



U.S. DEPARTMENT OF  
**ENERGY**

# Republic of the Marshall Islands Special Medical Care and Logistics Program Activities, FY 2019

Report to Congress  
December 2020

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's Republic of the Marshall Islands Special Medical Care and Logistics Program (Special Medical Care Program) provides medical examinations and treatment for potential radiation-related cancers, and logistical support associated with providing those services, for members of the population of the Rongelap and Utrik Atolls who were exposed to radiation as the result of the 1954 U.S. thermonuclear weapons test, which was code-named "Castle Bravo." There were 93 individuals eligible for participation in the program as of October 1, 2018, the beginning of fiscal year (FY) 2019.

This report provides information regarding the expenditure of funds during FY 2019 for the Special Medical Care Program, as directed by Title 48, United States Code, Section 1933(k).

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

- **The Honorable Richard Shelby**  
Chairman, Senate Committee on Appropriations
- **The Honorable Patrick Leahy**  
Vice Chairman, Senate Committee on Appropriations
- **The Honorable Nita M. Lowey**  
Chairwoman, House Committee on Appropriations
- **The Honorable Kay Granger**  
Ranking Member, House Committee on Appropriations
- **The Honorable Lamar Alexander**  
Chairman, Subcommittee on Energy and Water Development  
Senate Committee on Appropriations
- **The Honorable Dianne Feinstein**  
Ranking Member, Subcommittee on Energy and Water Development  
Senate Committee on Appropriations
- **The Honorable Marcy Kaptur**  
Chairwoman, Subcommittee on Energy and Water Development  
House Committee on Appropriations

- **The Honorable Mike Simpson**  
Ranking Member, Subcommittee on Energy and Water Development  
House Committee on Appropriations

If you have any questions or need additional information, please contact Dr. Patricia R. Worthington, Director, Office of Health and Safety, within the Office of Environment, Health, Safety and Security, at (301) 903-6929; or Ms. Katie Donley, Deputy Director for External Coordination, Office of the Chief Financial Officer, at (202) 586-0176.

Sincerely,

Matthew B. Moury  
Associate Under Secretary for  
Environment, Health, Safety and Security

## Executive Summary

The purpose of this report is to provide information regarding the expenditure of funds during fiscal year (FY) 2019 for the Department of Energy's (DOE) Republic of the Marshall Islands (RMI) Special Medical Care and Logistics Program (Special Medical Care Program), as directed by Title 48, United States Code, Section 1933(k).

The Special Medical Care Program, administered through DOE's Office of Environment, Health, Safety and Security, provides for medical examinations and treatment for potential radiation-related cancers, and logistical support associated with providing those services, for members of the populations of the Rongelap and Utrik Atolls who were exposed to radiation resulting from the March 1, 1954, U.S. thermonuclear weapons test, which was code-named "Castle Bravo."

Medical care is provided in the form of annual comprehensive medical screening examinations for cancer, referrals to specialists for further testing, as needed, cancer treatment, and follow-up examinations by specialists. The care provided includes local community-based medical services in the RMI; medical care at locations in Hawaii for services that are not available in the RMI; and medical care in the continental United States (CONUS) for patients who reside there. The Special Medical Care Program also provides support for travel, lodging, and per diem expenses for program participants and their escorts traveling in the RMI, Hawaii, and the CONUS.

There were 253 people on the Rongelap and Utrik Atolls during the Castle Bravo test in 1954. At the beginning of FY 2019, there were 93 individuals, with an average age of 70 years, eligible for participation in the Special Medical Care Program. The following summarizes FY 2019 medical services activities/results for the Special Medical Care Program:

- Seventy-nine patients received annual medical screening examinations. The remaining 14 patients were not examined for reasons including patient refusal, change of residence without forwarding new contact information, and postponement due to travel restrictions enacted by the RMI to prevent the spread of the Dengue Fever outbreak. Of the 79 patients examined, 5 were referred to specialists for suspicion of cancer. No cancers were detected during subsequent examinations.
- Three patients who had previously been treated for breast cancer, thyroid cancer, and gum cancer were provided follow-up examinations by specialists. No new cancers were detected during those follow-up examinations.
- One of the patients referred for a follow-up examination received iodine therapy in FY 2019 for previously diagnosed thyroid cancer.

Of the 93 patients in the program, 2 died in FY 2019, neither from cancer. There were 91 remaining eligible participants in the program at the beginning of FY 2020.

Total program costs in FY 2019 for medical care and logistical support services were \$1,354,620. Total program costs are projected to increase slightly in FY 2020 to \$1,459,965 because of expected increases in costs associated with travel and medical care.



