



U.S. DEPARTMENT OF  
**ENERGY**

# Marshall Islands Special Medical Care and Logistical Support Program

Report to Congress  
February 2017

United States Department of Energy  
Washington, DC 20585

# Message from the Associate Under Secretary for Environment, Health, Safety and Security

The U.S. Department of Energy Marshall Islands Special Medical Care and Logistical Support Program provides annual medical screening examinations and care for members of the population of Rongelap and Utrik exposed to radiation resulting from the 1954 U.S. thermonuclear weapons test code-named "Castle Bravo." There were 253 people on Rongelap and Utrik during the 1954 test. There were 112 individuals eligible for participation in the program as of October 1, 2015.

This report presents a summary of the work conducted under a cooperative agreement for fiscal year 2016.

This report is being provided to the following Members of Congress:

**The Honorable Rodney Frelinghuysen**  
Chairman, House Committee on Appropriations

**The Honorable Nita Lowey**  
Ranking Member, House Committee on Appropriations

**The Honorable Michael Simpson**  
Chairman, Energy and Water Development Subcommittee  
House Committee on Appropriations

**The Honorable Marcy Kaptur**  
Ranking Member, Energy and Water Development Subcommittee  
House Committee on Appropriations

**The Honorable Thad Cochran**  
Chairman, Senate Committee on Appropriations

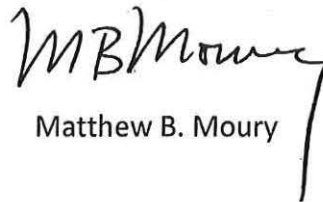
**The Honorable Patrick Leahy**  
Vice Chairman, Senate Committee on Appropriations

**The Honorable Lamar Alexander**  
Chairman, Energy and Water Development Subcommittee  
Senate Committee on Appropriations

**The Honorable Dianne Feinstein**  
Ranking Member, Energy and Water Development Subcommittee  
Senate Committee on Appropriations

If you have any questions or need additional information, please contact me or Joseph E. Levin, Associate Director for External Coordination, Office of Budget, within the Office of the Chief Financial Officer, at (202) 586-3098.

Sincerely,

A handwritten signature in black ink, appearing to read "MB Moury". The signature is written in a cursive style with a long, vertical flourish extending downwards from the end of the name.

Matthew B. Moury

## Executive Summary

The Department of Energy Marshall Islands Special Medical Care and Logistical Support Program is a medically, culturally, and logistically complex service program for an eligible participant population of 112 individuals from the Islands of Rongelap and Utrik. The care provided includes local community-based medical services, medical care, as needed, at the U.S. Army base hospital on Kwajalein Island (Kwajalein Hospital), and medical care services at locations outside the Republic of the Marshall Islands (RMI) that are not currently available in the RMI. The eligible population had an average age of nearly 68 years as of October 1, 2015.

The program pays for patient out-of-country medical referrals and services that include diagnoses, treatment, care, and followup visits, principally under a subcontract with Queens Medical Center in Honolulu, Hawaii. There were five referrals in fiscal year 2016. Patients residing in the continental United States were provided access to medical services within their own communities or at the nearest source of the needed care.

Medical professionals recruited under the program from locations other than the Marshall Islands also conducted one creditable Continuing Medical Education session.

Other support services included paying transportation and travel expenses for patient escorts.

Of the 112 patients in the program, seven died in FY 2016. Of the seven who passed away, three died after being scheduled for an examination, and four died after having received an examination—leaving 105 remaining eligible participants in the program on October 1, 2016.



# MARSHALL ISLANDS SPECIAL MEDICAL CARE AND LOGISTICAL SUPPORT PROGRAM

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## I. Legislative Language

The Department of Energy (DOE) is directed to provide the Committees on Appropriations of the House and Senate with a report by December 1 of each fiscal year detailing how funds were spent during the previous fiscal year for the special medical care and logistical support program for Rongelap and Utrik.<sup>1</sup> The report is also required to specify the anticipated needs of meeting the radiological health care and logistical support program for Rongelap and Utrik during the current and following fiscal years.

## II. Introduction

The DOE Marshall Islands Special Medical Care and Logistical Support Program provides annual medical screening examinations and care for members of the populations of Rongelap and Utrik exposed to radiation resulting from the March 1, 1954, U.S. thermonuclear weapons test code-named "Castle Bravo." There were 253 people on Rongelap and Utrik during the test. There were 112 individuals eligible for participation in the program as of October 1, 2015, and 103 received comprehensive medical screening examinations in fiscal year (FY) 2016.

