



California Regional Water Quality Control Board

Central Valley Region

Robert Schneider, Chair



Alan C. Lloyd, Ph.D.
Secretary for
Environmental
Protection

Fresno Branch Office
Internet Address: <http://www.swrcb.ca.gov/~rwqcb5>
1685 E Street, Fresno, California 93706
Phone (559) 445-5116 • FAX (559) 445-5910

N60211_000673
CROWS LANDING
SSIC NO. 5090.3.A

Arnold Schwarzenegger
Governor

MARCH 10 P 2:52
LAND OFFICE

22 March 2006

Mr. Michael S. Bloom
Department of the Navy
Base Realignment and Closure
Program Management Office West
1230 Columbia Street, Suite 1100
San Diego, CA 92101-8571

8 MARCH 2006 DRAFT REMOVAL ACTION REPORT, NON-TIME CRITICAL REMOVAL ACTION, INSTALLATION RESTORATION PROGRAM SITE 11, NASA CROWS LANDING FLIGHT FACILITY, CROWS LANDING, STANISLAUS COUNTY

We have reviewed the 8 March 2006 *Draft Removal Action Report, Non-Time Critical Removal Action, Installation Restoration Program Site 11* at the NASA Crows Landing Flight Facility near Crows Landing in Stanislaus County. Your consultant, Shaw Environmental, Inc., prepared the report. The report summarized the removal action that occurred at Site 11 from 2 June 2005 to 4 September 2005.

Investigation Findings

Site 11, which is located north of the intersection of the runways at the Crows Landing facility, encompasses 15 acres, 11 of which are fenced. Seven ammunition storage bunkers were formerly located at Site 11. Additionally, the site was used for waste disposal, including office trash, kitchen waste, scrap metal, and empty paint and pesticide containers that were dumped into pits dug within the site and burned. One pit was used for disposal of scrap metal collected from two nearby practice bombing ranges.

A geophysical survey followed up with test pits and trenches identified six areas of concern (AOC). The Non-Time Critical Removal Action was conducted to remove the wastes, including munitions and explosives of concern (MEC), associated with each AOC and to properly dispose of the material at appropriate off-site facilities.

A total of 13,420 tons of waste material and soil were excavated from the six AOC. The findings at each of the AOC are summarized below.

- AOC 1
Waste removed: 1,129 tons
Disposal: Class II, Forward Landfill, Manteca
Analytical results: All compounds detected were below Preliminary Remediation Goals (PRGs) for industrial soil. Motor oil was detected at a maximum concentration of 68 milligrams per kilogram (mg/kg).

California Environmental Protection Agency

Backfill: Excavation backfilled with imported soil and compacted.

- AOC 2

Waste removed: 5,081 tons

Disposal: Class II, Forward Landfill, Manteca

Analytical results: Arsenic was detected at 13.1 mg/kg, which is higher than the established arsenic background concentration for the site of 6.0 to 12 mg/kg. All other compounds detected were below PRGs for industrial soil. Motor oil and diesel were detected at a maximum concentration of 1,000 mg/kg and 99 mg/kg, respectively.

Backfill: Excavation backfilled with imported soil and compacted.

- AOC 3

Waste removed: 5,163 tons

Disposal: Class II, Forward Landfill, Manteca and waste suspected of containing asbestos was disposed of as Class I waste at Forward Landfill.

MEC: MEC scrap was segregated for separate disposal. The Stanislaus County Sheriff's Department destroyed one piece of unexploded ordnance (UXO).

Analytical results: Arsenic was detected at 12.8 and 13.1 mg/kg, which is higher than the established arsenic background concentration for the site of 6.0 to 12 mg/kg. All other compounds detected were below PRGs for industrial soil. Motor oil was detected at a maximum concentration of 43 mg/kg.

Backfill: Excavation backfilled with imported soil and compacted.

- AOC 4

Waste removed: 225 tons

Disposal: All waste at AOC 4 was suspected of containing asbestos and was disposed of as Class I waste at Forward Landfill, Manteca.

Analytical results: All detected compounds were below PRGs for industrial soil. Motor oil was detected at a maximum concentration of 260 mg/kg.

Backfill: Excavation backfilled with imported soil and compacted.

- AOC 5

Waste removed: 1,501 tons

Disposal: Class II, Forward Landfill, Manteca.

Analytical results: Arsenic was detected in one sample at 12.2 mg/kg, which is higher than the established arsenic background concentration for the site of 6.0 to 12 mg/kg. All other compounds detected were below PRGs for industrial soil. Motor oil was detected at a maximum concentration of 19 mg/kg.

Backfill: Excavation backfilled with imported soil and compacted.

- AOC 6

Waste removed: 321 tons

Disposal: Class II, Forward Landfill, Manteca.

MEC: MEC scrap was segregated for separate disposal.

Analytical results: All detected compounds were below PRGs for industrial soil.

Backfill: Excavation backfilled with imported soil and compacted.

The report concluded that based on the data obtained during the removal action, no further action is needed at IRP Site 11 to address impacted soil or groundwater. Further, the report stated that the risk associated with the low-level petroleum hydrocarbon detections is minimal. The only additional work to be completed at Site 11 is MEC verification and clearance to minimize the risk associated with any potential MEC items remaining on the site.

Comments

Based on the data presented in the draft report, it would appear that the waste and associated impacted soil at each of the six AOC has been adequately characterized and remediated. As such, we concur that no further investigation/remediation regarding the six AOC is needed, and that the levels of petroleum hydrocarbon remaining in the soil pose a minimal risk. Further, we agree that the remaining MEC verification and clearance should be completed at Site 11.

Our only question regarding the report is as follows: What was the final disposition of the MEC removed from Site 11? Appropriate documentation for the MEC disposal should be provided.

By 12 May 2006, please provide a finalized version of the report addressing the above question. If you have any questions, please contact Greg Issinghoff at (559) 488-4390.



RUSSELL W. WALLS

Senior Engineer

RCE No. 43140

GJI:gji

cc: Mr. Don Chuck, NASA Ames Research Center, Moffett Field
Ms. Francesca D'Onofrio, California Department of Toxic Substance Control, Sacramento
Mr. Alan Berry, California Integrated Waste Management Board, Sacramento
Ms. Nicole Damin, Stanislaus County Hazardous Materials Division, Department of
Environmental Resources, Modesto
Mr. Keith Boggs, Stanislaus County Chief Executive Office, Modesto