

**Environmental
Protection Agency**

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

OH4700711 LORAIN CITY PWS

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NOTICE OF VIOLATION – ACTION REQUIRED

April 20, 2011

RE: LORAIN COUNTY
CITY OF LORAIN
COMMUNITY PUBLIC WATER SYSTEM
PWS ID # OH4700711

Mr. Dan McGannon, Water Plant Superintendent
City of Lorain Water Plant
1106 First Street
Lorain, Ohio 44052

Subject: Violation of Turbidity Levels

Dear Mr. McGannon:

The City of Lorain is in violation of the maximum turbidity levels established by Ohio Administrative Code (OAC), Rule 3745-81-73. Failure to meet the maximum turbidity levels of one (1) NTU in conjunction with failure of an individual treatment process is a Treatment Technique violation subject to Tier 1 public notification as required by OAC 3745-81-32(B)(1)(g).

On April 11, 2011, this office was contacted regarding an apparent underfeed of coagulant that occurred on Saturday, April 9 and again on Sunday, April 10. The chemical underfeed was reportedly caused by erroneous dosage rates shown on the chemical feed pump controls. It was determined that an underfeed of approximately 15-20% was occurring. As a result of significant increases in raw water turbidity on Saturday (over 100 NTU), undertreated water left the treatment plant with turbidity values ranged from 0.30 NTU to 2.5 NTU between 12:00 noon and 9:00 p.m. A second occurrence of high reported turbidity on Sunday yielded turbidity values ranging from 0.37 NTU to 3.80 NTU between 6:00 p.m. and 10:00 p.m.

The City elevated chlorine residual levels on Saturday once a problem was noted. Special Purpose Total Coliform samples were collected in the distribution system on Saturday, Sunday, and Monday to determine if a contamination incident occurred. Also, strategic hydrant flushing was instituted to address the high turbidity water leaving the plant. To date, all Total Coliform results have been found to be safe. It should be noted that the Ohio EPA's 24-hour emergency hotline was contacted at 10:08 p.m. on Sunday, April 10, 2011, 30 hours after the first turbidity result over 1 NTU was noted.

Because of these actions and results, Ohio EPA did not issue a system wide boil advisory. However, a Treatment Technique violation occurred on Saturday and on Sunday in conjunction with the malfunction of a critical treatment process and Ohio EPA was not notified within the required 24-hour time frame established by OAC. This requires a Tier 1 public notification be issued to every customer of the City of Lorain water plant, including the consecutive (bulk purchaser) water systems.

ACTIONS REQUIRED:

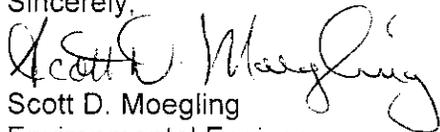
1. **Notify the people served by this water system of the violation.** Provide a public notice as soon as practical. The appropriate methods for notifying the public are as described in the following table.

Community Public Water System Tier 1 Public Notification
<ul style="list-style-type: none">• Appropriate broadcast media (such as radio or television) within 24 hours of being notified by Ohio EPA followed by mail delivery of the notice to all persons served by the water system within 30 days of being notified, or;• Hand or mail delivery of the notice to all persons served by the water system by Friday, April 22, 2011;• Another delivery method approved in writing by the Director.
Posted notices must remain in place for as long as the violation exists. The language in italics on the enclosed public notice is mandatory and must be included, as written. Do not make changes to the public notice without consulting with Ohio EPA beforehand.

2. **Complete the enclosed verification form within 10 days of issuing the Public Notice** and mail it to Ohio EPA's Northeast District Office. Include a copy of each notice distributed, published or posted.
3. **Prepare an investigation report evaluating the entire event.** The report must contain a detailed timeline of critical events. Additionally, the City must explain why the chemical feed pump reported erroneous feed rates, how other treatment process limitations may have contributed to the turbidity violations, and why Ohio EPA was not notified within the required 24-hour time frame. Other issues that may also need to be investigated include operator training with regards to emergency situations, an evaluation of chemical feed process calibration and verification, evaluation of the filter media (including potential formation of mudballs, media loss, physical parameters of the media (size, uniformity coefficient and/or media growth, Iodine Number on the caps, media depth, etc.), and any role the PAC may have had with this situation. Changes in standard operating procedures and additional assurances required at the plant to ensure this type of event will not happen in the future must be provided, at a minimum.

Please be aware you will need to identify this violation in the 2011 Consumer Confidence Report. If you have any questions, contact me at (330) 963-1277.

Sincerely,



Scott D. Moegling
Environmental Engineer
Division of Drinking and Ground Waters

SDM/ams

Enclosures: Tier 1 Public Notification
Public Notice Instructions and Verification Form

cc: Lorain County Health Department
Kim Etters, Ohio EPA, NEDO, DDAGW
Information Management Section, Central Office, DDAGW