

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

IN THE MATTER OF: )  
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DENVER WATER, COLORADO )  
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VARIANCE UNDER  
SDWA SECTION 1415(a)(3)

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**INTRODUCTION**

**1. Statutory and Regulatory Background**

Under the Safe Drinking Water Act (SDWA), 42 U.S.C. §§ 300f et seq., the U.S. Environmental Protection Agency (EPA) promulgates national primary drinking water regulations (NPDWRs) which specify for certain drinking water contaminants either a maximum contaminant level or treatment technique with which public water systems (PWS) must comply. EPA has promulgated a NPDWR for lead and copper that consists of a treatment technique requiring PWSs to take various steps to ensure that users of PWSs are not exposed to levels of lead and copper in drinking water that would result in adverse health effects (40 C.F.R. Part 141, Subpart I). This regulation requires all large PWSs to complete steps to determine the optimal corrosion control treatment for the system. If the State designates installation of optimal corrosion control treatment (OCCT), as defined in 40 C.F.R. Section 141.2, then the system must install and operate the designated OCCT (40 C.F.R. § 141.82(e)), conduct water quality parameter monitoring, and conduct tap water monitoring to determine the levels of lead and copper being delivered to users. If tap water levels exceed certain "action levels" for these contaminants, large PWSs are required to take other steps, including delivering public education materials to users about the health risks of lead in drinking water and initiating a lead service line (LSL) replacement program.

Under SDWA Section 1413, 42 U.S.C. § 300g-2, the Colorado Department of Public Health and Environment (CDPHE) has primary enforcement responsibility for NPDWRs, including the Lead and Copper Rule (LCR) because, among other things, it has adopted regulations that are no less stringent than the NPDWR. Colorado's Lead and Copper Rules are located at the Colorado Code of Regulations, 5 CCR 1002-11 § 11.26 et seq., which apply to the Denver Water PWS. The EPA Administrator, however, has the authority to grant a variance from any treatment technique requirement of a national primary drinking water regulation under certain circumstances. Section 1415(a)(3) of the SDWA, 42 U.S.C. § 300g-4, provides:

The Administrator may grant a variance from any treatment technique requirement of a national primary drinking water regulation upon a showing by any person that an alternative treatment technique not included in such requirement is at least as efficient in lowering the level of the contaminant with respect to which such requirement was prescribed. A variance under this paragraph shall be conditioned on the use of the alternative treatment technique which is the basis of the variance.

See also 40 C.F.R. § 142.46. Generally, under the SDWA, EPA retains independent enforcement authority even when states have primary enforcement responsibility under Section 1413. EPA has the authority to enforce the terms and conditions of this variance pursuant to Section 1414, 42 U.S.C. § 300g-3.

This order is a variance from the definition of “optimal corrosion control treatment” in 40 C.F.R. Section 141.2 as that term is used in 40 C.F.R. Sections 141.82(c), (d), (e), and (h). 40 C.F.R. Section 141.82(d) provides that “[t]he State shall either approve the corrosion control treatment option recommended by the system, or designate alternative corrosion control treatment(s) from among those listed in paragraph (c)(1) of this section.” 40 C.F.R. Section 141.82(h) authorizes a State “to modify its determination of the optimal corrosion control treatment under paragraph (d) of this section.” 40 C.F.R. Section 141.82(c)(1) provides that “[a]ny public water system performing corrosion control treatment studies shall evaluate the effectiveness of each of the following treatments, and if appropriate, combinations of the following treatments [...] to identify the optimal corrosion control treatment for that system: (i) Alkalinity and pH adjustment; (ii) Calcium hardness adjustment; and (iii) The addition of a phosphate or silicate based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples.” 40 C.F.R. Section 141.82(c)(6) provides that on the basis of that evaluation, “the water system shall recommend to the State in writing the treatment option that the corrosion control studies indicate constitutes optimal corrosion control treatment for that system.” 40 C.F.R. Section 141.2 defines optimal corrosion control treatment” as “the corrosion control treatment that minimizes the lead and copper concentrations at users’ taps while insuring that the treatment does not violate any national primary drinking water regulations.”

When Denver Water conducted the most recent corrosion control treatment (CCT) study pursuant to 40 C.F.R. Section 141.82(c) and CDPHE modified its determination of OCCT as authorized under 40 C.F.R. Section 141.82(h), the utility and State were bound by 40 C.F.R. Sections 141.82(c) and (d), respectively, and the definition of OCCT in 40 C.F.R. Section 141.2. CDPHE designated OCCT as orthophosphate because it “minimizes” the lead concentrations at users’ taps in comparison to pH and alkalinity adjustment. Denver Water, in turn, was required under 40 C.F.R. Section 141.82(e) to “properly install and operate throughout its distribution system the optimal corrosion control treatment designated by the State under paragraph (d) of this section.” This variance is from the definition of “optimal corrosion control treatment” in 40 C.F.R. Section 141.2. It will relieve Denver Water from that aspect of the requirement in 40 C.F.R. Section 141.82(e) to install the “optimal” corrosion control treatment designated by the State under 40 C.F.R. Section 141.82(d) and instead require Denver Water to comply with the terms and conditions of this variance as well as all other provisions in the LCR, including the requirements associated with CCT. Accordingly, CDPHE may designate as OCCT pH and alkalinity adjustment even though it does not minimize lead concentrations at users’ taps, and CDPHE may modify its OCCT designation under 40 C.F.R. Section 141.82(h) to require Denver Water to comply with the terms and conditions of this variance, which include actions in addition to installation of CCT.

This document also provides the basis for EPA’s findings for approving, for a limited period of time, an alternative treatment technique proposed by Denver Water, and establishes the conditions on the use of this alternative treatment technique, as well as the conditions upon which the terms of this variance may be extended for the total of 15 years requested by Denver Water.

## 2. Factual Background

Denver Water is a PWS which must comply with applicable requirements of the LCR.

In 2012, Denver Water's 90<sup>th</sup> percentile lead level was 17 ppb, exceeding the lead action level of 15 ppb. Pursuant to state LCR requirements, CDPHE required Denver Water to complete an optimal corrosion control treatment study. Denver Water first completed a desktop study, which was inconclusive. Denver Water then initiated a pipe rack study using sections of 32 LSLs extracted from customers' homes. The study included testing of three forms of corrosion control treatment (silicate, pH and alkalinity adjustment, and orthophosphate) for the two different sources of water that supply water to Denver Water customers. Denver Water submitted an Optimal Corrosion Control Treatment Report to CDPHE in September 2017. The report concluded that orthophosphate provided greater lead reduction than pH and alkalinity adjustment. On March 20, 2018, CDPHE modified its designation of the optimal corrosion control treatment for Denver Water, requiring Denver Water to install and operate orthophosphate as OCCT by March 20, 2020.

