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TEMPORARY EMERGENCY RESOURCE CONSERVATION AND RECOVERY ACT PERMIT
APPLICATION FOR EXPANDED SITE INSPECTION AT CAT ISLAND BOMB TARGET MCAS
CHERRY POINT NC
07/01/2010
CH2M HILL

Temporary Emergency RCRA Permit Application - Expanded Site Inspection

**Former Cat Island Bomb Target BT-2
Marine Corps Air Station Cherry Point
Havelock, North Carolina**

Contract Task Order 043

July 2010

Prepared for

**Department of the Navy
Naval Facilities Engineering Command
Mid-Atlantic**

Under the

**NAVFAC CLEAN 1000 Program
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Prepared by



CH2MHILL

Charlotte, North Carolina

Temporary Emergency RCRA Permit Application – Expanded Site Inspection Former Cat Island Bomb Target BT-2 Marine Corps Air Station Cherry Point North Carolina

Introduction and Program Overview

This Temporary Emergency Resource Conservation and Recovery Act (RCRA) Permit Application is being submitted by Marine Corps Air Station (MCAS) Cherry Point to support treatment and disposal of solid waste generated during range clearing activities on Wood Island, North Carolina, site of the Former Cat Island Bomb Target BT-2 (BT-2). Wood Island is approximately 10 acres in size and is located at latitude 34°41'10"N and longitude 76°57'5" W. This former bomb target site is owned by MCAS Cherry Point.

An Expanded Site Inspection (SI) to be conducted by the Naval Facilities Engineering Command (NAVFAC) and MCAS Cherry Point is being planned at BT-2 to characterize and properly manage munitions and explosives of concern (MEC) and material potentially presenting an explosive hazard (MPPEH) located on the ground surface at BT-2. The BT-2 Expanded SI will consist of the following activities:

- Site reconnaissance will be conducted to locate and classify debris.
- All MEC encountered on the ground surface of the island and MPPEH that is not safe to move will be destroyed by open detonation on Wood Island.
- MPPEH that is safe to move, and other metallic debris will be transported by boat to the nearby Marine Corps Auxiliary Landing Field (MCALF) Bogue (hereinafter referred to as Bogue Field), located approximately four miles west of Wood Island.
- MPPEH transported to Bogue Field will be stored temporarily and demilitarized, if necessary, prior to being certified as Material Documented as Safe (MDAS).
- MDAS and other debris will be stored temporarily on Bogue Field at a location separate from the MPPEH storage area until it is transported to an approved disposal facility.

The temporary emergency permit is needed to authorize and complete the Expanded SI work associated with the transport of MPPEH from Wood Island to Bogue Field, as well as the demilitarization and inspection activities performed at Bogue Field. In order to complete work in a controlled, safe, and protective manner, MPPEH and other debris must be transported off range (to nearby Bogue Field) for demilitarization and processing. It is our understanding that the MPPEH will be considered a solid waste and therefore is subject to RCRA Subtitle C regulation. Pursuant to 40 CFR Part 260, et al. Military Munitions Rule (MMR): Hazardous Waste Identification and Management; Explosives Emergencies; Manifest Exemption for Transport of Hazardous Waste on Public Right-of-Ways on Contiguous Properties; Final Rule, February 12, 1997, Section 266.202.(c)(1) states that a used or fired military munition is a solid waste when "...transported off range or from the site of use, where the site of use is not a range, for the purposes of storage, reclamation, treatment, disposal, or treatment prior to disposal". Activities conducted on Wood Island

(open detonation of MEC, etc.) are not subject to RCRA Subtitle C regulation per Section 266.202.(a)(1)(iii), which states that a military munition is not considered a solid waste when generated as part of recovery, collection, and on-range destruction of unexploded ordnance (UXO) and munitions fragments which occur during clearance activities conducted at active or inactive ranges.

Proposed project activities are described in further detail in the following sections of this application.

Description of Potential Hazard

Residual MEC and MPPEH from historical range activities associated with BT-2 present an imminent hazard to human receptors. BT-2, which was used as an aerial bombing target from 1943 through 1955, was located in the immediate vicinity of Wood Island, within Bogue Sound between Bogue Banks (near Emerald Isle) and the North Carolina mainland (**Figure 1**). During this time, inert target-practice and high-explosives munitions were used at the site including general purpose bombs, armor piercing bombs, semi-armor piercing bombs, depth bombs, rockets, and machine guns.