# REPUBLIC OF THE MARSHALL ISLANDS SPECIAL MEDICAL CARE AND LOGISTICS PROGRAM

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## I. Legislative Language

The Department of Energy (DOE) is directed by Title 48 U.S. Code (U.S.C.) Section 1933(k) to:

*[P]rovide 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 ... referenced in Section 103(h)[(1)] of Public Law 99-239 [48 U.S.C. 1903(h)(1)]. The report shall also specify the anticipated needs during the current and following fiscal years in order to meet the radiological health care and logistical support program for Rongelap and Utrik....*

Title 48 U.S.C. 1903(h)(1) states:

*Notwithstanding any other provision of law, upon the request of the Government of the Marshall Islands, the President (either through an appropriate department or agency of the United States or by contract with a United States firm) shall continue to provide special medical care and logistical support thereto for the remaining 174 members of the population of Rongelap and Utrik who were exposed to radiation resulting from the 1954 United States thermonuclear "Bravo" test, pursuant to Public Laws 95–134 and 96–205. Such medical care and its accompanying logistical support shall total \$22,500,000 over the first 11 years of the Compact.*

## II. Introduction

DOE's Republic of the Marshall Islands (RMI) Special Medical Care and Logistics Program (Special Medical Care Program), which is administered through DOE's Office of Environment, Health, Safety and Security, provides for medical examinations and treatment for potential radiation-related cancers for members of the populations of Rongelap Atoll and Utrik Atoll who were exposed to radiation resulting from the March 1, 1954, U.S. thermonuclear weapons test, which was code-named "Castle Bravo."

Medical and logistical services for the Special Medical Care Program are provided by International Outreach Services (IOS), a Hawaii-based 501(c)(3) non-profit organization with which DOE has a cooperative agreement. Program funding is used to provide for: (1) annual medical screening examination costs, including salaries for healthcare professionals and administrative staff; pharmaceuticals; medical supplies and equipment; laboratory, imaging, and physician services; aircraft and charter vessels for patient transportation inside the RMI; medical malpractice insurance; travel, lodging, and per diem expenses for patients and their escorts traveling to clinics in the RMI, Hawaii, or the continental U.S. (CONUS); and medical personnel travel in support of annual screening exams; (2) medical referral costs, including medical services for patients referred to specialists for suspicion of cancer or follow-up care, as

well as travel, lodging, and per diem expenses for patients and their escorts, and other travel-related costs; and (3) medical logistical services and infrastructure costs necessary to support the operation of the Special Medical Care Program, including lease expenses and utilities for the Majuro clinic; facility maintenance and repair services; vehicle maintenance and repair services; supplies and equipment; medical and management personnel travel not directly related to medical screening examinations (e.g., program oversight, meetings, etc.); and continuing medical education.

In fulfilling its mission to provide healthcare and logistical support for the people of Rongelap and Utrik, the Special Medical Care Program must address several issues. One such issue is that most participants in the program have other medical conditions that are outside the scope of the program. For example, about 73 percent of the patient population in the Special Medical Care Program have cardiometabolic syndrome, which consists of adult onset diabetes, hypertension, and high cholesterol that are covered by other, non-DOE medical care programs, including the “Section 177 Healthcare Program” (also known as the Four Atoll Healthcare Program) and the RMI national healthcare program. The Section 177 Healthcare Program provides basic healthcare services for the people of the Bikini, Enewetak, Rongelap, and Utrik Atolls who were impacted by the U.S. nuclear weapons testing program. Although the Special Medical Care Program does not provide complete care for cardiometabolic syndrome conditions, the program’s physicians provide basic supportive care and refer patients with these conditions to the Section 177 Healthcare Program and the RMI national healthcare system.

In addition, there are very few physicians who speak Marshallese or who understand the cultural context and social rules of conducting medical examinations of Marshallese patients. The language barrier makes it difficult for non-Marshallese-speaking physicians to communicate with these patients. To help with the language barrier and provide personal assistance and monitoring, given the ages and physical conditions of the patients, a family member or companion who speaks English typically escorts the patients who are referred to medical facilities outside the RMI or to specific examination sites within the RMI. The escorts receive the same travel and per diem benefits as the patients.

There were 253 people on the Rongelap and Utrik Atolls during the “Castle Bravo” test in 1954. On October 1, 2018, the beginning of FY 2019, 93 individuals were eligible for participation in the Special Medical Care Program. Thirty of the 93 individuals resided in the U.S. in FY 2019 and the Special Medical Care Program provided for care for these individuals within their own communities.

This report provides a description of the services provided to program participants; general results of the examinations performed; an overview of the logistics involved in administering the Special Medical Care Program; and a summary of program expenditures.

### III. Medical Services

The Special Medical Care Program provides annual, comprehensive medical screening examinations for potential radiation-related cancers, referrals to specialists for further testing as needed, cancer treatment, and follow-up examinations by specialists.