In July 2018, Denver Water requested that EPA and CDPHE consider an alternative treatment technique due to concerns that orthophosphate would require improvements at downstream wastewater treatment plants to remove the additional phosphorus to meet discharge permit requirements. Furthermore, orthophosphate changes the scale composition on all pipelines in the distribution system, including service lines and household plumbing. Once the phosphate-based scales are formed, it may be challenging for Denver Water to discontinue orthophosphate treatment. For example, transitioning from orthophosphate to another corrosion control treatment would need to be carefully managed to avoid potential releases of lead, iron and other metals from transitioning pipe scales into the drinking water.

As a result of these concerns, Denver Water developed a Lead Reduction Program Plan (LRPP) that includes the following elements:

- Development of a LSL inventory to identify and track LSL replacement.
- A filter program.
- An accelerated lead service line replacement (LSLR) program.
- Corrosion control treatment with pH and alkalinity adjustment.
- Communications, outreach and education plan.

The Denver Water LRPP provides a holistic lead reduction approach that permanently removes lead service lines. EPA has determined that the Denver Water LRPP appears to meet the SDWA Section 1415(a)(3) standard for a variance but requires greater assurance of its effectiveness and benefits. As a result, EPA is approving a short-term variance from the definition of OCCT in 40 C.F.R. Section 141.2 that will enable Colorado to modify its designation of orthophosphate as the required treatment for lead and allow Denver Water to further demonstrate the effectiveness of its alternative approach.

This order, which is effective as described below, sets the detailed requirements that Denver Water must meet as conditions of this variance. Except for the definition of "optimal corrosion control treatment," Denver Water must continue to comply with all provisions of the LCR as promulgated under state and federal law, 5 CCR 1002-11 §11.26 et seq., 40 C.F.R. §§ 141.80-141.91, and as may be revised in the future.

The variance from the definition of “optimal corrosion control treatment” in 40 C.F.R. Section 141.2, issued pursuant to this order, will enable CDPHE to authorize Denver Water to implement an alternative treatment technique that will be at least as efficient in lowering the level of lead as orthophosphate alone as OCCT. The alternative treatment technique involves Denver Water fully implementing the LRPP, submitted to EPA on September 6, 2019, and pursuant to the terms and conditions of this order. EPA has determined that this alternative treatment technique will be at least as efficient as installation of “optimal corrosion control treatment” as defined at 40 C.F.R. Section 141.2 in lowering the level of lead in drinking water so long as the conditions outlined in this order are met.

### **FINDING OF FACTS**

1. This matter comes before the Regional Administrator of the EPA Region 8 on application of Denver Water for an order granting a variance pursuant to Section 1415(a)(3) of the SDWA, 42 U.S.C. § 300g-4.
2. Pursuant to Section 1401(4)(A) of the SDWA, 42 U.S.C. § 300f(4)(A), a PWS is a system that provides drinking water to the public for human consumption through pipes or other constructed conveyances that have at least fifteen service connections or regularly serves at least twenty-five individuals at least 60 days out of the year. See also § 141.2.
3. The Denver Water system provides drinking water to the public for human consumption through pipes or other constructed conveyances that have at least fifteen service connections and regularly serves at least twenty-five individuals at least 60 days out of the year, and therefore is a PWS.
4. A large PWS is defined at 40 C.F.R. Section 141.2 as a PWS that serves greater than 50,000 people.
5. Denver Water serves greater than 50,000 people and is therefore a large PWS.
6. Pursuant to Section 1401(1)(A) of the Act, 42 U.S.C. §300f(1)(A), because Denver Water is a PWS that is also a large PWS, certain NPDWRs apply to the facility.
7. 40 C.F.R. Section 141.81(a)(1) and Section 141.81(d) required that all large PWSs complete the CCT steps and install OCCT for lead and copper by January 1, 1997, complete follow up sampling, and operate in compliance with optimal water quality control parameters (OWQPs) specified by the State by July 1, 1998. 40 C.F.R. 141.82(e) requires Denver Water to properly install and operate throughout its distribution system the optimal corrosion control designated by the State under Section 141.82(d). Under 40 C.F.R. 141.82(h), a State may modify its determination of the OCCT made under Section 141.82(d).

Denver Water complied with all of these provisions of the LCR. Denver Water conducted a corrosion control treatment study in the mid-1990’s. Based on that study, CDPHE designated pH and alkalinity treatment as optimal corrosion control treatment for Denver Water and set a minimum pH of 7.5 and alkalinity of 15 mg/L, respectively, as OWQPs on October 18, 1995. Denver Water installed pH and alkalinity adjustment treatment prior to January 1, 1997. Denver Water has consistently monitored, met these OWQPs and has not had any excursions or violations related to OWQPs.

8. In 2012, Denver Water exceeded the lead action level of 15 µg/L. Under 5 CCR 1002-11 Section 11.26(3)(c), CDPHE required Denver Water to conduct a new OCCT study, which was completed in September 2017.

9. On March 20, 2018, CDPHE modified its designation of the OCCT for Denver Water from pH and alkalinity adjustment to orthophosphate as optimal corrosion control treatment for Denver Water. This designation required Denver Water to install and operate orthophosphate as OCCT by March 20, 2020, pursuant to 5 CCR 1002-11 Section 11.26(3)(c)(vi).
10. On September 6, 2019, Denver Water requested a variance from EPA that will allow it to implement the LRPP in lieu of CDPHE's designation of orthophosphate treatment as OCCT as defined by 40 C.F.R. Section 141.2.
11. CDPHE is supportive of Denver Water's request for a variance to relieve Denver Water of the requirement to comply with the State's designation of orthophosphate as OCCT, as stated in its letter to EPA dated November 15, 2019. CDPHE has confirmed that it will act under 5 CCR 1001-11 Section 11.26(3)(d)(iii) subsequent to EPA's issuance of the variance by modifying the March 20, 2018 designation of orthophosphate as the OCCT and instead incorporate the terms and conditions of this order in its decision approving Denver Water's request for a modification.
12. Denver Water is currently in compliance with the LCR.

