# Papahānaumokuākea Marine National Monument

RESEARCH Permit Application

**NOTE:** ***This Permit Application (and associated Instructions) are to propose activities to be conducted in the Papahānaumokuākea Marine National Monument. The Co-Trustees are required to determine that issuing the requested permit is compatible with the findings of Presidential Proclamation 8031. Within this Application, provide all information that you believe will assist the Co-Trustees in determining how your proposed activities are compatible with the conservation and management of the natural, historic, and cultural resources of the Papahānaumokuākea Marine National Monument (Monument).***

**ADDITIONAL IMPORTANT INFORMATION:**

- Any or all of the information within this application may be posted to the Monument website informing the public on projects proposed to occur in the Monument.

- In addition to the permit application, the Applicant must either download the Monument Compliance Information Sheet from the Monument website OR request a hard copy from the Monument Permit Coordinator (contact information below). The Monument Compliance Information Sheet must be submitted to the Monument Permit Coordinator after initial application consultation.

- Issuance of a Monument permit is dependent upon the completion and review of the application and Compliance Information Sheet.

**INCOMPLETE APPLICATIONS WILL NOT BE CONSIDERED**

Send Permit Applications to:
Papahānaumokuākea Marine National Monument Permit Coordinator
6600 Kalaniana'ole Hwy. # 300
Honolulu, HI 96825
nwhipermit@noaa.gov
PHONE: (808) 397-2660 FAX: (808) 397-2662

**SUBMITTAL VIA ELECTRONIC MAIL IS PREFERRED BUT NOT REQUIRED. FOR ADDITIONAL SUBMITTAL INSTRUCTIONS, SEE THE LAST PAGE.**

# Papahānaumokuākea Marine National Monument
# Permit Application Cover Sheet

This Permit Application Cover Sheet is intended to provide summary information and status to the public on permit applications for activities proposed to be conducted in the Papahānaumokuākea Marine National Monument. While a permit application has been received, it has not been fully reviewed nor approved by the Monument Management Board to date. The Monument permit process also ensures that all environmental reviews are conducted prior to the issuance of a Monument permit.

## Summary Information

**Applicant Name:** Randy K Rembold
**Affiliation:** Sandia National Laboratories

**Permit Category:** Research
**Proposed Activity Dates:** 9/2009-9/2014
**Proposed Method of Entry (Vessel/Plane):** Plane
**Proposed Locations:** Sand Island Midway Atoll

**Estimated number of individuals (including Applicant) to be covered under this permit:**
4
**Estimated number of days in the Monument:** 30 days the first year for installation and then approximately 7 days each year thereafter.

**Description of proposed activities:** (complete these sentences):

a.) The proposed activity would…
Install four infrasound elements on Sand Island for the purpose of monitoring the Comprehensive Test Ban Treaty

b.) To accomplish this activity we would ….
Ship 4 infrasound elements including solar panels, equipment housing, hoses, radios and antennas and install at the four locations indicated on the attached photo

c.) This activity would help the Monument by …
Fulfilling U.S. Comprehensive Test Ban Treaty obligations by installing stations to monitor worldwide for nuclear testing

**Other information or background:** In 1996 the UN adopted the Comprehensive Test Ban Treaty which bans all nuclear testing everywhere on the planet. That same year President Clinton signed the treaty. To monitor the treaty the Comprehensive Test Ban Treaty Organization oversees a network of 321 monitoring stations of which 37 reside on U.S. territory.

## Section A - Applicant Information

### 1. Applicant

Name (last, first, middle initial): Randy K Rembold

Title: U.S. International Monitoring System Configuration Manager

**1a. Intended field Principal Investigator (See instructions for more information):**
Randy K Rembold

**2. Mailing address (street/P.O. box, city, state, country, zip):** [redacted]

Phone: [redacted]

Fax: [redacted]

Email: [redacted]

For students, major professor's name, telephone and email address:

**3. Affiliation (institution/agency/organization directly related to the proposed project):**
U.S. Army Nuclear Arms Control Technology and Comprehensive Test Ban Treaty Organization

**4. Additional persons to be covered by permit. List all personnel roles and names (if known at time of application) here (e.g. John Doe, Research Diver; Jane Doe, Field Technician):**
Curt Szuberla - University of Alaska Fairbanks
Jay Helmericks - University of Alaska Fairbanks