The annual screening examination consists of a physical examination, including a thyroid palpation; gender-specific examinations, such as mammogram and rectal exams; and laboratory tests, which include, but are not limited to, complete blood count (CBC), comprehensive metabolic panel (CMP), hemoglobin A1c, urinalysis, baseline electrocardiogram (EKG), liver cancer screening, chest x-ray, thyroid ultrasound, and periodic colonoscopy. Each patient's medical records and personal history are reviewed as part of the annual exam. Any suspicious conditions for cancer are discussed with the patient and referrals are made for further evaluation and management, as needed. Each examination is conducted in accordance with appropriate guidelines and recommendations, such as those provided by the American Cancer Society, the American College of Physicians, and the U.S. Preventive Services Task Force (USPSTF).

Referral patients receive additional screening and treatment, as needed, by an oncologist and other physicians who may be involved in his or her cancer diagnosis and treatment. Treatment continues until a patient is in remission or has reached end of care. Each patient is engaged with his or her treatment plan and provided with access to additional specialists, including survivorship counseling.

#### **Annual Medical Screening Examinations**

The 93 individuals who were eligible for participation in the Special Medical Care Program in FY 2019 were scheduled for annual medical screening examinations. The results of the FY 2019 annual medical screening examinations are as follows:

- 79 patients received annual medical screening examinations.
- 14 patients were not examined in FY 2019 for the following reasons:
  - 2 patients died (not from cancer) prior to receiving an examination;
  - 3 patients changed their residences or contact information without providing forwarding addresses or new contact information;
  - 5 patients refused exams;
  - 3 patients were not examined due to travel restrictions enacted by the RMI in response to the Dengue Fever outbreak; and
  - 1 patient delayed the examination due to personal travel to the Philippines.

Thus, in FY 2019, 85 percent of eligible patients received an annual examination through the Special Medical Care Program.

In addition to the clinics available in Majuro (the capital of the Marshall Islands) and Kwajalein that serve eligible patients residing in Majuro and on Ebeye Island (which is part of the Kwajalein Atoll), five in-home visits to provide annual exams were made to homebound patients residing in these locations. These visits allowed program physicians to examine the patients and interact with them and other family members in the household. Quarterly home visits were also performed by program physicians for all eligible patients residing in Majuro and Ebeye Island as a courtesy follow-up. No program medical staff traveled to Utrik Atoll to visit patients who reside on the atoll due to the RMI Dengue Fever travel restrictions.

Thyroid disease is of special concern for the Special Medical Care Program because of exposure of the Marshallese people on Rongelap and Utrik to radioactive iodine in fallout from the Castle Bravo test. Traditional manual examination of the thyroid is augmented by ultrasound procedures, which are used at the recommendation of the American Thyroid Association. Each participant in the Special Medical Care Program is offered a thyroid ultrasound examination annually by the program endocrinologist; CONUS patients receive examinations through a clinic near their home. Ultrasounds are also used when abnormalities are identified.

The program's endocrinologist visited program patients residing in Majuro, Ebeye, and Hawaii in FY 2019, and will continue to visit program patients in FY 2020. To date, there have been 18 thyroid cancers diagnosed among participants in the Special Medical Care Program.

Other medical services, such as pharmacy, laboratory, radiology, and mammography services, were also provided to program participants, as needed.

### **Medical Referrals**

In FY 2019, five program participants were referred to specialists for suspicion of cancer. Four of the participants were referred directly to The Queen's Medical Center in Honolulu, Hawaii, and one participant residing in the CONUS was referred to a local medical facility in the CONUS for the following:

- Three participants were referred for a fine needle aspiration of the thyroid;
- One participant was referred for a biopsy of the prostate; and
- One participant was referred for an ultrasound of the breast.

No cancers were detected during these examinations.

### **Cancer Treatment**

One of the program participants, who was referred for a follow-up examination, received iodine therapy in FY 2019 for previously diagnosed thyroid cancer.

### **Follow-up Medical Examinations**

Three participants who were previously diagnosed with breast cancer, thyroid cancer, and gum cancer, respectively, were referred to The Queen's Medical Center in Honolulu, Hawaii, for follow-up examinations. No new cancers were detected during these follow-up examinations.

## IV. Logistics Services

The logistics services element of the Special Medical Care Program includes the necessary infrastructure and support needed for the program to operate, including lease expenses and utilities for the Majuro clinic, facility maintenance and repair services, vehicle maintenance and repair services, supplies and equipment, medical and management personnel travel not directly related to medical screening examinations (e.g., program oversight, meetings, etc.), and continuing medical education.

The Special Medical Care Program conducts medical operations in the RMI from two clinical facilities. The Special Medical Care Program in Majuro is located in a commercial center in Delap Village, within 500 yards of the island’s hospital. A small office space dedicated to the Special Medical Care Program is leased inside Ebeye Hospital (on Kwajalein Atoll), pursuant to an agreement with the RMI Ministry of Health and Human Services (MoHHS). Kwajalein is used as a staging area, with office space for program staff and storage of necessary supplies and equipment, for logistical support to the program. The program physicians who are located in the RMI donate numerous clinical hours weekly to the RMI MoHHS and its hospital.

