



# California Regional Water Quality Control Board

## Central Valley Region



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### ***DRAFT RECORD OF DECISION/REMEDIAL ACTION PLAN, INSTALLATION RESTORATION PROGRAM SITES 10, 12, 13, 14, 16 AND 18, NAVAL AUXILIARY LAND FIELD (NALF) CROWS LANDING, STANISLAUS COUNTY.***

We have reviewed the Draft Record of Decision/Remedial Action Plan (ROD/RAP) for IRP sites 10, 12, 13, 14, 16 and 18, dated 31 March 1998. The Draft ROD/RAP presents the selected remedial action at these sites as no further action. The rationale for no further action is provided in the Remedial Investigation Report, dated 31 July 1997, which we reviewed as well as the Site Investigation Report, dated 31 July 1992.

As discussed in the RPM meeting of 2 April 1998, the Navy agreed that our previous comments of 8 April 1998 on these sites, presented in our review of the Feasibility Study (FS) Report, would be addressed in the ROD/RAP. In our general comment, we summarized which information the ROD/RAP should present, in lieu of providing an FS for these sites. In addition to these FS comments, we have the following specific comments on IRP sites 10, 12, 14 and 16.

Ordinarily, the RI would be followed by an FS Report to evaluate potential remedies for each site. However, the Navy chose not to submit an FS Report and instead has submitted a ROD/RAP. We believe that the RI Report presented adequate information for starting an FS. However, we believe that the Navy has not provided sufficient information to support a NFA status for all sites.

#### General Comment

1. The Navy should revise the ROD/RAP to provide a summary table for each site showing all contaminant concentrations detected during the RI and SI. Site maps should be presented showing all soil sample locations and depths. These site maps should show all groundwater monitoring wells that could be used to evaluate potential groundwater contamination. The Navy should provide an evaluation with these tables indicating which constituents were included in the sampling and analysis plan to evaluate potential groundwater contamination at each site.

## Specific Comments

### Site 10 - Rubble Disposal Area

1. The Navy indicated that the U.S. EPA evaluated this site previously and determined that the nature of activities and historical descriptions suggest that Site 10, warrants no further action. The Navy has indicated that no samples were collected at this site. The ROD should provide the basis for the no further action determination and should at a minimum include information that was presented to the U.S. EPA. We will evaluate this data and determine if we are able to concur with the U.S. EPA's determination. Our experience with similar disposal sites at other military facilities indicates that historical records alone are often not a complete record of disposal practices.

### Site 12 - Maintenance Shop Area

2. Previous investigation indicate that the Navy evaluated pesticides, petroleum hydrocarbons and chlorinated VOCs and SVOCs. Based on the site history there appears to be sufficient justification to evaluate most of these constituents. However, the Navy performed only a limited investigation to evaluate chlorinated VOCs. Table 4-10 of the RI Report shows that most of the sampling for VOCs was done at 2 feet below ground surface (bgs). Several samples were collected approximately 18 feet BGS. However, these samples were not evaluated for chlorinated VOCs. The site's historical record, however, indicates that the wash pad contained 4 drains located at the center of the wash pad. The completion depth of these drains is unknown. The presence of these drains and the limited depth of the VOC samples leave too much uncertainty with respect to the presence or absence of VOCs. Additional data should be collected to evaluate chlorinated VOCs.
3. We have reviewed groundwater data associated with IRP Site 12. The RI Report indicates that the Navy installed one well 12-MW-1 near this site. Also, additional monitoring wells in the vicinity of UST 117, adjacent to IRP site 12, were evaluated for VOCs. However, all these wells went dry shortly after their construction. The RI Report indicates that monitoring well 12-MW-1 was sampled only twice for VOCs. We are concerned that these monitoring wells were not evaluated for more than 2 quarters. We believe that 2 quarters of groundwater monitoring data is insufficient to evaluate this site because the groundwater flow direction appears to be variable and appears to be influenced by several irrigation wells surrounding the facility. Therefore, the Navy should evaluate if any other monitoring wells could be used to provide further evaluation for chlorinated VOCs at IRP Site 12. If the Navy is unable to evaluate if this site is a potential VOC source area, the Navy may need to construct additional monitoring wells in this area. Additional evaluation of the groundwater data is also necessary in order to evaluate if additional soil characterization for chlorinated VOCs is necessary.

