

**Abbreviated Health and Safety
Plan
for
Initial Site Visit
Six Munitions Response Sites
Naval Air Station Brunswick
Brunswick, Maine**



**Naval Facilities Engineering Command
Mid-Atlantic
Contract Number N62472-03-D-0057
Contract Task Order 069**

May 2007



TETRA TECH NUS, INC.

661 Andersen Drive • Pittsburgh, PA 15220
Tel 412.921.7090 • Fax 412.921.4040 • www.tetrattech.com

M M R P

PITT-05-7-041

May 21, 2007

Project Number 00645

ATTN: Mr. Orlando Monaco
BRAC PMO Northeast
4911 South Broad Street
Philadelphia, PA 19112-1303

Reference: CLEAN Contract No. N62472-03-D-0057
Contract Task Order No. 069

Subject: Abbreviated Health and Safety Plan
For Initial Site Visit Six Munitions Response Sites
Naval Air Station Brunswick, Maine

Dear Mr. Monaco:

Enclosed for your information please find two copies and one CD of the Abbreviated Health and Safety Plan (HASP) for Initial Site Visit at Six Munitions Response Sites at Naval Air Station Brunswick, Maine. The document was prepared in support of the upcoming Tetra Tech NUS site visit of May 30 through May 31, 2007.

Please call me at (412) 921-8650 if you have any comments or questions.

Very truly yours,

Linda Klink, P.E.
Project Manager

LEK/kf
Enclosure

- c Ms. Carolyn Lepage, Lepage Environmental (1 copy)
- Mr. Dale Mosher, BNAS (2 copies)
- L. Rapp, NAVFAC Mid-Atlantic (w/o enclosure)
- B. Capito, NAVFAC Mid-Atlantic (w/o enclosure)
- J. Trepanowski, TtNUS King of Prussia (1 copy)
- G. Glenn, TtNUS Norfolk (w/o enclosure)
- R. Brooks, TtNUS Atlanta (1 copy)
- R. Basinski, TtNUS Pittsburgh (1 copy)
- J. Parish, Tetra Tech EMI, Atlanta (1 copy)
- File 00645, CTO 069 (1 copy)

ABBREVIATED HEALTH AND SAFETY PLAN

INITIAL SITE VISIT

SIX MUNITIONS RESPONSE SITES

LOCATED AT THE

**NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE**

**Submitted to:
BRAC PMO Northeast
4911 South Broad Street
Philadelphia, Pennsylvania 19112-1303**

**Submitted by:
Tetra Tech NUS, Inc.
Foster Plaza 7
600 Clark Avenue, Suite 3
King of Prussia, Pennsylvania 19406-1433**

**CONTRACT NUMBER N62472-03-D-0057
CONTRACT TASK ORDER 0069**

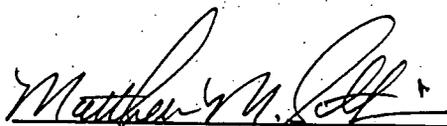
MAY 2007

PREPARED UNDER THE SUPERVISION OF:

APPROVED FOR SUBMITTAL BY:



**LINDA KLINK
PROJECT MANAGER
TETRA TECH NUS, INC.
PITTSBURGH, PENNSYLVANIA**



**MATTHEW M. SOLTIS, CIH, CSP
CLEAN HEALTH AND SAFETY MANAGER
TETRA TECH NUS, INC.
PITTSBURGH, PENNSYLVANIA**

TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
1.0 INTRODUCTION	1-1
1.1 BACKGROUND	1-1
1.1.1 Location and Setting	1-2
1.1.2 Former Munitions Bunker West Area Description	1-2
1.1.3 Machine Gun Boresight Range Description	1-3
1.1.4 NAS Skeet Range Description	1-4
1.1.5 Site 12 Explosive Ordnance Disposal (EOD) Area Description	1-4
1.1.6 Quarry Description	1-5
1.1.7 Topsham Annex Skeet Range Description	1-5
1.2 SCOPE OF WORK	1-6
2.0 HAZARD ASSESSMENT	2-1
2.1 MEC/MEC HAZARDS	2-1
2.1.1 MEC Avoidance Measures	2-1
2.2 NATURAL HAZARDS	2-13
2.2.1 Snakes	2-13
2.2.2 Snake Avoidance Measures	2-17
2.2.3 Snake Control Measures	2-17
2.2.4 Ticks/Spiders/Other Insects	2-18
2.3 PHYSICAL HAZARDS	2-23
2.3.1 Slip, Trip and Fall Hazards	2-23
2.4 FIRE	2-24
2.5 PPE AND EMERGENCY EQUIPMENT	2-24
3.0 EMERGENCY ACTION PLAN	3-1
3.1 EMERGENCY PLANNING	3-1
3.1.1 Recognition and Prevention	3-1
3.1.2 Emergency Medical Treatment	3-2
3.1.3 Emergency Equipment	3-2
FIGURES -	
Map 1A - Site Location Map for Machine Gun Boresight Range, Former Munitions Bunker West Area and Skeet Range	
Map 1B - Site Location Map for Site 12 EOD Area and Quarry	
Map 1C - Site Location Map for Topsham Skeet Range Site	
Map 2 - Former Munitions Bunker West Area Site Details	
Map 3 - Machine Gun Boresight Range Site Details	
Map 4 - NAS Skeet Range Site Details	
Map 5 - Site 12 EOD Area Site Details	
Map 6 - Quarry Site Details	
Map 7- Topsham Skeet Range Site Details	
ATTACHMENT I - FIRST AID INSTRUCTIONS	
INJURY/ILLNESS REPORTING PROCEDURE	
MEDICAL DATA SHEET	
HOSPITAL MAP AND EMERGENCY CONTACT NUMBERS	
SITE SPECIFIC TRAINING DOCUMENTATION	

1.0 INTRODUCTION

The objective of this Abbreviated Health and Safety Plan (AHASP) is to provide the minimum safety practices and procedures for Tetra Tech NUS, Inc. (TtNUS), U.S. Navy, and associated personnel conducting an initial site visit of the six munitions response sites (MRSs) at Naval Air Station Brunswick (NASB) located at Brunswick, Maine.

1.1 BACKGROUND

The installation was originally constructed and occupied in March 1943 with the primary mission of training British Naval Command (Royal Canadian Air Force) pilots. The station carried out a secondary mission of anti-submarine warfare during World War II. In October 1946, the installation was deactivated and the land and buildings were leased jointly to the University of Maine and Bowdoin College as annexes to ease the overcrowded conditions caused by the G.I. Bill student influx. The University of Maine and Bowdoin College terminated their leases in 1949, and the station was taken over by the Brunswick Flying Service. Following this period of caretaker status, the station was selected by the Navy as a prime center for development. During the development period, the U.S. Air Force reached an agreement with the Navy authorizing the construction of an Air Force Control and Warning Facility on the station as a part of the continental circumferential radar screen.

The station was recommissioned in March 1951 as a Naval Air Facility with the mission of supporting three land-plane patrol squadrons and one fleet aircraft service squadron and a planned future mission as a master jet base. The station retained the mission of anti-submarine warfare. In December 1950, the Navy requested funds from Congress to be used for this master jet project. Such a base required dual 8,000-foot runways and two outlying fields: one for gunnery and one for carrier practice landings. In addition, the Secretary of Defense submitted a request to Congress for approximately \$20 million in June 1951. This money was to be used for additional barracks, officers' quarters, and enlisted men's clubs; control tower, storage, and communication buildings; and new galleys and mess facilities. The new buildings and facilities would make the station a permanent installation in Brunswick.

In December 1951, the Naval Air Facility was officially changed to the designation of Naval Air Station. The Arctic Survival Training School to provide training in north country survival skills was established in September 1956 to train members deploying to the Arctic in techniques.

Topsham Annex was initially developed by the U.S. Air Force in 1956 as an airspace surveillance and communications facility. The Air Force's mission for Topsham Air Force Base, its name during this period, was to perform the mid-coast Maine segment of the Semi-Automatic Ground Environment (SAGE)

system. SAGE was a networked radar and communications system that provided airspace surveillance of the U.S. and Canada during the 1960s. Topsham Air Force Base included the typical support infrastructure of a small military base: barracks, engineering, supply, recreation, administration, communication, etc. In the early 1960s, 51 additional buildings comprising 177 housing units were constructed. In the 1970s, Topsham Annex was acquired by the Navy and placed under the operational control of NASB as a housing annex and space for support units; it was renamed Topsham Annex. Prior to 1956, the installation was occupied by a small dairy farm and woodland. Portions of the Topsham Annex have been excessed (e.g., taken out of service) by the Navy. Four parcels were transferred to the Maine School Administration District (MSAD) No. 75. The property included seven buildings, ball fields, roadways, and parking lots. The Topsham Annex Skeet Range overlaps Parcel 1 of the MSAD No. 75 property along its northern property boundary, and Parcels 2, 3, and 4 of the MSAD No. 75 property are located south of the range.

1.1.1 Location and Setting

The NASB is located in Cumberland County, approximately 25 miles northeast of Portland, Maine. The installation is located just south of United States (U.S.) Route 1, approximately 2 miles east of Brunswick's main business district and 5 miles inland from the Atlantic Ocean.

The NASB sits on approximately 3,200 acres. It is the last active duty Department of Defense (DoD) airfield remaining in the northeastern United States. The NASB is home to three active duty and two Reserve squadrons and 29 tenant commands. The installation is one of Maine's largest employers with over 4,800 military and civilian personnel. The NASB also provides support for other Navy units in Maine, including the Navy ships at Bath, the Navy Security Group at Winter Harbor, the U.S. Naval Radio Station at Cutler, the U.S. Naval Survival School at Rangeley, and the Department of Naval Sciences at the Maine Maritime Academy at Castine. Maps 1A, 1B, and 1C show the general layout of NASB, as well as the locations of the six MRSs that are the focus of this AHASP.

1.1.2 Former Munitions Bunker West Area Description

The Former Munitions Bunker West Area is approximately 29 acres in size and is located to the west of the runways. Between 1980 and 2000, U.S. Marines stationed at the installation used the site sporadically to conduct munitions-related security training. Blank small arms ammunition, practice grenades, and limited pyrotechnics (simulators and smoke devices) were used during the training. The area is no longer used to conduct security training. Map 2 shows the layout of the Former Munitions Bunker West Area.

The entire Former Munitions Bunker West Area is suspected munitions and explosives of concern (MEC) area. However, Marines at NASB reported that sweeps of the area were conducted after each training exercise and that all munitions debris was removed from the ground surface. Additionally, no MEC were observed during a site survey conducted by Malcolm Pirnie team members in January of 2003. Therefore, the potential for MEC at the site is considered extremely low.

In addition, the potential exists for munitions constituents (MC) in the surface soil. Contaminants potentially present at the site include phosphorous from the smoke-generating grenades, metals, and explosives. Based on known frequency of usage, types of items, and likely volume of items deployed, heavy deposition of MC contamination is not expected. Actual concentrations (if any) of MC remaining at the site are unknown.

1.1.3 Machine Gun Boresight Range Description

The Machine Gun Boresight Range was located in the eastern portion of the installation. The range encompasses approximately 0.3 acres from the firing line to the berm with an approximately 1029.4 acre Surface Danger Zone (SDZ). The former range was used during the 1950s to align and test fire aircraft mounted guns. Naval aircraft of the 1950s would have fired machine gun ammunition including .30-caliber and .50-caliber. At the time the range was active, the area east of the range was undeveloped and wooded. The range is visible on a 1957 aerial photograph of the installation. Today, however, there are no visible remnants of the Machine Gun Boresight Range or the range berm. A map believed to be from the late 1950s to early 1960s found at the National Archives had the range labeled as a pistol range. The exact history or use of the range as a pistol range is unknown. In the early 1960s, the layout of the installation was later changed and eventually taxiways connecting the runways to the range area were removed and the range was abandoned.

Today, Building 55 sits on the approximate area of the former range. Approximately 0.5 acres of the former range SDZ area are paved serving as a parking lot and storage area associated with Building 55. Map 3 shows the layout of the Machine Gun Boresight Range.

The Former Machine Gun Boresight Range is not suspected to contain MEC. It is assumed that all small arms debris onsite were removed when the berm was demolished. The ultimate disposition of the berm is unknown. However, there is the potential for MC. The primary MC of concern associated with machine gun and small arms ranges is lead. By design, the majority of the bullets fired at the range would have landed and accumulated in the berm. It is unknown if NASB has any procedures in place to remove and dispose of lead as it accumulated on the range when it was active or when the range was closed. Sampling data was not available to estimate the potential for lead in the soil.

1.1.4 NAS Skeet Range Description

The Skeet Range was located in the southeast portion of the installation in an open field approximately 75 meters north of and 100 meters east of Building 55. This former range was located adjacent to Range Road just northeast of the taxiway intersection.

The former Skeet Range was used for the training of military personnel during the 1950s. Navy Programming Guidance from the 1950s defined the SDZ of a skeet range as a 900-foot radius from the shooting field giving it an area of 58 acres. The configuration of the range has changed over the years. On range maps from 1952, the range is shown with the direction of fire to the north; however, in a 1957 aerial photograph, the range is shown with the direction of fire to the east. These changes in range layout and direction of fire may have been implemented to maintain a safe separation distance from the shooting field outlined in the Programming Guide, because the area east of the range was undeveloped. Map 4 shows the layout for the Skeet Range.

The lead shot from expended shot gun ammunition is not considered MEC. There is the potential for MC. The primary constituent of concern associated with the Skeet Range is lead and polynuclear aromatic hydrocarbons (PAHs) from the clay targets. It is unknown if the Navy performed any lead removal from the range when it was active or after it was abandoned. During the time the range was operational, lead was not considered an environmental or health hazard. Other associated MC, which are less likely to be of concern, may include antimony (increases hardness), arsenic (present in lead), nickel (coating on some shot), and lead azide (associated with gunpowder).

1.1.5 Site 12 Explosive Ordnance Disposal (EOD) Area Description

Site 12 EOD Area is a 112.7 acre area located in the southeast portion of the installation. The site is located in a remote, open upland area on Buttermilk Mountain. Map 5 shows the layout of the Site 12 EOD Area. The site currently has a 5 to 6 foot tall earthen berm that is 60 feet long by 100 feet wide and occupies approximately one-half of the area suspected of being a former sand/gravel pit.

The Site 12 EOD Area was used from 1981 through June 1, 2004, for disposal of small quantities of ordnance, pyrotechnics, privately manufactured explosive devices, and war souvenirs. Historical and visual evidence suggest that MEC are present at the site.

There is a potential for MC associated with the MEC to be present at the site. Based on quantities involved, low level contamination of unburned explosive residues and elevated concentrations of lead, cadmium, chromium, mercury, and perchlorate may be expected in the soils.

1.1.6 Quarry Description

The Quarry is located southwest of the runways at the NASB boundary, adjacent to Maine State Route 123. The approximately 4-acre area has been used as a rock quarry and contains an approximately 20- to 30- foot rock face. In the early 1990s, land spreading was conducted at the Quarry. The Quarry was added to the MRP due to an undocumented report that it may have been used for past EOD activities. Map 6 shows the layout for the Quarry.