### CONCLUSIONS OF LAW

13. Section 1415(a)(3) of the Act, 42 U.S.C. § 300g-4, and 40 C.F.R. Section 142.46, authorize the EPA Administrator to grant a variance from a treatment technique:
- upon a showing by any person that an alternative treatment technique not included in such requirement is at least as efficient in lowering the level of the contaminant with respect to which such requirement was prescribed. A variance under this paragraph shall be conditioned on the use of the alternative treatment technique which is the basis for the variance.
14. Section 1401(12) defines "person" as "an individual, corporation, company, association, partnership, State, municipality, or Federal agency (and includes officers, employees, and agents of any corporation, company, association, State, municipality, or Federal agency)." Denver Water is a public municipal water utility and political subdivision of the State of Colorado.
15. The authority to issue SDWA variances for treatment technique requirements was delegated to the Regional Administrators on June 12, 2000, under EPA Delegation, 9-69, *Issuance of Variances for Treatment Technique Requirements*.
16. Denver Water proposes that it will do the following instead of operating orthophosphate treatment, as required by CDPHE's designation:
- A. Develop a LSL inventory to identify and track LSLRs.
  - B. Implement a lead removal filter program for homes with LSLs and certain homes with copper pipe with lead solder.
  - C. Implement an accelerated LSLR program to replace 7 percent of the LSLs each year so that all LSLs are replaced within 15 years from the Effective Date of the variance.
  - D. Operate increased pH and alkalinity adjustment as CCT.
  - E. Implement a communications, outreach and education plan.

17. The LRPP that Denver Water proposes is an alternative treatment technique that, taken as a whole, is not authorized as a means of complying with the OCCT requirements in the LCR. The LRPP involves installation of increased pH and alkalinity CCT which was not determined by the state as OCCT in its March 2018 designation (40 C.F.R. § 141.82(d)), as well as additional actions which are not CCT.

18. Under the LRPP, Denver Water will conduct full LSLRs (from the service connection to the first fitting inside the structure) of privately-owned LSLs at an accelerated rate compared to current conditions, or inspect full LSLRs conducted by others. Denver Water estimates it has approximately 64,000 LSLs. Under the LRPP, Denver Water commits to replacement of all LSLs at a cumulative average rate of 7.0% per year, and complete replacement of all LSLRs in 15 years. Because some homes with LSLs will have to wait multiple years for their LSLs to be replaced, Denver Water will also initiate and implement a lead removal filter program to provide a filter and replacement cartridges to every household with a LSL and select households with copper pipe with lead solder.

19. In conjunction with these efforts, Denver Water will operate increased pH and alkalinity adjustment as CCT to reduce lead and copper corrosion from all sources, including premise plumbing.

20. Finally, Denver Water commits to conduct a full investigation of its LSL inventory and publish a map showing the locations of all LSLs. Denver Water will also conduct extensive outreach to educate customers about the health risks of lead and ways that they can reduce their exposure to lead in drinking water.

21. Denver Water conducted an analysis demonstrating that these steps will provide “at least as efficient” or greater lead reductions compared to orthophosphate and will therefore provide equivalent or better public health protection.

22. EPA concluded that the components of the LRPP overall are expected to provide equivalent or better public health benefits compared to what would be achieved using orthophosphate treatment. See Appendix A for additional information on EPA’s technical evaluation of the Denver Water LRPP. EPA finds that Denver Water has made a showing that its proposed alternative treatment technique meets the requirements of SDWA Section 1415(a)(3). The terms and conditions described below are intended to ensure that Denver Water’s variance will be “at least as efficient” in lowering the level of lead as orthophosphate. EPA is approving this variance for an initial three-year period to give Denver Water the opportunity to demonstrate the variance approach they have outlined will be effective.

23. This SDWA Section 1415(a)(3) variance only relieves Denver Water of the definition of “optimal corrosion control treatment” in 40 C.F.R. Section 141.2 for purposes of federal law. A corresponding state action is needed to relieve Denver Water of the requirement to implement the state-designated OCCT as a matter of state law because CDPHE has primary enforcement responsibility for the LCR in Colorado, and SDWA Section 1414(e) provides that nothing in the SDWA shall diminish state authority “to adopt or enforce any law or regulation respecting drinking water regulations or public water systems.” Further, while EPA has authority under 40 C.F.R. Section 141.82(i) to designate corrosion control treatment for a system in lieu of the State’s designated OCCT under certain circumstances, EPA is prohibited under 40 C.F.R. Section 142.19(d)(5) from exercising such authority to impose conditions less stringent than those that the State imposed for corrosion control treatment. The State has agreed that it will issue such an action under 5 CCR 1002-11 Section 11.26(3)(d)(iii) subsequent to EPA’s issuance

of the variance by modifying its March 20, 2018 designation of orthophosphate as the optimal corrosion control treatment.

### ORDER

Based on the foregoing Findings and Conclusions and pursuant to EPA's authority under SDWA 1415(a)(3) it is therefore ORDERED:

Denver Water's variance request is granted subject to the following terms and conditions:

#### **1. Definitions:**

A. "*Action level*" has the same meaning as action level in the LCR, 40 C.F.R. § 141.80(c) and §§ 11.26(1)(c) and (2)(b) of the Colorado Primary Drinking Water Regulations (5 CCR 1002-11).

B. "*Adoption*" or "*Adopted*" for the purposes of the filter program means that the customer enrolled in the filter program is using a filter NSF/ANSI (53) certified for lead removal for drinking, cooking, and infant fed formula (ingestion). Respondents who indicate that they use bottled water or an alternative NSF/ANSI (53) certified filter for ingestion will count as having adopted the use of a filter under paragraph 5.E below.

C. "*Contact*" means direct mailing, water bill inserts, door hangers, in person contact, email, phone calls, educational materials accompanying filters and cartridges, or any other direct communication channels identified in Denver Water's communications, outreach, and education plan. Communications via information posted on the Denver Water website, social media websites, water bills, distribution of filters and replacement cartridges alone, or public notices that are required under the LCR and/or this variance are excluded from this definition.

D. "*Customer Premise*," for the purpose of these terms and conditions only, means all properties, including residential units within a multi-family property, that receive water service pursuant to a Denver Water or distributor tap license.

E. "*Customer(s) Enrolled in the Filter Program*" means a customer premise, as defined herein where there is a known, suspected, or possible LSL, that will automatically be distributed a filter under paragraph 5 below, unless otherwise refused by the customer.

