

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL DIVISION
NORTHERN CALIFORNIA SECTION
4250 POWER INN ROAD
SACRAMENTO, CA 95826
(916) 739-3145



March 22, 1988

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

Dear J. G. Sims:

REVIEW - SITE INVESTIGATION CROWS LANDING FIRE FIGHTING SCHOOL

Enclosed please find the Department of Health Services' comments and recommendations on the above named report. The report was reviewed by Gordon Stephens, Hazardous Materials Specialist.

In general Crows Landing Fire Fighting School should be aware that the Environmental Protection Agency may regulate fire fighting training facilities under RCRA in the future. As the report recommends, the design of the new facility should be coordinated through the regulatory agencies.

If you have any questions or concerns about these comments, please feel free to call Gordon at (916) 924-2345.

Sincerely,

David Wang
David Wang, P. E.
Senior Waste Management Engineer
Toxic Substances Control Division

Enclosure

cc: Ric Notini
Toxic Substances Control Division
Berkeley

GS:mr

Memorandum

To : David Wang, P.E.
Senior Waste Management Engineer

Date : February 11, 1988

Subject: CROWS LANDING
FIRE FIGHTING SCHOOL

From : *Gordon H. Stephens*
Gordon H. Stephens
Hazardous Materials Specialist

SITE INVESTIGATION: CROWS LANDING FIRE FIGHTING SCHOOL
CROWS LANDING CALIFORNIA

As requested I have reviewed the above named report. My comments are based on previous reports on Fire Fighting Training Facilities (FFTF) and a recent memorandum from the Environmental Protection Agency (EPA).

A memorandum dated June 24, 1987 originating from EPA Region 10, requests EPA Headquarters to state a position on FFTF. Since materials used at many FFTFs may include both characteristic and listed wastes, EPA is considering classifying FFTFs as "thermal treatment of hazardous waste" or "land disposal of hazardous waste". This in turn may cause regulation of FFTF under RCRA, both through EPA and the Department of Health Services (DHS).

Depending on EPA's position the FFTF at Crows Landing may be regulated under RCRA in the future. Crows Landing Fire Fighting School should be made aware of this. The DHS Permitting Unit is currently developing guidelines for constructing FFTFs. It is advisable that the construction details of the new FFTF be reviewed by the DHS Permitting Unit.

In general the methodology presented in this investigation was acceptable. The following comments point out the areas of concern or where questions exists.

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- o One ground water monitoring well placed in the assumed downgradient is not sufficient to determine if ground water has been impacted from this facility. For instance was local pumping of public or domestic wells considered? A minimum of three wells (or piezometers) are needed to determine ground water gradients. The RCRA Technical Enforcement Guidance Document recommends at least three downgradient wells plus one upgradient well be installed.

- o Geologic cross sections would be helpful in understanding the stratigraphy in the area. Two cross sections should be constructed perpendicular to each other.
- o Surrounding area descriptions are lacking. Example are population in relation to the site, and public or domestic wells in the area.
- o (page 2-3) The use of 50-50 mixture of sand and bentonite used to backfill the bore holes may not be sufficient in the unsaturated zone. A calcium rich clay formation may tend to extract moisture from the sodium bentonite; therefore, possibly causing cracks or other paths for cross contamination.
- o Monitoring well filter packs should be engineered through sieve analyses of the aquifer formation. The screen should be then selected for the filter pack. As mentioned above additional wells are needed to determine whether ground water has been impacted from the facility.
- o The actual clean up recommendations are similar to that used in underground tanks. The Department of the Navy should be aware that the soil borings do not define fully the area of contamination and the clean up may extend further than expected from this report. Any visual contamination of the soil should be removed during the clean up process. Verification sampling should be done as in the recommendations. DHS would like a proposal for the clean up prior to its commencing, included in this proposal should be a Health and Safety Plan, and a sampling verification plan.

As mentioned under the recommendations on page 4-2, the design of the new FFTF should be coordinated through the regulatory agencies. Additional investigation also should be coordinated through our office.

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GS/gs