Exh. RS-6
Docket UW-170924
Witness: Rachel Stark

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

SARAH HAND, **Complainant,** **v.** **RAINIER VIEW WATER CO., INC.,** **Respondent.**	**DOCKET UW-170924**

EXHIBIT TO
TESTIMONY OF

Rachel Stark

STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION

Email string between John Cupp, Rachel Stark, and Virpi Salo-Zieman, dated December 6, 2016, with attachment

May 3, 2018

From: Salo-Zieman, Virpi (DOH)
To: Stark, Rachel (UTC)
Subject: RE: Rainier View Water
Date: Tuesday, December 6, 2016 2:48:35 PM

Hi Rachel, we don't have any FAQs on the topics you are touching. So I will answer what I can. – Please keep asking if something is not clear.

There is no treatment requirement due to health implication of iron and manganese in the water. Iron and manganese are regulated for aesthetic reasons. For more information on this, you can check EPA's website on secondary MCLs: https://www.epa.gov/dwstandardsregulations/secondary-drinking-water-standards-guidance-nuisance-chemicals . I am not aware of any risk of iron or manganese to the customer's plumbing fixtures – other than staining, which is aesthetic.

The water system must monitor for these compounds at the entry point to the distribution system regularly – the frequency depends on the past results at the particular location, varying from once every 3 years to once every 9 years. Typically, iron and manganese levels like other inorganic chemicals, do not significantly vary over time. If a system treats to remove these compounds, then they must monitor at least monthly (after treatment). In Southwood system, they have several treatment plants in place where this monitoring frequency would be required (but only at the plants, not on all sources).

The company has taken steps to install treatment on the wells that have elevated iron or manganese. Treatment is currently in place at five locations at the Southwood water system. Two additional treatment plants have been approved, but are yet to be constructed. Fir meadows has not been one of those sites and my understanding is that the plan is to keep the source with high manganese at Fir meadows site offline until treatment has been installed. The system has been working on this several years now and is making steady progress.

Rainier View water has installed these similar treatment plants in other water system too. Would you need information on those as well or is this specific to Southwood water system?
There are not any compliance actions related to color, iron, and manganese at the systems Rainier View Water owns and operates. We would only do compliance on aesthetic issues if the majority of the customers are on board with specific concern and understand the cost of addressing that concern.

Regards,

Virpi

From: Stark, Rachel (UTC)
Sent: Tuesday, December 6, 2016 2:21 PM
To: Salo-Zieman, Virpi (DOH) <Virpi.Salo-Zieman@DOH.WA.GOV>
Subject: RE: Rainier View Water

Hi Virpi,

Mostly customers that we are hearing from want to know what requirements there are that DOH holds the company responsible to adhere to. What tests are being done, what are the results of those tests, when the tests were performed, and are there any other steps the company should be doing in order to provide clear, clean water to their customers.

In order to provide proper information to these customers, I would like to know what the company has done in the past few years to satisfy DOH's standards for these systems. Yes, we would like information about aesthetic concerns of iron and manganese, treatment and any health risks or risk to customer's pipes and/or appliances or toilets. Two of the consumers state there are health aspects concerning their household and damage or stains to their tubs, sinks, toilets, etc.

Are there any pending compliance cases or current or past actions related to these systems?

Sounds like Mr. Bob Blackman, Rainier View Water, met with Mr. Bob James, DOH, on November 18. Here is what Mr. Blackman sent to me regarding their discussion. Can you please let me know if this information sounds reasonable?

> "We discussed the Iron/Manganese Remove treatment/filtration of the Fir Meadows Wellfield. We also visited the site and took raw water Iron and Manganese samples from the three well and will have them analyzed by a certified laboratory. We also discussed setting up a flushing program and shutting off the well that produces the highest level of Manganese to help minimize this issue until the treatment is on-line. Yesterday afternoon we took several chlorine residuals test within Springwood, which indicate we are well within the levels to insure proper disinfection."

I'm sure I may have some additional questions.