### Site 14 - Fire Training Exercise Area

4. Site 14 was a fire training exercise area that was used for burning of JP-4 fuel and cleaning solvents. The area consisted of an unlined burn pit that was used from 1943 to 1987. The RI Report indicates that soil and groundwater sampling was conducted at this site. The Navy

installed one monitoring well which was sampled two times before it became dry. Sampling of this well (B-13) did not indicate the presence of VOCs. The Navy conducted soil excavation and soil remediation by a thermal heat process which volatilizes VOCs (March 1992). Confirmation sampling results indicated low concentrations of BTEX suggesting that this site was remediated to protect groundwater from these constituents. However, the confirmation sampling results also indicated the presence of 1,1,1 TCA and TCE in one side wall excavation sample (5 feet below ground surface). The Navy only included analyses for chlorinated VOCs in 5 near surface soil sampling locations (see Figure 4-11 in RI Report).

5. We are concerned that the confirmation sampling results did not evaluate the extent of residual chlorinated VOCs. In addition, the groundwater monitoring data presented in the Annual Groundwater Monitoring Reports shows that the groundwater flow direction is variable and appears to be influenced by irrigation well pumping. Because the site soil and groundwater monitoring data is very limited and inconclusive, additional evaluation appears to be necessary to determine the extent of VOCs at Site 14.
6. We request that the Navy construct additional monitoring wells that should be located downgradient of this site, taking into account seasonal changes in the groundwater flow direction. If possible, the Navy can use existing monitoring wells if they are appropriately located. These monitoring wells must be sufficient to establish the flow direction and the observed seasonal changes. At least 4 quarters of groundwater monitoring data should be collected to evaluate if chlorinated VOCs are present at this site. In addition, the ROD/RAP should include drawings that clearly indicate the original depth of the burn pit, the depth of the excavation and the soil sampling locations.

#### Site 16 - Pesticide Mix Area

7. The Navy conducted soil and groundwater investigations and evaluated pesticides, VOCs and metals at this site. Only one groundwater sample was collected from a groundwater monitoring well located adjacent to the pesticide mix area (16-MW-01). This sample was analyzed for VOCs, pesticides and TPH, but only detected low concentrations of TPH. It appears only one sampling event (September 1991) was conducted before this well went dry. Soil samples were limited to two locations to a depth of 25.5 feet below ground surface at the northern side of the concrete pad and mixing sink. Later RI activities, performed in 1995, determined that arsenic concentrations were above background concentrations and could potentially impact water quality. The presence of arsenic was attributed to the use of herbicides. The Navy proceeded to remove arsenic contaminated soils in areas that surrounded the concrete pad and excavations extended as far as 20 feet south of the pad.
8. Although the SI sampling, did not indicate the presence of pesticides, we believe the number of samples that were evaluated, was insufficient to provide an adequate characterization of this site. The presence of arsenic contamination (see Figure 4-13, RI Report) around the concrete pad shows that a larger area was impacted by site operations than was previously suspected during the SI.

Crows Landing

9. The presence of arsenic contamination in areas surrounding the concrete pad and the description of site operations, suggest that pesticides should have also been evaluated in areas where arsenic was detected. Because the Navy has performed soil excavation in this area, we request that the Navy provide additional confirmation sampling for pesticides and evaluate if pesticides are present in areas surrounding the former concrete pad. If this confirmation sampling indicates leachable concentrations of pesticides are present that could impact groundwater, the Navy may also be required to construct additional groundwater monitoring well(s) and evaluate potential impacts to groundwater for a minimum of 4 consecutive quarters.

We look forward to resolving the above issues at the next RPM meeting. We believe that a majority of these comments can be resolved by providing additional information for our review. If you have questions prior to meeting, please call me at (916) 255-3050.



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