There is no documentation to support a claim that the Quarry was used for EOD activities. There was also no visual evidence of MEC scrap/fragments found during a visual survey of the Quarry. MC may be associated with the Quarry if MEC is encountered.

1.1.7 Topsham Annex Skeet Range Description

The Topsham Annex Skeet Range is located in the northern portion of Topsham Annex along the Navy property line and east of the Mt. Ararat Middle School athletic field. The former 29-acre area was used during the U.S. Air Force's occupation of Topsham Annex prior to the 1970s. Navy Programming Guidance from the 1950s defined the SDZ of a skeet range as a 900-foot radius from the shooting field. Based on the visual survey and historical layout, it appears that the direction of fire was toward the north. The majority (27 acres) of the SDZ extends off-base onto private property transferred to the MSAD No. 75. No structures remain at the site, but clay target fragments were identified during the visual survey. The site is currently undeveloped, and future use will likely not change on the Navy owned property. The future use of the off-base portion of the range is unknown. Map 7 shows the layout for the Topsham Annex Skeet Range.

The lead shot from expended shot gun ammunition is not considered MEC. However, there is the potential for MC. The primary constituents of concern associated with the Topsham Annex Skeet Range are lead from shot and PAHs from the clay targets. Other MC associated with shotgun ammunition, which are less likely to be of concern, may include: antimony (increases hardness), arsenic (present in lead), nickel (coating on some shot), and lead azide (associated with gunpowder). Data from the July 2004 Investigative Activities indicated that lead is present in the surface soils. The soil samples were taken at the firing point and not within the likely shotfall area; therefore, the samples may not be representative of the entire Topsham Annex Skeet Range.

- Personnel will be assigned in such a manner as to permit the direct visual observation of one another as well as provide any emergency assistance should it be required.
- Personnel will notify the UXO Escort(s) should they encounter suspected MEC articles or unidentified items.
- There shall be NO SMOKING, eating, drinking, chewing gum or tobacco, or other hand-to-mouth activities permitted while on the site.
- No matches, lighters, or other fire, flame, or spark-producing devices shall be taken onto the site.
- Personnel shall not use cell phones or radios in the vicinity of any site areas that may contain suspected MEC items.
- Personnel shall suspend all outdoor activities in the event of inclement weather (thunderstorms, lightning, heavy rain).

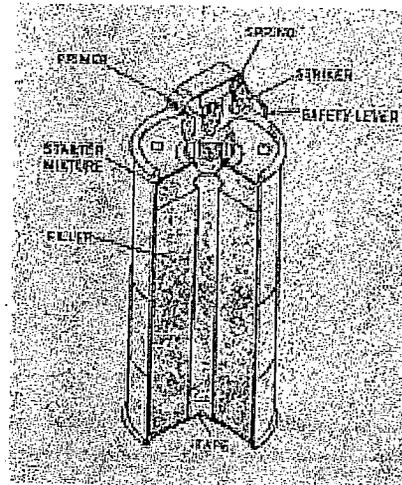
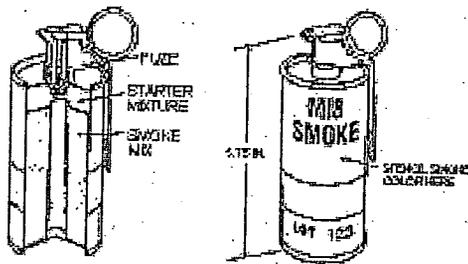
The following MEC items were identified as possible contacts for the Site Inspection Team during the site visit. These items are similar to the ones mentioned in documents containing information about the sites to be visited. Components from these items may also be present at the site.

FORMER MUNITIONS BUNKER WEST AREA

The following list represents the types of munitions suspected to have been used at the Former Munitions Bunker West Area.

Nomenclature: Grenade Hand Smoke M18

GRENAD, HAND: SMOKE (RED), M18



Ordnance Family: Pyrotechnic

DODIC: G945

Filler: Smoke Mixture

Filler weight: ± 326.03 g

Item weight: 536 g (19 oz)

Diameter: 64 mm

Length: 146 mm (5.75in)

Maximum Range: N/A

Fuze: Cocked- Striker, Delay-igniting

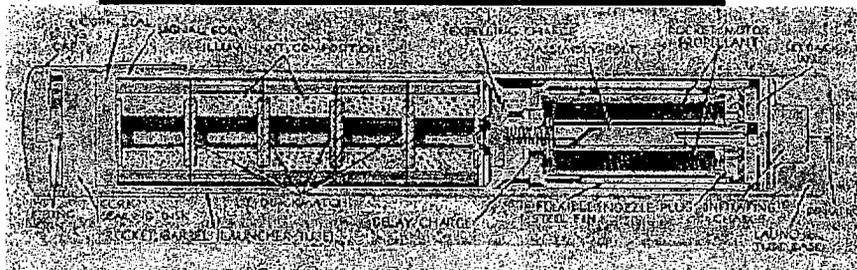
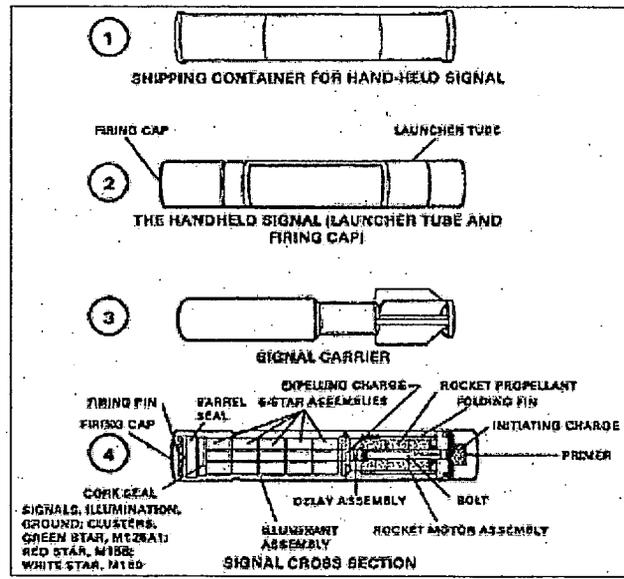
Usage: The M18 is a hand-thrown, smoke grenade which can emit red, yellow, green, or violet smoke for 50 to 90 seconds. These grenades use a pyrotechnic, delay-igniting fuze which provides an approximate 2-second delay.

Description: The M18 grenade may be olive drab with a light green band around the lower body and nomenclature and smoke color stenciled in light green, or light green with stenciled the color of the smoke. The top of the grenade is painted the color of the smoke.

Reference: ORDATA II Version 1.0

Nomenclature: Signal Illumination Ground M125A1

M125A1



Ordnance Family: Pyrotechnic/Flare

DODIC: L314

Propellant Charge: Black powder

Filler: Color Dependent

Filler weight: + not provided

Item weight: 503.5 g (1.11 lbs)

Diameter: 42 mm (1.564in)

Length: 258 mm (10.5in)

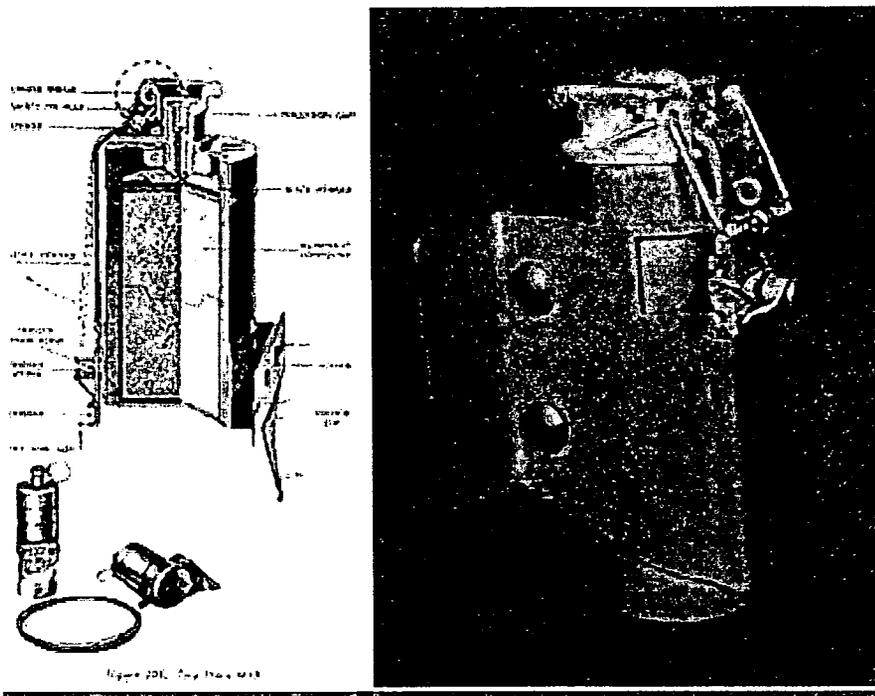
Maximum Range: 250 m (273yds)

Usage: Ground pyrotechnic signals are capable of signaling for communication or illuminating a small area.

Description: These signals are issued in their own launching mechanism and are designed to reach a minimum height of 200 meters. This group of signals includes five-star clusters, single-star parachutes, and smoke parachutes. Handheld signals have replaced all rifle-projected pyrotechnic signals and chemical grenades.

Reference: ORDATA Online, FM3-23.30

Nomenclature: Flare surface Trip M49A1



Ordnance Family: Smoke – Pyrotechnic

DODIC: L495

Filler: Pyrotechnic composition

Filler weight: ± not provided

Item weight: 1.44 lbs

Dia: not provided

Length: not provided

Fuze: Mechanical (pull, pressure release)

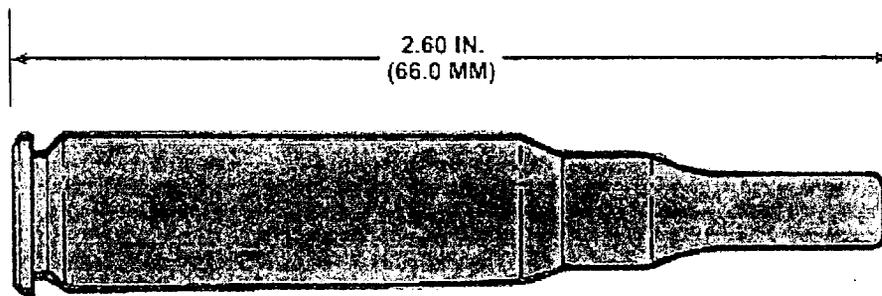
Usage: The purpose of the flare is to reveal the approach of enemy troops. Fixed to one end is a pull-type, spring-actuated firing mechanism to which the trip wire is attached. Enclosed in the tube are the primer, black-powder charge, impregnated muslin disc, and pyrotechnic composition. Two 40-foot lengths of wire are available, making it possible to have two trip wires running in opposite directions. A web belt secures the flare to a tree.

Item Description: The flare has a grenade-shaped cylindrical body, with a nose fuze that protrudes 0.875-inch from the head end. A mounting bracket and a spring-loaded trigger mechanism are mounted on a metal base cap. The upper arm of the trigger is attached to a trip wire, and the lower arm of the trigger restrains the safety lever after the removal of the safety pin.

Reference: ORDATA Online

Nomenclature: Simulator Noise Cartridge Assault Rock trainer, MK 103 Mod 0
(No Picture)

Nomenclature: Cartridge 7.62 Blank M82 Linked



Used by M60, M219 and M240 machine guns, and the M14 rifle. For use during training when simulated live fire is desired. A blank firing attachment (BFA) should be used to fire this ammunition.

This cartridge consists of a primer and propellant contained in a brass case shaped to conform to the configuration of the service round. The propellant is held in by a wad. The mouth of the cartridge is sealed and crimped.

Nomenclature: Cartridge 5.56 Blank M20 Linked and non-linked
5.56MM M200 BLANK

The 5.56mm M200 provides simulated firing for training exercises where the M16A1, M16A2, M4 rifles, M249 machine gun and M231 weapon are used.

Characteristics

Height (max)	1.500 in
Weight	109.7 grains

Ballistics

Muzzle Velocity	N/A
Chamber Pressure (typical)	N/A
Accuracy	N/A
Action Time	N/A



The 5.56-mm blank M200 (M2 link, A075) blank cartridge has no projectile. The case mouth is closed with a seven-petal rosette crimp and has a violet tip. The original M200 blank cartridge had a white tip. Field use of this cartridge resulted in residue buildup, which caused malfunctions. Only the violet-tipped M200 cartridge should be used. The blank round is used during training when simulated live fire is desired. An M15A2 blank-firing attachment must be used to fire this ammunition.

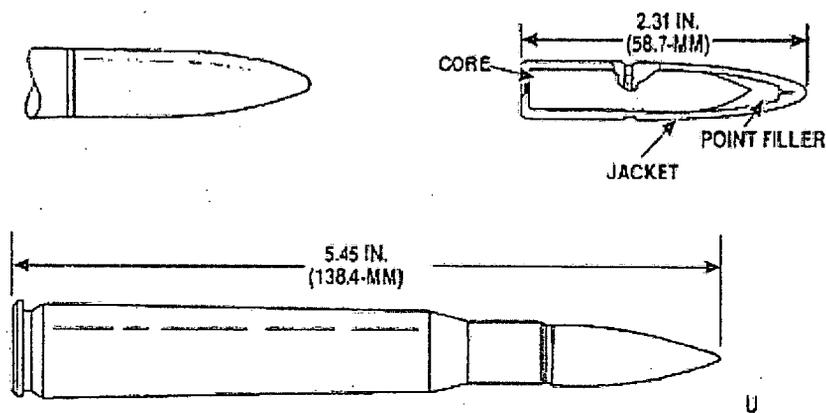
MACHINE GUN BORE SIGHT RANGE

The following list represents the types of munitions suspected to have been used at the Machine Gun Bore Site Range. Munitions listed include machine gun ammunition used in aircraft mounted guns and pistol ammunition from the 1950s.

Nomenclature: .50 Caliber Small Arms Ammunition

.50 Caliber Small Arms

CARTRIDGE, CALIBER .50, BALL, M2



Ordnance Family: Small Arms

DODIC: A552

Filler: Single or Double Base Powder

Filler weight: ± Various

Item weight: 1813 gr

Diameter: .50 Caliber

Length: 5.45 in. (138.4 mm)

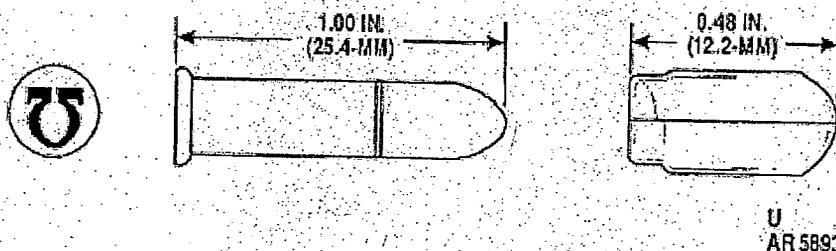
Usage: Machine Guns, Caliber .50, M2 and M85. The cartridge is intended for use against personnel or unarmored targets.

Description: BALL Cartridge. The cartridge is identified by a plain bullet tip.

