

**BY ORDER OF THE COMMANDER
1ST SPECIAL OPERATIONS WING
(AFSOC)**

HURLBURTFIELD INSTRUCTION 91-202

24 MARCH 2023



Safety

EXPLOSIVE TRAINING RANGE

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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(Lt Col Nicholas M. Pulire)

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This publication implements Air Force Policy Directive 91-2, *Safety Programs*. This publication applies to all base, tenant, Air National Guard (ANG), and Air Force Reserve (AFR) agencies performing training demolition operations on the Hurlburt Field Explosive Training Range. All base, tenant, ANG, and AFR agencies engaged in range operations are responsible for compliance with this publication and applicable procedures. Failure to comply with this publication is punishable as a violation of Article 92, of the UCMJ. The publication is subject to the requirements of DoDD 5400.11, DoD Privacy and Civil Liberties Program. Refer recommended changes and questions about this publication to 1 SOCES/CED using the DAF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate chain of command. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the publication OPR for non-tiered compliance items. Ensure all records generated as a result of processes prescribed in this publication adhere to AFI 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, located in the Air Force Records Information Management System. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force. Compliance with Attachments is mandatory.

SUMMARY OF CHANGES

This rewrite of HFI 91-202 updates 1 SOCES/CED and other contact information. It also updates equipment requirements to operate on the Hurlburt Field explosive training range along with operational considerations for detonations that exceed a 2,500-foot blast/frag safety radius.

1. Responsibilities.

1.1. The 1 SOCES/CED Explosive Ordnance Disposal (EOD) Flight controls access to the range. All agencies will schedule the range via unit email at 1soces.ced.eod@us.af.mil and contact

1 SOCES/CED operations section at (850) 884- 7193 to preclude scheduling conflicts. (T-3).

1.2. Other agencies, military, or federal services that frequently (more than once a year) perform explosive operations on Hurlburt Field are required to implement a support agreement IAW DODI 4000.19, Interservice and Intergovernmental Support. This requirement applies to using the Hurlburt Field EOD demolition range. All requests for one-time or emergency use will be routed through the Wing Explosive Safety office to the 1 SOW/CC for approval. (T-3).

1.3. Agencies utilizing the Hurlburt Field Explosive Training Range must provide 1 SOCES/CED with the following: a sequence of events, listing of all munitions to be used during the range operation (**Attachment 2**), an Operational Risk Management assessment (**Attachment 3**), and Explosives Operations Order (OPORD) (**Attachment 4**). Operations must be approved by

1 SOCES/CED the 1 SOCES/CED flight may provide a qualified EOD technician to act as Range Safety Officer (RSO) for outside organizations at their discretion. Deviations from approved range plans are not authorized. (T-3).

1.4. Agencies must sign out a range gate key and radio from 1 SOCES/CED operations. (T-3). Units using the range to conduct explosive operations with all categories of explosives will review this operating instruction annually. (T-3). Units not in compliance will be unable to sign for use of the Hurlburt Field Explosive Training Range. Units accept responsibility and compliance with procedures upon signing for the range key. Units will return the range to its prior operational condition upon completion of their unit training.

1.5. All agencies will restrict movement and operations to the approved and cleared demolitions area, cleared, and maintained access roads, and the identified bunker/training area. (T-3). Movement and operations in wooded areas is prohibited. These restrictions are based on a Memorandum of Agreement between the Florida Department of Environmental Protection and Hurlburt Field. The purpose of this agreement is to ensure that the wetland area surrounding the Hurlburt Field Explosive Training Range will be protected from any form of future development or human disturbance that would degrade its ecological value.

1.6. The Hurlburt Field Explosive Training Range is only permitted for the use of demolition training, or emergency disposal of hazardous munitions (EOD only). This area is not defined as an "Active range", or a "Military range". When using the Explosive Training Range for emergency disposal purposes, limit disposal of cased munitions to less than 5 inches in diameter with a clear zone of 2,500 feet. The use of small arms ammunition is not authorized on the Hurlburt Field Explosive Training Range. Expended or unused munitions that are not recovered and disposed of properly are considered a solid waste under the 40 CFR Parts 260

thru 266 and 270 Military Munitions Rule. Violation of this policy will result in fines imposed by the Environmental Protection Agency under the Resource Conservation and Recovery Act. (T-0).

