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MCAS EL TORO  
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Cal/EPA

July 11, 1996

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Governor

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Control

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Mr. Joseph Joyce  
BRAC Environmental Coordinator  
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**COMMENTS ON DRAFT REPORT FOR THE ANTHROPOGENIC PAH REFERENCE-LEVEL STUDY FOR MARINE CORPS AIR STATION (MCAS) EL TORO**

Dear Mr. Joyce:

The California Environmental Protection Agency (Cal/EPA) has completed the review of the above subject document dated May 1996, prepared by Bechtel National, Inc. The report presents the findings of the anthropogenic (man-made) polynuclear aromatic hydrocarbon (PAH) compound reference level study at MCAS El Toro. In addition, the reference-level sampling locations associated with runway parcels were also assessed for levels of metals and dioxins. Samples were analyzed for PAHs using fixed-base laboratory and field-screening immunoassay methods. The report presents a comparison between the immunoassay results and the fixed-base laboratory results to assess the accuracy and reliability of current immunoassay methods to detect PAHs at levels below U.S. EPA PRGs.

This letter is to transmit the enclosed Department of Toxic Substances Control and the Hazardous Materials Laboratory comments on the report. Please incorporate the agreed upon comments, where appropriate, and send us a response to comments along with a revised document. Thank you for your cooperation. If you have any questions, please call me at (310) 590-4891.

Sincerely,

*for Tayseer Mahmoud*

Tayseer Mahmoud  
Remedial Project Manager  
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Enclosures

cc: See Next Page



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*July 11, 1996*  
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*July 11, 1996*

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**DEPARTMENT OF TOXIC SUBSTANCES CONTROL**  
**Comments on**  
**Draft Report For Anthropogenic PAH Reference-Level Study**  
**Marine Corps Air Station-EI Toro**  
**Dated May 1996**

**GENERAL COMMENTS**

The data tables are confusing. Some PAH results are for "NOAA PAH-SIM (presumably GC/MS selective ion monitoring)", but the detection limits are as low as 2ug/kg, which appear to be Method 8310 (HPLC) results. It appears that these are really 8310 results. The data tables should be re-formatted to clarify which methods are used for each result.

**SPECIFIC COMMENTS**

**Table 2-1**

CAS stands for Chemical Abstracts Service, not Chemical Analysis Survey.

**Table 2-2**

The holding times of 14 days have no scientific basis. These should be called turnaround times rather than holding times. Holding times are based on the chemical stability of the analytes, which is not an issue for PAHs, PCDD/Fs, and metals in this study.

**SECTION 3.1 Polynuclear Aromatic Hydrocarbons**

No data was presented for U.S. EPA Method 8270M. The Workplan specified the method. The data should be presented and compared with the data from U.S. EPA Method 8310.

**Table 3-1**

Napthalene is misspelled.

**SECTION 3.1.2 Tail Metals and Dioxins**

Table 3-2 should specify the number of samples "N" and standard deviations when means are provided.

Table 3-2 lists the maximum values for iron and lead as less than the corresponding minimum values.

The currently accepted approach between the Navy and the BCT regulatory agencies is to

use soil inorganic background levels in remedial investigation reports and risk assessment calculations. Therefore, there seems to be no point in making the comparison of inorganic soil levels to PRGs. Rather, the comparison should be only to establish background values.

#### **TABLE 3-2**

This table would benefit from the presentation of all background levels for inorganics and the deletion of inorganic PRGs. See the previous comment for further explanation.

#### **Section 3.2.1 ENSYS Results**

Since one of the objectives of the study is to evaluate immunoassay test kits, a summary table of results should have been provided similar to Table 3-1.

#### **Section 3.2.2 OHMICRON RaPID Assay Results**

See comments above for Section 3.2.1, ENSYS Results.

#### **Table 4-2, page 4-4**

Note 'c' should read "...50 milligrams per kilogram" instead of "100 micrograms per kilogram".

#### **Section 4.3 DIOXIN AND METALS SAMPLES FOR THE RUNWAY PARCELS**

Because of the issue over inorganic background, summary data should have been presented for metals.

#### **APPENDIX B ANALYTICAL RESULTS SUMMARY**

Descriptive meanings of the table headings and codes should be provided at the front of the table.

#### **CONCLUSION**

The Department of Toxic Substances Control concurs with the conclusions regarding the levels of anthropogenic PAHs and the viability of the PAH immunoassays. The design of the study and interpretation of results are consistent with guidance from the CMECC Chemical Data Quality and Cost Reduction Process Action Team.