

CSWAB

Citizens for Safe Water Around Badger
E12629 Weigand's Bay South - Merrimac, WI 53561
Phone (608) 643-3124 - Fax (608) 643-0005
Email: info@cswab.org - Website: www.cswab.org

U.S. Senator Russ Feingold
ATTN: Katie Crawley
1600 Aspen Commons
Middleton, WI 53562

September 30, 2008

SENT VIA ELECTRONIC MAIL

Dear Senator Feingold:

Thank you for your continued support of our work to protect human health and the environment from military toxins that place not only our community, but communities across the U.S., at risk.

We are writing to request a Congressional investigation into potential exposures and health risks to workers, their families, and other onsite personnel resulting from past exposures to contaminated drinking water at Badger Army Ammunition Plant (Badger). It is our goal to assure that these populations and the general public are fully informed and made aware of potential exposures to contamination that may have occurred through exposure (ingestion, inhalation, and dermal absorption) to drinking water at the site and the potential health risks and implications of these possible exposures.

We do not take this request to your office lightly. As an organization, we have struggled over a period of many years to find this vital information through countless formal and informal requests to the U.S. Army (as facilitated by your office), the Wisconsin Division of Health, the Wisconsin Department of Department of Industry Labor and Human Relations (now Commerce), Wisconsin Department of Natural Resources (WDNR), U.S. Environmental Protection Agency, Sauk County Department of Public Health, labor union officials, and many others. All are aware of our concerns and none have taken any measurable steps to assess and respond to the potential health implications and risks to those that may have been exposed to military toxins in their drinking water.

The water supply system at Badger Army Ammunition Plant was constructed during 1942 to serve the potable, process, and fire protection needs of the plant. A total of 5 high capacity wells were drilled, capable of producing 3600 gpm (5,194,000 gpd). In addition to the wells, a pump station and surface water treatment system capable of producing 86,000,000 gpd from the Wisconsin River were installed.¹ Also, 2 reservoirs were constructed in the bluffs on the north end of the Badger property. One reservoir, a 6,000,000 gallon open-air concrete structure, holds raw water pumped from the Wisconsin River until treated. The other, a 5,000,000 gallon open-air concrete structure holds water for the potable, process, and fire systems. This water is pumped from the wells. The water distribution system consists of in excess of 615,000 feet of 1 inch through 36 inch diameter pipe. Small diameter pipe is galvanized steel. Most 2 through 8 inch pipe is cast iron, and most 10 inch and larger

¹ Wisconsin Department of Natural Resources, Correspondence/Memorandum, Subject: Badger Army Ammunition Plant (BAAP) – Water Supply System, Kim Kolosovsky (WDNR South Central Region) and Del Maag (WDNR South Central Region Drinking Water/Groundwater Expert) to Mike Degen (WDNR South Central Region), March 23, 1998.

diameter pipes are steel. However, there also remains about 4,500 feet of 10 and 14 inch asbestos cement water main.²

“The potable water distribution system connected directly to a variety of industrial operations, with little or no protection from the potential for backflow/backsiphonage provided.”

Source: Long-Range Comprehensive Plan for the Potable Water Supply System at the Badger Army Ammunition Plant, Badger-Olin Corporation, U.S. Army/Badger Army Ammunition Plant, December 1992.

In December 1992, Olin Corporation (the operating contractor at Badger), in conjunction with the Department of Army, issued a Long Range Comprehensive Plan for the potable (drinking) water supply system. WDNR water experts who reviewed the report wrote: “In it, their own engineers acknowledged that there were literally hundreds of cross-connections between the potable water system and the process water system (could result in backsiphonage of acid into drinking water) and sanitary sewers.”³

The potable water system had hundreds of direct connections between the process water piping and production tanks and vessels separated only by gate valves. The potable water distribution system connected directly to a variety of industrial operations, with little or no protection from the potential for backflow/backsiphonage provided.⁴ There were no backflow preventors on the high pressure boilers. In the past, the potential existed for recycled recovered water to discharge into the potable water system. Potable water lines within the acid, nitroglycerin, and rocket productions areas, for example, which utilized large volumes of water, were similarly unprotected.⁵ In 1986, the U.S. Army Environmental Hygiene Agency determined that a viable cross-connection control/backflow prevention program was “sorely needed at this installation”.