1.7. The senior explosive demolition qualified individual on the range (or a designated qualified person) will assume the duties of the Range Safety Officer (RSO). (T-0). The RSO is responsible for overall safety on the range.

2. Explosive Limits.

2.1. The maximum amount of explosives per detonation will not exceed 100 pounds Net Explosive Weight (NEW). (T-3). The NEW will be calculated using TNT equivalency. (T-0). (See [Attachment 5](#) for TNT equivalencies for select military explosives and calculations).

3. Personnel Limits.

3.1. A minimum of two explosive demolition qualified personnel are required for any explosive operation.

3.2. When transporting explosives, the maximum number of personnel shall not exceed the capacity allowed in the crew compartment of the vehicle transporting explosives. (T- 0).

4. Equipment Requirements.

4.1. Radio communication with Hurlburt Field control tower and 1 SOCES/CED operations section.

4.2. Four each Class-A water fire extinguishers.

4.3. First Aid Kit/Trauma Kit.

4.4. Two each Range Flags (In ammo can attached to flag poles).

5. Location of Operation.

5.1. The Hurlburt Field Explosive Training Range is located west of the Hurlburt Field Munitions Storage Area, MGRS 16R EU 25547 65888 (Datum WGS84). All demolition shots will be placed in the center of the range between the markers. ([Attachment 6](#)) (T-3).

5.2. All training vehicles, training aids, and inert ordnance items are for EOD use only. The robotics training facility can be used by outside agencies through prior coordination only. Additionally, all damage to the facility will be funded/repaired by the offending agency.

6. Safety Precautions.

6.1. Do not detonate fragment-producing munitions on the range. Shaped charges and water charges are allowed as long as they are projected in a safe direction.

6.2. During emergency disposal operations involving fragment producing munitions (EOD only) with a blast/frag calculation that meets or exceeds 2,500 feet, post guards to deny access to Eglin Range Road 253. Guards will be posted at the intersection of Road 668 and 253 (MGRS 16R EU 24755 65392) and at the second bridge reached by traveling north on Road 253 (MGRS 16R EU 25515 67080). (T-3).

6.3. Do not use or detonate pyrotechnic munitions without approval from 1 SOCES/CED operations. This includes illumination, signaling, or fire producing munitions.

- 6.4. Do not conduct pit/trench-burning operations.
- 6.5. Demolition operations will be conducted as close to the center of the cleared demolition area as practical. (T-3). Range center is marked by two wooden posts (Figure 1).
- 6.6. Red range flags will be flown at the east and west gate during all explosive operations. (T-0).
- 6.7. Range gates will be closed and locked during all explosive operations. (T-3).
- 6.8. Do not conduct operations when electrical storms are within 5 nautical miles.
- 6.9. Do not conduct operations if sustained wind speed exceeds 15 miles per hour.
- 6.10. The RSO will control all initiating devices. (T-0).
- 6.11. Coordinate initiation of all detonations with the Hurlburt airfield control tower. Request and receive clearance prior to initiating charges and notify tower when complete. Tower coordination is not required for explosively-powered EOD tools or if only initiating blasting caps.
- 6.12. Prior to the start of any operation, a safety briefing and risk management assessment will be conducted. (T-3).
- 6.13. Check fire conditions prior to operations. Routine demolition operations will not be conducted during very high and extreme fire conditions. For emergency demolition during these conditions, coordinate with 1 SOCES/CEF for guidance on how fire suppression capabilities will be positioned. (T-3). **NOTE:** Fire Conditions can be obtained on the internet at the following site: <http://currentweather.freshfromflorida.com/fdi-report.htm> <http://currentweather.freshfromflorida.com/fdi-report.htm> 1
- 6.14. No Electro-Magnetic Radiation producing devices within 25 feet of Electro Explosive Devices.

