

Executive Summary

This Range Condition Assessment (RCA) is being conducted for Naval Air Facility (NAF) El Centro in El Centro, California pursuant to the United States Department of the Navy (DON) Range Sustainability Environmental Program Assessment (RSEPA) Policy Implementation Manual (DON 2005) to assess the environmental condition of the NAF El Centro operational ranges. The purpose of the RCA is to answer the following two Decision Point 1 questions for NAF El Centro's operational ranges: Targets 101, 103, and the Parachute Drop Target within the R-2510 restricted airspace and Targets 68 and 95 within the R-2512 restricted airspace.

1. Are further steps required to maintain compliance?
2. Is further analysis required to assess risk of potential off-range release of munitions constituents (MCs)?

To answer Question #1, information was collected from site visits, personnel interviews, archive search reports, and document reviews to conduct a compliance and operations impact review of Federal and State environmental regulations. To answer Question #2, surface soil samples were collected and analyzed for MCs at Target 101 to determine whether practice ordnance is a significant source of MCs, whether MCs are being transported off-range via surface runoff, and whether MCs in surface soils pose a human health risk. Operational range site models (ORSMs) were then developed using Target 101 surface soil sample results and information collected from document searches, site visits, and interviews to analyze whether an off-range release of MCs is possible.

Decision Point 1 Question #1:

NAF El Centro's operational ranges meet all environmental compliance requirements.

Decision Point 1 Question #2:

Results of the surface soil sampling at Target 101 show that of the MCs analyzed (i.e., nitroglycerine, explosives, and perchlorate), only perchlorate was detected and the concentrations of perchlorate ranged from non-detect to 0.043 parts per million (ppm), which is significantly lower than the United States Environmental Protection Agency (EPA) Region 9 Residential Preliminary Remediation Goal (PRG) of 7.8 ppm. The results demonstrate that practice ordnance is not a significant source of MCs (Battelle 2007).

Surface soil sampling results from the three primary washes that drain from Target 101 do not show a strong correlation between the perchlorate concentrations in the Main Bull's Eye area, the perchlorate concentrations observed in the dry washes, and the flow

pattern of the washes. As stated above, perchlorate was detected at 0.043 ppm in surface soils at the Main Bull's Eye. Perchlorate was not detected in samples collected from the dry wash running through the Main Bull's Eye and it was not detected in the sample collected from the dry wash running approximately 1.25 miles southeast of the Main Bull's Eye. Perchlorate was detected at 0.010 ppm from the wash running approximately 1.75 miles southeast of the Main Bull's Eye. The perchlorate present in this wash may be naturally-occurring or due to other non-range related anthropogenic sources (Battelle 2007).

Perchlorate concentrations in surface soil samples collected from the Target 101 clay mine located approximately 0.75 miles west of the Main Bull's Eye ranged from non-detect to 0.012 ppm. This level is significantly lower than the EPA Region 9 Residential PRG of 7.8 ppm and is therefore considered an acceptable health level (Battelle 2007).

Using the sampling results described above and identifying potential pathways and receptors, the ORSMs developed for the NAF El Centro operational ranges demonstrate that because no source of MCs has been identified, there is not a potential for an off-range release of MCs. Therefore, further analysis is not required to assess the risk of potential off-range releases of MCs from Targets 101, 103, the Parachute Drop Target, 68, and 95.