F. "*Day*" means calendar day.

G. "*Effective Date*" is January 1, 2020.

H. "*Integrated System(s)*" means the defined term used in Section 11.42(4) of 5 CCR 1002-11 as a "wholesale system and one or more consecutive systems with distribution systems that are physically connected [that] ...choose to operate in a manner where the wholesaler assumes responsibility for compliance with one or more regulatory requirements applicable to the supplier responsible for the consecutive system, if the requirements of ... section 11.42(4) are met."

I. "*Ingestion*" means the use of tap water for drinking, cooking, and infant fed formula.

J. “*Investigated*” or “*Investigate*” refers to any activity used to identify the service line materials including a lead water quality test, potholing, visual inspection, or other methods that allow for a determination of the service line material, not including customer requested sample data.

K. “*Known LSLs*” are based upon direct evidence that gives a 100% estimated probability that a service line is an LSL.

L. “*Known, suspected and possible LSLs*” collectively refers to known LSLs, suspected LSLs, and possible LSLs, as defined in this paragraph.

M. “*Lead and Copper Rule (LCR) Compliance Tap Sampling*” means the collection of lead and copper tap samples in accordance with Section 11.26 of 5 CCR 1002-11 and 40 C.F.R. Section 141.86.

N. “*Lead Reduction Program Plan (LRPP)*” means Denver Water’s Lead Reduction Program Plan dated September 2019.

O. “*Lead Service Line*” or “*LSL*” means a service line made of lead which connects the water main to the building inlet and any lead pigtail, gooseneck or other fitting which is connected to such lead line. This definition is intended to be inclusive of the term “Lead Service Line” as defined under Section 11.26(1)(g) of 5 CCR 1002-11 and 40 C.F.R. Section 141.2.

P. “*LSL Replacement*” or “*LSLR*” is defined in paragraph 4.B, below.

Q. “*Orthophosphate Treatment*” means phosphate-based corrosion inhibitor addition per the Colorado Department of Public Health and Environment’s March 20, 2018 letter to Denver Water designating orthophosphate as OCCT.

R. “*Possible LSLs*” are based on conflicting or missing data that provides an estimated probability value between 50% to 79% that a service line is an LSL.

S. “*Program Year*” has the same meaning as calendar year.

T. “*Public Notice*” for the purpose of this variance means:

i. a Tier 2 public notice as described in Section 11.33(3) of 5 CCR 1002-11 and 40 C.F.R. Section 141.203;

ii. a public notice that contains the same elements of Tier 2 Public Notice described above that is provided to customers enrolled in the filter program, and that is delivered by making at least two forms of direct contact with the customer subset, with messaging approved by CDPHE; and

iii. a Tier 3 public notice as described in Section 11.33(4) of 5 CCR 1002-11 and 40 C.F.R. Section 141.204.

U. “*Select Households*” means homes built between 1983-1987 that do not have LSLs.



V. “*Service Line Refusal List*” means a list of the households where the owner has refused access for lead service line replacement. The list should include addresses of Customer Premises and descriptions of the attempts to contact the property owner.

W. “*Suspected LSLs*” are based upon available data that provides an estimated probability value between 80% to 99% that a service line is a LSL (i.e., homes built before 1951).

X. “*System*” means the community water system that Denver Water owns and operates (PWS ID# CO0116001) and the Integrated Systems covered under Master Meter, Read and Bill, or Total Service agreements with Denver Water as detailed in Appendix III.B.1 of the Lead Reduction Program Plan submitted by Denver Water in support of its variance request. Those systems are listed in Appendix B.

Y. “*Variance End Date*” means three years after the Effective Date unless conditions described under paragraph 8.D trigger an extension.

## **2. Corrosion Control Treatment:**

A. *pH and Alkalinity Adjustment Corrosion Control Treatment.* Denver Water must begin to adjust pH and alkalinity as CCT in its System no later than March 20, 2020 and meet the implementation schedule approved by CDPHE in its modification decision under Section 11.26(3)(d)(iii) of 5 CCR 1002-11 and 40 C.F.R. Section 141.82(h).

### **B. Monitoring and Sampling:**

i. *LCR Compliance Tap Sampling for Action Level 90th Percentile Calculation.* During the variance, Denver Water must comply with the LCR sampling pursuant to Section 11.26(2) of 5 CCR 1002-11 and 40 C.F.R. Section 141.86.

ii. *Use of Sampling Results in the 90<sup>th</sup> Percentile Calculation.* Lead water quality tests collected to identify LSLs for the inventory under this variance and to verify lead concentrations post-replacement shall not be used in the calculation of the 90th percentile. Any customer-requested samples that meet the Tier 1 sampling requirements will still be included in Denver Water’s 90<sup>th</sup> percentile compliance calculations.

iii. *Monitoring for Water Quality Parameters.* Per 40 C.F.R. Section 141.87(a), Denver Water must collect a total of 50 samples at 25 sites during each 6-month monitoring period for the applicable water quality parameters at the locations required under 40 C.F.R. Section 141.87(c). Additionally under this variance, Denver Water must collect a minimum of 8 of the 50 tap samples each month to meet the required total number of 50 samples over each six-month period. Denver Water must follow Sections 11.26(4)(f) and (j)-(l) of 5 CCR 1002-11 and 40 C.F.R. Section 141.82(g) for treatment technique compliance determinations for continued operation and maintenance of the CCT.

iv. *Identifying and Addressing Elevated Lead Levels.* Within 90 days of the Effective Date, Denver Water must develop and submit an elevated lead response plan for approval by CDPHE and EPA. The plan shall describe how Denver Water will assess LCR compliance tap sampling results (described in paragraph 2.B.i) to identify sites with elevated lead levels. The plan shall also describe the actions Denver Water will take to identify the cause of the elevated lead levels

and to reduce exposure to lead in drinking water at those sites. Denver Water must also describe in the plan how they will incorporate information on elevated lead levels and actions taken into the monthly reporting on lead levels required under paragraph 7.B.i. Denver Water shall implement the response plan as approved by CDPHE and EPA. Upon identification of a sampling location with elevated levels of lead, Denver Water shall take actions to reduce drinking water exposure to lead in accordance with the approved plan.

*C. Corrosion Control Treatment Metric.* Denver Water must consistently maintain in all parts of the System a minimum target pH of 8.5 during the first year of operation under this variance. Subsequently, Denver Water must maintain pH and alkalinity within the ranges designated by CDPHE in its modification decision under Section 11.26(3)(d)(ii) of 5 CCR 1002-11.

