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**Safety**

**TRAIN HOLD CRITERIA**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction describes responsibilities, procedures and the criteria to be used in determining train protection and subsequent “hold” or “proceed” decisions during missile 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 30th Space Wing (30 SW) units involved in missile launch operations. The use of the name or make of any specific manufacture, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

**SUMMARY OF REVISIONS**

Southern Pacific has been changed to Union-Pacific. Launch hold procedures and responsibilities have been clarified. Procedure to determine cost of holding an Amtrak train to pass on to launch user has been deleted because the cost information is not available to the Trainmaster.

**1. Responsibilities:**

- 1.1. The Commander, 30th Space Wing (30 SW/CC) has the overall responsibility for the safety of all launch operations.
- 1.2. The Mission Flight Control Officer (MFCO) (30 SW/SEO) determines what portions of the railroad track require protective measures.
- 1.3. The Aerospace Control Officer (ACO) (30 RANS/DOO) monitors railroad traffic and coordinates with the Union-Pacific Trainmaster to ensure train protection during launch operations.
- 1.4. Flight Safety Analyst (FSA) (30 SW/SEY) analyzes potential hazards to the railroad tracks due to launch operation.
- 1.5. Range Operations Commander (ROC) (30 RANS/DOO) manages Range countdown activities and passes final Range clearance for launch.

1.6. Union-Pacific Trainmaster maintains radio contact with and controls all railroad traffic that traverse Vandenberg AFB. The Trainmaster is stationed in Guadalupe.

**2. Background and Coordination.** The Union-Pacific Transportation Company (UPTC) right-of-way crossing Vandenberg AFB is private property, with the UPTC having the rights of a property owner. Most launch sites are located in areas where overflight of the railroad is unavoidable. A few of the northern Minuteman sites near Point Sal may not require railroad safety precautions. Coordination with the UPTC during launch countdown operations is effected through direct line communication between the trainmaster and the Aerospace Control Officer (ACO) in the Area Control Center.

### **3. Operations Procedures.**

3.1. The ACO (30 RANS/DOO) will ensure the current train location, movement, and schedules for all trains in the Vandenberg AFB area are documented and reported to the ROC (30 RANS/DOO) and MFCO (30 SW/SEO) as defined in 30 SWI 10-112, *Range Surveillance*.

3.2. The Flight Safety Analyst (FSA) (30 SW/SEY) will analyze predicted hazards from debris and toxic hazards to UPTC assets during the countdown and provide this information, as well as any updates, to the MFCO.

3.3. The MFCO will determine and update the train protection area, based on information received from the FSA, and pass this information to the ACO as soon as possible. The train protection area will be based on the Impact Limit Line, the train hazard impact probability contours, the Tier 2 catastrophic abort toxic hazard corridor (THC), or the Tier 2 normal THC, whichever is more conservative. The MFCO and ROC will coordinate countdown "hold", and ability to "pick up the count" decisions based on train status received from the ACO.

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 and ACO. 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 and ACO 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, and the Spacelift Commander has not granted a waiver for the train to be there, at liftoff. The ACO will attempt to coordinate the holding of trains that conservatively might be in the train protection area at liftoff. If the trainmaster cannot/will not hold a train, the ACO will report to the MFCO and the ROC of the train's time to clear the hazard area. The ROC will coordinate a new launch time with the range user, MFCO and ACO.

3.6. In the event of a launch area destruct action or self-abort, where land and railroad debris impact is suspected, the MFCO will instruct the ACO to request the trainmaster to stop all trains until the track can be inspected and cleared by the UPTC. For on-base inspection and clearance, the Disaster Control group will assist UPTC personnel in inspecting and clearing the UPTC tracks. The ACO will notify the MFCO and ROC when a train has stopped and when UPTC has determined the tracks to be 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 orig-

inally not deemed hazardous), the MFCO will pass to the ACO identification of the spur tracks where the Tier 2 THC is entered and exited. The ACO will request that the trainmaster advise the train engineer to close all open windows and doors while in this area. If the train must be held until the tracks are certified clear of debris, the ACO 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 unless a Tier 3 THC is anticipated on its path. The MFCO will notify the ACO and the ROC when hazardous conditions no longer exist and trains are cleared to pass through the previously identified THC.

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