BY ORDER OF THE COMMANDER
SPACE LAUNCH DELTA 30

SPACE LAUNCH DELTA 30
INSTRUCTION 91-703

13 DECEMBER 2021

Safety

TRAIN HOLD CRITERIA

COMPLIANCE WITH THIS INSTRUCTION IS MANDATORY

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This instruction implements Air Force Space Command Instruction (AFSPCI)91-701, *Launch and Range Safety Program Policy and Requirements*. It describes responsibilities, procedures and criteria used to determine train protection and subsequent "hold" or "proceed" decisions during launch operations. It further describes limits associated with delays when toxic hazard conditions are present, as well as disaster response procedures. It applies to all Space Launch Delta 30 (SLD30) units involved in launch operations. Refer recommended changes and questions about this instruction to SLD30/SEL, 806 13th Street, Suite 319, Vandenberg Space Force Base (VSFB) CA 93437-5230, using the AF Form 847, *Recommendation for Change of Publication.* Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFI33-322, Records Management and Information Governance Program, and disposed of in accordance with the Air Force Records Information Management System Records Disposition Schedule. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply Air Force endorsement.

SUMMARY OF CHANGES

This document has been revised. The 30th Space Wing (30SW) was renamed Space Launch Delta 30 (SLD30) along with the base name changing from Vandenberg Air Force base (VAFB) to Vandenberg Space Force Base (VSFB). Other changes include a launch personnel position name change from Aerospace Control Officer (ACO) to Aerospace Surveillance Officer (ASO) and

adding the Range Safety Manager (RSM). Updates were made to the *Abbreviations and Acronyms* list (**attachment 1**).

1. Responsibilities:

1.1. The Commander, Space Launch Delta 30 (SLD30/CC), has the overall responsibility for the safety of all launch operations.

1.2. The Mission Flight Control Officer (MFCO) / Range Safety Manager (RSM) (SLD30/SE) disseminates changes to railroad protection requirements. The RSM is the term used for MFCO duties on autonomous flight safety system (AFSS) operations.

1.3. The Aerospace Surveillance Officer (ASO) (2ROPS) monitors railroad traffic and coordinates with the Union-Pacific Manager Road Operations to ensure train protection during launch operations.

1.4. The Flight Safety Analyst (FSA) (SLD30/SEL) analyzes potential launch operation hazards to the railroad tracks and determines what portions of the track require protective measures.

1.5. The Range Operations Commander (ROC) (2ROPS) manages Range countdown activities and passes final Range clearance for launch.

1.6. The Union-Pacific Manager Road Operations (MRO) maintains radio contact with and controls all railroad traffic that traverses Vandenberg SFB. The MRO is located in San Luis Obispo.

2. Background and Coordination. The Union-Pacific Railroad (UPRR) Company owns 50 feet to 100 feet of the land to each side of the track that traverses Vandenberg SFB, with the rights of a private property owner to use the land. Most launch sites are located in areas where overflight of the railroad is unavoidable. A few northern launch sites near Point Sal may not require railroad safety precautions. The SLD 30 maintains a relationship with UPRR to coordinate during launch countdown operations through direct line communication between the MRO and the ASO

3. Operations Procedures.

3.1. The ASO will ensure the current location, movement, and schedules for all trains in the Vandenberg SFB area are documented and reported to the ROC and MFCO/RSM as defined in 30SWI13-207, *Range Surveillance*.

3.2. The FSA will analyze predicted debris and toxic hazards to UPRR assets during the countdown, update the train protection area if necessary, and provide it to the MFCO/RSM. The train protection area will be based on the Impact Limit Line, the debris risk contours, the Tier 2 catastrophic abort toxic hazard corridor (THC), or the Tier 2 normal THC, whichever is more conservative.

3.3. The MFCO/RSM will pass the updated train protection area to the ASO as soon as possible. The MFCO/RSM and ROC will coordinate countdown “hold”, and ability to “pick up the count” decisions based on train status received from the ASO.

3.4. The ROC will manage all range user program objectives and the optimum liftoff time within the launch window. The ROC will coordinate any range user objectives or decisions that may affect, or be affected by, train hold criteria with the MFCO/RSM and ASO. When a critical train problem arises during the countdown, but prior to terminal count, the ROC will coordinate with the range user. The user decides when the best time is to hold or when to

resume the launch countdown. The ROC will coordinate with the MFCO/RSM and ASO to determine range readiness to meet these times.

3.5. A launch operation will be held if a train is projected to be in the train protection area with a violation of the individual risk criteria for either a debris or toxic hazard and the Launch Decision Authority (LDA) has not granted a waiver for the train to be there at liftoff. The ASO will attempt to coordinate holding trains that conservatively might be in the train protection area at liftoff. If the MRO cannot or will not hold a train, the ASO will report to the MFCO/RSM and the ROC the time the train is expected to clear the hazard area. The ROC will coordinate a new launch time with the range user, MFCO/RSM and ASO.

3.6. If a launch area destruct action, a self-abort or a planned jettison occurs where debris is suspected to impact railroad assets, the MFCO/RSM will instruct the ASO to request the MRO stop all trains until UPRR can inspect and clear the tracks. For on-base inspection and clearance, the Launch Support Team (LST) and Emergency Operations Center (EOC) will assist UPRR personnel in inspecting and clearing the UPRR tracks. The ASO will notify the MFCO/RSM and ROC when a train has stopped and when UPRR has determined the tracks are clear.

3.7. If a catastrophic abort occurs and updated THC analysis shows a Tier 2 over a stationary or moving train (train was held due to hazardous conditions or was allowed to proceed through an area originally not deemed hazardous), the MFCO/RSM will pass to the ASO identification of the spur tracks where the Tier 2 THC is entered and exited. The ASO will request that the MRO advise the train engineer to close all windows and doors while in this area. If the train must be held until the tracks are certified clear of debris, the ASO will request the engineer maintain a buttoned-up configuration until further notice. If the train is moving, no attempt will be made to stop it for toxic hazards unless a Tier 3 THC is anticipated on its path. The MFCO/RSM will notify the ASO and the ROC when hazardous conditions no longer exist and trains are cleared to pass through the previously identified THC.

ROBERT A. LONG, Colonel, USSF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

30SWI13-207, *Range Surveillance,* 20 November 2006

Adopted Forms

AF Form 847, *Recommendation for Change of Publication,* 22 September 2009

Abbreviations and Acronyms

2ROPS—2d Range Operations Squadron

ASO—Aerospace Surveillance Officer

AFMAN—Air Force Manual

AFRIMS—Air Force Records Information Management System

EOC—Emergency Operations Center

FSA—Flight Safety Analyst

LDA—Launch Decision Authority

LST—Launch Support Team

MFCO—Mission Flight Control Officer

MRO—Manager Road Operations

RDS—Records Disposition Schedule

ROC—Range Operations Commander

RSM—Range Safety Manager

SLD30—Space Launch Delta 30

SLD30/CC—Space Launch Delta 30 Commander

SLD30/SE—Space Launch Delta Safety Office

SLD30/SEL—Space Launch Delta 30 Launch Safety

THC—Toxic Hazard Corridor

UPRR—Union-Pacific Railroad