### **3. Lead Service Line Inventory:**

*A. LSL Inventory.* During the term of this variance, Denver Water must create and maintain on an ongoing basis an inventory of the material used for each service line used for drinking water that is a known, suspected, and possible LSL associated with a Customer Premise within Denver Water's System, and update the inventory each Program Year as LSLs are replaced and the material used for service lines are Investigated. The inventory must include all LSLs within the System regardless of ownership, including in the service areas of all distributors who are a part of the Integrated System. Denver Water must complete the initial LSL inventory no later than 35 Days after the Effective Date. The total estimated number of known, suspected, and possible LSLs equals (Y). Any updates to (Y) will be submitted in Denver Water's annual summary report described in paragraph 7 below.

*B. Investigation of Service Line Materials.* During the term of this variance, on an ongoing basis Denver Water must Investigate known, suspected, and possible LSLs using lead water quality tests, potholing, visual inspections, or other means that supports a determination of the service line material. Denver Water must incorporate its findings under this subparagraph into its required LSL inventory annual updates.

*C. Publication of LSL Inventory.* No later than 70 Days after the Effective Date, Denver Water must provide public access to its LSL inventory on its external customer website, which will allow the public to view whether service line materials used for any Customer Premise in the System, by the specific street address, is lead, copper, or unknown. During the term of this variance, Denver Water must update this inventory at least annually, and must continue to provide public access to its LSL inventory. For owners or residents of a Customer Premise who call Denver Water by phone, Denver Water must disclose whether its inventory shows that the owner's or resident's service line is: a known, suspected or possible LSL; is unlikely to be an LSL; or is a non-lead service line.

*D. LSL Inventory Compliance Metric.* Denver Water must Investigate a minimum of 1.4% of the total estimated number of suspected and possible LSLs in the LSL inventory each Program Year (based on a subset of Y as described in paragraph 3.A above), as adjusted. Should the program be extended, by the variance end date (15 years from issuance) there must be no remaining sites in the inventory categorized as a known, suspected, or possible LSL, as defined in Paragraph 1. These investigations are performed independently of the LSL replacements under paragraph 4 below.

#### 4. Accelerated Lead Service Line Replacement Program:

A. *LSL Replacement.* Within 90 Days of the Effective Date, Denver Water must begin to implement accelerated LSL replacement in its System. Each Program Year, Denver Water shall replace at least 7.0% of the estimated number of LSLs in its distribution system, or a rate of at least 4,477 LSLRs each year, whichever is higher. At the end of each Program Year, the cumulative average must be calculated using the total number of LSLs replaced during the term of the variance divided by the total estimated number of known, suspected, and possible LSLs, consistent with the initial LSL inventory. If service lines initially inventoried as unlikely or non-lead are later discovered to be LSLs, they must be added to the initial number of LSLs in Denver Water's inventory and included in the calculation of the LSL replacement rate. If the extension to the variance is granted, Denver Water shall assure that the replacement rate described above results in replacement of all lead service lines in 15 years.

B. *LSL Replacement Defined.* For the purpose of calculating the cumulative Program Year average replacement rate, the following types of LSL replacements will count as credit for an entire LSL replacement:

- i. full LSL replacement of a single service line;
- ii. replacement of an existing partial LSL that results in a non-lead service line from the main to the first fitting inside the structure;
- iii. replacement of a galvanized service line downstream of an existing or previously existing LSL, including any lead that is part of the upstream segment of the service line; and
- iv. LSL replacement completed by entities other than Denver Water, such as governmental agencies, developers, homeowners, and non-profits, which have been inspected by Denver Water.

C. *Full LSL Replacements.* All LSLs must be replaced from the main up to the first fitting inside the structure excluding any portion of the service line that is copper. If there is no fitting within five feet of the location where the service line enters the structure, Denver Water must install a fitting to allow for connection of the service line at a location convenient for Denver Water.

D. *Partial LSL Replacements.* Denver Water may not make a partial replacement of an LSL during the term of the variance except when: i. emergency repairs must be made to a service line; or ii. in the course of water main replacement, property owner consent cannot be obtained, or the property cannot be accessed (e.g. due to safety concerns). A partial replacement that does not result in complete replacement of all portions of the LSL shall not be counted as a LSL replacement for the purposes of the accelerated LSL replacement program until the partial LSL is fully replaced.

E. *Post Replacement Samples.* Denver Water must offer property owners the option to have Denver Water conduct one-time lead sampling at homes where LSLs have been replaced within six months post-LSL replacement.

F. *Test Out.* The "test out" provision in 40 C.F.R. Section 141.84(c) and Section 11.26(6)(b)(i)(B) of 5 CCR 1002-11 does not apply while Denver Water is subject to this variance. All LSLs must be replaced.

*G. Property Owner Consent.* Denver Water intends to contact property owners at the Customer Premise a minimum of two weeks before replacement to secure the property owner's documented consent. Work at the Customer Premise is intended to commence once consent is documented. If Denver Water has not made contact with a property owner, and consent is required under State or local law for Denver Water to conduct a replacement, then Denver Water must use reasonable efforts to secure consent. Reasonable efforts must include at least three attempts to contact the property owner including an attempt to send at least two written requests by U.S. mail to the property owner at the most recent mailing address identified through Denver Water records for consent to replace the LSL at the property, and an attempt to obtain permission by making in-person contact with the property owner if necessary. If documented consent to replace the LSL is not granted after reasonable efforts are made to achieve consent, and consent is required under State or local law for Denver Water to conduct a replacement, then the property will be added to Denver Water's Service Line Refusal List as described in paragraph 4.H. below.

*H. Customer Refusals and Changes in Customer Accounts.* Denver Water must maintain records of the specific addresses of all structures at which the property owner does not consent to LSL replacement (i.e., Service Line Refusal List defined under Paragraph 1 of this Order). When Denver Water customer account records indicate a change in ownership at the customer premise, Denver Water must determine whether the address is on the Service Line Refusal List, and within 91 Days of a change in Denver Water account records, undertake reasonable efforts to obtain permission from the new property owner of the Customer Premise to replace the LSL. Reasonable efforts include the efforts described in paragraph 4.G. above. If permission is granted and conditions allow for the LSL to be accessed and safely replaced, Denver Water must replace the LSL.

*I. Accelerated LSL Replacement Compliance Metric.* Denver Water must annually achieve at least a 7.0% cumulative average Program Year LSL replacement rate as determined based on reporting required in paragraph 7.B. If not achieved, Denver Water shall provide public notice within 30 days to all customers who have known, suspected, or possible LSLs as required under 1.T.ii.