## Section B: Project Information

**5a. Project location(s):**

| | | Ocean Based | |
|---|---|---|---|
| ☐ Nihoa Island | ☐ Land-based | ☐ Shallow water | ☐ Deep water |
| ☐ Necker Island (Mokumanamana) | ☐ Land-based | ☐ Shallow water | ☐ Deep water |
| ☐ French Frigate Shoals | ☐ Land-based | ☐ Shallow water | ☐ Deep water |
| ☐ Gardner Pinnacles | ☐ Land-based | ☐ Shallow water | ☐ Deep water |
| ☐ Maro Reef | | | |
| ☐ Laysan Island | ☐ Land-based | ☐ Shallow water | ☐ Deep water |
| ☐ Lisianski Island, Neva Shoal | ☐ Land-based | ☐ Shallow water | ☐ Deep water |
| ☐ Pearl and Hermes Atoll | ☐ Land-based | ☐ Shallow water | ☐ Deep water |
| ☒ Midway Atoll | ☒ Land-based | ☐ Shallow water | ☐ Deep water |
| ☐ Kure Atoll | ☐ Land-based | ☐ Shallow water | ☐ Deep water |
| ☐ Other | | | |

NOTE: There is a fee schedule for people visiting Midway Atoll National Wildlife Refuge via vessel and aircraft.

Location Description:
There are four locations on Sand Island Midway Atoll. These are shown on the attached photo

**5b. Check all applicable regulated activities proposed to be conducted in the Monument:**

☐ Removing, moving, taking, harvesting, possessing, injuring, disturbing, or damaging any living or nonliving Monument resource

☐ Drilling into, dredging, or otherwise altering the submerged lands other than by anchoring a vessel; or constructing, placing, or abandoning any structure, material, or other matter on the submerged lands

☐ Anchoring a vessel

☐ Deserting a vessel aground, at anchor, or adrift

☐ Discharging or depositing any material or matter into the Monument

☐ Touching coral, living or dead

☐ Possessing fishing gear except when stowed and not available for immediate use during passage without interruption through the Monument

☐ Attracting any living Monument resource

☐ Sustenance fishing (Federal waters only, outside of Special Preservation Areas, Ecological Reserves and Special Management Areas)

☐ Subsistence fishing (State waters only)

☐ Swimming, snorkeling, or closed or open circuit SCUBA diving within any Special Preservation Area or Midway Atoll Special Management Area

**6 Purpose/Need/Scope** ***State purpose of proposed activities:***
In 1996 the UN adopted the Comprehensive Test Ban Treaty which bans all nuclear testing everywhere on the planet. That same year President Clinton signed the treaty. To monitor the treaty the Comprehensive Test Ban Treaty Organization oversees a network of 321 monitoring stations of which 37 reside on U.S. territory. Sand Island Midway Atoll is the location for two of these stations, a radionuclide monitoring station and an infrasound monitoring station. The radionuclide monitoring station has been installed and is awaiting certification. Without these stations there is a large un-monitored area of the South Pacific Ocean.

**7. Answer the Findings below by providing information that you believe will assist the Co-Trustees in determining how your proposed activities are compatible with the conservation and management of the natural, historic, and cultural resources of the Monument:**

The Findings are as follows:

a. How can the activity be conducted with adequate safeguards for the cultural, natural and historic resources and ecological integrity of the Monument?
These elements will be installed on existing concrete surfaces and will not intrude on any nesting habitats

b. How will the activity be conducted in a manner compatible with the management direction of this proclamation, considering the extent to which the conduct of the activity may diminish or enhance Monument cultural, natural and historic resources, qualities, and ecological integrity, any indirect, secondary, or cumulative effects of the activity, and the duration of such effects?
By installing the elements on existing concrete there should be little impact to the monument

c. Is there a practicable alternative to conducting the activity within the Monument? If not, explain why your activities must be conducted in the Monument.
The Comprehensive Test Ban Treaty specifically lists station types and locations. There are no alternative sites for these stations

d. How does the end value of the activity outweigh its adverse impacts on Monument cultural, natural and historic resources, qualities, and ecological integrity?
The monitoring of nuclear testing and along with it nuclear proliferation, benefits not only the U.S. but the entire world

e. Explain how the duration of the activity is no longer than necessary to achieve its stated purpose.
These sites will be removed when the treaty is no longer in effect

f. Provide information demonstrating that you are qualified to conduct and complete the activity and mitigate any potential impacts resulting from its conduct.
I was the project lead for the installation of the radionuclide monitoring station on Sand Island

g. Provide information demonstrating that you have adequate financial resources available to conduct and complete the activity and mitigate any potential impacts resulting from its conduct.
The Department of Defense is the program manager for the U.S. CTBT effort and has a funding agreement already in place with the U.S. F&WS for use of island infrastructure. The University of Alaska Fairbanks will be responsible for purchase and maintenance of equipment as well as personnel cost.

