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727 THE EFFECTS OF SOME COMMON VOLATILE ORGANIC DUMPSITE CHEMICALS (DSCs) ON RAT NEUTROPHIL (PMN) FUNCTION *IN VITRO*. E M Shobe, P E Ganey, and R A Roth, Dept. of Pharmacol./Toxicol. and Institute for Environ. Toxicol., Michigan State Univ., E. Lansing, MI.

The activation of PMNs to release reactive oxygen metabolites or hydrolytic enzymes has been implicated in some mechanisms of toxicity. This study characterized the ability of six DSCs to alter the production of superoxide anion or release of β -glucuronidase by PMNs *in vitro*. The DSCs tested were trichlorethylene, 1,1,1-trichloroethane, carbon tetrachloride, benzene, toluene, and methylene chloride. Glycogen-elicited peritoneal PMNs from rats were incubated *in vitro* at 37°C with DSCs in the range of ~5ppt to ~5ppm. DSCs did not significantly alter superoxide production or β -glucuronidase release. In addition, the DSCs were not cytotoxic to the PMNs as indicated by a lack of LDH release. Synergistic effects between the DSCs and known PMN activators were also investigated: the DSCs were again found to have no effect on superoxide production or β -glucuronidase release. These results indicate that the common DSCs used in this study do not affect membrane-associated functions of PMNs *in vitro*. (Supported by ES04911)

728 DEVELOPMENT OF RECOMMENDED PUBLIC HEALTH LEVELS FOR DRINKING WATER IN CALIFORNIA. Y Y Wang, R H F Lam, J P Brown, A M Fan, and A M Milea. Calif. Dept. of Health Services, Berkeley, CA.

The California Safe Drinking Water Act of 1989 requires the development of recommended public health levels (RPHLs) in addition to maximum contaminant levels (MCLs) for drinking water contaminants. RPHLs will provide additional health protection for approximately 75% of the State's population. RPHLs are based solely on health effects and MCLs are to be set as close as practical to RPHLs. The Act also requires MCLs to be reviewed every five years after adoption. As of October 1990, 42 MCLs for organics and 11 for inorganics have been promulgated. Initially, 45 RPHLs (38 organics and 7 inorganics) will be proposed. Ten of the RPHLs will be lower than existing MCLs: benzene, chlordane, 1,2-dibromo-3-chloropropane, 1,3-dichloropropene, ethylene dibromide, heptachlor epoxide, perchloroethylene (PCE), toxaphene, trichlorethylene (TCE), and vinyl chloride. RPHLs can not be enforced if the chemical can not be detected at that level. Analytical method detection limits (MDLs) need to be at least 5 to 10 times lower than the enforceable levels so that monitoring may be effectively conducted. This paper compares the RPHLs to the MDLs for data gap investigation. A preliminary analysis indicates that among the 10 chemicals, only benzene, PCE, and TCE have methods available with adequate MDLs for monitoring purposes.

729 EVALUATION OF POTENTIAL SOURCES OF 1,2,8,9-TCDD IN AQUATIC BIOTA FROM NEWARK BAY. M Harris, B Finley, R Wenning and D Paustenbach, ChemRisk, a Division of McLaren/Hart, Irvine, CA.
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A recent report indicated that elevated levels of 1,2,8,9-TCDD had been measured in the hepatopancreas of several lobsters (*Homarus americanus*) and blue crabs (*Callinectes sapidus*) located in and around Newark Bay. Although a recent fingerprinting study has indicated that there are multiple sources of PCDDs and PCDFs near Newark Bay, it has been suggested that the presence of 1,2,8,9-TCDD in the biota samples is related to a former manufacturing facility located several miles upstream on the Passaic River. This paper presents a review of the PCDD/PCDF literature with respect to the sources of 1,2,8,9-TCDD in the environment. The analysis indicates that 1,2,8,9-TCDD is associated almost exclusively with combustion products of wood and waste incinerators rather than chemical synthesis or manufacturing (as originally suggested). Further, 1,2,8,9-TCDD does not appear to be a product of chemical reactions that produce PCDDs/PCDFs such as pulp and paper mill processes and the synthesis of 2,4,5-T and 2,4-D. Accordingly, it is likely that the presence of 1,2,8,9-TCDD in sediments and in aquatic biota collected from Newark Bay is due to combustion sources rather than the former manufacturing facility.

730 INTERIM REPORT OF THE 65 WEEK FINDINGS OF THE CHRONIC TOXICITY/CARCINOGENICITY STUDIES FOR DENVER'S POTABLE REUSE DEMONSTRATION PROJECT. G Wolfe¹, B Myers¹, W Lauer², and L Condie³. ¹Hazleton Washington, Vienna, VA; ²Denver Water Dept., Denver, CO; and ³U. S. Army, Dugway, UT.

Chronic Toxicity/Carcinogenicity studies are being conducted in F-344 and B6C3F1 mice to evaluate the relative health effects of highly treated reclaimed water derived from secondary wastewater compared to Denver's high-quality drinking water. Water samples of reclaimed water (RD) and ultrafiltered water (UF, rat only) and Denver's drinking water (FH) are concentrated 5000 X using XAD resins. Samples are then diluted to 500 X or 150 X using distilled water. After dilution of the FH sample, chloroform, bromodichloromethane, and 1,1-dichloropropane are added to represent volatile organic carbons (VOC's) found prior to and lost during the XAD resin concentration process. No VOC's are added to the RD or UF samples since no VOC's are consistently identified in the RD or UF samples. The first 65 weeks of the 104 week studies have been completed and no findings of toxicological significance have been noted in survival, body weights, food and water consumption, clinical observations, and clinical, gross, and microscopic pathology. There has been a slight decrease (5 - 15%) in weekly water consumption in the rat and mouse FH groups which is believed to be the result of the VOC's and not of toxicological significance.