



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

FEB 24 2017

REPLY TO THE ATTENTION OF:

The Honorable Karen W. Weaver
Mayor of Flint
1101 South Saginaw Street
Flint, Michigan 48502

W-15J

Mr. Bryce Feighner, Director
Drinking Water & Municipal Assistance Division
Michigan Department of Environmental Quality
525 West Allegan Street
P.O. Box 30473
Lansing, MI 48909-7973

Re: Corrosion Control Study Plans in the City of Flint's January 31, 2017
Water Treatment Plant Modification Plan Submission

Dear Mayor Weaver and Director Feighner:

I wish to thank the City of Flint for submitting the City of Flint's *Water Treatment Plant Modification Plan (WTPMP)* on January 31, 2017. As noted in the Mayor's accompanying letter, MDEQ reviewed the submittal and concurred in its content; consequently, it seemed appropriate to address this letter to both Respondents.

EPA is still conducting its review of the WTPMP; however, we want to highlight some concerns with the corrosion control study (CCS) plans that were provided for the current source, GLWA, and for the intended new sources: Genesee County-treated KWA water and Flint-treated KWA water.

The City's CCS plans were reviewed by experts on EPA's Flint Drinking Water Technical Support Team (formerly known as EPA's Flint Safe Drinking Water Task Force). Based on that review, EPA would like to share with you three significant concerns regarding the proposed CCS plans:

- (1) it is impossible to adequately represent the complexity of Flint's lead pipe scale surfaces and associated mechanisms that control lead release using a coupon test approach;
- (2) the coupon test approach has not been validated in corrosion literature or case study experience as being adequate to predict changes in lead release with changes in background water quality and treatment; and

(3) the amount of time that was allotted to do a study with a sufficiently rigorous technical approach to protect the public against changes in lead release is highly inadequate. Appropriate anticipatory studies for source and treatment changes need a minimum of a year or more, and need to be completed well in advance of making each water quality and treatment change decision.

Given these concerns, it is difficult to envision the conduct of corrosion control studies, regardless of the monies spent or the expertise brought in, that would assure the protection of public health under the current scenario in which the City plans to switch to Genesee County-treated KWA water later this year and then to Flint-treated KWA water in a year or two.

Moreover (and as the Respondents know), EPA feels that the most valuable data will come from pipe loop studies. The proposed scope modification of the Flint Corrosion Control Plan under Section 1 accurately states that "Ideally pipe loops would be conducted to optimize the orthophosphate dose." However, recognizing that there are time and resource constraints, the Plan further states in Section 1 that "However, the time remaining that this water will be used does not justify the time and expense of a pipe loop study" (referring to both Sections 1 and 2). Therefore, to save resources, the proposed pipe loop work was pushed into the third section that deals with testing the water produced by the Flint treatment plant (the final long-term water selection). EPA disagrees with the concept that the first and second sections that deal with interim waters do not need to incorporate pipe loop studies, and recommends that the City expand the Plan scope to include pipe loops in each stage of the project. EPA realizes that this will increase the cost and time needed at each stage; however, this is the most informative approach and will lead to a solution that will minimize public risk from two short-term but substantive water quality changes prior to the City implementing its final long-term water source selection. Indeed, given the time needed to undertake robust corrosion control studies, EPA believes that this issue should be considered carefully by the City as it decides on whether it will continue with the currently-planned interim and ultimate source water selections.

EPA will continue its review of the WTPMP and will follow up with the Respondents to address these initial and any additional concerns. Further, EPA will be meeting with the Respondents via teleconference on Wednesday, March 1, 2017, at which time there will be an opportunity to discuss any questions the Respondents may have regarding the content of this letter and the requirements of EPA's Order.

Thank you for your attention to this matter. Please do not hesitate to contact me at (312) 353-8320 or korleski.christopher@epa.gov with any questions or concerns.

Sincerely,



Christopher Korleski
Director, Water Division

cc: Richard Baird, Michigan Governor's Office
Sylvester Jones, City Administrator, City of Flint
Keith Creagh, Director, Michigan Department of Natural Resources