h. Explain how your methods and procedures are appropriate to achieve the proposed activity's goals in relation to their impacts to Monument cultural, natural and historic resources, qualities, and ecological integrity.
We will work with the Fish and Wildlife Island Manager to mitigate any impact to the island

i. Has your vessel has been outfitted with a mobile transceiver unit approved by OLE and complies with the requirements of Presidential Proclamation 8031?
N/A

j. Demonstrate that there are no other factors that would make the issuance of a permit for the activity inappropriate.
All efforts have been made to reduce the footprint and any impact these installations will have on the island and monument

**8. Procedures/Methods:**
Four areas on the island have been identified as possible locations for installation of four elements for an infrasound array. These locations are marked on the map in photo 1. At each site there would be a 1 m3 equipment enclosure (shown in photo 2) which would contain a microbarometer, digitizer, radio, and batteries. A GPS antenna and radio antenna would mounted to the outside of the enclosure. Two solar panels would be mounted on brackets on the ground next to the enclosure. The panels would be mounted parallel to the ground so that they would not be higher than the equipment enclosure (photo 3). Sixteen polypropolene hoses would lie on the ground also just beside the enclosure with four on each side of the enclosure (photo 4). The four hoses on each side would connect together using metal manifolds with a single hose from the manifold entering the enclosure on each side The hoses would be covered with crushed coral to keep the birds from them. Data from the sites would be transmitted by radio to locations where there are connections to the communications building. The data would be collected at the communications building and formatted into a data frame and then sent via fiber optic to the CTBT radionuclide building where it would be transmitted by satellite to Vienna.

**NOTE: If land or marine archeological activities are involved, contact the Monument Permit Coordinator at the address on the general application form before proceeding, as a customized application will be needed. For more information, contact the Monument office on the first page of this application.**

**9a. Collection of specimens - collecting activities (would apply to any activity): organisms or objects (List of species, if applicable, attach additional sheets if necessary):**

Common name:
NA

Scientific name:

# & size of specimens:

Collection location:

☐ Whole Organism ☐ Partial Organism

**9b. What will be done with the specimens after the project has ended?**

**9c. Will the organisms be kept alive after collection? ☐ Yes ☐ No**

• General site/location for collections:

• Is it an open or closed system? ☐ Open ☐ Closed

• Is there an outfall? ☐ Yes ☐ No

• Will these organisms be housed with other organisms? If so, what are the other organisms?

• Will organisms be released?

**10. If applicable, how will the collected samples or specimens be transported out of the Monument?**
NA

**11. Describe collaborative activities to share samples, reduce duplicative sampling, or duplicative research:**
Once the data from this station arrives in Vienna it is available to all states parties (every coutry that has signed the CTBT treaty).

**12a. List all specialized gear and materials to be used in this activity:**
Each element will have a microbarograph, digitizer, radio& antenna, GPS receiver and batteries located in a 1 m3 plastic enclosure along with two solar panels, GPS antenna, radio antenna, and sixteen hoses located outside the enclosure as shown in the attached drawing.

**12b. List all Hazardous Materials you propose to take to and use within the Monument:**
There will be no hazardous materials associated with this project

**13. Describe any fixed installations and instrumentation proposed to be set in the Monument:**
Each element will have a microbarograph, digitizer, radio& antenna, GPS receiver and batteries located in a 1 m2 plastic enclosure along with two solar panels, GPS antenna, radio antenna, and sixteen hoses located outside the enclosure as shown in the attached drawing.

**14. Provide a time line for sample analysis, data analysis, write-up and publication of information:**
This project will be ongoing with the data transmitted directly to the International Data Center in Vienna Austria

**15. List all Applicants' publications directly related to the proposed project:**
N/A

With knowledge of the penalties for false or incomplete statements, as provided by 18 U.S.C. 1001, and for perjury, as provided by 18 U.S.C. 1621, I hereby certify to the best of my abilities under penalty of perjury of that the information I have provided on this application form is true and correct. I agree that the Co-Trustees may post this application in its entirety on the Internet. I understand that the Co-Trustees will consider deleting all information that I have identified as "confidential" prior to posting the application.

_____ _____

Signature Date

**SEND ONE SIGNED APPLICATION VIA MAIL TO THE MONUMENT OFFICE BELOW:**

Papahānaumokuākea Marine National Monument Permit Coordinator
6600 Kalaniana'ole Hwy. # 300
Honolulu, HI 96825
FAX: (808) 397-2662

**DID YOU INCLUDE THESE?**

☐ Applicant CV/Resume/Biography
☐ Intended field Principal Investigator CV/Resume/Biography
☐ Electronic and Hard Copy of Application with Signature
☐ Statement of information you wish to be kept confidential
☐ Material Safety Data Sheets for Hazardous Materials