During site visits to Wood Island in 2008 and 2009, MPPEH was observed on the ground surface. This material potentially presents an explosive hazard and could affect human and ecological receptors. Due to its location within Bogue Sound, it is not possible to completely restrict access (recreational boaters, trespassers, etc.) to Wood Island.

Additional details regarding historical munitions use at BT-2 are documented in the United States Army Corps of Engineers (USACE) *Final Range Identification and Preliminary Range Assessment Report* (USACE, 2001).

Description of Expanded SI Effort

Metallic debris encountered on the surface of Wood Island during the Expanded SI effort will be classified in one of four categories:

1. MEC (Munitions and Explosives of Concern) – Debris classified as MEC will be destroyed by open detonation on Wood Island using donor explosives. Following detonation, residual debris will be reclassified as MPPEH or other debris.
2. MPPEH (Material Potentially Presenting an Explosive Hazard) Determined Safe to Move – Debris classified as MPPEH that is safe to move will be consolidated on Wood Island and transported to Bogue Field for demilitarization and inspection.
3. MPPEH Determined Not Safe to Move - Debris classified as MPPEH that is not safe to move will be consolidated and destroyed by open detonation on Wood Island using donor explosives.
4. Other Debris – Material identified as presenting no explosive hazard and believed to have been generated from activities unrelated to the former military use of BT-2 will be classified as “other debris”. Other debris will be consolidated on Wood Island and transported to Bogue Field for temporary storage until it is transported to an approved disposal facility.

Surface Clearance, Transportation, and Disposition of MPPEH Determined Safe to Move

If the item is identified as MPPEH Determined Safe to Move, it will be staged temporarily on Wood Island and transported to Bogue Field for verification, certification, and demilitarization. Once the MPPEH has been transported to Bogue Field it will be stored in a secured area until demilitarization is performed, if necessary. Other debris will be placed at a separate storage location and regularly transferred to Bogue Field for disposal.

Inspection and Segregation

A systematic approach will be used for collecting, inspecting, and segregating site debris. The approach is designed so that materials undergo a continual evaluation/inspection process from the time they are acquired until the time they are removed from the site.

Segregation procedures begin at the time the metal item is discovered on the island by the UXO Technician. At this point, the UXO Technician makes a preliminary determination as to the classification of the item. If the UXO Technician makes a preliminary determination that the item is MPPEH that is safe to move, it is placed in a temporary accumulation point located on the island and will undergo the following procedure.

MPPEH Disposition

MPPEH that is considered safe to move will be placed into a storage box, labeled "MPPEH", and transported by boat to the MPPEH storage area at Bogue Field on a daily basis. A shredding machine and storage containers will be sited on Bogue Field for demilitarization and storage of material removed from Wood Island. The site layout and locations of these items and their associated explosives safety quantity distance (ESQD) arcs are presented on **Figure 2**.

Two storage containers will be marked "MPPEH" and will be used to store MPPEH at Bogue Field prior to demilitarization and inspection. These containers will be positioned at the site as shown on **Figure 2**. MPPEH that cannot be certified and verified as safe will remain at Bogue Field until demilitarized as necessary.

MPPEH will be demilitarized, as needed, on Bogue Field using the shredder. All MPPEH surfaces must be inspected for the presence of explosives residue. If all surfaces of an item cannot be inspected, the item will undergo demilitarization which will shred the item so all surfaces are visible for inspection. Following demilitarization, the material will be inspected, certified, and placed into an MDAS storage box for offsite disposal.

Only UXO-qualified personnel will perform these inspections. A UXO Technician III will perform the 100% inspection and document that the MPPEH is free of explosive hazards. Per Ordnance Pamphlet (OP)-5, Section 13-15.7.2 (Naval Sea Systems Command [NAVSEA], 2007) and Department of Defense Instruction (DoDI) 4140.62 (DoD, 2008), the UXO Quality Control Specialist (UXOQCS) will conduct the re-inspection and document that the MPPEH is free of explosive hazards. Following documentation of these two visual inspections, the MPPEH becomes MDAS.