Reference: TM 43-0001-27

Nomenclature: .22 Caliber Small Arms Ammunition

.22 Caliber Small Arms



Ordnance Family: Small Arms

DODIC: A086

Filler: Single or Double Base Powder

Filler weight: 2.5 gr

Item weight: 416 gr

Projectile Weight: 40.5 gr

Diameter: .22 Caliber

Length: 1 in. (25.4 mm)

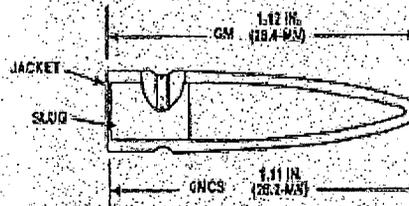
Usage: Subcaliber Rifle M2A1; Caliber .22 Rifle; Remington Models 40X and M513T; Steven's Model 416-2; Winchester Models 52 and 75; Machine Gun Trainers M3 and M4; pistols for gallery practice and training purposes. The cartridge is intended for use against small game for survival purposes.

Description: BALL Cartridge. The cartridge is identified by a plain bullet tip.

Reference: TM 43-0001-27

Nomenclature: .30 Caliber Small Arms Ammunition

.30 Caliber Small Arms



Ordnance Family: Small Arms

DODIC: A212

Filler: Single or Double Base Powder

Filler weight: ± Various

Item weight: 416 gr

Diameter: .30 Caliber

Length: 3.34 in. (84.8mm)

Usage: Machine Guns, Caliber .30, M37, M1919A4 and M1919A6; and Rifle, Caliber .30, M1. The cartridge is intended for use against personnel or unarmored targets.

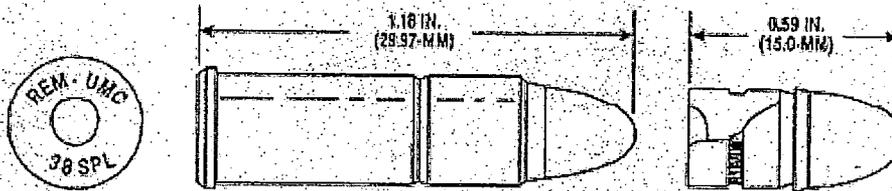
Description: BALL Cartridge. The cartridge is identified by a plain bullet tip.

Reference: TM 43-0001-27



Nomenclature: .38 Caliber Small Arms Ammunition

.38 Caliber Small Arms



Ordnance Family: Small Arms

DODIC: A408

Filler: Single or Double Base Powder

Filler weight: 4.8 gr

Item weight: 196 gr

Projectile Weight: 60.5 gr

Diameter: .38 Caliber

Length: 1.18 in. (29.97mm)

Usage: Caliber .38 weapons. The cartridge is for CONUS-guard or security use in caliber .38 weapons.

Description: BALL Cartridge. The cartridge is identified by a plain bullet tip.

Reference: TM 43-0001-27

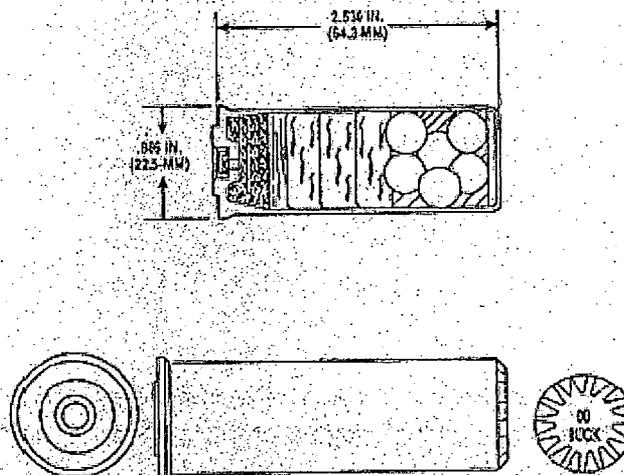
SKEET RANGE/TOPSHAM ANNEX SKEET RANGE

The following list represents the types of munitions suspected to have been used at the range.

Nomenclature: 12 Gage Shotgun, NO 00

12 Gage Shotgun, NO 00

CARTRIDGE, 12 GAGE, SHOTGUN, NO. 00, M162



Ordnance Family: Small Arms

DODIC: A011

Filler: Smokeless Powder

Filler weight: ± Various

Item weight: 0.736 gr

Diameter: .886 in

Length: 2.53 in. (64.3 mm)

Usage: Military issue shotgun, 2-3/4 inch chamber. The cartridge is intended for guard and combat use.

Description: The cartridge case is all plastic, and is loaded with smokeless powder and No. 00 commercial shot.

Reference: TM 43-0001-27

Based on historical documents and information obtained during the data collection process, there is no evidence of MEC at the Skeet Range as only small arms were used.. Firing records were not available, and there is no defensible method of determining the amount of ammunition potentially fired at the range. The 1958 Programming Guidance indicated that the range was used for pilot training. It is unknown if the range was also used for recreational purposes.

SITE 12 EXPLOSIVE ORDNANCE DISPOSAL AREA/QUARRY

Known operations occurred at this site and a large variety of MEC items possibly remain.

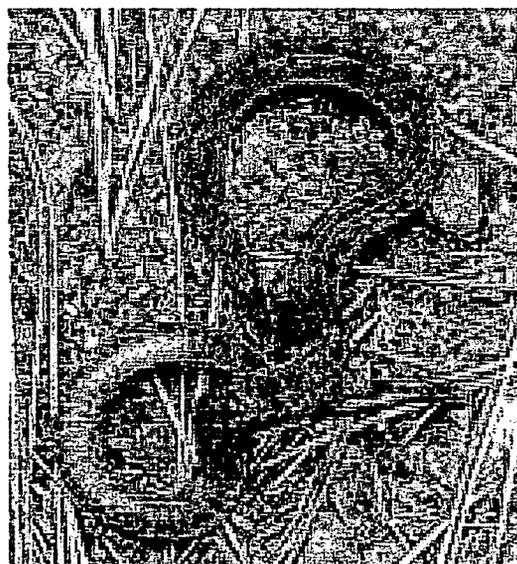
The six sites have been used for ammunition operations from the early 1900s to the present. This allows for the Site Inspection Team to come into contact with many other unknown items.

2.2 NATURAL HAZARDS

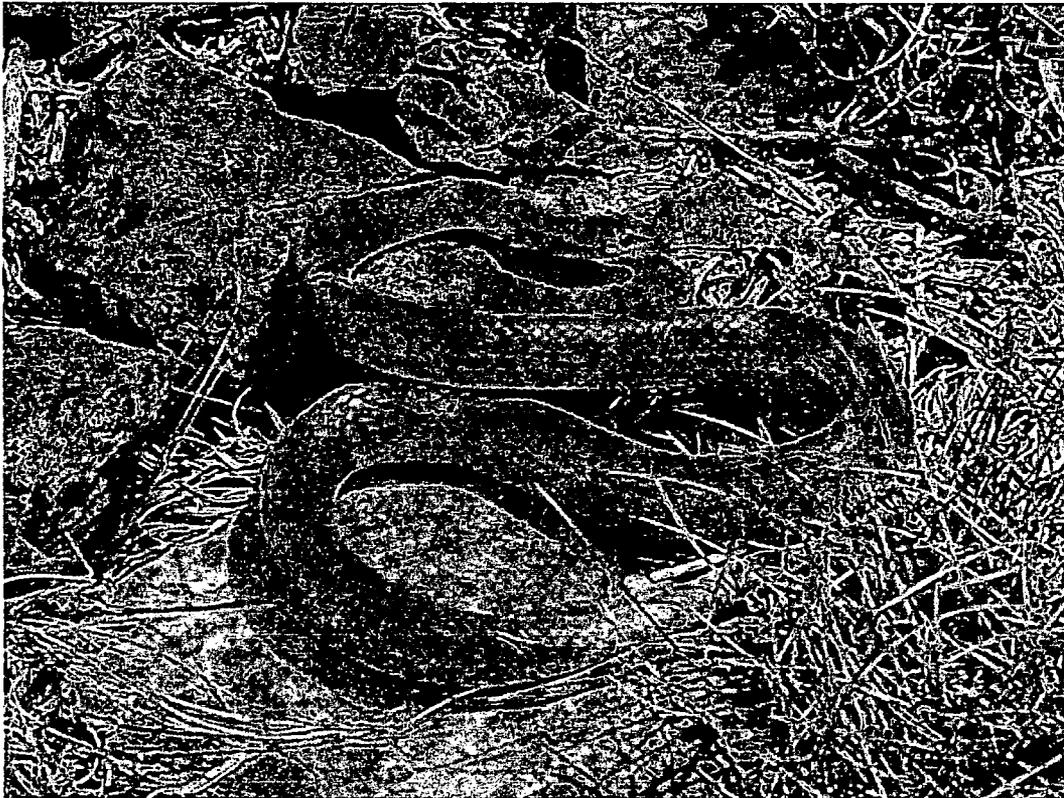
2.2.1 Snakes

There are no poisonous snakes indigenous to this part of Maine. Only rare reports of timber rattler come from the extreme southwestern part of the state. However, even bites from non-poisonous snakes can be painful and can result in complications such as infection, and therefore should be avoided. One measure to prevent snake bites is for the field team to have a basic understanding of these reptiles as summarized below. The following snakes may be encountered at NAS Brunswick.

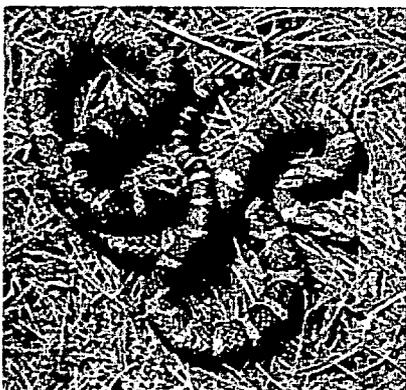
Red-bellied snake (*Storeria occipitomaculata*) is 8 to 10 inches in length, brown on top, red underneath. Occasionally found in upland areas.



Smooth green snake (*Opheodrys vernalis*) is 14 to 20 inches in length. Found in upland areas.

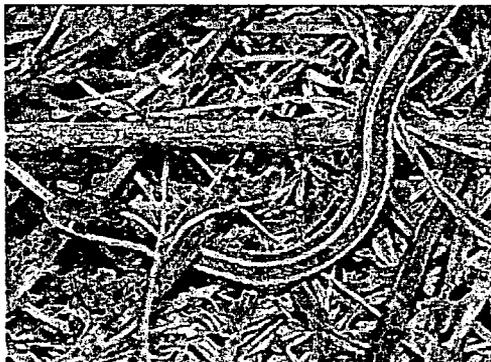


Eastern milk snake (*Lampropeltis triangulum triangulum*) is 24 to 36 inches, slender and blotched in brown or reddish brown and black. Found in a wide variety of habitats.

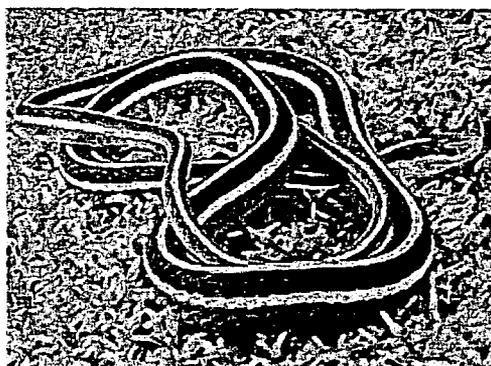


Protection: The Eastern Milk Snake is listed as a "specially protected species" in schedules of the *Fish and Wildlife Conservation Act, 1997*. This Act prohibits hunting or trapping of this species, and it cannot be kept in captivity unless special permission is obtained from the Ministry of Natural Resources for the purposes of research or conservation management.

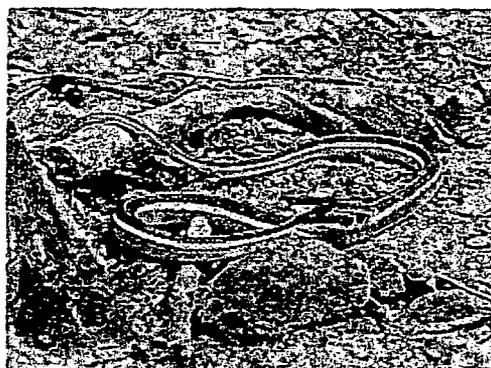
Northern ringneck snake (*Diadophis punctatus edwardsi*) is a 10 to 15 inch dark slender snake with a golden collar. Found in woodlands and cutover areas with abundant hiding places.



Northern Ribbon Snake (*T. s. septentrionalis*).

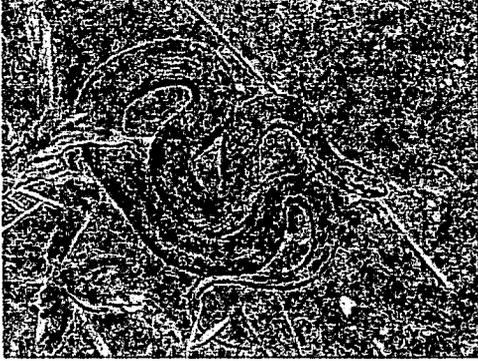


Northern Ribbon Snake (*T. s. septentrionalis*).

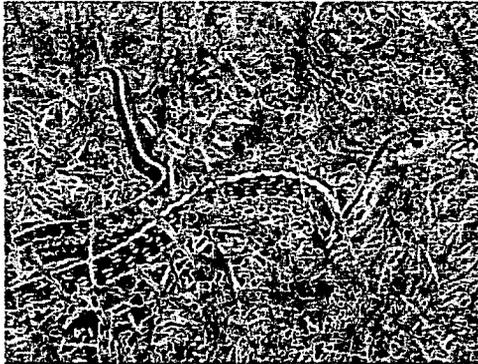


Northern Ribbon Snake (*T. s. septentrionalis*).

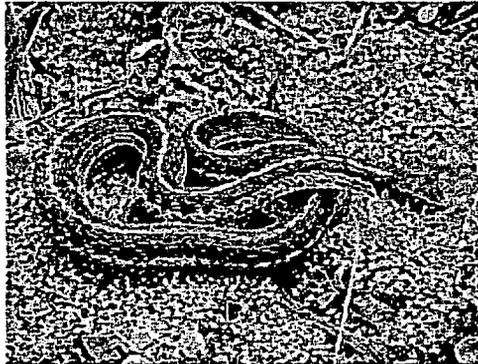
Eastern garter snake (*Thamnophis sirtalis sirtalis*). 18 to 26 inches, striped like an old fashioned men's sock garter. Rest of pattern variable. Found in a wide variety of habitats.



Eastern Garter Snake (*T. s. sirtalis*),



Eastern Garter Snake (*T. s. sirtalis*).



Eastern Garter Snake (*T. s. sirtalis*).



2.2.2 Snake Avoidance Measures

Avoidance is the first line of defense. If you see them, do not harass them, attempt to capture, move or otherwise disturb them. Leave them alone!