## **5. Filter Program:**

*A. Filters.* Denver Water must distribute to the occupants of all Customer Premises in its System with known, suspected and possible LSLs one filter and enough replacement cartridges for the first six months of use. Denver Water shall begin to distribute educational materials, filters and cartridges within 90 Days of the Effective Date. Denver Water shall complete distribution of the educational materials, filters and cartridges for at least the first six months of use within 270 Days of the Effective Date. If Denver Water does not distribute all filters and cartridges by the above deadline, then Denver Water must conduct public notice to all customers enrolled in the filter program under paragraph 1.T.ii. All filters and cartridges distributed must be certified NSF/ANSI (53) for lead removal and not certified to remove fluoride. Customers who indicate that they use bottled water or an alternative filter device certified NSF/ANSI (53) will continue to be customers enrolled in the filter program unless they refuse a filter or contact Denver Water to opt-out of the filter program. Denver Water must maintain a list of customers who have refused filters or opted-out of the filter program and provide the list to EPA and CDPHE upon request.

*B. Filter Replacement Cartridges.* Denver Water must distribute replacement cartridges to customers enrolled in the filter program per the filter manufacturers' recommended replacement rate unless the customer refuses the filter or replacement cartridges. Replacement filters must be provided to each

Customer Premise enrolled in the filter program until six months after replacement of a Customer Premise's LSL or until the time the service line of the property is confirmed to be non-lead. If Denver Water does not distribute all replacement filters or cartridges per the manufacturers' recommended replacement rate, then Denver Water must provide public notice to all customers enrolled in the filter program under paragraph 1.T.ii.

*C. Changes in Customer Accounts.* If a change in the customer name of the water account associated with a customer enrolled in the filter program occurs at any time, Denver Water must provide the new residents with educational materials no later than two weeks following the change in customer account. If the Customer Premise or a residential unit at the Customer Premise is enrolled in the filter program, Denver Water must distribute a new filter and replacement cartridges per manufacturers' recommended replacement rate to the new customer within 35 Days of the change in customer account. Denver Water will also make filters available for pick-up at customers' election.

*D. Filters for Infants in Select Households.* If a formula-fed infant/child up to 24 months of age resides in a Select Household, upon customer request Denver Water must offer free drinking water lead testing. If the water quality results in the first draw sample show lead concentrations above 3 ppb, Denver Water must offer a filter and enough replacement filters and cartridges to last the customer until the child at the Select Household exceeds the age of 24 months. Denver Water will develop and implement a communications, outreach and education program focused on Select Households to make them aware of the opportunity for testing and filters.

*E. Filter Adoption Assessment.*

i. *Surveys.* Denver Water must conduct a survey each program year of randomly selected customers enrolled in the filter program to receive a minimum of 1,059 responses. The minimum number of required responses may be reduced upon written approval of CDPHE and EPA as the number of customers enrolled in the filter program decline during the term of this variance. The survey must inquire: whether the customer has used the filter for water to make infant formula (if applicable); cooking and drinking; or is using bottled water or a filter device that is certified NSF/ANSI (53) for lead removal not provided by Denver Water for infant formula, cooking and drinking. The filter survey will be provided to and approved in writing by EPA and CDPHE before distribution to customers enrolled in the filter program. If Denver Water:

a. Does not conduct the annual survey during any program year, then Denver Water must conduct public notice to all customers under paragraph 1.T.i.

b. If Denver Water does not collect the minimum number of survey responses during any program year, then Denver Water must conduct public notice to all customers enrolled in the filter program under paragraph 1.T.iii, unless CDPHE determines that Denver Water must conduct public notice under paragraph 1.T.ii.

ii. *Survey of Filter Adoption Rate.* All received survey responses will be used to calculate the filter adoption rate based on: the number of responses that confirm adoption of the filter, use of bottled water, or use of an alternative filter device not provided by Denver Water that is certified NSF/ANSI (53) for ingestion. Respondents who indicate that while for cooking purposes they do not use the filter Denver Water provided, bottled water, or alternative filter device that is certified NSF/ANSI (53), but utilize one of these three options for drinking water and infant fed

formula, such respondents will be summed and multiplied by 50% and the result may be counted as having adopted a filter for the purposes of determining the average filter adoption rate.

#### F. *Filter Performance.*

i. *Confirmation of Filter Performance Before Distribution.* Within 90 Days of the Effective Date, Denver Water must test the lead removal effectiveness of twelve units of each type of filter to be distributed to customers using water from Denver Water's pipe racks as described in the LRPP from at least one Denver Water treatment plant in accordance with a testing protocol approved by EPA and CDPHE to confirm that the filters meet the requirements of the NSF/ANSI (53) certification. All filter testing results will be reported to EPA and CDPHE. Denver Water shall not distribute a filter model that fails to meet the NSF/ANSI (53) certification requirements based upon the lead samples collected under this paragraph.

ii. *Confirmation of Filter Performance and Usage in Field.* To confirm performance of filters in use at Customer Premise, Denver Water must collect samples from filters in at least 50 locations in use by customers enrolled in the filter program who are also enrolled in Denver Water's LCR compliance tap sampling program. Sampling will have the same frequency as LCR compliance tap sampling. Samples must be collected in accordance with a testing protocol approved by EPA and CDPHE in writing that includes both first draw and lead service line samples. During the sample collection process, Denver Water will collect additional information regarding whether the filter is properly used and maintained, including but not limited to: whether the filter cartridge is properly installed and changed on time; whether the filter is being used for drinking, cooking, and infant formula; and whether the filter is being used per manufacturer's instructions.

iii. If Denver Water does not complete testing of filters under this paragraph, in accordance with EPA and CDPHE approved protocols, Denver Water must provide public notice in accordance with paragraph 1.T.ii. above.

G. *Filter Communication Compliance Metric.* Denver Water must make direct contact with lead outreach and education materials to 95% of all customers enrolled in the filter program in every Program Year. Outreach and education materials must include information on the proper use of filters including filter cartridge replacement. Communications channels may include "door-to-door" communications, a customer tracking system, how-to videos, and local opportunities to engage residents (See Appendix A). Compliance shall be documented by mailing lists and mail receipts, lists of customer email addresses for customers who elect to receive email communication, or other forms of documentation approved by CDPHE. If Denver Water does not achieve compliance with this metric, Denver Water must provide public notice to all customers enrolled in the filter program of its failure to achieve the metric under paragraph 1.T.ii.