7. Emergency Procedures.

7. 1. **If a fire occurs, immediately contact the Emergency Communications Center.** Attempt to fight the fire as long as 1.1 munitions are not involved, and it is safe to do so.
- 7.2. If personnel are injured, perform first aid and request assistance if required.
- 7.3. Follow misfire procedures IAW applicable technical data.

8. Sequence of Events.

- 8.1. Notify the following agencies prior to operations ([Attachment 7](#)):
 - 8.1.1. Public Affairs (Notify 3 days prior to an operation involving more than 10 pounds NEW).
 - 8.1.2. Weather (Request wind speed and if electrical storms are expected).
 - 8.1.3. Command Post.
 - 8.1.4. Medical Group.
 - 8.1.5. Security Forces.
 - 8.1.6. Airfield Tower.

- 8.1.7. Wing Safety.
- 8.1.8. Munitions Control.
- 8.1.9. Emergency Communications Center.
- 8.2. Obtain all required equipment and explosives.
- 8.3. Secure gates and raise flags.
- 8.4. Place explosives in designated holding areas.
- 8.5. Prepare charges for initiation.
- 8.6. Obtain clearance from tower prior to all detonations (see **paragraph 6.11**).
- 8.7. Ensure personnel are at a safe distance IAW DESR6055.09_AFMAN 91-201 and the range is clear; sound off with 3 booming "Fire in the Hole!" aimed left, right and center of detonation site. Ensure range is clear once again.
- 8.8. Detonate charges.
- 8.9. Notify Tower when detonations are complete.
- 8.10. Search area for unexploded ordnance, munitions, and explosive residue. Remove all residue/trash from the range and dispose of properly.
- 8.11. Repeat paragraphs **8.5** through **8.10** for additional detonations.
- 8.12. Stow equipment, pick up trash and return any unused explosives. Ensure the range is returned to the condition it was prior to the training. Take down flags and secure gate.
- 8.13. Contact 1 SOCES/CED operations when complete of training operations. 1 SOCES/CED will conduct an inspection of the range to ensure there is no damage to training resources (i.e., cap work up areas, explosive work up area, vehicles, culvert) or trash left. (T-3).

ALLISON K. BLACK, Colonel, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

DESR6055.09_AFMAN91-201, *Explosives Safety Standards*, 28 May 2020

AFPD 91-2, *Safety Programs*, 2 Sep 2019

T.O. 11A-1-66, *General Instructions-Demolitions*

40 CFR Parts 260 through 266, and 270, *Military Munitions Rule (MMR) UFC 3-340-02, Structures to Resist the Effects of Accidental Explosions*.

60A-1-1-4, *Protection of Personnel and Property*, 10 Dec 2015

60A-1-1-4-1, *Protection of Personnel and Property; Explosive Effects*, 10 Dec 2015

Prescribed Forms

None

Adopted Forms

DAF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFR—Air Force Reserve

AFRIMS—Air Force Records Information Management System

ANG—Air National Guard

CFR—Code of Federal Regulations

DODI—Department of Defense Instruction

EOD—Explosive Ordnance Disposal

HD—Hazard Division

IAW—In Accordance With

MGRS—Military Grid Reference System

NEW—Net Explosive Weight

OPORD—Operations Order

OPR—Office of Primary Responsibility

RDS—Records Disposition Schedule

RSO—Range Safety Officer

SOCES—Special Operations Civil Engineer Squadron

SOW—Special Operations Wing

TNT—Trinitrotoluene

UCMJ—Uniformed Code of Military Justice

Attachment 2**PRE-OPERATIONAL PLANNING FOR USE OF HURLBURT FIELD EOD RANGE****WARNO- UNIT DATE:****RSO: TSgt XXXXXXXX****Team Chief:** SSgt XXXXXXXX:X**Location:** Hurlburt Field Demolition Range**Training Objective:** The primary training objective is to XXXXXXXXXXXX**Special Equipment:** PPE, Water, Food, Personal Gear**Munitions:**