- Do not pick up or disturb ground cover such as brush, rocks, logs, deadfall, etc., as this may be a potential nesting area for snakes.
- Stick to well-used trails and wear over-the-ankle boots and loose-fitting long pants. Avoid tall grass, weeds and heavy underbrush which snakes commonly frequent. If these areas cannot be avoided, wear snake chaps.
- Be observant in open, sunny areas, as snakes are cold-blooded and need to "sun themselves" to regulate their body temperature.
- Do not put your hands where you cannot see.
- Step ON logs and rocks, never over them, and be especially careful when climbing rocks. Snakes will also crawl along buildings and doorways as the building or logs offer protection on one side. Examine the area carefully before entering buildings (stepping over door way threshold plates) not regularly used and maintained.

2.2.3 Snakebite Control Measures

Initial efforts will be directed to avoid, where possible, nesting and territorial areas. However, should field personnel come in contact with these animals and receive a bite, the following actions are necessary.

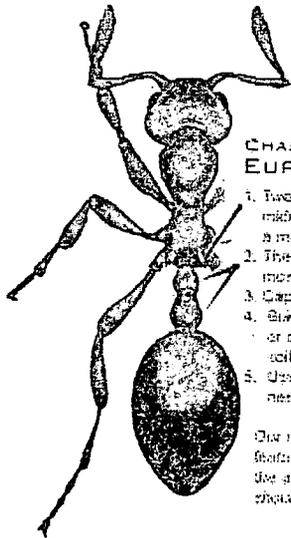
- Obtain a detailed description of the snake. This and the bite mark will enable medical personnel administering medical aid to provide prompt and correct antidotes.
- Immobilize the bite victim to the extent possible. Physical exertion can mobilize the toxins (if poisonous varieties) from the bite point systemically through the body.
- Apply a pressure wrap (for extremities), just above and over the bite area using whatever is available (an article of clothing). With a couple wraps of the pressure wrap in place over the bite area to limit movement and restrict toxins from leaving the site of the bite.

better off you are. Bug netting is also a good defense if you plan on spending long periods of time in wooded, wet areas.

Bugs on average will not bother you when you are moving. They will become a nuisance when you stop.

Mosquitoes and minges (no-see-ums) are not as relentless as the black fly but can leave just as nasty a bite. These insects also go after exposed skin. Insect repellents work well.

European fire ants (also known as European red ants, *Myrmica rubra*) are very small red ants. The workers are about 3/16 inch long (as long as this line: —) and the queens are a little larger. These ants are only distantly related to the “true” fire ants (*Solenopsis* species) found in the southern U.S. and Latin America.

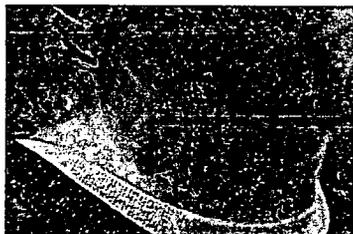


**CHARACTERISTICS OF THE
EUROPEAN FIRE ANT:**

1. Two backward-pointing spines on the middle body section, visible only with a magnifying glass.
2. The abbreviated “waist” has two segments; most native species have only one.
3. Capable of inflicting a painful, burning sting.
4. Build nests in soil under rocks, wood, or other debris. Nests are NOT large soil mounds.
5. Usually very abundant with 10-12 nests in a 10 ft x 10 ft area.

Our native ants share some of these features. If you have small, red ants with the above characteristics, their identity should be verified.

European fire ants are a nuisance pest for people and a potential threat to the environment. They aggressively defend their territory and readily sting humans, pets and livestock that have the misfortune to move slowly or rest within the ants’ large foraging areas.



European fire ant stings usually result in inflamed red areas from one to four inches in diameter.

The severity of reaction to the European fire ant sting varies from one individual to another, and with the location of the sting. Usually a sting results in an inflamed red area from one to four inches in diameter, sometimes with a raised white area in the center. The sting causes an initial burning sensation and the affected area can remain sore for just a few hours, or a day or more.

Bees, Wasps and Hornets

Bees, hornets, yellow jackets, wasps and even mosquitoes can sting or bite. Though irritating and uncomfortable, in most cases insect bites or stings are harmless. However insect bites can cause allergic reactions in some people.

- If stung, remove the stinger by scraping a card across the wound (do not squeeze).
- Wash the area with warm, soapy water.
- Apply a cold compress to control swelling.
- Take aspirin for pain and an antihistamine, as needed, for minor itching and swelling.
- If you experience a body-wide reaction, severe local swelling, especially around the face or neck, or have difficulty breathing, call 911 immediately.
- The specialists at the Poison Center are available to help if a bite or sting occurs

It is important that if you have allergies (to bee stings, fire ants, etc.) it is critical that this information is noted on your medical data sheet provided in Attachment 1. In situations where you employ Benadryl or Doctor/Health Care Provider recommended antidotes insure you have these pharmaceuticals with you.

Tick and Mosquito Transmitted Illnesses and Diseases

Tick bites are common and usually harmless, but occasionally may result in Rocky Mountain spotted fever or Lyme disease.

- It usually takes about 24 hours of tick attachment to a "host" for disease to be transmitted.
- The symptoms can begin as early as a few days after a bite or take as long as two weeks before appearing.
- Symptoms include headache, chills, fever and rash - much like the flu.
- If bitten, carefully remove the tick using blunt tweezers. Grasp the tick close to the skin and pull straight out with a steady pressure. Check to see that the entire tick has been removed.
- Clean with warm, soapy water, then apply an antiseptic.
- Be observant of and if any of the above symptoms develop, contact your doctor immediately.

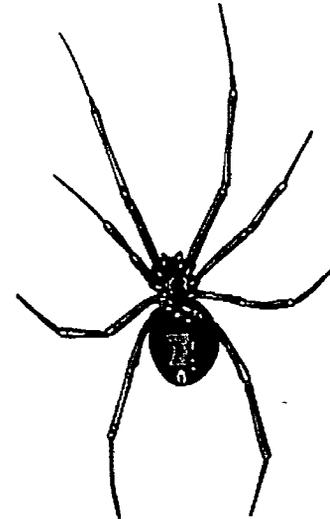
Ticks and mosquitoes have been identified in the transmission of diseases including Lyme's disease and malaria. Warm months (Spring through early fall) are the most predominant time for this hazard. Information concerning Lyme's Disease including recognition, evaluation, tick removal, and control is provided in Section 4.0 of the TtNUS NUS Health and Safety Guidance Manual.

Malaria may occur when a mosquito or other infected insect sucks blood from an infected person, and the insect becomes the carrier to infect other hosts. The parasite reproduces within the mosquito, and is then passed on to another person through the biting action. Acute symptoms include chills accompanied by fever and general flu-like symptoms. This generally terminates in a sweating stage. These symptoms may recur every 48 to 72 hours.

Black Widow

Black widow spiders generally live in trash, closets, attics, woodpiles, garages and other dark places. Only the female spider is dangerous to humans.

The female black widow spider has a round, glossy black abdomen one-half inch in diameter with an orange-red hourglass marking her belly.



- Her painful bite results in redness and warmth at the site as well as muscle cramps, twitching, rigid abdomen, difficulty breathing, weakness, headache, nausea and vomiting.
- The male black widow spider is solid in color, and his bite is not venomous.
- If bitten, wash the area with warm, soapy water and call the Poison Center immediately

2.3 PHYSICAL HAZARDS

2.3.1 Slip, Trip and Fall Hazards

Various potential slip, trip and fall hazards may be encountered during the performance of planned site activities. These hazards are associated with working outdoors where uneven or wet terrain may be encountered. To minimize the potential for worker injury from these hazards, the following requirements must be observed:

- The UXO escorts will preview and inspect work areas to identify and eliminate slip, trip, or fall hazards. They will select routes for areas of the site inspection where minimal terrain challenges exist. In outdoor locations, pay particular attention to sink holes or other depressions that may be encountered.

- At areas where steep, high, or potentially unstable ledges, edges, rims or other features may exist (such as at the Quarry) no field team member will be permitted to approach closer than 4 feet to the edge.
- Use footwear with adequate traction.

2.4 FIRE

Drought conditions are being experienced in various areas of the country. To combat this hazard, persons with the Site Visit Team will refrain from parking vehicles in high grassy areas (i.e., Where the grasses are high enough to be in direct contact with the vehicle undercarriage). Exhaust pipes and other elevated temperature components may cause the grasses to catch fire.

2.5 PPE AND EMERGENCY EQUIPMENT

PPE for the site visit will be as follows:

- Over the ankle boots with an aggressive tread for traction is preferred.
- Loose fitting long pants. A rugged material such as denim will offer protection when moving through the brush as well as offer limited protection in some snake bite instances.
- Tape up and use insect repellants. If it becomes apparent that areas to be visited will involve walking through high grass, deadfall areas or other such areas where encountering ticks is likely, personnel should use redundant repellants (as previously presented in section 2.2.4) on both the clothing and the skin. Also, all personnel must tape up the joint between the bottom of their pants lets and the top of the their work boots with duct tape to help prevent tick bites. Additional protective measures such as Tyvek are not recommended at this time. This determination is based on the initial hazard assessment and the following assumptions:
 - The Site Inspection Team will largely be restricted to cleared and open areas avoiding heavy brush where possible.

No additional, emergency equipment is considered necessary based on the limited and non-intrusive activities to be conducted.

Provisions for First-aid trained personnel are also not considered necessary based on the close proximity and availability of medical services.

3.0 EMERGENCY ACTION PLAN

In order to address potential emergency situations, the field crew will utilize public support services (911), or NAS Brunswick Security, if required. In order to accomplish this, Local Emergency Services have been identified and are listed in Attachment I of this AHASP. This includes phone numbers and a map to the closest emergency medical services provider.

3.1 EMERGENCY PLANNING

Control measures listed in Section 2.0 will be the primary methods employed for controlling potential emergencies. Any hazards listed in Section 2.0 that come to full realization will be considered emergencies.

3.1.1 Recognition and Prevention

Should an emergency occur the following will be conducted:

- Care for any injured persons.
- Call NAS Brunswick Security Dispatch – They will notify appropriate responding agency (Fire, ambulance, etc.).
- For UXO/MEC - The Team will provide security of the area until responding agencies arrive.

Natural Hazards

The potential for snake, animal, insect/spider bites exists given the environmental setting. Due to the potential consequences, allergic reactions may also contribute to an emergency situation.

- Any reptile bites will be considered an emergency and the affected individual will be transported for medical attention immediately.
- Allergies will be reported on the Medical Data Sheets provided at the end of this section. Generic and Doctor/Health Care Provider recommended antidotes will be carried by the affected person. A person exhibiting signs of anaphylactic shock will be transported for immediate medical attention. This is also considered a medical emergency.

- Insect repellants are to be used and if necessary taping up prior to entering heavy brush areas. Clothing and body examinations will be conducted to look for and remove any insects (ticks) that may be discovered.

3.1.2 Emergency Medical Treatment

TtNUS personnel are only permitted to provide treatment to the level of their First-Aid Training. It should also be noted that all first aid shall be administered voluntarily. TtNUS personnel will employ the following in an emergency situation;

- Engage emergency notification.
- If it will not endanger the injured individual (i.e., spinal cord injury, etc.) transport to the identified medical facility.
- Begin life saving techniques as appropriate (CPR, cooling or warming regimens, etc.).

Any and all near miss and incidents will be immediately reported to the CLEAN Health and Safety Manager (HSM). General first aid direction is provided as Attachment 1 General First Aid Directions.

3.1.3 Emergency Equipment

Given the short duration of this site visit and limited non-intrusive activities there will not be any emergency equipment required and maintained on-site.

Preliminary Assessment
Naval Air Station Brunswick, Maine



**MALCOLM
PIRNIE**

Map 2.1-1
Area Location Map

Legend

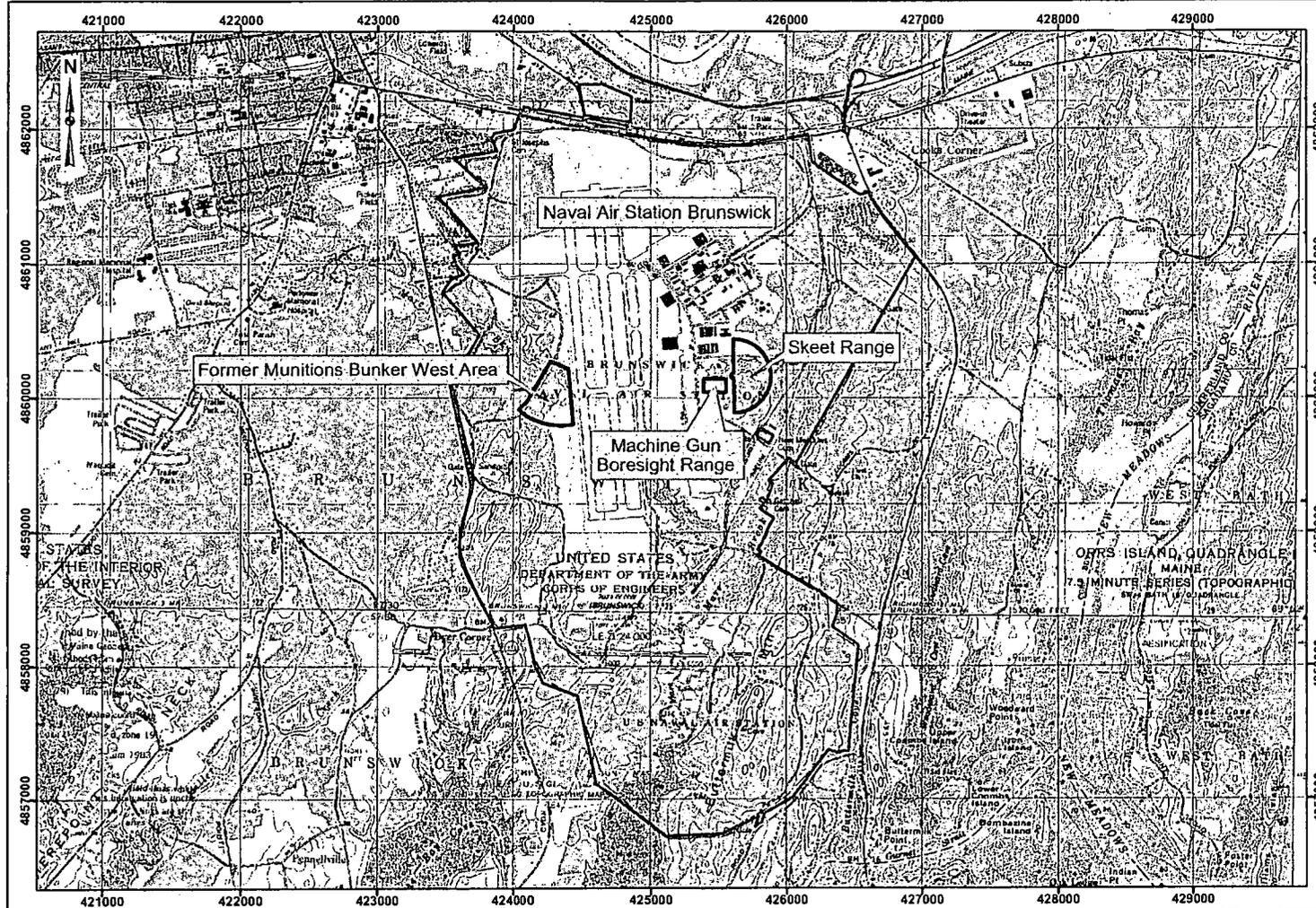
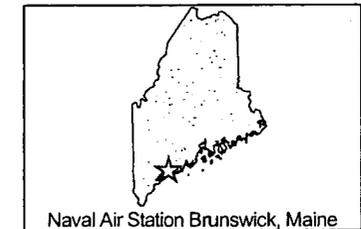
-  Installation Boundary
-  Ranges