### **6. Lead Reduction Program Plan:**

A. *Lead Reduction Program Plan.* Denver Water shall work in good faith to fully implement the LRPP. In no case shall a deviation from or failure to implement the LRPP modify these terms and conditions. In the event of a conflict between these terms and conditions and the LRPP, the terms and conditions in this variance take precedence.

B. *Comprehensive LRPP Performance Metric.* Denver Water must demonstrate to EPA's satisfaction, using the updated equivalency model results as reported under paragraph 7.C, that the combined actual performance of the LRPP as implemented continues to be "at least as efficient as" orthophosphate treatment in reducing lead exposure on an annual basis. Denver Water may account for the CCT optimization period in this demonstration.

## 7. Recordkeeping and Reporting Requirements:

A. *Reporting.* In the event that Denver Water determines that it will not meet any of the terms and conditions as defined in this document, Denver Water must notify CDPHE and EPA in writing no later than two Days after the determination occurs. The notification shall identify the provision of the Order that will not be met and describe the actions Denver Water is taking to address the failure to meet the terms and conditions.

B. *Reporting and Recordkeeping.* All of the requirements of the LCR other than the definition of OCCT remain in effect, including the reporting and recordkeeping requirements. In addition, during the first Program Year, Denver Water shall record, maintain records of, and report the following information to CDPHE and EPA within ten Days after the end of each calendar quarter (April 10, July 10, October 10, January 10), except as noted below. Starting in the second Program Year, this information shall be reported every six months on July 10 and January 10, except as noted below. Denver Water will provide any of the raw data to CDPHE and EPA, within 30 days, when requested.

### i. CCT.

- a. within 90 days of the Effective Date, an elevated lead response plan for approval by CDPHE and EPA in accordance with requirements of paragraph 2.B.iv.
- b. notification to CDPHE and EPA of elevated lead levels and the actions that Denver Water is taking to reduce drinking water exposure to lead at those locations.
- c. all lead and copper compliance tap sampling results, as required in Subpart I of 40 C.F.R. Part 141 and Section 11.26 of 5 CCR 1002-11, as well as the results of any customer requested samples;
- d. CCT water quality parameters for pH and alkalinity, reported monthly no later than the tenth day of the following month; and
- e. all lead and water quality results collected as part of Denver Water's investigation of LSLs and post LSL replacement and service line material of those sites, reported monthly no later than the tenth day of the following month.

### ii. LSL Inventory.

- a. total number of service lines;
- b. the total number of replaced LSLs during the variance;
- c. the total number of known, suspected, and possible LSLs;
- d. the total number of unlikely LSLs;
- e. the total number of non-LSLs, indicating the number designated as non-LSLs solely based on statistical factors;
- f. the number of Investigations conducted each year, demonstrating that the minimum 1.4% verification rate has been met;
- g. an updated service line inventory map; and
- h. the rationale for a change in the status of a service line in the inventory (e.g. Investigation, replacement, water quality data).

iii. *LSL Replacements.*

- a. the address and date of all LSL replacements occurring during the variance, including by year;
- b. the type of LSL replacement (full, partial including galvanized, by third party);
- c. the unique customer identification number of Customer Premises on the refusal list and documented attempts to contact the property owner; and
- d. those Customer Premises where Denver Water performed a partial LSL replacement due to an emergency repair and property owner consent could not be obtained.

iv. *Filters.*

- a. addresses of Customer Premises where filters and replacement cartridges have been provided, and certification of the number of homeowners with known, suspected, or possible LSLs that are not part of filter program because they use their own filter or bottled water;
- b. the total number of filters and replacement cartridges distributed per Program Year;
- c. the percent filter adoption for each year of the variance, and the method used to determine this rate;
- d. a list of unique customer identification numbers reporting the use of bottled water or a filter certified NSF/ANSI (53) for removal of lead, and any changes in the list;
- e. a list of unique customer identification numbers for customers enrolled in the filter program who have refused a filter or replacement cartridges or have opted out of enrollment in the filter program;
- f. filter lead sampling results collected under paragraph 5.F above;
- g. information about filter use and maintenance under paragraph 5.F; and
- h. Denver Water shall notify CDPHE and EPA within 10 Days of receiving sample results if data indicate measurable lead in filtered drinking water and shall provide the measured levels of lead in filtered water.

v. *Compliance Metrics.* Results achieved under the compliance metrics in paragraphs 2.C, 3.D, 4.I, 5.G and 6.B above.

vi. *Communications, Outreach and Education.* A summary of activities conducted under the Communications, Outreach and Education program, including the updated communications, outreach and education plan for the new Program Year. The summary will include, at a minimum:

- a. a description of outreach activities conducted, including copies of the outreach materials provided;
- b. a list of any partner organizations who conducted, or were involved in the implementation of the communications, outreach and education plan; and
- c. if in-person or telephone surveys are conducted, the answers to filter usage survey questions that were asked, and date and time of call.

vii. *Health Equity and Environmental Justice.* A summary of activities conducted and designed to address health equity and environmental justice (HE&EJ) principles set forth in the LRPP, including:



- a. a description of how the HE&EJ principles are being incorporated into the accelerated LSL replacement program, lead filter program, and communications, outreach and education plan;
- b. socioeconomic or demographic data collected through the survey that may inform the filter adoption rate by neighborhood or demographic group to the extent practical;
- c. socioeconomic or demographic data collected from or other sources (e.g. census data, local public health agencies) to target communications, outreach and education programs to specific neighborhoods, demographic cohorts, or non-English speaking groups; and
- d. documentation that outreach and education materials have been provided to at least 95% of the households enrolled in the filter program.

*C. Annual Program Year Reports.* No later than 30 Days following the end of a Program Year, Denver Water must submit a Program Year report to CDPHE and EPA, containing a summary of the information and data required under this paragraph for the previous Program Year, including an assessment of which metrics were achieved. The Annual Program Year Report must include a comprehensive evaluation of LRPP performance to date using the equivalency model described in the LRPP with updated inputs based on actual LRPP implementation for: 90<sup>th</sup> percentile lead levels at LSL and copper with lead solder sites after operation of increased pH and alkalinity adjustment as CCT, number of LSLRs conducted, filter adoption rate, and filter performance in the field. This requirement remains in effect for the term of the variance. The Program Year report must also document any deviations from the LRPP during the most recent Program Year. If CDPHE or EPA provides any comments or requests related to the annual report, Denver Water must provide a written response within 30 Days that addresses any identified comments/requests.

