

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
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18 May 1988

J. G. Sims, Cdr., CEC, USN
Public Works Officer
Naval Air Station
Moffett Field, CA 94035-5000

NAVAL AUXILIARY LANDING FIELD, CROWS LANDING, STANISLAUS COUNTY

We have reviewed the document "*Site Investigation, Crows Landing Fire Fighting School, Crows Landing, California*," prepared by ERM-West. Our comments are summarized in the enclosed memo. Please address each item in the memo and submit your specific workplan for remediation by 18 July 1988.

If you have any questions, please call me at (916) 361-5679.

Kenneth B. Landau
for
KENNETH B. LANDAU
Senior Engineer

DTW/mm

Enclosure

cc: U. S. Environmental Protection Agency, San Francisco
Department of Health Services, Toxic Substances Control Division,
Sacramento
ERM-West, Walnut Creek

Memorandum

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD • CENTRAL VALLEY REGION

3443 Routier Road
Sacramento, CA 95827-3098

Phone: (916) 361-5600
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TO: Kenneth D. Landau
Senior Engineer

FROM: Daniel T. Ward
Associate Engineer

DATE: 18 May 1988

SIGNATURE: Daniel T. Ward
916 361 5655

SUBJECT: U.S. NAVAL AUXILIARY LANDING FIELD, FIRE FIGHTING SCHOOL BURN SITE,
CROWS LANDING, STANISLAUS COUNTY

I have reviewed ERM-West's investigation of the subject site.

This site has been used for approximately 25 years for fire fighting training. Airplane wreckage and mock-up airplanes are set on fire and extinguished for practice at the site. Various waste flammable liquids are burned as fuel. According to this report, these liquids probably included diesel fuel, jet fuel, gasoline, solvents including Stoddard Solvent, crankcase oil, methyl ethyl ketone, transmission fluid, PCB-containing transformer oils, and cooking grease.

The fire fighting school plans to upgrade the operation by constructing a bermed concrete pad to contain fuels not consumed by the fire. Hydrocarbon odors were detected in the soils removed in preparation for pad construction. Excavated soils were stockpiled on plastic sheeting. Eleven soil borings were made in the general vicinity: one soil boring was in the excavation, six borings were made adjacent to the excavation, and four were made away from the excavation. Soil samples were taken in the borings and in the stockpiled soils. One of the borings was converted to a shallow ground water monitoring well.

All soil samples were analyzed for TPH, BTX, and a select number were analyzed for PCBs and EPA 8240 chemicals. BTX and TPH constituents were found at 13 feet below ground surface and above in 5 of the 7 borings in an area near the excavation. PCBs were not detected. EPA 8240 chemicals were not detected at the detection limits stated.

The report contains a proposal for excavation and treatment of the soils at the site. My specific comments are as follows:

1. The highest PID organic vapor readings came from boring B5 and strong petroleum odors were noted on the drill log, yet no BTX or TPH were detected in the samples. B5 is not among the locations to be excavated as remedial action. The area around B5 should be investigated further as indicated in the excavation plan.
2. The analysis of the sample from B1 by EPA Method 8240 has detection limits from 100 to 10,000 ug/kg. These levels are generally well above our cleanup levels. This situation should be resolved. It was apparently based upon these analyses that it was decided that EPA 8240 chemicals would not be analyzed for in ground water. Additional samples should be taken and analyzed by EPA 8240 with acceptable detection limits.

3. On page 3-4, the statement is made that *"Fire Fighting School activities at the burn site have apparently had no detectable impact on underlying ground water."*

I have several concerns with this statement:

- a. Only one monitoring well was constructed at the site. While the ground water gradient has been estimated to be to the northeast, three wells must be present in the water table aquifer to truly establish the gradient. Perhaps other shallow wells on-site can be used for this purpose.
 - b. As discussed in No. 2 above, it is unclear whether EPA 8240 chemicals are present at elevated concentrations at the burn site. Neither deep soils nor ground water were analyzed for 8240 constituents. It is possible that these chemicals continue to leach from the site.
 - c. The concentration of toluene in boring B-11 increased with depth from 8 to 13 feet. No deeper sample was taken.
 - d. With a, b, and c in mind, the possibility of ground water contamination from the site should be re-evaluated. If appropriate, additional work should be done to investigate this possibility. At a minimum, the monitoring well should be resampled and analyzed by EPA 624.
4. On page 3-4, the statement is made that *"Guidelines established internally by the Regional Water Quality Control Board ... for petroleum hydrocarbons in soils indicate that concentrations less than 100 ppm require no remedial action."* The Region 5 Sacramento office has no such guideline. The goals that we have set internally for cleanup of petroleum hydrocarbons are 1 ppm in soil and non-detectable in ground water. These goals may be modified due to site conditions and the proximity and quality of surface and ground water. The recommendation that only soils that exceed 100 ppm TPH are to be excavated should be amended accordingly.
5. Treatment of soils on-site by aeration is proposed. While we concur with this plan, the soil and ground water situation at the treatment site should be evaluated to assure that new soil or ground water contamination does not occur.

DTW/mm