

Interoffice Communication

To O. D. Steffey
From W. D. Broddle
Date August 18, 1982
Subject WORKPLACE HAZARDS OF LABORATORY CHEMICALS, WESTLAKE REFINERY

My memorandum of August 5, 1982, to you was a toxicological review of the 1982 annual inventory of laboratory chemicals at the Westlake refinery. On August 13, we discussed this memorandum with Mr. M. Johnston and agreed to send him an outline of the specific health hazards and to suggest appropriate workplace practices.

The following are the chemicals and health hazards as discussed above:

<u>Chemical</u>	<u>Potential Toxic Properties</u>
1. Arsenic compounds	Systemic poisons, carcinogens.
2. Benzene	Carcinogen.
3. Bruccine compounds	Potent stimulant; very toxic (Rat oral LD ₅₀ , 1 mg/kg.)
4. Cadmium compounds	Kidney toxin, carcinogen.
5. Chloroform	Liver-kidney toxin, carcinogen
6. Chromium trioxide	Carcinogen.
7. Chromates	Carcinogenic (hexavalent chromium more potent).
8. Cobalt compounds	Systemic toxin, blood disorders.
9. Creosote	Skin carcinogen.
10. Dichlorobenzene	Skin sensitizer.
11. Dichlorobenzene propane	Similar compounds are mutagenic and carcinogenic (i.e., dibromo- chloro-propane).
12. Dimethyl phenylene diamine and its salts	Mutagens and carcinogens; sensitizers.
13. Diphenyl benzidine	Mutagens and carcinogens; sensitizers.
14. Formaldehyde	Mutagens and carcinogens; sensitizers.
15. Hydrazine salts	Irritant, mutagen & carcinogen.
16. Lead salts	Toxic to kidney & nervous system, carcinogenic.
17. Mercury salts	Systemic toxin (kidney, gastro- intestinal tract).
18. Methanol	Systemic toxin, blindness.
19. Methyl isobutyl ketone (MIBK)	Nerve damage.

<u>Chemical</u>	<u>Potential Toxic Properties</u>
20. Morpholine Morpholine borane	Irritant, systemic toxin, mutagen, carcinogen.
21. Nickel salts	Sensitizer, carcinogenic.
22. Picric acid	Skin sensitizer; explosive if not kept moist.
23. Sodium azide	Systemic toxin, Very toxic (Rat oral LD ₅₀ , 40 mg/kg.
24. Sodium cyanide	Systemic toxin; Very toxic (Rat oral LD ₅₀ , 6 mg/kg).
25. Sodium diethyl dithiocarbamate	Cholinesterase inhibition (causes nerve toxicity).
26. Thioacetamide	Liver toxin, carcinogen.
27. Trichloro-trifluoro ethane	Analogs are mutagens and carcinogens.
28. Tri-N-butylamine	Irritant.

I understand that you will suggest appropriate workplace practices and send all of this information to M. Johnston.



W. D. Broddle
Senior Toxicologist

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cc:

J. L. Riddle

E. L. DeWhitt, Jr.