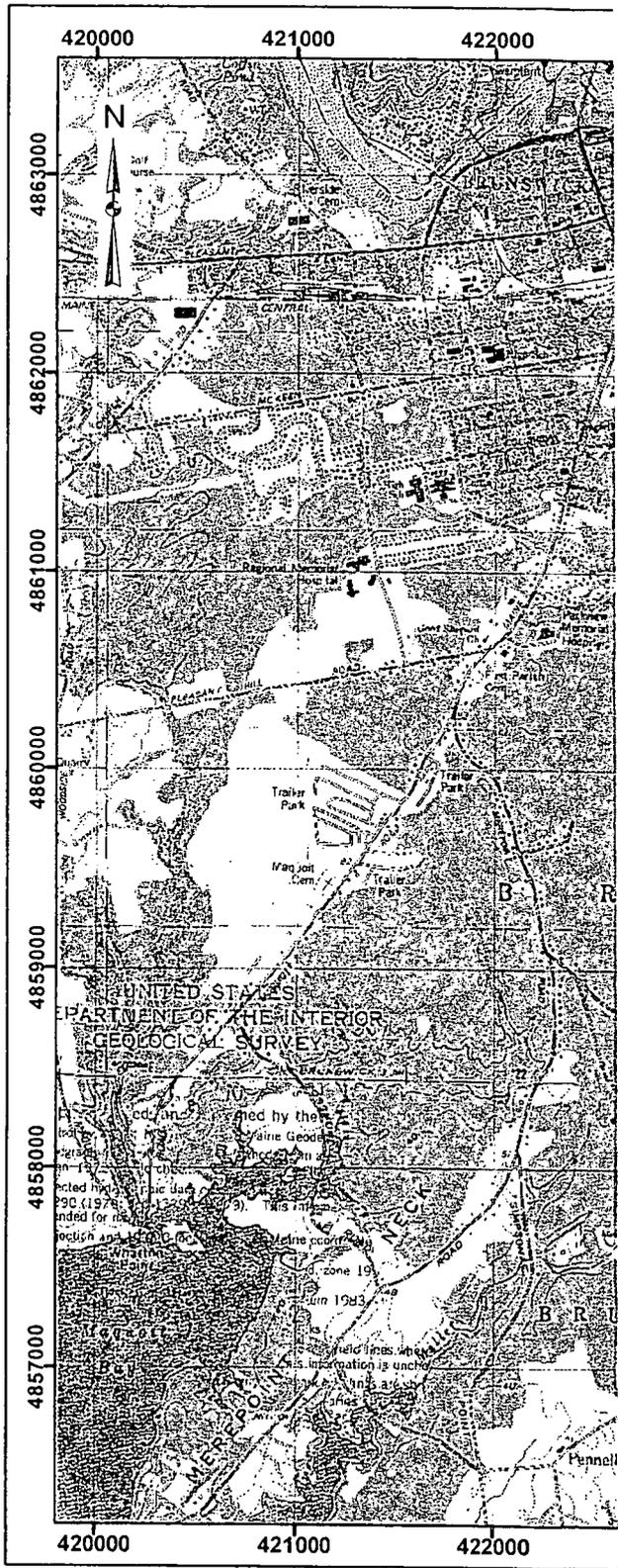
Data Source: USGS 7.5 Minute Series
Topographic Survey Map
Brunswick, ME, 1980
Orrs Island, ME, 1978

Coordinate System: UTM Zone 19N
Datum: NAD 83
Units: Meters

Contract: N62472-02-D-1300
Edition: Final Preliminary Assessment
Date: February 2006



**MAP 1A - SITE LOCATION MAP FOR MACHINE GUN BORESIGHT RANGE,
FORMER MUNITIONS BUNKER WEST AREA AND SKEET RANGE**



Preliminary Assessment Addendum
 Naval Air Station Brunswick, Maine

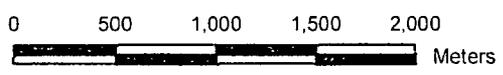


**MALCOLM
 PIRNIE**

Map 2.1-1
 Area Location Map

Legend

-  Installation Boundary
-  Ranges

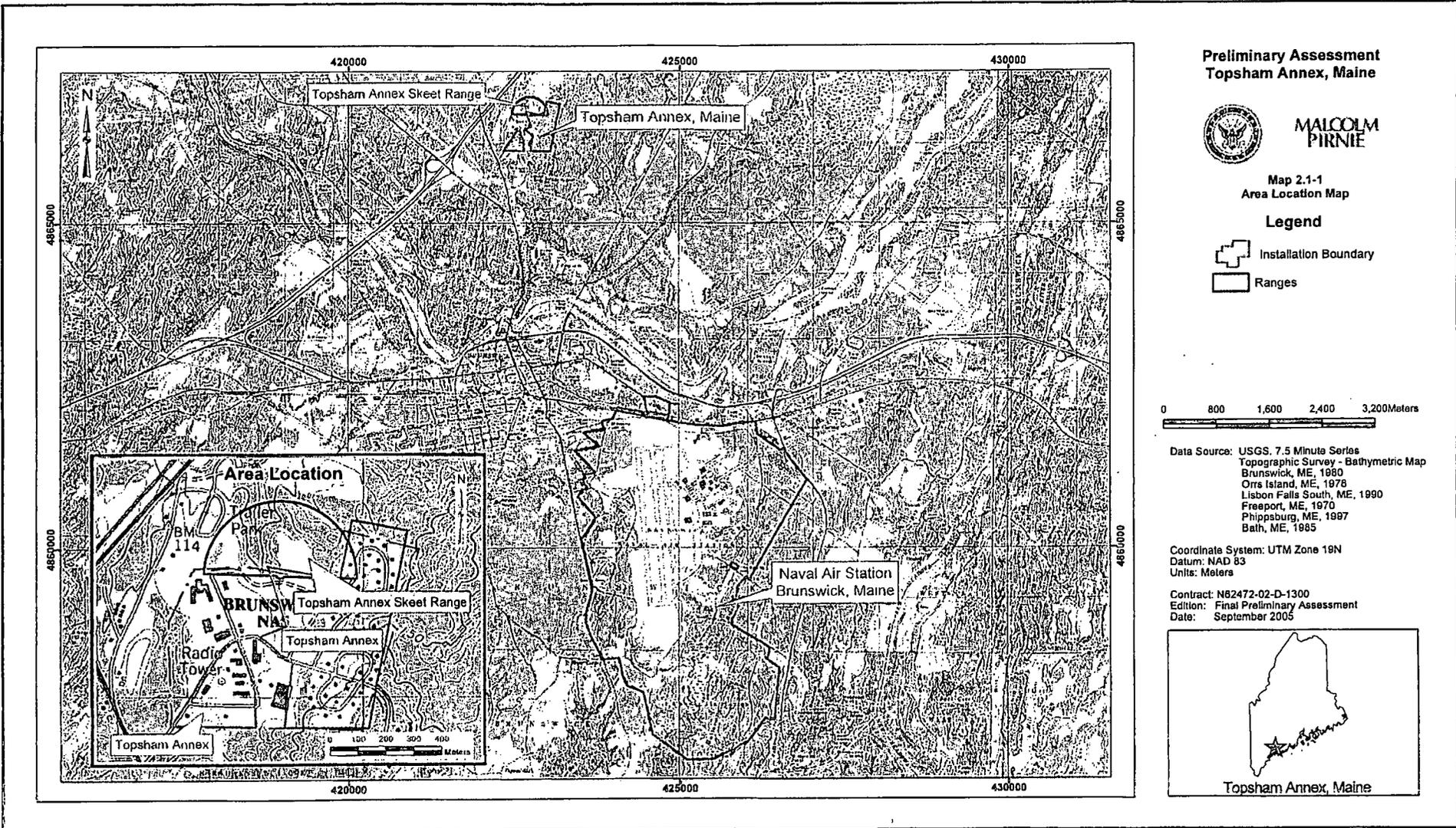


Data Source: USGS 7.5 Minute Series
 Topographic Survey Map
 Brunswick, ME, 1998
 Orrs Island, ME, 1998

Coordinate System: UTM Zone 19N
 Datum: NAD 83
 Units: Meters

Contract: N62472-02-D-1300
 Edition: Draft Final Preliminary Assessment Addendum
 Date: January 2007





**Preliminary Assessment
Topsham Annex, Maine**

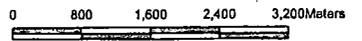


**MALCOLM
PIRNIE**

Map 2.1-1
Area Location Map

Legend

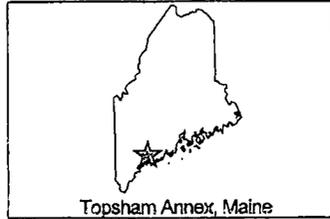
-  Installation Boundary
-  Ranges



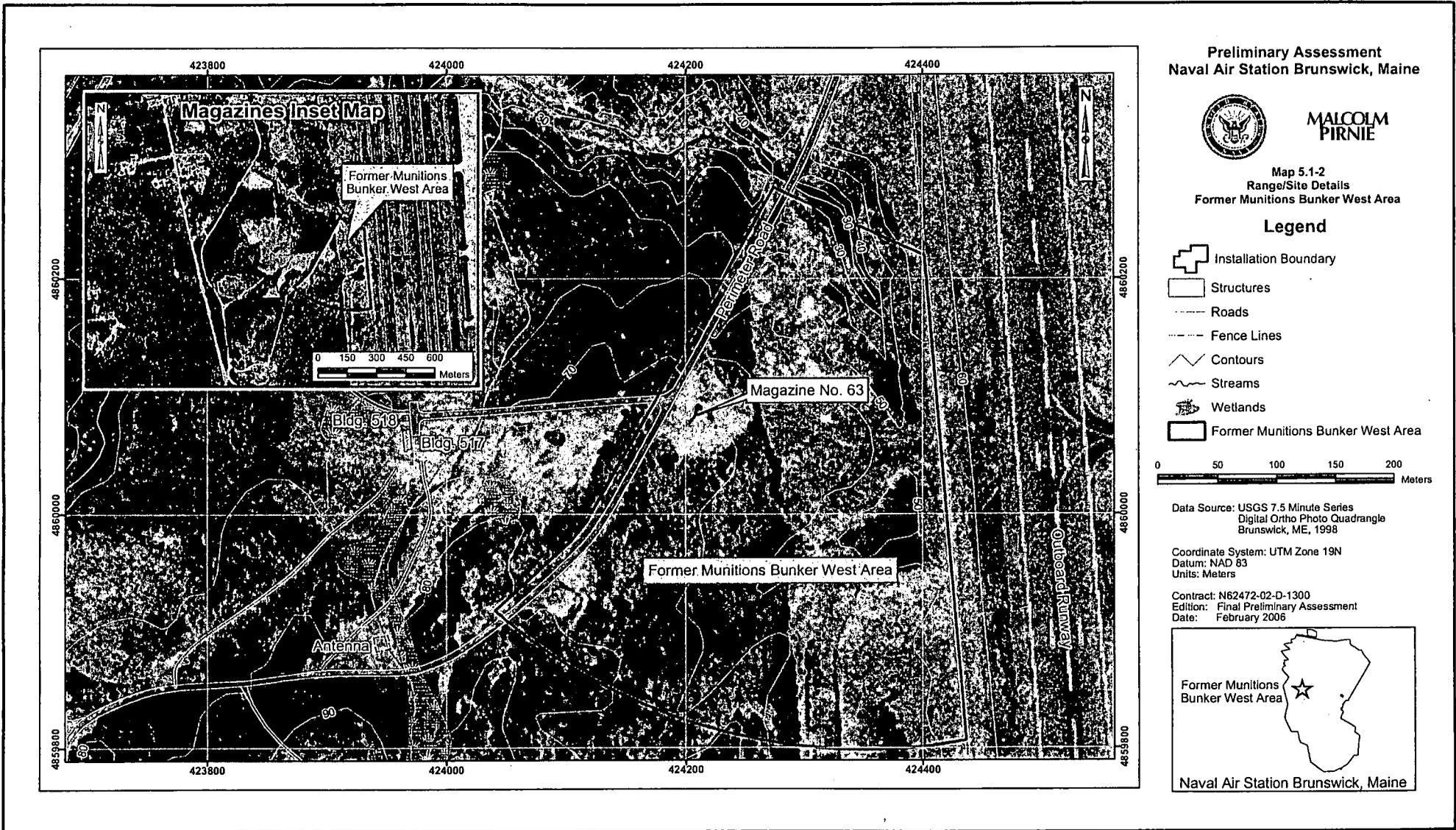
Data Source: USGS 7.5 Minute Series
Topographic Survey - Bathymetric Map
Brunswick, ME, 1980
Ors Island, ME, 1978
Lisbon Falls South, ME, 1990
Freeport, ME, 1970
Phippsburg, ME, 1987
Bath, ME, 1985

