which would have increased the total cost of supplying helium to the U.S. economy, at the same time the government was incurring the opportunity cost of holding a large inventory of crude helium. The bill did not address whether to allow private storage of helium at Cliffside, an action currently being taken by the Bureau that fosters private industry.

Interior's 1992 Proposal

In January 1992, Interior proposed a bill to the Congress that would remove the requirement that federal agencies purchase their major requirements for helium from the Bureau. Thus, all federal needs could be met by either the Bureau or private industry. The proposal did not provide

for canceling the helium program debt nor address helium conservation, including what to do with the federal helium inventory.

Because this proposal continues to hold the Bureau program responsible for repaying the program debt, an extremely high Bureau helium price would be necessary to repay the debt. To repay the debt by 1995, a price of over $3,000 per thousand cubic feet of helium would be needed, compared to the current Bureau price of $55. This would likely result in driving the Bureau program out of business because no customer would be likely to pay the Bureau $3,000 per thousand cubic feet, compared to the current private prices around $45. Terminating the Bureau program in this manner would have the same effects on the federal budget that H.R. 2541 would have. In summary, the shift of helium purchases from the Bureau to private industry would result in increased government outlays for helium purchases, as well as the loss of revenues from Bureau sales to nonfederal customers.

Similar to H.R. 2541, this proposal would further foster the private helium industry because it would shift purchases of helium from the Bureau to the private helium refining industry. And this proposal may increase helium conservation. Because most purchases of helium would be from private industry, this shift to private industry, without releasing an equal supply of federal helium from Cliffside, would cause recovery of helium that would otherwise be vented into the atmosphere. In addition, this would increase the market price of helium, at least in the short run, stimulating new investment in crude helium production capacity, which would increase the total cost of supplying helium to the U.S. economy, at the same time the government is incurring the opportunity cost of holding a large inventory of crude helium. Also, the bill does not address whether to allow the private storage of helium at Cliffside, an action currently being taken by the Bureau to foster private industry.

Effect of H.R. 2541 and Interior's 1992 Proposal on Private Helium Prices

If the Bureau's program is terminated (as would have happened under H.R. 2541 and would likely happen under Interior's 1992 proposal), while the federal inventory of crude helium stored in Cliffside is not released to private industry to meet the helium demand of the Bureau's customers, shifting that demand to private industry could be expected to increase the private market prices of helium in the short run. The magnitude of the increase would depend on how responsive private producers would be to the change in demand. For example, an existing econometric model suggests that, under H.R. 2541, the short-run price increase would likely

have been between 10 and 15 percent but could have been as low as 7 percent or as high as 19 percent.[1]

If such a price increase provided sufficient incentive, private industry would invest in increased helium production capacity and develop new sources of crude helium supply. As this would happen, refined helium supply would increase, causing the market price to decline somewhat from the short-run increased price. It is not clear whether such a decline would result in a new price that is higher than or equal to the price before the shift of demand to the private market.

A 1988 Bureau study estimated that it would take about 3 to 4 years for private industry to make the transition to implement a shift from the Bureau to private industry. Private industry officials told us that the Bureau's estimate was reasonable.

[1]Noel Uri, "The Helium Market in the USA," Applied Energy, v. 22, 1986.

Conclusions and Recommendations to the Congress

Conclusions

How to meet current and foreseeable federal needs for helium is a public policy decision that should consider many issues. Among them is recognition that changes have occurred since the act was passed in 1960 that affect the relative priority of the act's objectives and the Bureau's ability to realistically repay the helium program's debt by 1995. For example, although the Bureau can continue to meet federal needs for helium, there is now a private helium industry that we believe could meet federal needs. Any decision on how to meet federal needs for helium should consider not only the effects of the changes since 1960, but also (1) the interrelationship of the act's objectives, recognizing that a change to one could affect another, and (2) the decision's effect on the federal budget and the total cost of supplying helium to the U.S. economy.

Although we believe that the 1960 act's conservation objective was addressed by the purchase of the large inventory of federal helium stored at Cliffside, the Bureau's current use of that inventory to meet needs works against helium conservation. However, any change to the current practice would affect the private helium industry and the federal budget. Furthermore, there is an opportunity cost of holding a federal helium inventory, rather than generating revenue through the sale or use of this inventory. In addition, the market price of helium will depend on any decision on what to do with the federal inventory. New investment in crude helium production capacity at the same time that a federally owned helium inventory is held would increase the total cost of supplying helium to the U.S. economy.

Furthermore, the helium program's debt could be canceled without adversely affecting the overall federal budget. Cancellation of the debt would require a decision on the helium program's role because, with elimination of the debt, the Bureau would likely be able to price federal helium lower than private industry, thereby adversely affecting the private helium-refining industry by taking away helium sales.

If a decision is made to continue fostering and encouraging the private helium-refining industry, the Bureau could be required to price federal helium comparable to private prices. This could be done in several ways. For example, the Bureau could simply ascertain private prices and charge a comparable price. Or the Bureau could be required to set a sales price for refined helium that would cover its capital costs, operating expenses, estimated costs of a normal level of inventory, and an industry-like rate of return on this investment. Alternatively, competition between the Bureau and the private helium-refining industry could be eliminated by requiring

that all federal needs for helium be met by the Bureau, while prohibiting the Bureau from meeting any nonfederal needs.

In addition, if the Bureau's program is terminated, decisions would need to be made about allowing private industry access to Cliffside and disposing of the program's capital assets.

Recommendations to the Congress

We recommend that, because conditions affecting the Bureau's helium program have changed since the Helium Act of 1960 was passed, the Congress reassess the act's objectives in order to decide how to meet current and foreseeable federal needs for helium. We also recommend that the Congress cancel the debt in the Helium Fund because it is no longer realistic to expect the debt to be repaid by the statutory deadline of 1995 and because canceling the debt would not adversely affect the federal budget. Canceling the Bureau's helium program debt, however, would likely allow the Bureau to undercut private industry's refined helium prices, thereby adversely affecting the private helium-refining industry by taking away sales. Therefore, on the basis of a reassessment of the act's objectives, if the Congress decides that fostering the private helium industry is still an objective, additional actions would be needed, such as requiring the Bureau to price its helium comparably to private prices or requiring all federal needs to be met by the Bureau but prohibiting the Bureau from selling helium to nonfederal customers.

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