The storage container marked "MDAS" will contain material with an explosives safety status of "safe", which means that the contents have been certified as not presenting an explosive hazard, and are consequently safe for unrestricted transfer or release pending any further demilitarization requirements or trade security controls.

As part of the transfer of MDAS to an off-Base facility for final disposition, the following statement will be entered on each DD Form 1348-1 (series) and will be signed by the Senior UXO Supervisor (SUXOS) and the UXOQCS.

"This certifies that materially potentially presenting an explosive hazard listed has been 100 percent properly inspected and to the best of our knowledge and belief, is inert and/or free of explosives or related materials."

CH2M HILL, the Navy contractor, will arrange for maintaining the chain of custody (COC) and final disposition of the certified and verified materials. The certified and verified material will be released only to an organization that will:

1. Provide signed documentation stating that the organization has received the containers, that each container has an unbroken seal and unique identification, and that after reviewing the documentation accompanying the containers, agrees that the sealed containers contained no explosive hazards when received. This documentation will be signed on company letterhead and state that the contents of these sealed containers will not be sold, traded, or otherwise given to another party until the contents have been smelted and are identifiable only by their basic content.
2. Send notification and supporting documentation to CH2M HILL documenting that the sealed containers have been smelted and are now identifiable only by their basic content. These documents will be incorporated into the final After Action Report.

Type, Quantity, and Expected Conditions of the Waste(s)

Examples of MPPEH that may be encountered at BT-2 include, but are not limited to munitions, range debris, and empty casings or other expended munitions. MPPEH that is safe to move will be transported as such to Bogue Field. MPPEH that is safe to move will be processed on Bogue Field and will be certified safe and inert when transported as MDAS from Bogue Field to an approved disposal facility. Other debris that may be encountered may include, but is not limited to, cultural debris from fishermen, hunters, and recreational boaters. Waste removed from Bogue Field for off-site disposal will not be considered hazardous waste. The solid waste generated during this Expanded SI effort following the processing effort will consist of MDAS and other non-hazardous metallic debris.

Generator EPA ID and Contact Information

MCAS Cherry Point EPA ID Number: NC-117-00-27261

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Qualification and Training for Personnel

UXO personnel assigned to positions UXO Technician I, UXO Technician II, UXO Technician III, UXO Safety Officer, UXOQCS, or SUXOS, will be qualified and certified in accordance with Naval Sea Systems Command Instruction (NAVSEAINST) 8020.9B, Ammunition and Explosives Personnel Qualification and Certification Program; terms

outlined by U.S. Department of Labor Employment Standards Administration Wage Hour Division for UXO Personnel; and Department of Defense Explosives Safety Board (DDESB) Technical Paper (TP)-18, *Minimum Qualifications for Unexploded Ordnance (UXO) Technicians and Personnel*. UXO personnel will be the only site workers handling waste removed from Wood Island.

Project Health and Safety

Health and Safety Plan

A project Health and Safety Plan has been developed to address potential project hazards, identify project personnel responsibilities, and detail emergency response procedures. This Health and Safety Plan will be reviewed by all site personnel prior to commencing work.

Site Security

Security at Bogue Field is maintained by the United States Marine Corps. Site access is restricted to personnel with proper credentials and enforced by guards at gated entry points 24 hours a day. Therefore, entry to the work area at Bogue Field by unauthorized persons is unlikely.

Additional Information

Project Schedule

Field activities are expected to begin in late 2010. Due to the classification of Wood Island as a migratory bird habitat, field activities must be performed between September 1, 2010 and March 31, 2011. Therefore, it is requested that the temporary emergency RCRA permit be issued to allow work to be conducted within this time frame. The project schedule is subject to change based on future developments in the work planning phase.