Shot 1 – 50' Det Cord Mainline (TNT Equivalency .45lbs)

5x 10' Det Cord Branchline (TNT equivalency .45lbs) 5x M112 (TNT equivalency 8.56lbs) whipped

Mainline dual primed with 2x M7 nonelectric blasting caps Initiated with Time Fuse and 2x M60

TOTAL NEW TNT Equivalency 9.46lbs

Shot 2 – 50' Det Cord Mainline (TNT equivalency .45lbs)

1x M112 (TNT equivalency 1.71lbs) whipped

Mainline dual primed with 2x M7 nonelectric blasting caps

Initiated with Time Fuse and 2x M60

TOTAL NEW TNT Equivalency 2.16lbs

Tentative Schedule:**DD MMM YY**

1200-Range Day briefing (Location)

1230-Prepare assigned tasks from briefing

DD MMM YY

0715-Safety Briefing, All Personnel (Location)

0730-Personnel depart location to pull munitions

0800-All remaining Personnel depart to range

0815-Conduct class

0825-Set up procedure

0845-Execute

0850-Examine Results

0900-Prepare next procedure setup

0930-Discuss different methods, learning points

0945-Set up procedure

0955-Execute

1000-Examine Results

1030-Clean up shot set up

1035-Execute clean up shot

1045-Depart range

1100-All Personnel back to location, Mission Complete

Approved/Not Approved Date:

Commander's Name:

Commander' s Signature:

Attachment 3
DEMO RANGE ORM TEMPLATE

Figure A3.1. DEMO RANGE ORM TEMPLATE.

OPERATIONAL RISK MANAGEMENT PLANNING WORKSHEET				
PLANNER		Date:		
MISSION/TASK: DEMOLITION TRAINING				
MISSION STEPS	POTENTIAL HAZARDS	RISKS LEVEL	CONTROLS	RESIDUAL RISK LEVEL
PLANNING	Inadequate	L M H	Ensure good internal planning is conducted LAW unit SOP. Thoroughly brief mission steps and cover what to do in case of emergency.	L M H
MISSION EQUIPMENT	Death or serious injury due to unfamiliarity with equipment or malfunction of equipment.	L M H	Ensure personnel are trained with all equipment being used during operation. Also check out equipment prior to operation to make sure it is in good working order.	L M H
TRANSPORT TO/FROM RANGE AND TRANSPORT EXPLOSIVES	Vehicle accident	L M H	Allow adequate time to obey all traffic laws, wear seat belts, and make sure explosives are properly strapped down or secured.	L M H
SEPARATION OF DEMOLITION MATERIAL	Failure to separate Blasting Caps from Explosives could cause	L M H	Use prepared permanent structures for proper safety distances.	L M H

OPERATIONAL RISK MANAGEMENT PLANNING WORKSHEET				
PLANNER		Date:		
MISSION/TASK: DEMOLITION TRAINING				
MISSION STEPS	POTENTIAL HAZARDS	RISKS LEVEL	CONTROLS	RESIDUAL RISK LEVEL
CRIMPING BLASTING/TIME FUZE TEST BURN	Premature detonation could occur due to improper crimping technique/test burn to close	L M H	Ensure all personnel crimping caps are trained and current or supervised if in upgrade training. Make sure caps are crimped away from other explosives, and test burns conducted 25ft downwind from other explosives.	L M H
SETTING/IGNITING CHARGES	Explosives could prematurely detonate and cause serious injury or death	L M H	Only essential personnel are to be present when setting charges or inserting caps. Do not force caps in place and follow all commands from RSO. Once charge is placed/ignited, walk with a purpose to bunker or awaiting vehicle.	L M H
LACK OF MEDICAL COVERAGE	Medics are not on site or lack of proper gear	L M H	Medical coverage is coordinated for training operations. Ensure multiple means of communication are available in case of emergency. During emergency disposal operations, Medics/First Responders will be on scene.	L M H

