#### BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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IN THE MATTER OF:	)		
WATER QUALITY STANDARDS AND EFFLUENT LIMITATIONS FOR THE CHICAGO AREA WATERWAY SYSTEM AND THE LOWER DES PLAINES RIVER: PROPOSED AMENDMENTS TO 35 ILL. Adm. Code Parts 301, 302, 303, and 304	) R08-9 ) (Rulemaking – Water) )		
NOTICE OF FILING			
To:			
John Therriault, Clerk Illinois Pollution Control Board Agency James R. Thompson Center 100 West Randolph St., Suite 11-500 Chicago, IL 60601	Stefanie N. Diers, Assistant Counsel Illinois Environmental Protection 1021 North Grand Avenue East P.O. Box 19276 Springfield, IL 62794-9276		
Marie Tipsord, Hearing Officer Illinois Pollution Control Board James R. Thompson Center 100 West Randolph St, Suite 11-500 Chicago, Il 60601	Persons on the attached service list		
Please take notice that today I filed with the office of the Clerk of the Pollution Control Board <b>Prefiled Questions of the Natural Resources Defense Council to Charles N. Haas</b> , a copy of which is hereby served on you.			
ann Olexander			
Ann Alexander			
Dated: August 22, 2008			
Ann Alexander Senior Attorney, Midwest Program Natural Resources Defense Council 101 North Wacker Dr., Ste. 609 Chicago, IL 60606			

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#### **CERTIFICATE OF SERVICE**

I, Ann Alexander, the undersigned attorney, hereby certify that I have served the attached Prefiled Questions of the Natural Resources Defense Council to Charles N. Haas on all parties of record (Service List attached), by depositing said documents in the United States Mail, postage prepaid, from 227 W. Monroe, Chicago, IL 60606, before the hour of 5:00 p.m., on this 22nd Day of August, 2008.

Ann Alexander, Natural Resources Defense Council

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#### BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
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WATER QUALITY STANDARDS AND	)	
EFFLUENT LIMITATIONS FOR THE	)	R08-9
CHICAGO AREA WATERWAY SYSTEM	)	(Rulemaking – Water)
AND THE LOWER DES PLAINES RIVER:	)	
PROPOSED AMENDMENTS TO 35 ILL.	)	
Adm. Code Parts 301, 302, 303, and 304	)	

# PREFILED QUESTIONS OF NATURAL RESOURCES DEFENSE COUNCIL TO CHARLES N. HAAS

The Natural Resources Defense Council hereby files questions to Charles N. Haas:

- 1. What methods of disinfection do you understand to be available for use in wastewater treatment?
  - a. Does your testimony concern any methods other than chlorination?
  - b. Does UV disinfection create the same type and level of disinfection byproducts (DBPs) as chlorination?
- 2. Regarding the discussion at p. 2 of your testimony concerning USEPA water quality criteria for trihalomethanes:
  - a. In deriving these criteria, what assumptions were made regarding exposure, in terms of dose and duration?
  - b. What is the MCL for trihalomethanes?
  - c. What is the MCLG for chloroform?
  - d. What is the children's health-based limit for 1 day exposure?
  - e. Have there been any studies at all regarding the health impact of trihalomethanes on recreational water users?
  - f. Is chlorine used to disinfect swimming pools? Are you aware of research concerning the concentration of trihalomethanes in swimming pools?
- 3. What is the most common method of disinfection of wastewater effluent currently being used in the US? What percent of wastewater disinfection is currently achieved through chlorination as opposed to other methods?

- 4. The MWRD currently disinfects at several of its WWTPs in suburban areas, correct? What type of disinfection is used at these facilities?
- 5. Regarding the section of your testimony headed "Relative Insensitivity of Some Pathogens" (p. 3) where you state that "attainment of satisfactory indicator levels in disinfected wastewater does not assure a low level of risk from exposure to viruses" as well as protozoan pathogens -- Is your concern here that indicators overpredict the health risk from pathogens or underpredict it?
- 6. Regarding the first paragraph of the section on p. 4 headed "Security and Safety Issues"
  - a. Is there any reason that the Water Reclamation District would need to use gaseous chlorine if it decided to use chlorination as its disinfection method?
  - b. To your knowledge, do the majority of wastewater treatment facilities in the country that use chlorination to disinfect use gaseous chlorine or liquid chlorine?
- 7. Regarding the second paragraph of that section, in which you state that liquid sodium hypochlorite solution is corrosive and presents potential worker safety hazards is sodium hypochlorite solution is more commonly known as bleach when sold for household use?