Diagrams found in public WDNR files indicate that water systems at Badger were historically connected to both Staff Village and Badger Village, raising concerns that families in these communities, like on-site workers, may have been exposed to contamination through their drinking water.

The Bluffview community is the residential area west of the main gate of Badger. This housing complex was built as part of Badger to house workers beginning in 1942. When originally built, it was called Badger Village and included housing for several thousand people, a public school, recreation facilities, and commercial facilities. About half of the

² Wisconsin Department of Natural Resources, Correspondence/Memorandum, Subject: Badger Army Ammunition Plant (BAAP) – Water Supply System, Kim Kolosovsky (WDNR South Central Region) and Del Maag (WDNR South Central Region Drinking Water/Groundwater Expert) to Mike Degen (WDNR South Central Region), March 23, 1998.

³ Wisconsin Department of Natural Resources, Correspondence/Memorandum, Subject: Badger Army Ammunition Plant (BAAP) – Water Supply System, Kim Kolosovsky (WDNR South Central Region) and Del Maag (WDNR South Central Region Drinking Water/Groundwater Expert) to Mike Degen (WDNR South Central Region), March 23, 1998.

⁴ *Long-Range Comprehensive Plan for the Potable Water Supply System at the Badger Army Ammunition Plant*, Badger-Olin Corporation, U.S. Army/Badger Army Ammunition Plant, December 1992.

⁵ *Long-Range Comprehensive Plan for the Potable Water Supply System at the Badger Army Ammunition Plant*, Badger-Olin Corporation, U.S. Army/Badger Army Ammunition Plant, December 1992.

original Badger Village has been redeveloped. The area currently houses about 500 people in apartments, trailer homes, and double-wide manufactured houses.⁶

Just south of Bluffview is Staff Village, now called Maple Park, which historically housed officers and their families and currently consists of 25 single-family housing units. A community well and clustered community mound system is now maintained through the existing homeowners association.⁷

Other populations at risk include on-site personnel not employed by Badger such as farmers, small business, and others that that leased property at Badger – a common practice especially during periods when the plant was inactive.

Carcinogenic and toxic contaminants associated with historical wastewater discharges generated by Badger include dinitrotoluenes, lead, mercury, carcinogenic polycyclic aromatic hydrocarbons (CPAHs), diethyl phthalate, diphenylamine, aluminum, tin, arsenic, cadmium, chromium, n-nitrosodiphenylamine, nitroglycerine, nitrocellulose, nitric acid, sulfuric acid, and many others.⁸

A meeting was held on July 28, 1993 between representatives from Badger (Olin Corporation and the Department of Army), WDNR, DILHR (now Commerce), and the Wisconsin Division of Health. As a result of that meeting, Badger's water supply system was divided into 2 distinct, completely separate systems. The WDNR reported that DILHR decided it would not enforce plumbing code at Badger and would act as a "consultant". At the time of the WDNR's March 23, 1998 report, the numerous cross-connections between water systems required the majority of the military base (approximately 90 percent) to either have the water turned off or to be posted as "non-potable".

According to documents that CSWAB has obtained and provided as attachments, it is evident that workers, their families, and other populations could have been exposed to contamination in drinking water at Badger beginning in early 1943 and continuing until as recently as 1993, when the systemic problem was finally remedied. One source estimates that over the years more than 20,000 people have, at one time or another, been employed at Badger.

Thank you in advance for your time, attention, and energies to this vital public and worker health issue. Please let us know if we can be of additional service in accomplishing our shared goals to protect the environmental health of workers and the public.

Sincerely,



Laura Olah,
Executive Director

⁶ Olin Corporation, Sanitary Sewage Treatment System Facility Evaluation and Planning Report, Badger Army Ammunition Plant, Baraboo, Wisconsin, June 1997.

⁷ Wastewater Facility Plan, Badger Army Ammunition Plant, Baraboo, Wisconsin, Midstate Associates Project, No. 250402, June 2004.

⁸ Department of Army, Badger Army Ammunition Plant, Settling Pond #4 Remedial Action Plan, August 18, 2008.