Coordinate System: UTM Zone 19N
Datum: NAD 83
Units: Meters

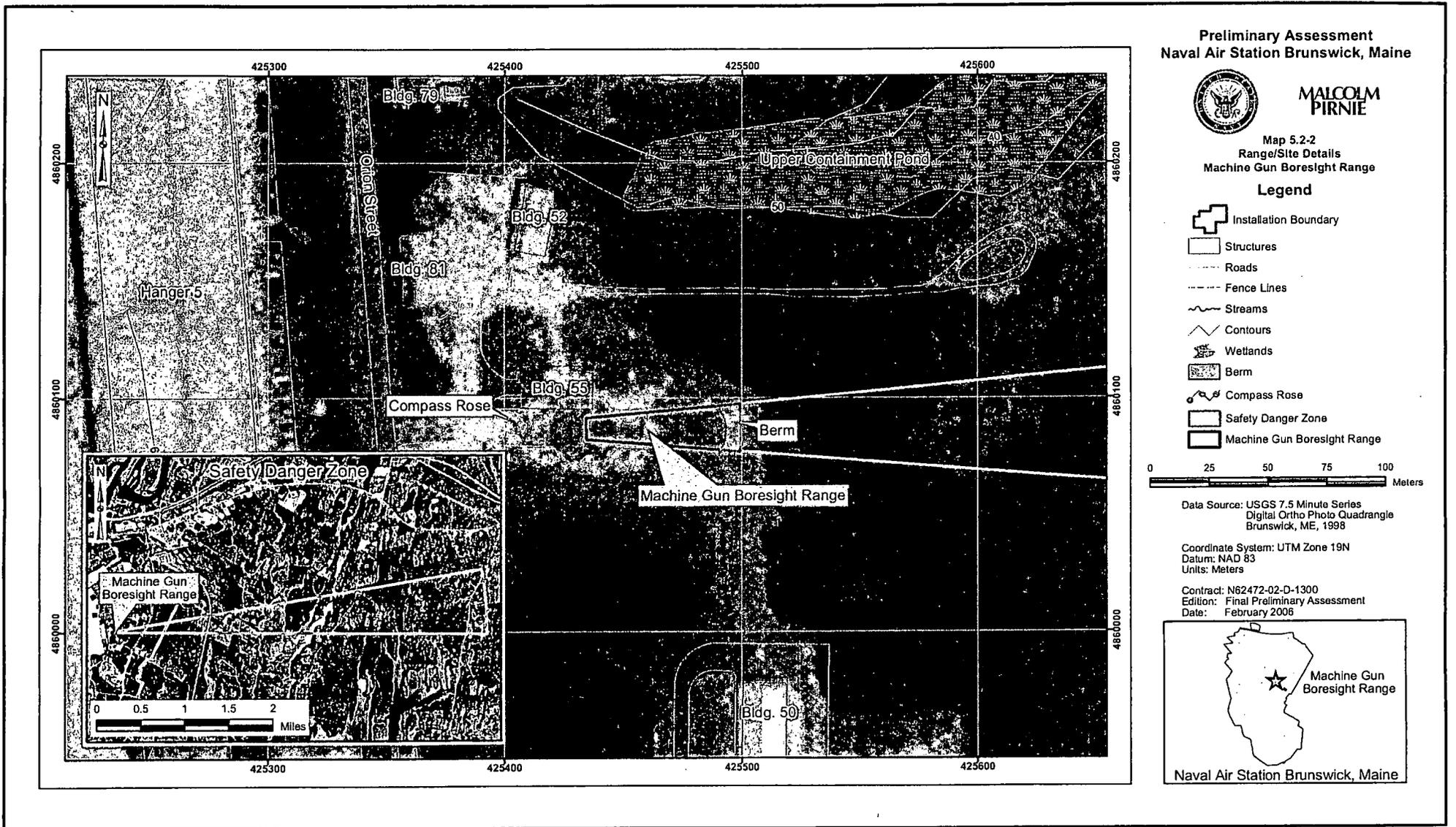
Contract: N62472-02-D-1300
Edition: Final Preliminary Assessment
Date: September 2005



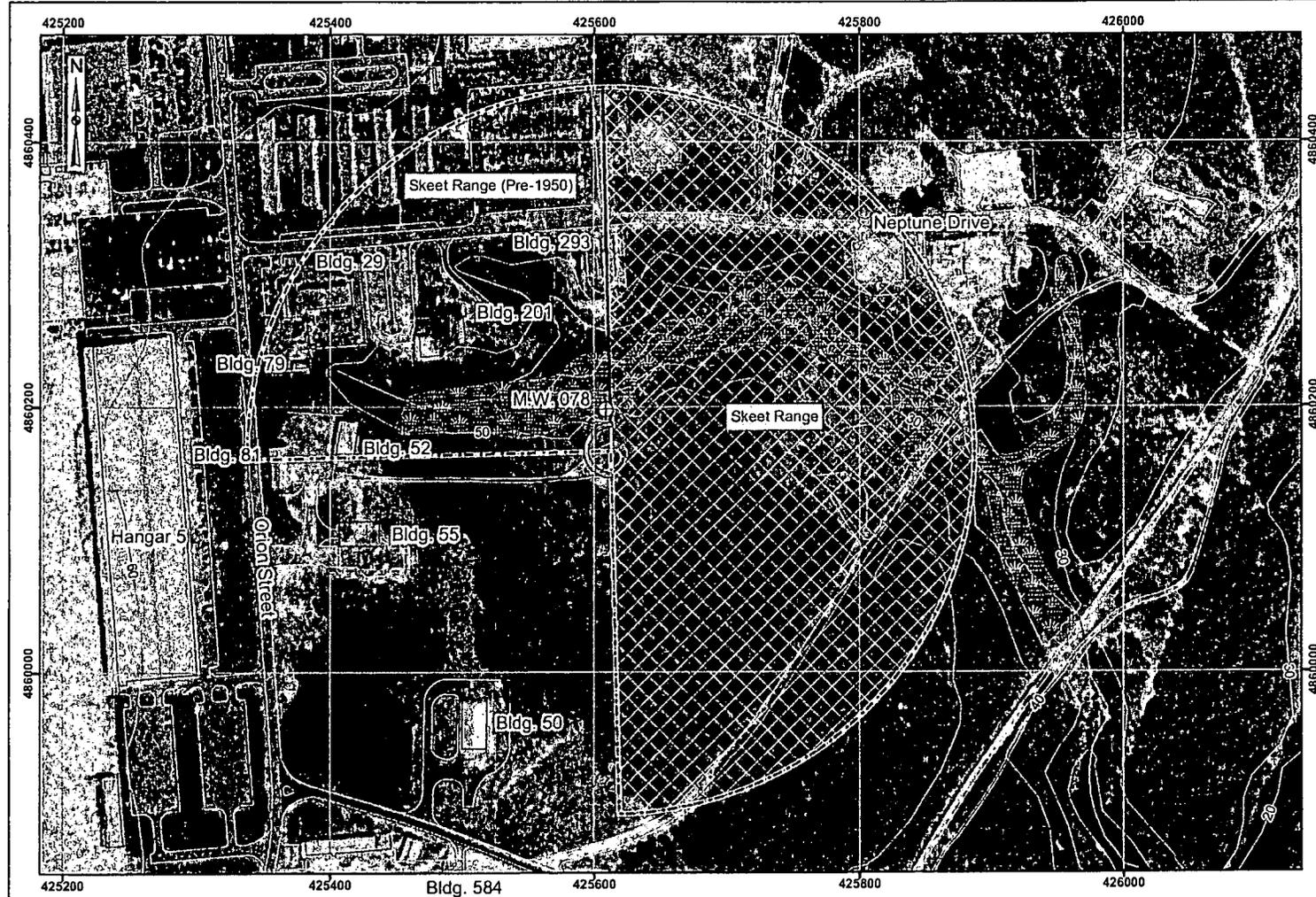
MAP 1C - SITE LOCATION MAP FOR TOPSHAM SKEET RANGE SITE



MAP 2 - FORMER MUNITIONS BUNKER WEST AREA SITE DETAILS



MAP 3 - MACHINE GUN BORESIGHT RANGE SITE DETAILS



**Preliminary Assessment
Naval Air Station Brunswick, Maine**

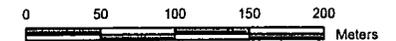


**MALCOLM
PIRNIE**

Map 5.3-2
Range/Site Details
Skeet Range

Legend

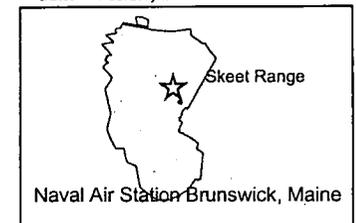
- Installation Boundary
- Structures
- Roads
- Fence Lines
- Contours
- Streams
- Wetlands
- Monitoring Well
- Firing Line
- Surface Danger Zone
- Skeet Range (Pre-1950)
- Skeet Range



Data Source: USGS 7.5 Minute Series
Digital Ortho Photo Quadrangle
Brunswick, ME, 1998

Coordinate System: UTM Zone 19N
Datum: NAD 83
Units: Meters

Contract: N62472-02-D-1300
Edition: Final Preliminary Assessment
Date: February 2006



MAP 4 - NAS SKEET RANGE SITE DETAILS

Preliminary Assessment Addendum
Naval Air Station Brunswick, Maine

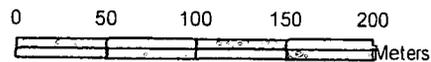


**MALCOLM
PIRNIE**

**Map 5.1-2
Range/Site Details
Site 12 EOD Area**

Legend

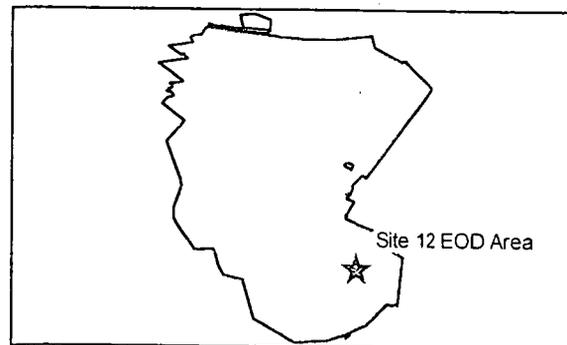
-  Installation Boundary
-  Site 12 EOD Area
-  Building
-  Fence
-  Stream
-  1989 Test Pit Location



Data Source:
Maine Office of GIS, ORTHO_HF, 2003

Coordinate System: UTM Zone19N
Datum: NAD83
Units: Meters

Contract: N62472-02-D-1300
Edition: Draft Final Preliminary Assessment Addendum
Date: January 2007



Preliminary Assessment Addendum
Naval Air Station Brunswick, Maine

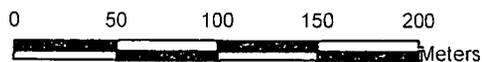


**MALCOLM
PIRNIE**

Map 5.2-2
Range/Site Details
Quarry

Legend

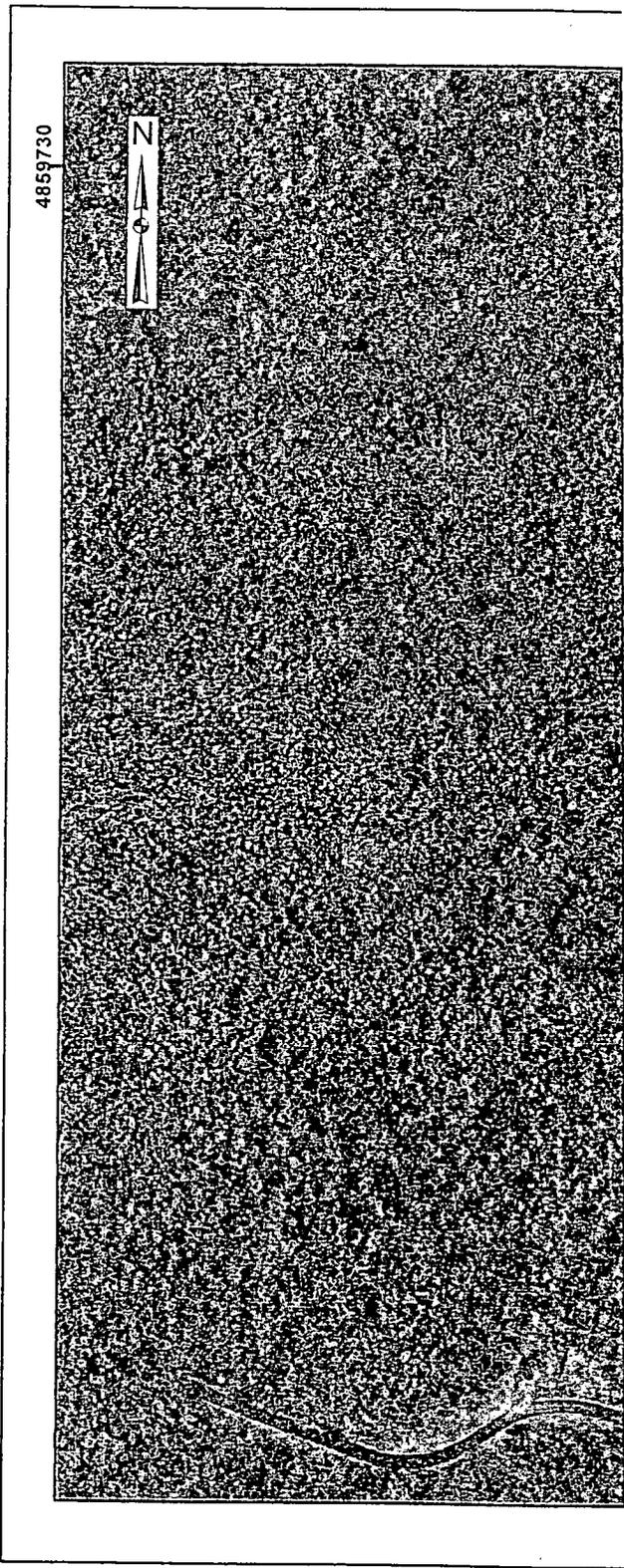
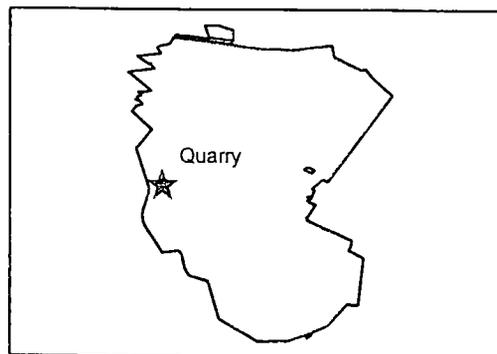
-  Installation Boundary
-  Quarry
-  Land Spreading Area
-  Fences
-  Rock Face
-  Stream



Data Source:
Maine Office of GIS, ORTHO_HF, 2003

Coordinate System: UTM Zone19N
Datum: NAD83
Units: Meters

Contract: N62472-02-D-1300
Edition: Draft Final Preliminary Assessment Addendum
Date: January 2007