## V. Program Expenditures

The Special Medical Care Program costs in FY 2019 and FY 2020 (projected) are summarized in the following table.

**Special Medical Care Program Costs for FY 2019 and Projected Costs for FY 2020**

Program Element	FY 2019	FY 2020 Projected
<b>Annual Medical Screening Examination Costs:</b> <ul style="list-style-type: none"> <li>• Costs include, but are not limited to:                             <ul style="list-style-type: none"> <li>○ Salaries for healthcare professionals and administrative staff;</li> <li>○ Pharmaceuticals;</li> <li>○ Medical supplies and equipment;</li> <li>○ Laboratory, imaging, and physician services;</li> <li>○ Aircraft and charter vessels for transportation for patient examinations inside the RMI;</li> <li>○ Medical malpractice insurance;</li> <li>○ Travel, lodging, and per diem expenses for patients and their escorts traveling to clinics in the RMI, Hawaii, or the CONUS for annual screening; and</li> </ul> </li> </ul>	<b>\$979,502</b>	<b>\$1,108,938</b>

<ul style="list-style-type: none"> <li>○ Medical personnel travel in support of annual screening exams.</li> </ul>		
<p><b>Medical Referral Costs:</b></p> <ul style="list-style-type: none"> <li>• Costs include, but are not limited to:           <ul style="list-style-type: none"> <li>○ Medical services for patients referred to specialists for suspicion of cancer or follow-up care; and</li> <li>○ Travel, lodging, and per diem for patients and their escorts, and other travel-related costs.</li> </ul> </li> </ul>	<b>\$118,725</b>	<b>\$237,988</b>
<p><b>Medical Logistics Services Costs:</b></p> <ul style="list-style-type: none"> <li>• Costs include, but are not limited to:           <ul style="list-style-type: none"> <li>○ Lease/Rent for the Majuro clinic;</li> <li>○ Utilities for the Majuro clinic;</li> <li>○ Facility maintenance and repair services;</li> <li>○ Vehicle maintenance and repair services;</li> <li>○ Supplies and equipment (office, cleaning, electronic, personal protective equipment, shipping and packing, vehicle fuel, health snacks and drinking water for patients);</li> <li>○ Medical and management personnel travel not directly related to medical screening examinations (e.g., program oversight, meetings, etc.); and</li> <li>○ Continuing medical education (conferences and seminars).</li> </ul> </li> </ul>	<b>\$256,393</b>	<b>\$113,039</b>
<b>Total</b>	<b>\$1,354,620</b>	<b>\$1,459,965</b>

The program’s medical screening examination costs for FY 2020 are expected to increase slightly because of the effects of an aging participant population and concomitant increases in medical procedures and travel costs. In FY 2019, the program’s medical referral costs were substantially lower than previous years because the patients referred did not require as many medical services as those referred in previous years. However, based on average referral costs in previous years, medical referral costs are expected to increase in FY 2020. Medical logistics services costs are expected to decrease in FY 2020, as there were atypical costs in FY 2019 associated with modifying office space in preparation for moving the DOE medical clinic in Majuro in FY 2020, as well as replacing a vehicle used for transporting patients.

## VI. Conclusion

In FY 2019, DOE provided comprehensive annual medical screening examinations in the RMI and in the U.S. for 79 of 93 eligible individuals through the Special Medical Care Program. The remaining 14 patients were not examined for various reasons, including patient refusal, change

of residence without forwarding addresses or new contact information, and postponement due to Dengue Fever travel restrictions. Of the 79 program participants examined, 5 participants were referred to specialists for suspicion of cancer, and 3 participants, who were previously diagnosed with cancer, were provided follow-up examinations by specialists. No new cancers among program participants were detected in FY 2019; however, DOE provided follow-up care for a program participant who was previously treated for cancer.

The medical care provided by DOE through the Special Medical Care Program included local community-based medical services in the RMI, as well as medical care at locations in Hawaii for services not currently available in the RMI, and in the CONUS for patients who reside there. DOE also provided support for travel, lodging, and per diem expenses for program participants and their escorts for program-related travel in the RMI, Hawaii, or the CONUS.

Total costs for the Special Medical Care Program in FY 2019 for medical care and logistics services were \$1,354,620. Costs are projected to increase slightly in FY 2020 to \$1,459,965 because of increases in expected costs related to travel and medical care.

Of the 93 participants in the Special Medical Care Program, 2 died during FY 2019 (not from cancer), leaving 91 remaining eligible participants in the Special Medical Care Program on October 1, 2019, the start of FY 2020.