



Department of Public Works

January 11, 2002

Mariano A. Schifalacqua  
Commissioner of Public Works

James P. Purko  
Director of Operations

Honorable John O. Norquist  
Mayor, City of Milwaukee  
Room 200, City Hall

To the Honorable, the Common Council  
Room 205, City Hall

Dear Mayor and Members of the Common Council:

I wanted to update you on the status of the ozone disinfection system at the Linnwood Water Purification Plant.


The cause of the problem has been identified and repairs are nearly complete. You may recall that ozone is created by vaporizing liquid oxygen (stored on site) into gaseous oxygen, which is then subjected to an electrical charge in ozone generators. The problem which caused the ozone to go off line occurred at the vaporizers that turn the liquid oxygen into gaseous oxygen. The liquid oxygen is about minus 250 °F when it flows into the vaporizers. A flow of warmer water around the vaporizers keeps them from freezing. It was this flow of water that was blocked, and the liquid oxygen caused the vaporizers and associated piping to freeze. Seven valves, which regulate the flow of oxygen, were also damaged. The location of the damaged valves made it impossible to safely start up the redundant vaporizer, so ozone was taken off line.

It was subsequently determined that corrosion from some internal components of the vaporizer caused the water flow blockage. The vaporizer was dismantled, cleaned, reassembled and successfully tested. At this time, cryogenic piping which carries the oxygen, and associated valving, is being carefully reassembled and tested. At this time we are very close to completion and the ozone system will be started up as soon as possible. This may occur during the weekend but hopefully no later than Monday, January 14<sup>th</sup>. Meanwhile, other vaporizers are being inspected for this corrosion and corrective action will be taken.

Meanwhile, all other systems at the plant are working optimally. Raw water quality is currently very high and remains stable. Disinfection is being accomplished by the chlorination system and the barrier of filtration is performing particulate removal efficiently. Monitoring shows finished water quality to be excellent.

We will keep you updated of any new developments, and will advise you when ozone is back on line. If you have any questions, do not hesitate to call Carrie Lewis at 286-2801.

Very truly yours,

  
Mariano A. Schifalacqua  
Commissioner of Public Works

CML

c: Marianne Walsh  
Jennifer Meyer

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