Attachment 4

DEMO RANGE OPORD TEMPLATE

PRE-MISSION DATES	SAFETY SPOT	CONTACT INFORMATION	ALT CONTACT INFO
COMPLETED	COMPLETED	POC: Phone:	POC: Phone:
Additional Personnel		TIME START	TIME END
VEHICLES			
6 PAX			
BSERV:			
HUMWV			
ATV			
RANGE EQUIPMENT (SIGN OUT/IN FROM EOD)			
OUT	IN		
RANGE FLAGS			
RANGE KEY			
BULL HORN			
RADIO #			
SITUATION/ MISSION CONCEPT		TIMELINE	
SUMMARY			
RANGE EQUIPMENT REQUIRED (Minimum)		INDIVIDUAL PPE	
FIRE EXTINGUISHERS	Y N	IB/IV/TV/PLATE CARRIER	
FIRST AID KIT	Y N	HELMET	
		EYE PROTECTION/EAR	
		GLOVES	
		UNIFORM	
ADMINISTRATIVE ACTIONS			
PUBLIC AFFAIRS	884-7464	MUNITIONS CONTROL	884-2011
*If over 10 lbs fax request 3 days prior to 884-6093		BASE WEATHER	884-7423
COMMAND POST	884-8100	JACKSON GUARD	882-6233
FIRE DEPARTMENT	884-6360	FIRE CONDITION: A B C D	
MEDICAL CLINIC	881-3902		
SECURITY FORCES	884-6423		
AIRFIELD TOWER	884-4795	EOD	884-7193
WING SAFETY	884-7495		
1 SOCES/CED OPERATIONS REVIEW			
DATE RECEIVED	DATE REVIEWED	DATE SIGNED	DATE GO/NO-GO
<p style="background-color: yellow; padding: 5px;">* All range requests should be submitted at a minimum of 1 week prior to requested use date to the 1 SOCES/CED organizational email 1sociess.ced@hurlburt.af.mil. You are not scheduled for the range unless you receive confirmation!</p>			

Attachment 5**TNT EQUIVALENCY CALCULATIONS****A5.1. TNT Equivalency Table.**

Explosive	TNT Equivalent Weight
Composition B	1.16
Composition C-4	1.37
H-6	1.38
PETN	1.27
RDX	1.46
TNT	1.00

A5.1. 1. Above are explosives commonly used on the Explosive Training range. If other explosives are to be utilized that are not listed, contact 1 SOCES/CED Operations Section for TNT Equivalency weights.

1.00 will still be calculated using a TNT equivalency of 1.00. Never calculate intentional detonations using less than 1.00 TNT equivalency.

A5.2. Calculations.

A5.2.1. Below is an example of how to calculate TNT Equivalency:

10 Blocks of M112, Composition C-4. Each block of C-4 weighs 1.25 pounds (NEW). C-4 has a TNT equivalency of 1.37 pounds

$10(\text{blocks of C-4}) * 1.25 = 12.5 \text{ pounds (NEW)}$

$12.5(\text{pounds NEW}) * 1.37(\text{TNT Equivalency}) = 17.125 \text{ pounds (NEW TNT Equivalency)}$

Attachment 6
LOCATION OF RANGE CENTER

Figure A6.1. Location of Range Center.



Attachment 7
RANGE CALLS

Table A7.1. RANGE CALLS.

DATE:

The following agencies will be notified prior to Range explosive operations:

AGENCY	PHONE	INITIALS
PUBLIC AFFAIRS (CALL 3 DAYS PRIOR IF OVER 10 LBS)	4-7196	
COMMAND POST	4-8100	
EMERGENCY COMMUNICATIONS CENTER	4-6360	
CLINIC	1-3902/1-3149	
SECURITY POLICE	4-6423	
AIRFIELD TOWER	4-4795	
WING SAFETY	4-7496	
MUNITIONS CONTROL	4-2011	
BASE WEATHER	4-7423	

FIRE CONDITION: <http://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Wildland-Fire/Current-Fire-Conditions>
<http://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Wildland-Fire/Current-Fire-Conditions>.