The DOE Marshall Islands Special Medical Care and Logistical Support Program is a medically, culturally, and logistically complex service program. Each participant is eligible to receive an annual comprehensive medical screening examination and treatment of potential radiation-related conditions (cancers). The program is medically complex in that most participants have other medical conditions that are outside the scope of the DOE Marshall Islands Special Medical Care and Logistical Support Program, but which are addressed by another congressionally-funded health care program (i.e., the 177 Health Care Program) and the Republic of the Marshall Islands (RMI) national health care program. For example, about 65 percent of the DOE Marshall Islands Special Medical Care and Logistical Support Program patient population has adult onset diabetes and 56 percent has other associated conditions, such as hypertension, that are covered by other, non-DOE medical care programs.

Although the DOE Marshall Islands Special Medical Care and Logistical Support Program does not provide complete care for diabetics, DOE program physicians provide basic diabetes supportive care and refer people with diabetes-related medical needs to the RMI national health care program.

The DOE Marshall Islands Special Medical Care and Logistical Support Program is culturally complex because there are few physicians who speak Marshallese or who understand the cultural context and social rules of conducting a medical examination of the Marshallese patients. The language barrier makes it difficult for non-Marshallese-speaking doctors to

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<sup>1</sup> P.L. 99-658, § 104(k), codified at 48 U.S.C. § 1933(k)

communicate with these patients. A family member or companion who speaks English escorts the patient during referrals to medical facilities outside the Marshall Islands or to specific examination sites within the Marshall Islands, such as Kwajalein Island, where the U.S. Army hospital is located.

DOE must transport patients and escorts from place to place for examinations and treatments within the Marshall Islands, continental United States (CONUS), and Hawaii. Given the ages and physical conditions of the patients, many individuals require medical and/or family escorts for personal assistance and monitoring. The escorts receive the same travel and per diem benefits as the patients.

The DOE Marshall Islands Special Medical Care and Logistical Support Program is logistically complex because of the atoll settlement patterns of the Marshallese patients and the fact that 32 percent of the 112 eligible patients have migrated to the United States. Providing medical care to each geographic subgroup requires special logistical considerations. The care provided includes local community-based medical services, medical care, as needed, at the U.S. Army base hospital on Kwajalein Island (Kwajalein Hospital), and outside the Marshall Islands for medical care services that are not currently available in the Marshall Islands. The Kwajalein Hospital mammography equipment was temporarily out of service; therefore, female participants traveled to Honolulu, Hawaii, for their mammogram and ancillary services.

### **III. Medical Services**

The DOE Marshall Islands Special Medical Care and Logistics Support Program provides services to program-eligible patients residing in the Marshall Islands, Hawaii, and CONUS. Of the 112 eligible patients, 103 completed an annual examination. A total of seven patients who passed away during the year; some died after receiving their exams, leaving 105 remaining eligible participants in the program on October 1, 2016.

The Special Medical Care and Logistical Support Program also pays for program patient out-of-country medical referrals and services that includes diagnosis, treatment, care, and followup visits under a subcontract with Queens Medical Center in Honolulu, Hawaii. For the five referred to Queens Medical Center, two patients with a suspicion of cancer were found to have benign tumors; the two sent for followup were in remission and one was diagnosed with cancer and was treated.

In addition to regular clinics available at Majuro and Kwajalein that serve eligible patients residing in Majuro and on Ebeye Island near Kwajalein, a total of six in-home visits were made to patients residing on Majuro and Ebeye who were physically unable to visit the clinics. Quarterly home visits were performed by program physicians for all eligible patients residing on Majuro and Ebeye. The visits allowed the program physicians to examine the patients and interact with them and other family members in the household. A trip was made to Utrik in April 2016 by program medical staff and one RMI physician.

The program staff arranged visits for patients residing in Hawaii and CONUS with temporary duty physicians when the opportunity was available. For example, when the endocrinologist was traveling through Hawaii en route to/from the RMI, arrangements were made to ensure the Hawaii patients received thyroid examinations. DOE coordinated with Kwajalein Hospital for ancillary services, such as pharmacy, laboratory, radiology, and mammography. Kwajalein Hospital access is critical because the program is required to use U.S. Food and Drug Administration-approved mammography facilities, and the only approved facility in the region is at Kwajalein Hospital. The program physicians coordinate care and referrals with other health care programs and agencies in the Marshall Islands. Patient referrals to Honolulu are principally to Queens Medical Center.

