



April 26, 1995

Bart Simmons, Ph.D.  
California Environmental Protection Agency  
Department of Toxic Substances Control  
Hazardous Materials Laboratory  
2151 Berkeley Way  
Berkeley, California 94704

SUBJECT: Moffett Federal Airfield Phase I  
Site-Wide Ecological Assessment

Reference: CTO0236/  
2738.1037/3.1.7

Dear Dr. Simmons:

This letter and the enclosures in this package are provided in response to your request for an independent review of the identification of Azinphos-methyl as reported in the Phase I Site-Wide Ecological Assessment (SWEA) at Moffett Federal Airfield. As discussed previously (via facsimile dated March 14, 1995), Azinphos-methyl was detected in 3 out of 53 sediment samples (or 5.7 percent detection). The detected concentrations in the three sediment samples were as follows:

- 220 µg/kg in sample SSRP-013 (collected 7/12/93)
- 270 µg/kg in sample SSNC-003 (collected 7/06/93)
- 203 µg/kg in sample SSND-001 (collected 7/02/93)

These samples were not collocated (the first sample is in the Navy Retention Pond, the second is near the south end of the Northern Channel, and the third is in the north end of the Navy Ditch; see Figure 5-1 of the Phase I SWEA report), and they are not related by surface water hydrology.

All three of the detected concentrations were qualified as "J-T" by Terra West (the data validation firm). The following comment was noted by Terra West in the validation summary reports:

The positive hits for Azinphos-methyl and Coumaphos were the result of several peaks coeluting near the end of the run. The %D between the 2 columns for several of these detects was >25%. The lab indicated in the case narrative that the detects may be the result of a matrix interference. All detects for Azinphos-methyl and Coumaphos were qualified J-T.

I understand this to mean that Azinphos-methyl eluted within the retention time window for Azinphos-methyl on both the primary and secondary columns; however, the percent difference for the quantitation on the primary and secondary columns was greater than 25 percent for Azinphos-methyl. Based on the qualification made by Terra West and the

comments noted in the laboratory case narrative, I believe that Azinphos-methyl was incorrectly identified as being present in the samples because of matrix interference.

When we discussed this subject on March 16, 1995, you felt that you should perform an independent review of the Azinphos-methyl data. Subsequently, the raw data were retrieved. I took the opportunity to review the raw data, and discovered that Terra West was in error by qualifying Azinphos-methyl as "J-T" in sample SSND-001 because the percent difference was less than 25 (5.3 percent, see enclosed table). Also, I wanted to check the laboratory's calculation of percent difference and noted the following:

- The concentrations reported on the chromatograms as "Adjusted Amount" are the wet weight concentrations. The concentrations reported on Form 10A are dry weight concentrations. This does not change the result for percent difference, but I spent some time trying to understand what was being represented on the various forms, and I thought I'd save you some time.
- I calculated percent difference as follows:  $[ | P - C | / (( P + C ) / 2 ) ]$  times 100, where P = the concentration from the primary analysis and C = the concentration of the confirmatory analysis. I'm not sure how the laboratory calculated percent difference, but their values were less than mine by a factor of 2.
- As indicated on Form 10A, the retention time windows for compound identification seem wide, potentially resulting in false positives.

The entire sample delivery group for each of the three samples has been provided for your independent evaluation. Please call me at 510/975-3566 if you have any questions.

Sincerely,  
MONTGOMERY WATSON



Ruth Siegmund  
Chemist

enclosures

cc: Joseph P. LeClaire, Ph.D. (without enclosures)  
Stephen Chao, (without enclosures)  
Michael Gill, EPA (without enclosures)  
Joseph Chou, DTSC (without enclosures)  
Michael Bessette, RWQCB (without enclosures)

## ENCLOSURES

### SAMPLE DELIVERY GROUP

THESE ENCLOSURES WERE NOT SUBMITTED TO  
THE ADMINISTRATIVE RECORD FILE.

FOR ADDITIONAL INFORMATION,  
PLEASE CONTACT:

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