Will you please provide any FAQ sheets you may have that would be helpful for this issue?

Thank you.
Rachel Stark
Consumer Complaint Investigator
Consumer Protection
1-888-333-WUTC (9882)
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From: Salo-Zieman, Virpi (DOH)
Sent: Tuesday, December 06, 2016 1:48 PM
To: Stark, Rachel (UTC)
Subject: RE: Rainier View Water

Hi Rachel,

What kind of questions are you getting or anticipating? Would you like to know more about the aesthetic concerns of iron and manganese, treatment or something else?

Thanks,

Virpi Salo-Zieman, P.E.
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http://www.doh.wa.gov/ehp/dw/

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From: Cupp, John (UTC)
Sent: Tuesday, December 6, 2016 1:35 PM
To: Salo-Zieman, Virpi (DOH) <Virpi.Salo-Zieman@DOH.WA.GOV>
Cc: Stark, Rachel (UTC) <rstark@utc.wa.gov>
Subject: Rainier View Water

Hello Virpi,

I work in the Consumer Protection Division of the UTC. Rainier View Water has filed with us to extend the expiration date of a treatment surcharge it currently charges to its customers. According to the company, the increased surcharge is so "the company will be able to install manganese and iron treatment facilities at four additional locations."

You may have seen the news on Channel 7 a couple of weeks ago in which a news crew dropped in on Rainier View and confronted the company. We have been getting calls from Rainier View customers who have received the customer notice about the extension of the surcharge, and we need to respond. I believe the wells involved in these complaints are Tannenbaum and Fir Meadows, but there may be others.

Rachel Stark is one of our Public Involvement Coordinators, and she is taking inquiries from the Rainier View Water customers who have water quality complaints while this surcharge case is open.

Is there any information you can share with Rachel about the issues they are experiencing? Do you have a FAQ sheet or anything that we could send to these consumers to answer some of their questions?

I cc'ed Rachel in this message so that you can respond to her.

Thank you,

John Cupp
Regulatory Analyst
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EPA United States Environmental Protection Agency

Secondary Drinking Water Standards: Guidance for Nuisance Chemicals

On This Page:

What are secondary standards?

EPA has established National Primary Drinking Water Regulations (NPDWRs (National Primary Drinking Water Regulations)) that set mandatory water quality standards for drinking water contaminants. These are enforceable standards called "maximum contaminant levels" (MCLs) which are established to protect the public against consumption of drinking water contaminants that present a risk to human health. An MCL (Maximum Contaminant Level) is the maximum allowable amount of a contaminant in drinking water which is delivered to the consumer.

In addition, EPA has established National Secondary Drinking Water Regulations (NSDWRs) (National Secondary Drinking Water Regulations) that set non-mandatory water quality standards for 15 contaminants. EPA does not enforce these "secondary maximum contaminant levels" (SMCLs). (Secondary Maximum Contaminant Levels) They are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These contaminants are not considered to present a risk to human health at the SMCL (Secondary Maximum Contaminant Level).

Why set secondary standards?

These contaminants are not health threatening at the SMCL. P (Secondary Maximum Contaminant Level)ublic water systems only need to test for them on a voluntary basis. Then why it is necessary to set secondary standards?

EPA believes that if these contaminants are present in your water at levels above these standards, the contaminants may cause the water to appear cloudy or colored, or to taste or smell bad. This may cause a great number of people to stop using water from their public water system even though the water is actually safe to drink.

Secondary standards are set to give public water systems some guidance on removing these

Skin discoloration is a cosmetic effect related to silver ingestion. This effect, called argyria, does not impair body function. It has never been found to be caused by drinking water in the United States. A standard has been set, however, because silver is used as an antibacterial agent in many home water treatment devices and so presents a potential problem which deserves attention.