Thyroid disease is a special concern for the DOE Marshall Islands Special Medical Care and Logistical Support Program because of the exposure of Marshallese on Rongelap and Utrik to radioactive iodine in fallout from the Castle Bravo test.

Out of the 112 eligible DOE patients, 103 participants received their annual examination, including a thyroid ultrasound examination.

The program endocrinologist visited patients residing in Majuro, Ebeye, and Hawaii in FY 2016, and these visits will continue in FY 2017. Traditional manual examination of the thyroid replaced routine ultrasound procedures, using ultrasound only when abnormalities are identified by manual examination or at 3-year intervals. This standard for treatment parallels the recommendation of the U.S. taskforce on thyroid screening examinations.

There have been 17 thyroid cancers diagnosed among the Rongelap and Utrik people in the program. About 85 percent of all thyroid cancers diagnosed were detected in the first 28 years after the Castle Bravo test; one-half of these cancers were detected in the period 1975-79. No thyroid cancer case has been diagnosed since 1989.

The provision of medical care for the DOE program patient population, oversight of the Marshall Islands-based clinical staff, and conduct of community meetings with patients requires face-to-face interaction. Program medical professionals also conducted one creditable Continuing Medical Education session for program medical staff in RMI and RMI Government physicians and nurses.

## **IV. Logistics Services**

Logistical support involves travel, per diem, and accommodation arrangements for staff and patients and their escorts traveling between the Marshall Islands and Honolulu, Hawaii, or CONUS. Services include providing the medical team with necessary infrastructure; i.e., office facilities, vehicles, and travel support for the program to operate. The DOE doctors in the Marshall Islands donate numerous clinical hours weekly to the RMI Ministry of Health and its hospital.

DOE conducts medical operations in RMI from two fixed locations specifically modified and prepared as equipped clinical facilities. The medical facility in Majuro is located in a commercial center in Delap Village within 500 yards of the island's hospital and at Ebeye Hospital, pursuant



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to an agreement with the RMI Ministry of Health. Kwajalein is used as a staging area for both the medical and environmental programs.

## V. Program Expenditures

Program costs in FY 2016 and FY 2017 (projected) are summarized in Table 1.

Table 1. Program costs for FY 2016 and projected costs for FY 2017

Program Element	FY 2016 Actual	FY 2017 Projected <sup>1</sup>
Medical Care <ul style="list-style-type: none"> <li>Salaries for health professionals and administrative staff; medical supplies and equipment; local hospital and laboratory costs; and pharmaceutical costs. Transport and living costs for patients attending clinics for annual examinations in the Marshall Islands and Hawaii and patient escorts as needed; travel support for thyroid ultrasound, colonoscopy, mammography, and laboratory work; medical costs for referred patients to Hawaii requiring additional testing and treatment for cancers; maintenance of two clinic facilities; and mammography services through the Kwajalein Hospital.</li> </ul>	\$1,166,563	\$1,507,796
Medical Referral Travel Costs <ul style="list-style-type: none"> <li>Transport and living costs for patients referred to Honolulu and patient escorts; stipends for patients living in CONUS who arrange for their own transportation.</li> </ul>	\$76,217	\$55,000
<b>Total</b>	<b>\$1,242,780</b>	<b>\$1,562,796</b>

<sup>1</sup>The program estimates an increase in cost for FY 2017, reflecting an increase in medical care due to conditions of aging, necessitating increased referrals and medical procedures. The estimated reduction in medical referral travel costs reflects a decrease in the expected average number of days referred patients spend in Honolulu.

## VI. Conclusion

DOE provided comprehensive annual medical screening examinations in the Marshall Islands and in the United States for 103 of 112 eligible persons and, when cancers are detected as a result of these examinations, patients are provided state-of-the-art cancer treatment in the United States. Of the 112 patients in the program, seven died in FY 2016, leaving 105 remaining eligible participants in the program on October 1, 2016.

**Courtesy Copies List for Marshall Islands Annual Report for the Senate**

The Honorable Lisa Murkowski  
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The Honorable John McCain  
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The Honorable Mazie Hirono  
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