



# "Chemical Weapons: What, Where, and How"

by

Dr. Robert J. Radel

U.S. Army Dugway Proving Ground

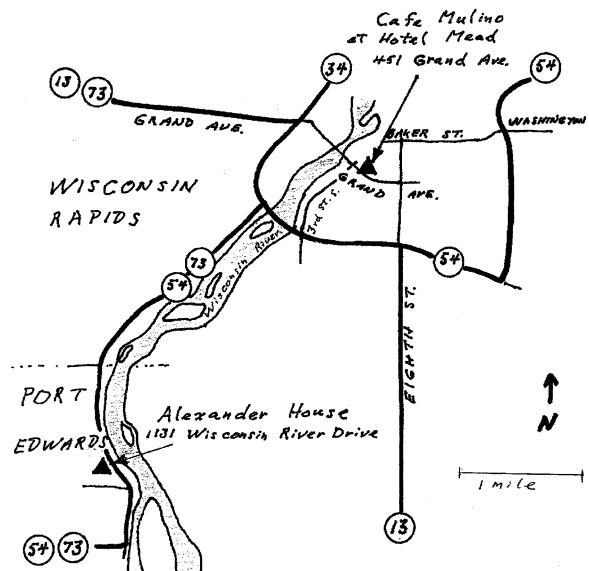
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Wisconsin Rapids

The signing and ratifying of the Chemical Weapons Convention by the United States has confirmed our move to destroy what may be the most dreaded weapons in the arsenal of nations. This talk will take a quick look at what chemical weapons are, where they are stored, and how this country is dealing with the destruction of these weapons in safe and environmentally sensitive processes. We will begin by looking at the types of weapons our national arsenal holds, their effects on humans, and the problems with their storage for indefinite periods of time. We will then take a quick tour of the storage area locations and their proximity to populated areas. Finally, we will take a look at operational methods of destruction as well as some that are in the research and development stages.

### \*\*\*About the Speaker\*\*\*

Dr. Robert J. (Bob) Radel received his B.S. in chemistry from the University of Cincinnati in 1971. He received his Ph.D. in heterocyclic chemistry under the direction of Dr. Bill Paudler from the University of Alabama in 1978. Bob's graduate work involved the development of synthetic methods for the preparation of as-triazine-2-oxides. Since that time, he has worked as a research chemist at TVA's National Environmental Research Center. His research has included such diverse areas as catalytic carbonylation reactions and the synthesis of urease and nitrification inhibitors, as well as the removal of sulfur gases from gasification streams. As manager of the Chemical Research Department at TVA, Bob pushed the implementation of total quality management in Research and Development. This push resulted in his department maintaining productivity in research during some very trying times of downsizing in the agency. Bob left TVA and through a stroke of fate, ended up on Johnston Island in the Pacific where the world's first incineration plant for chemical agents exists. From there, Bob traveled to Dugway Proving Grounds. Dugway is almost as isolated as Johnston Island, but you can get in a car and drive to civilization! He is currently the Division Director of the Chemical Test Division. Bob has been a member of the American Chemical Society since 1970. He has held local section offices for the Wilson Dam Section as chairman, program chairman, publicity chairman, and editor of the newsletter. He received the Outstanding Member Award from the Wilson Dam Section for the Year 1980-81 for helping to revitalize the Florence Area Chemical Technology Show (FACTS).



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Gather at 5:30, eat at 6:00 at Café Mulino in the Hotel Mead, 451 E. Grand Avenue in Wisconsin Rapids. Hotel Mead is three blocks east of the Wisconsin River on East Grand Avenue. Please see map. Please call or e-mail Dave Thiel at (715) 422-2470 (days), (715) 887-4338 (evenings), dave.thiel@storaenso.com before noon on Tuesday to make a reservation for dinner.

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Meeting begins at 7:30 at the Alexander House, 1131 Wisconsin River Dr. in Port Edwards on Highway 54,73. Please see map. To get there from the Hotel Mead:

- ①Go west to the first stop light at 3<sup>rd</sup> St.
- ②Turn left (south) onto 3<sup>rd</sup> St. and proceed about to the Riverview Expressway.
- ③Turn right, cross the river, turn left at the end of the bridge onto highway 54, 73.
- ④Proceed approximately 4.0 miles on the trip odometer. The Alexander house is on your right. The Alexander House is a combination art gallery and historical museum, and will open especially for us at 7:00 pm.