MAP 6 - QUARRY SITE DETAILS

**Preliminary Assessment
Topsham Annex, Maine**

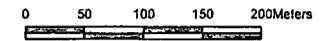


**MALCOLM
PIRNIE**

Map 5.1-2
Range/Site Details
Topsham Annex Skeet Range

Legend

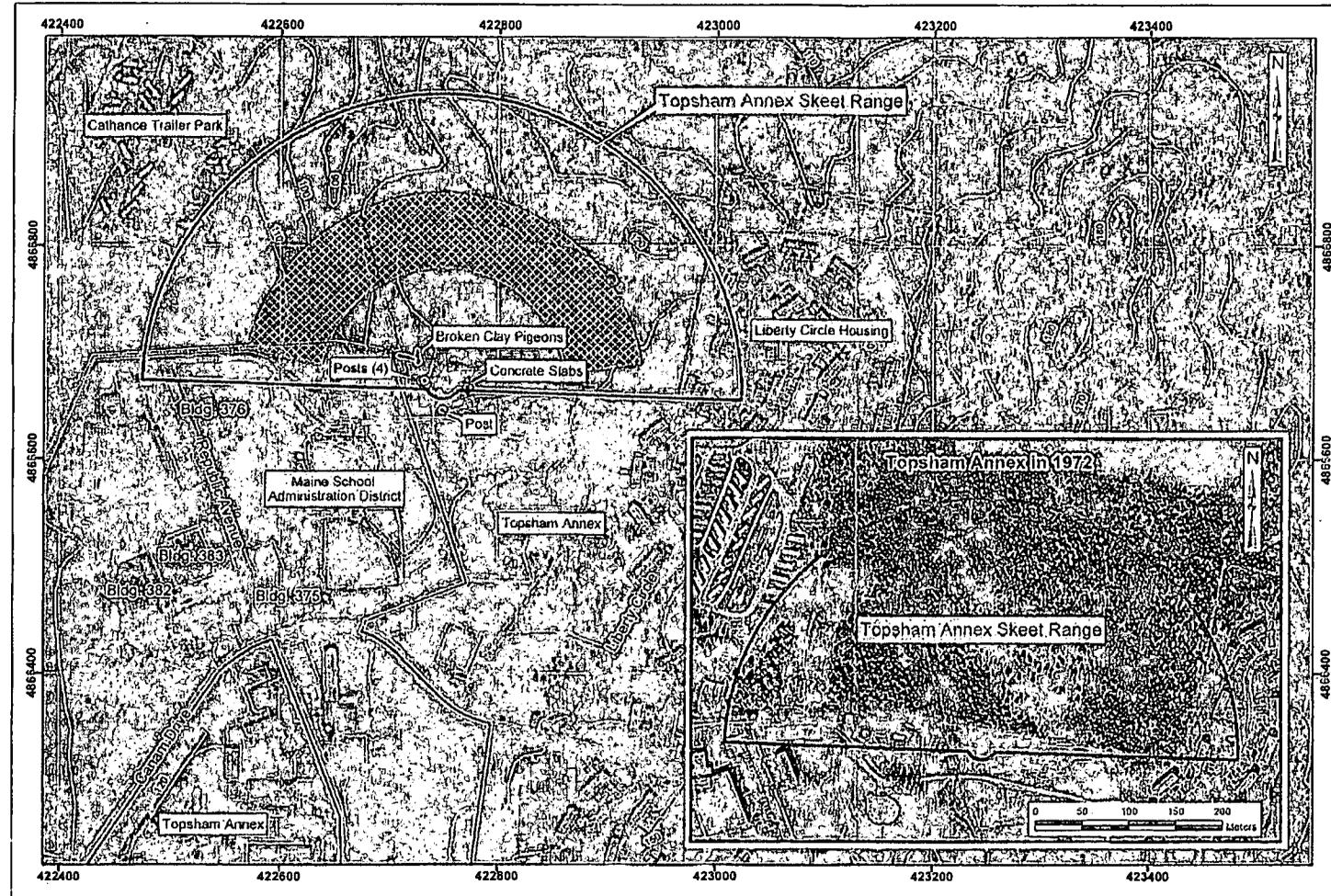
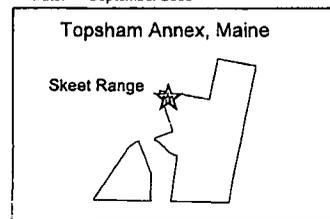
- Installation Boundary
- Structures
- Roads
- Drainage Ways
- contours
- Fence Lines
- Site Features
- Maine School Administration District
- Surface Danger Zone
- Likely Shotfall Zone
- Topsham Annex Skeet Range



Data Source: Digital Ortho Photo Quadrangle
Brunswick, ME, 1998
Historical Aerial Photograph
Topsham Annex, 1972

Coordinate System: UTM Zone 18N
Datum: NAD 83
Units: Meters

Contract: N62472-02-D-1300
Edition: Final Preliminary Assessment
Date: September 2005



MAP 7 - TOPSHAM SKEET RANGE SITE DETAILS

ATTACHMENT I

FIRST AID INSTRUCTIONS

INJURY/ILLNESS PROTOCOL AND FORM

POTENTIAL EXPOSURE REPORT

MEDICAL DATA SHEET

HOSPITAL MAP

EMERGENCY CONTACT NUMBERS

AND

SITE SPECIFIC TRAINING DOCUMENTATION



American Red Cross

First Aid

EMERGENCY TELEPHONE NUMBERS

Police _____
Fire Department _____
Doctor _____
Ambulance _____
Hospital _____
Poison Control Center _____

BITES Animal Bites - Thoroughly wash the wound with soap and water. Flush the area with running water and apply a sterile dressing. Immobilize affected part until the victim has been attended by a physician. See that the animal is kept alive and in quarantine. Obtain name and address of the owner of the animal.

Insect Bites - Remove "stinger" if present. Keep affected part down below the level of the heart. Apply ice bag. For minor bites and stings apply soothing lotions, such as calamine.

BURNS AND SCALDS Minor Burns - DO NOT APPLY VASELINE OR GREASE OF ANY KIND. Apply cold water applications until pain subsides. Cover with a dry, sterile gauze dressing. Do not break blisters or remove tissue. Seek medical attention.

Severe Burns - Do not remove adhered particles of clothing. Do not apply ice or immerse in cold water. Do not apply ointment, grease or vaseline. Cover burns with thick sterile dressings. Keep burned feet or legs elevated. Seek medical attention immediately.

Chemical Burns - Wash away the chemical soaked clothing with large amounts of water. Remove victim's chemical soaked clothing. If dry lime, brush away before flushing. Apply sterile dressing and seek medical attention.

CRAMPS Symptoms - Cramps in muscles of abdomen and extremities. Heat exhaustion may also be present.

Treatment - Same as for heat exhaustion.

CUTS Apply pressure with sterile gauze dressing, and elevate the area until bleeding stops. Apply a bandage and seek medical attention.

EYES Foreign Objects - Keep the victim from rubbing his eye. Flush the eye with water. If flushing fails to remove the object, apply a dry, protective dressing and consult a physician.

Chemicals - Flood the eye thoroughly with water for 15 minutes. Cover the eye with a dry pad and seek medical attention.

FAINING Keep the victim lying down. Loosen tight clothing. If victim vomits, roll him onto his side or turn his head to the side. If necessary wipe out his mouth. Maintain an open airway. Bathe his face gently with cool water. Unless recovery is prompt, seek medical attention.

FRACTURES Deformity of an injured part usually means a fracture. If fracture is suspected, splint the part, DO NOT ATTEMPT TO MOVE INJURED PERSON; seek medical attention immediately.

FROSTBITE Symptoms - Just before frostbite occurs skin may be flushed, then change to white or grayish-yellow. Pain may be felt early then subsides. Blisters may appear, affected part feels very cold and numb.

Treatment - Bring victim indoors, cover the frozen area, provide extra clothing and blankets. Rewarm frozen area quickly by immersion in warm water--NOT HOT WATER. DO NOT RUB THE PART. Seek medical attention immediately.

HEAT EXHAUSTION Caused by exposure to heat - either sun or indoors. Symptoms - Near normal body temperature. Skin is pale and clammy. Profuse sweating, tiredness, weakness, headache, perhaps cramps, nausea, dizziness, and possible fainting.

Treatment - Keep in lying position and raise victim's feet. Loosen clothing, apply cool wet cloths. If conscious, give sips of salt water (1 teaspoon of salt per glass) over a period of one hour. If vomiting occurs, discontinue the salt water. Seek medical attention immediately.

SUNSTROKE Symptoms - Body temperature is high (106 degrees F or higher). Skin is hot, red, and dry. Pulse is rapid and strong. Victim may be unconscious.

Treatment - Keep victim in lying position with head elevated. Remove clothing and repeatedly sponge the bare skin with cool water or rubbing alcohol. Seek medical attention immediately.

POISONING Call the poison control center for instruction on immediate care. If victim becomes unconscious, keep the airway open. If breathing stops give artificial respiration, by mouth to mouth breathing. Call an emergency squad as soon as possible.

POISON IVY Remove contaminated clothing; wash all-exposed areas thoroughly with soap and water followed by rubbing alcohol. If rash is mild, apply calamine or other soothing skin lotion. If a severe reaction occurs, seek medical attention.

PUNCTURE WOUNDS If puncture wound is deeper than skin surface, seek medical attention. Serious infection can arise unless proper treatment is received.

SPRAINS Elevate injured part and apply ice bag or cold packs: DO NOT SOAK IN HOT WATER. If pain and swelling persist, seek medical attention.

UNCONSCIOUSNESS Never attempt to give anything by mouth. Keep victim lying flat, maintain open airway. If victim is not breathing provide artificial respiration by mouth to mouth breathing and call an emergency squad as soon as possible.



Report Date	Report Prepared By	Incident Report Number

INSTRUCTIONS:

All incidents (including those involving subcontractors under direct supervision of Tetra Tech personnel) must be documented on the IR Form.

Complete any additional parts to this form as indicated below for the type of incident selected.

TYPE OF INCIDENT (Check all that apply)	Additional Form(s) Required for this type of incident
Near Miss (No losses, but could have resulted in injury, illness, or damage)	<input type="checkbox"/> Complete IR Form Only
Injury or Illness	<input type="checkbox"/> Complete Form IR-A; Injury or Illness
Property or Equipment Damage, Fire, Spill or Release	<input type="checkbox"/> Complete Form IR-B; Damage, Fire, Spill or Release
Motor Vehicle	<input type="checkbox"/> Complete Form IR-C; Motor Vehicle

INFORMATION ABOUT THE INCIDENT

Description of Incident

Date of Incident	Time of Incident
	_____ AM <input type="checkbox"/> PM <input type="checkbox"/> OR Cannot be determined <input type="checkbox"/>

Weather conditions at the time of the incident	Was there adequate lighting?
	_____ Yes <input type="checkbox"/> No <input type="checkbox"/>

Location of Incident

Was location of incident within the employer's work environment? Yes No

Street Address	City, State, Zip Code and Country

Project Name	Client

To Supervisor or Project Manager	Was supervisor on the scene?
	_____ Yes <input type="checkbox"/> No <input type="checkbox"/>

WITNESS INFORMATION (attach additional sheets if necessary)

Name	Company

Street Address	City, State and Zip Code

Telephone Number(s)



CORRECTIVE ACTIONS

Corrective action(s) immediately taken by unit reporting the incident:

Blank lines for corrective actions taken immediately.

Corrective action(s) still to be taken (by whom and when):

Blank lines for corrective actions still to be taken.

ROOT CAUSE ANALYSIS LEVEL REQUIRED

Root Cause Analysis Level Required: Level - 1 [] Level - 2 [] None []

Root Cause Analysis Level Definitions

Level - 1

Definition: A Level 1 RCA is conducted by an individual(s) with experience or training in root cause analysis techniques and will conduct or direct documentation reviews, site investigation, witness and affected employee interviews, and identify corrective actions. Activating a Level 1 RCA and identifying RCA team members will be at the discretion of the Corporate Administration office. The following events may trigger a Level 1 RCA:
- Work related fatality
- Hospitalization of one or more employee where injuries result in total or partial permanent disability
- Property damage in excess of \$75,000
- When requested by senior management

Level - 2

Definition: A Level 2 RCA is self performed within the operating unit by supervisory personnel with assistance of the operating unit HSR. Level 2 RCA will utilize the 5 Why RCA methodology and document the findings on the tools provided. The following events will require a Level 2 RCA:
- OSHA recordable lost time incident
- Near miss incident that could have triggered a Level 1 RCA
- When requested by senior management

Complete the Root Cause Analysis Worksheet and Corrective Action form. Identify a corrective action(s) for each root cause identified within each area of inquiry.

NOTIFICATIONS

Table with 5 columns: Title, Printed Name, Signature, Telephone Number, Date. Rows include Project Manager or Supervisor, Site Safety Coordinator or Office H&S Representative, Operating Unit H&S Representative, and Other.

The signatures provided above indicate that appropriate personnel have been notified of the incident.

INSTRUCTIONS:

Complete all sections below for incidents involving injury or illness.
Do NOT leave any blanks.
Attach this form to the IR FORM completed for this incident.

Incident Report Number: (From the IR Form) _____

EMPLOYEE INFORMATION

Company Affiliation

Tetra Tech Employee?

TetraTech subcontractor employee (directly supervised by Tt personnel)?

Full Name

Company (if not Tt employee)

Street Address, City, State and Zip Code

Address Type

Home address (for Tt employees)

Business address (for subcontractors)

Telephone Numbers

Work: _____

Home: _____

Cell: _____

Occupation (regular job title)

Department

Was the individual performing regular job duties?

Yes No

Time individual began work

_____ AM PM OR Cannot be determined

Safety equipment

Provided? Yes No

Type(s) provided:

Hard hat

Protective clothing

Used? Yes No If no, explain why

Gloves

High visibility vest

Eye protection

Fall protection

Safety shoes

Machine guarding

Respirator

Other (list)

NOTIFICATIONS

Name of Tt employee to whom the injury or illness was first reported

Was H&S notified within one hour of injury or illness?

Yes No

Date of report

H&S Personnel Notified

Time of report

Time of Report

If subcontractor injury, did subcontractor's firm perform their own incident investigation?

Yes No If yes, request a copy of their completed investigation form/report and attach it to this report.

INJURY/ILLNESS DETAILS

What was the individual doing just before the incident occurred? Describe the activity, as well as the tools, equipment, or material the individual was using. Be specific. Examples: "Climbing a ladder while carrying roofing materials"; "Spraying chlorine from a hand sprayer"; "Daily computer key entry."

What Happened? Describe how the injury occurred. Examples: "When ladder slipped on wet floor and worker fell 20 feet"; "Worker was sprayed with chlorine when gasket broke during replacement"; "Worker developed soreness in wrist over time."

Describe the object or substance that directly harmed the individual. Examples: "Concrete floor"; "Chlorine"; "Radial Arm Saw". If this question does not apply to the incident, write "Not Applicable."

MEDICAL CARE PROVIDED

Was first aid provided at the site: Yes No If yes, describe the type of first aid administered and by whom?

Was treatment provided away from the site: Yes No If yes, provide the information below.

Name of physician or health care professional

Facility Name

Street Address, City, State and Zip Code

Type of Care?

Was individual treated in emergency room? Yes No

Was individual hospitalized overnight as an in-patient? Yes No

Did the individual die? Yes No If yes, date: _____

Will a worker's compensation claim be filed? Yes No

NOTE: Attach any police reports or related diagrams to this report.

SIGNATURES

I have reviewed this report and agree that all the supplied information is accurate

Affected individual (print)

Affected individual (signature)

Telephone Number

Date

This form contains information relating to employee health and must be used in a manner that protects the confidentiality of the employee to the extent possible while the information is being used for occupational safety and health purposes.

INSTRUCTIONS:

Complete all sections below for incidents involving property/equipment damage, fire, spill or release.
Do NOT leave any blanks.
Attach this form to the IR FORM completed for this incident.

Incident Report Number: (From the IR Form) _____

TYPE OF INCIDENT (Check all that apply)

Property Damage Equipment Damage Fire or Explosion Spill or Release

INCIDENT DETAILS

Results of Incident: Fully describe damages, losses, etc.

Response Actions Taken:

Responding Agency(s) (i.e. police, fire department, etc.)

Agency(s) Contact Name(s)

DAMAGED ITEMS (List all damaged items, extent of damage and estimated repair cost)

Item:	Extent of damage:	Estimated repair cost:

SPILLS / RELEASES (Provide information for spilled/released materials)

Substance	Estimated quantity and duration	Specify Reportable Quantity (RQ)

Exceeded? Yes No NA

FIRES / EXPLOSIONS (Provide information related to fires/explosions)

Fire fighting equipment used? Yes No If yes, type of equipment: _____

NOTIFICATIONS

Required notifications	Name of person notified	By whom	Date / Time
Client: _____ Yes <input type="checkbox"/> No <input type="checkbox"/>			
Agency: _____ Yes <input type="checkbox"/> No <input type="checkbox"/>			
Other: _____ Yes <input type="checkbox"/> No <input type="checkbox"/>			

Who is responsible for reporting incident to outside agency(s)? Tt Client Other Name: _____

Was an additional written report on this incident generated? Yes No If yes, place in project file.