- Standard related to this effect: Silver

Tooth discoloration and/or pitting is caused by excess fluoride exposures during the formative period prior to eruption of the teeth in children. The secondary standard of 2.0 mg/L (Milligrams per Liter) is intended as a guideline for an upper boundary level in areas which have high levels of naturally occurring fluoride. The level of the SMCL (Maximum Contaminant Level) was set based upon a balancing of the beneficial effects of protection from tooth decay and the undesirable effects of excessive exposures leading to discoloration. Information about the Centers for Disease Control's (CDC) recommendations regarding optimal fluoridation levels and the beneficial effects for protection from tooth decay can be found on CDC's Community Water Fluoridation page.

- Standard related to this effect: Fluoride

Technical effects

Corrosivity, and staining related to corrosion, not only affect the aesthetic quality of water, but may also have significant economic implications. Other effects of corrosive water, such as the corrosion of iron and copper, may stain household fixtures and impart objectionable metallic taste and red or blue-green color to the water supply. Corrosion of distribution system pipes can reduce water flow.

- Standards related to corrosion and staining: Chloride, Copper, Corrosivity, Iron, Manganese, pH, Total Dissolved Solids, Zinc

Scaling and sedimentation are other processes which have economic impacts. Scale is a mineral deposit which builds up on the insides of hot water pipes, boilers, and heat exchangers, restricting or even blocking water flow. Sediments are loose deposits in the distribution system or home plumbing.

- Standards related to scale and sediments: Iron, pH, Total Dissolved Solids, Aluminum

Table of Secondary Drinking Water Standards

Contaminant	Secondary MCL (Maximum Contaminant Level)	Noticeable Effects above the Secondary MCL (Maximum Contaminant Level) (Maximum Contaminant Level)
Aluminum	0.05 to 0.2 mg/L (Milligrams per Liter)* (Milligrams per Liter)	colored water

This treatment is used to control the acidity, alkalinity, or other water qualities which affect pipes and equipment used to transport water. By controlling these factors, the public water system can reduce the leaching of metals such as copper, iron, and zinc from pipes or fixtures, as well as the color and taste associated with these contaminants. It should be noted that corrosion control is not used to remove metals from contaminated source waters.

Conventional treatments will remove a variety of secondary contaminants. Coagulation (or flocculation) and filtration removes metals like iron, manganese and zinc. Aeration removes odors, iron, and manganese. Granular activated carbon will remove most of the contaminants which cause odors, color, and foaming.

Non-conventional treatments like distillation, reverse osmosis, and electrodialysis are effective for removal of chloride, total dissolved solids, and other inorganic substances. However, these are fairly expensive technologies and may be impractical for smaller systems.

Non-treatment options include blending water from the principal source with uncontaminated water from an alternative source.

What can you do?

If you are concerned about the presence of secondary contaminants in your drinking water supply, here are a few suggestions:

- **First**, identify your local public water system. If you pay a water bill, the name, address, and telephone number of your supplier should be on the bill. If you do not pay a water bill, then contact your landlord, building manager, or the local health department — they should know.
- **Second**, contact your local public water system. Inquire about your supplier's monitoring for secondary contaminants. Ask for the list of secondary contaminants which are being monitored in your water supply. Does the water being delivered to the public meet these SMCLs (Secondary Maximum Contaminant Levels)? If you have not yet received notice from your supplier, ask how you can get a copy of the monitoring results.
- **Third**, if you receive a public notice from your local public water system regarding other drinking water standards — **read it carefully** — and follow any instructions closely. If you have questions or concerns, contact the person from the water system who is indicated in the notice. If that person is unavailable, contact either the state drinking water program or your local health department.
- **Fourth**, contact your state drinking water program if your water supplier is unable to provide the information you need. Ask if your water supplier is consistently in compliance with *both* primary and secondary drinking water regulations. Request a copy of monitoring results that were submitted to the state by your supplier. Your state drinking water program is usually located in the state capital (or another major city) and is often part of the department of health or environmental regulation. Consult the blue "government pages" of your local phone book for the proper address and phone number or call the Safe Drinking Water Hotline at 1-800-426-4791.
- **Fifth**, support rate increases for your local water supplier, where necessary, to upgrade your supplier's treatment facilities to meet drinking water standards.