Acronyms and Abbreviations

BT-2	Former Cat Island Bomb Target BT-2
COC	chain-of-custody
DDESB	Department of Defense Explosives Safety Board
DoDI	Department of Defense Instruction
ESQD	explosives safety quantity distance
MCAS	Marine Corps Air Station
MDAS	material documented as safe
MEC	munitions and explosives of concern
MMR	Military Munitions Rule
MPPEH	material potentially presenting an explosive hazard
NAVFAC	Naval Facilities Engineering Command
NAVSEA	Naval Sea Systems Command
NAVSEAINST	NAVSEA Instruction
OP	Ordnance Pamphlet
RCRA	Resource Conservation and Recovery Act
SUXOS	Senior UXO Supervisor
TP	Technical Paper
USACE	United States Army Corps of Engineers
UXO	unexploded ordnance
UXOQCS	UXO Quality Control Specialist
WMM	waste military munitions

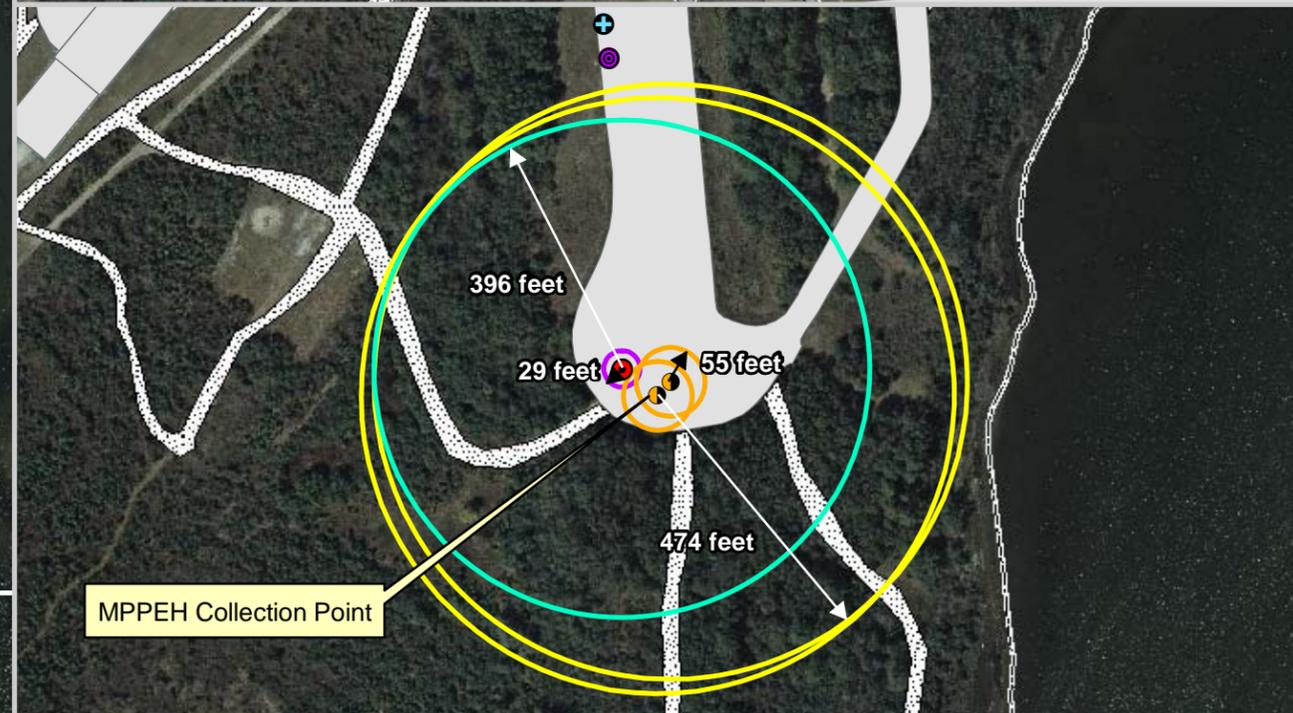
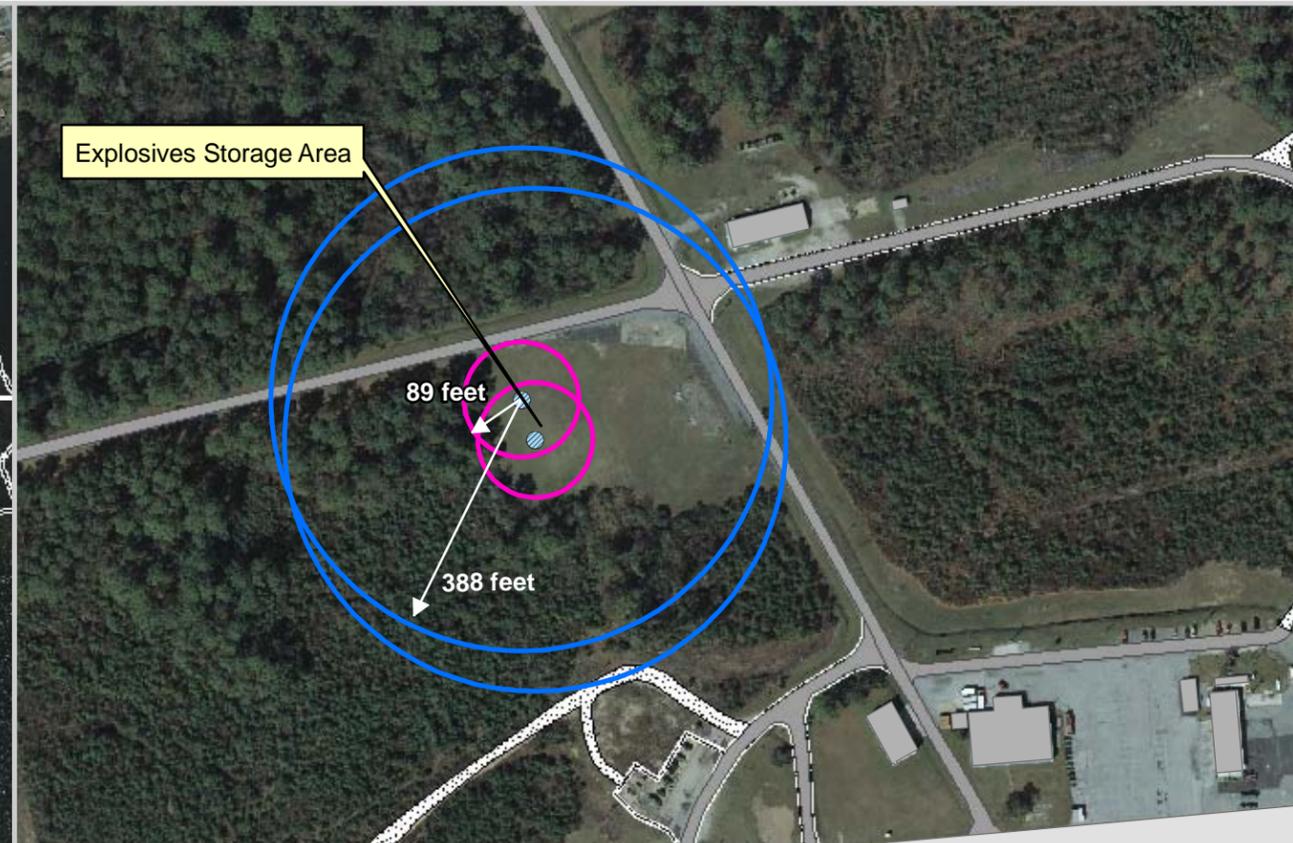
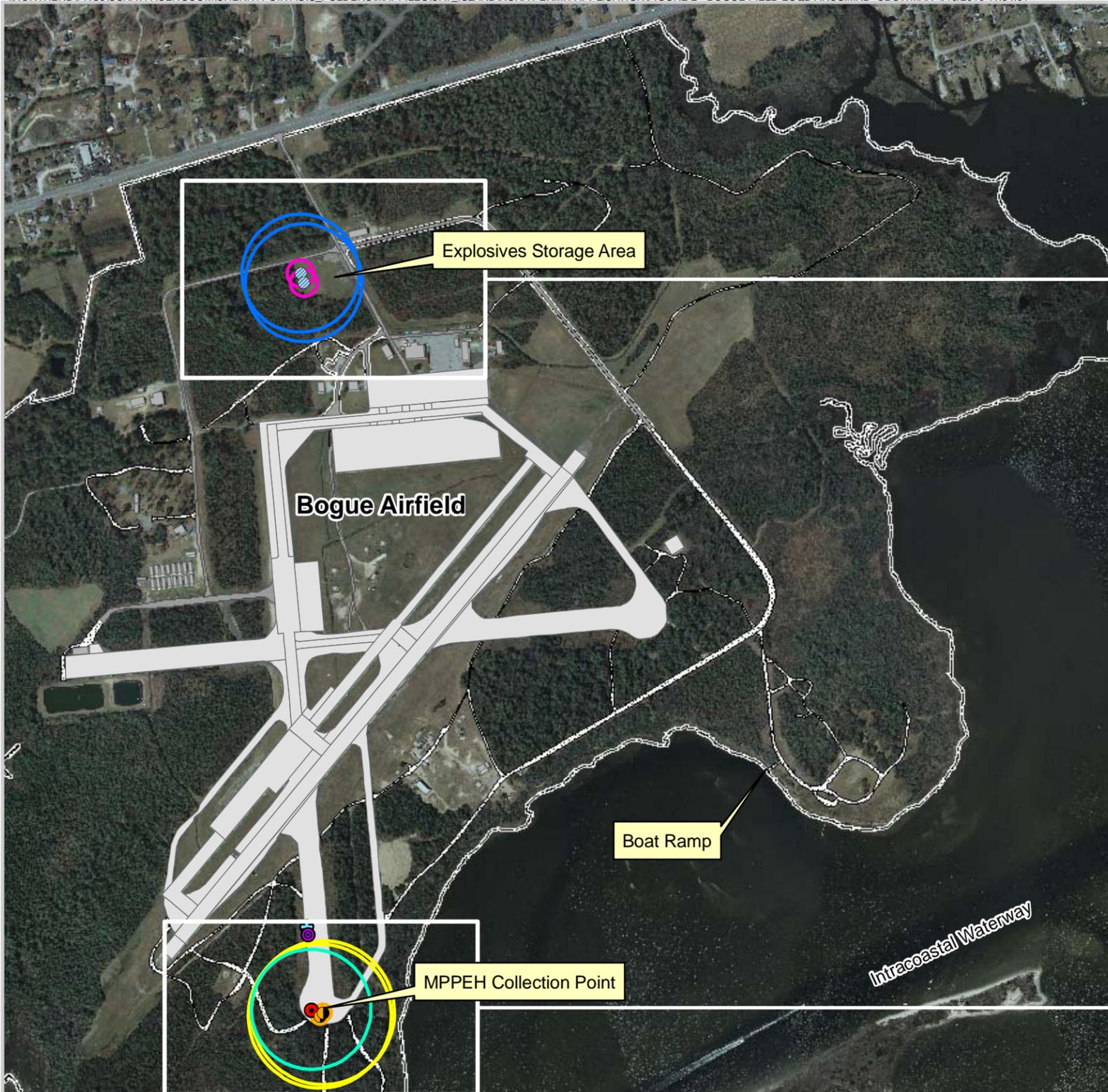
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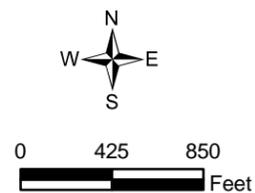
Legend

 Installation Boundary

Figure 1
Munitions Response Site Regional Location Map
Former Cat Island Bomb Target BT-2
MCAS Cherry Point
North Carolina



- Legend**
- MPPEH Collection Point (10lb NEW)
 - Commercial Explosives Storage (50lb NEW)
 - MDAS Storage Area
 - Other Debris Storage Area
 - Demilitarization Machine Shredder
 - Buildings
 - Runway
 - Unpaved Road
 - Paved Road
 - Base Boundary
 - Essential Personnel EZ (29 feet)
 - Non-essential Personnel EZ (396 feet)
 - MPPEH Collection Point IBD (474 feet)
 - MPPEH Collection Point PTR (55 feet)
 - Explosives Magazine IBD (388 feet)
 - Explosives Magazine PTR (89 feet)



- IBD - Inhabited Building Distance
- MPPEH - Material Potentially Presenting an Explosive Hazard
- NEW - Net Explosive Weight
- PTR - Public Transportation Route
- MDAS - Material determined as safe
- EZ - Exclusion Zone

Figure 2
Bogue Field ESQD Arcs
Former Cat Island Bomb Target BT-2
MCAS Cherry Point
North Carolina