INSTRUCTIONS:

Complete all sections below for incidents involving motor vehicle accidents. Do NOT leave any blanks.
Attach this form to the IR FORM completed for this incident.

Incident Report Number: (From the IR Form) _____

INCIDENT DETAILS

Name of road, street, highway or location where accident occurred _____ Name of intersecting road, street or highway if applicable _____

County _____ City _____ State _____

Did police respond to the accident? Yes No Did ambulance respond to the accident? Yes No

Name and location of responding police department _____ Ambulance company name and location _____

Officer's name/badge # _____

Did police complete an incident report? Yes No If yes, police report number: _____
Request a copy of completed investigation report and attach to this form.

VEHICLE INFORMATION

How many vehicles were involved in the accident? _____ (Attach additional sheets as applicable for accidents involving more than 2 vehicles.)

Vehicle Number 1 - Tetra Tech Vehicle _____ Vehicle Number 2 - Other Vehicle _____

Vehicle Owner / Contact Information _____ Vehicle Owner / Contact Information _____

Color _____ Color _____

Make _____ Make _____

Model _____ Model _____

Year _____ Year _____

License Plate # _____ License Plate # _____

Identification # _____ Identification # _____

Describe damage to vehicle number 1 _____ Describe damage to vehicle number 2 _____

Insurance Company Name and Address _____ Insurance Company Name and Address _____

Agent Name _____ Agent Name _____

Agent Phone No. _____ Agent Phone No. _____

Policy Number _____ Policy Number _____

DRIVER INFORMATION

Vehicle Number 1 - Tetra Tech Vehicle		Vehicle Number 2 - Other Vehicle	
Driver's Name		Driver's Name	
Driver's Address		Driver's Address	
Phone Number		Phone Number	
Date of Birth		Date of Birth	
Driver's License #		Driver's License #	
Licensing State		Licensing State	
Gender	Male <input type="checkbox"/> Female <input type="checkbox"/>	Gender	Male <input type="checkbox"/> Female <input type="checkbox"/>
Was traffic citation issued to Tetra Tech driver? Yes <input type="checkbox"/> No <input type="checkbox"/>		Was traffic citation issued to driver of other vehicle? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Citation #		Citation #	
Citation Description		Citation Description	

PASSENGERS IN VEHICLES (NON-INJURED)

List all non-injured passengers (excluding driver) in each vehicle.
 Driver information is captured in the preceding section.
 Information related to persons injured in the accident (non-Tetra Tech employees) is captured in the section below on this form.
 Injured Tetra Tech employee information is captured on FORM IR-A.

Vehicle Number 1 - Tetra Tech Vehicle		Vehicle Number 2 - Other Vehicle	
How many passengers (excluding driver) in the vehicle? _____		How many passengers (excluding driver) in the vehicle? _____	
Non-Injured Passenger Name and Address		Non-Injured Passenger Name and Address	
Non-Injured Passenger Name and Address		Non-Injured Passenger Name and Address	
Non-Injured Passenger Name and Address		Non-Injured Passenger Name and Address	

INJURIES TO NON-TETRA TECH EMPLOYEES

Name of injured person 1				Address of injured person 1		
Age	Gender	Car No.	Location in Car	Seat Belt Used?	Ejected from car?	Injury or Fatality?
	Male <input type="checkbox"/> Female <input type="checkbox"/>			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Injured <input type="checkbox"/> Died <input type="checkbox"/>
Name of injured person 2				Address of injured person 2		
Age	Gender	Car No.	Location in Car	Seat Belt Used?	Ejected from car?	Injury or Fatality?
	Male <input type="checkbox"/> Female <input type="checkbox"/>			Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Injured <input type="checkbox"/> Died <input type="checkbox"/>

OTHER PROPERTY DAMAGE

Describe damage to property other than motor vehicles	
Property Owner's Name	Property Owner's Address

COMPLETE AND SUBMIT DIAGRAM DEPICTING WHAT HAPPENED

A large, empty rectangular box with a thin black border, intended for a student to draw a diagram. The box occupies most of the page's width and height, leaving only a narrow margin at the top and a vertical strip on the right side.

POTENTIAL EXPOSURE PROTOCOL

The purpose of this protocol is to provide guidance for the medical management of injury situations.

In the event of a personnel injury or accident:

- Rescue, when necessary, employing proper equipment and methods.
- Give attention to emergency health problems -- breathing, cardiac function, bleeding, and shock.
- Transfer the victim to the medical facility designated in this AHASP by suitable and appropriate conveyance (i.e. ambulance for serious events).
- Obtain as much exposure history as possible (a Potential Exposure report is attached).
- If the injured person is a TtNUS employee, call the medical facility and advise them that the patient(s) is/are being sent and that they can anticipate a call from the WorkCare physician. WorkCare will contact the medical facility and request specific testing which may be appropriate. WorkCare physicians will monitor the care of the victim. Site officers and personnel should not attempt to get this information, as this activity leads to confusion and misunderstanding.
- Call WorkCare at 1-800-455-6155 and enter Extension 109, or follow the voice prompt after hours and on weekends and be prepared to provide:
 - Any known information about the nature of the injury.
 - As much of the exposure history as was feasible to determine in the time allowed.
 - Name and phone number of the medical facility to which the victim(s) has/have been taken.
 - Name(s) of the involved TtNUS employee(s).
 - Name and phone number of an informed site officer who will be responsible for further investigations.
 - Fax appropriate information to WorkCare at (714) 456-2154.
- Contact TtNUS Corporate Health and Safety Department (Matt Soltis) at 1-800-245-2730.

As data is gathered and the scenario becomes more clearly defined, this information should be forwarded to WorkCare. WorkCare will compile the results of all data and provide a summary report of the incident. A copy of this report will be placed in each victim's medical file in addition to being distributed to appropriately designated company officials.

Each involved worker will receive a letter describing the incident but deleting any personal or individual comments. A personalized letter describing the individual findings/results will accompany this generalized summary. A copy of the personal letter will be filed in the continuing medical file maintained by WorkCare.

POTENTIAL EXPOSURE REPORT

Name: _____ Date of Exposure: _____

Social Security No.: _____ Age: _____ Sex: _____

Client Contact: _____ Phone No.: _____

Company Name: _____

I. Exposing Agent

Name of Product or Chemicals (if known): _____

Solid Liquid Gas Fume Mist Vapor

II. Dose Determinants

What was individual doing? _____

How long did individual work in area before signs/symptoms developed? _____

Was protective gear being used? If yes, what was the PPE? _____

Was there skin contact? _____

Was the exposing agent inhaled? _____

Were other persons exposed? If yes, did they experience symptoms? _____

III. Signs and Symptoms (check off appropriate symptoms)

Immediately With Exposure:

Burning of eyes, nose, or throat Chest Tightness / Pressure
Tearing Nausea / Vomiting
Headache Dizziness
Cough Weakness
Shortness of Breath

Delayed Symptoms:

Weakness Loss of Appetite
Nausea / Vomiting Abdominal Pain
Shortness of Breath Headache
Cough Numbness / Tingling

IV. Present Status of Symptoms (check off appropriate symptoms)

Burning of eyes, nose, or throat Nausea / Vomiting
Tearing Dizziness
Headache Weakness
Cough Loss of Appetite
Shortness of Breath Abdominal Pain
Chest Tightness / Pressure Numbness / Tingling
Cyanosis

Have symptoms: (please check off appropriate response and give duration of symptoms)
Improved: _____ Worsened: _____ Remained Unchanged: _____

V. Treatment of Symptoms (check off appropriate response)

None: _____ Self-Medicating: _____ Physician Treated: _____

MEDICAL DATA SHEET

This form is to be completed by each field crew member (Tetra Tech and subcontractor personnel) and approved visitors who wish to enter active operational zones. This form should contain information that medical personnel should know in the event the crew member is incapacitated.

Project: NAS Brunswick, Maine

Name: _____

Home Telephone: _____ Work Telephone: _____ Cell Phone: _____

Address: _____

Age: _____ Height: _____ Weight: _____

Occupation: _____

Name of Next of Kin: _____

Address: _____

Home Phone: _____ Work Phone: _____ Cell Phone: _____

Drug or other Allergies: _____

Particular Sensitivities: _____

Do You Wear Contacts? _____

What medications are you presently using? _____

Past Medical History/Review of Systems (Check if you have had positive history and would like this information passed on to an attending physician in the event of an emergency)

- | | |
|---|--|
| <input type="checkbox"/> Heart Conditions (chest pains, angina, heart attacks) | <input type="checkbox"/> Endocrine (thyroid, diabetes) |
| <input type="checkbox"/> Gastrointestinal Conditions (ucers, liver, GI Bleeding) | <input type="checkbox"/> Hematological (clotting, anemia) |
| <input type="checkbox"/> Pulmonary (Difficulty in breathing, coughing, asthma, pneumonia) | <input type="checkbox"/> Cancer |
| <input type="checkbox"/> Muscular/Skeleton (arthritis, Fractures, etc.) | <input type="checkbox"/> Neurological (headaches, dizziness, stroke) |
| <input type="checkbox"/> Kidney/Urological Disorder (kidney stones, renal failure) | |
| <input type="checkbox"/> Other (recent illnesses, weight loss, fever, etc.) | |

Comments: (Please explain positive indications) _____

Do you have any medical restrictions? _____

Immunization History: Last Tetanus Shot or Booster (Date): _____

Pneumonia Vaccination (Date): _____ Flu Vaccination (Date): _____

Other: _____

Name, Address, and Phone Number of personal physician: _____

I am the individual described above. I have read and understand this HASP.

Signature

Date

DIRECTIONS TO HOSPITAL (See next page hospital route map)

Hospital Name: Mid Coast Hospital
Hospital Address: 123 Medical Center Drive,
Brunswick, ME 04011
Hospital Telephone: Emergency Department (207)373-3635
General (207) 729-0181

Route to Emergency Facility (Mid Coast Hospital)

Start on FITCH AVE. heading north.

Turn RIGHT onto ME-24 E/ BATH RD.

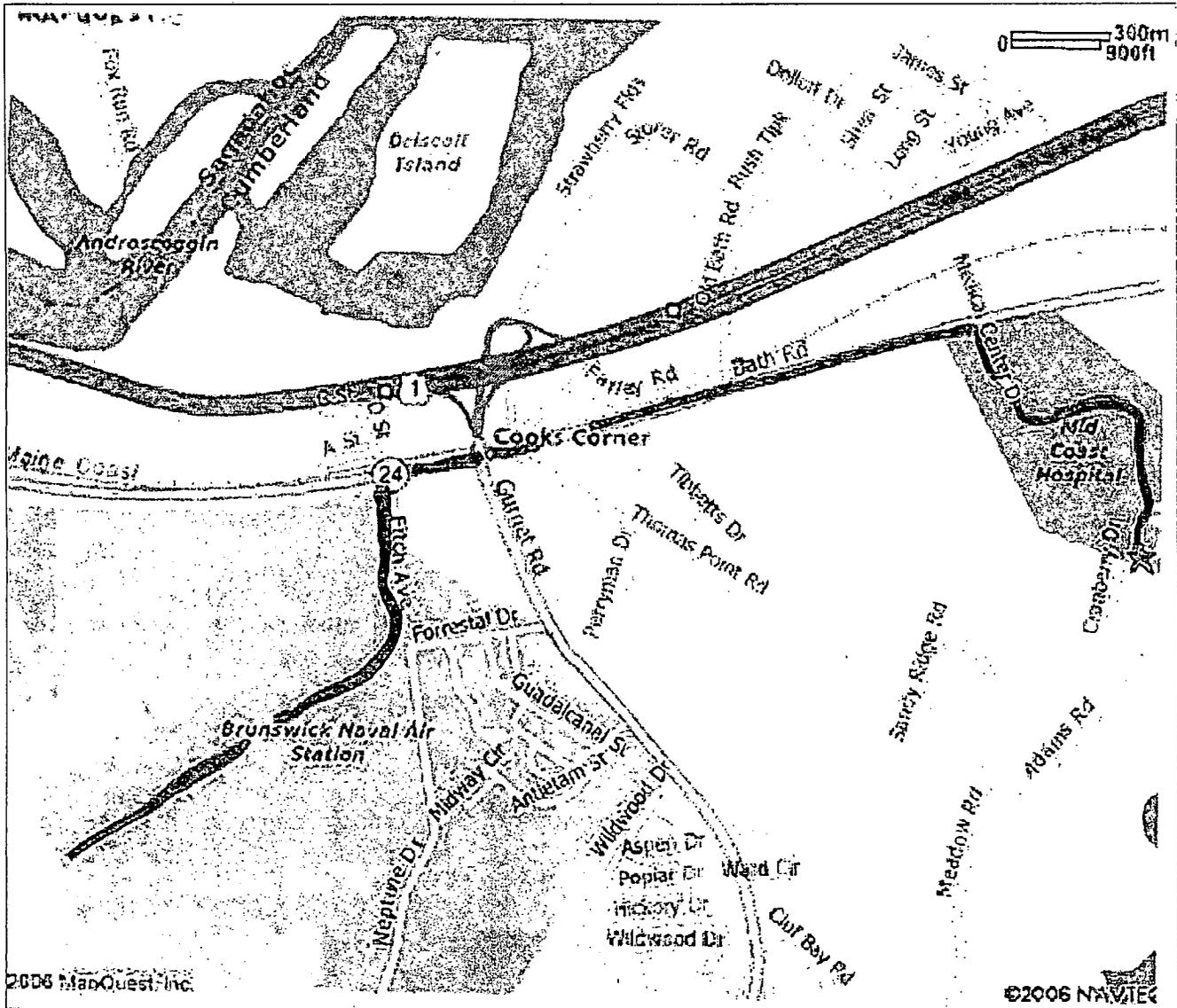
Turn RIGHT onto MEDICAL CENTER DR.

END at 123 MEDICAL CENTER DR.

Estimated Time: 2-3 minutes

Estimated Distance: 1.08 miles

Map to the Emergency Facility (Mid Coast Hospital)



**EMERGENCY REFERENCE
NAS, BRUNSWICK, MAINE**

CONTACT	PHONE NUMBER
NAS Brunswick Emergency Number for On-Base Fire and Police and Ambulance	9-1-1 or (207) 921-1719
Fire Department (non-emergency)	(207) 921-1719
Police Department (non-emergency)	(207) 921-1719
Mid Coast Hospital	(207) 373-3635
BRAC PMO NE Remedial Project Manager (RPM): Orlando Monaco	(215) 897-4911
Explosives Safety Officer	
EOD Support	Contact the RPM or POC
NASB Point of Contact (POC) Dale Mosher	(207) 921-1719
Chemtrec	(800) 424-9300
National Response Center	(800) 424-8802
NORTHERN NEW ENGLAND POISON CENTER	(800) 222-1222
WorkCare	(800) 455-6155 ext. 109
CLEAN Health and Safety Manager, Matthew M. Soltis, CIH, CSP	(800) 245-2730 ext. 8912. OR (412) 921-8912