## **8. General Provisions:**

*A. Authority.* Beginning on the date that CDPHE incorporates the terms and conditions of this variance into its LCR OCCT requirements for Denver Water, CDPHE has primary implementation and enforcement authority over the variance, subject to EPA oversight. CDPHE may make recommendations to EPA to terminate or continue this variance. EPA has the authority to ultimately decide whether to continue this variance.

*B. Revisions to the Lead and Copper Rule.* This is a variance from the definition of "OCCT" in 40 C.F.R. Section 141.2. It is not a variance from any other provision of the current or revised version of the LCR. If EPA revises the definition of "OCCT" in 40 C.F.R. Section 141.2 in a manner that affects the provisions and conditions of this variance, then EPA may modify or revoke this variance in a manner that is consistent with federal law.

*C. Enforcement.* EPA or CDPHE may take an enforcement action, including but not limited to issuing violations and requiring public notice, if Denver Water fails to comply with the terms and conditions of the variance and state's modification under 5 CCR 1002-11 Section 11.26(3)(d)(iii), in accordance with 42 U.S.C. Sections 300g-3(a)(1) of the SDWA and Colo. Rev.Stat. Sections 25-1-114, 25-1-114.1, and 25-1.5-203; 5 CCR 1002-11 Section 11.1(6)(c), respectively. Failure to comply with the conditions of the variance is subject to enforcement under Section 1414(a)(1)(A) of SDWA, 42 U.S.C. § 300g-3(a)(1)(A). EPA further reserves its right to act under SDWA Section 1431, 42 U.S.C. § 300i, if it determines there may be an imminent and substantial endangerment to the health of persons.

*D. Extension of Variance.* Prior to the expiration of this variance, but no later than 90 days before the Variance End Date, EPA intends to determine whether to modify the terms of this variance under paragraph 8.I to extend the term of this variance for up to an additional twelve years. To make this determination, EPA will, at a minimum, evaluate data reported through implementation under paragraph 7 against the following criteria to consider whether the variance approach, as implemented, is “at least as efficient” as the treatment technique requirements of the LCR at that time:

- i. Denver Water replaces LSLs at the required minimum cumulative average Program Year rate of 7.0%;
- ii. Denver Water distributes filters and replacement cartridges to customers identified as eligible for its filter program, as described in paragraph 5;
- iii. Denver Water operates pH and alkalinity adjustment as CCT in accordance with the water quality parameters set by CDPHE; EPA, in consultation with CDPHE, will review this information and determine if the distribution system is in the process of reaching equilibrium or has reached equilibrium with the approved water chemistry prescribed by the variance;
- iv. Comprehensive performance of the LRPP overall to date, including 90<sup>th</sup> percentile lead levels at LSL and copper with lead solder sites after operation of increased pH and alkalinity adjustment as CCT, number of LSLRs conducted, filter adoption rate, and filter performance in the field; and
- v. Denver Water complies with the terms and conditions of this variance and all provisions of the LCR other than the definition of OCCT in 40 C.F.R. Section 141.2.

EPA will provide notice to CDPHE and Denver Water of a decision under this paragraph at least 90 Days prior to the Variance End Date. If EPA does not provide notice of a decision, the Variance End Date is extended for six months or until EPA makes this determination, whichever occurs sooner.

*E. Revocation of the Variance.* EPA has the sole discretion to revoke this variance if Denver Water does not comply with the terms and conditions of the variance, or if EPA believes there is a risk to public health. Revocation of the variance will be at a date no longer than 180 Days after EPA’s notification of the revocation decision or once Denver Water installs and operates OCCT per paragraph 8.F, whichever occurs first. Failure to complete installation and operation of orthophosphate by this deadline will be considered a treatment technique violation under Section 11.26 of 5 CCR 1002-11 and 40 C.F.R. Section 141.82(e)

*F. Optimal Corrosion Control Treatment.* If EPA revokes the variance under paragraph 8.E., then within 180 Days of EPA’s decision Denver Water shall commence the operation of orthophosphate treatment as its designated OCCT, in accordance with CDPHE’s March 20, 2018, OCCT determination, and provide public notice to its customers in accordance with paragraph 1.T.i above. The initial dose of orthophosphate must be 2 mg/L. The specific orthophosphate dose may be further modified by CDPHE according to the provisions under Section 11.26(3)(d)(iii) of 5 CCR 1002-11 and 40 C.F.R. Section 141.82(h).

*G. Notice of Lead Reduction Program Plan.* Within 90 Days of the Effective Date, Denver Water must begin a multi-media public information campaign and customer notification by written letter or

pamphlet to notify customers enrolled in the filter program of Denver Water's variance, including the accelerated LSL replacement program and the distribution of the NSF/ANSI (53) certified filters for lead removal.

H. *Term of Variance.* Unless EPA revokes or modifies the terms of this variance, the term of this variance is no longer than three years and six months, beginning on the Effective Date through the Variance End Date.

I. *Modification of Conditions.* EPA has the sole authority to modify this variance. EPA will notify Denver Water and CDPHE of any modifications in writing, and such modifications shall be incorporated into this variance. Denver Water and CDPHE can also request modifications in writing, including a rationale for the request.

J. *Notices.* All notices, reports, disclosures, or other communications required or related to this variance must be sent via certified U.S. Mail, overnight express delivery service, or electronic means to the recipients and addresses below.

EPA:  
Safe Drinking Water Branch Chief  
Water Division U.S. Environmental Protection Agency, Region 8  
1595 Wynkoop St.  
Denver, CO 80202-1129  
Current E-mail: bahrman.sarah@epa.gov

Denver Water:  
James S. Lochhead  
CEO/Manager  
Denver Water  
1600 West 12th Avenue  
Denver, Colorado 80204  
E-mail: jim.lochhead@denverwater.org


Office of General Counsel:  
ATTN: Jessica Brody  
Denver Water  
1600 West 12th Avenue  
Denver, Colorado 80204  
E-mail: jessica.broadly@denverwater.org

CDPHE:  
Safe Drinking Water Program Manager  
Colorado Department of Public Health and Environment  
4300 Cherry Creek Drive South  
Denver, CO 80246  
Current E-mail: ron.falco@state.co.us

All reports will be sent to Drinking Water Compliance Assurance through its on-line portal at <https://wqcdcompliance.com/login> or through such other means as designated in writing by CDPHE or EPA.

Attorney General's Office  
ATTN: Matt Miller  
1300 Broadway  
Denver, CO 80203  
E-mail: matthew.miller@coag.gov

Dated: 12/16/19

  
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Gregory Sopkin  
Regional Administrator  
EPA Region 8