Received from Susie Navetta 6/27/13

PUBLIC HEALTH DIVISION
Drinking Water Services

John A. Kitzhaber, MD, Governor

Oregon Health Authority

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June 19, 2013

Dan Reitz
Alderwood Water Development Company
30086 Federal Lane
Eugene, OR 97402-9763

Re: Alderwood Water Development Company

Dear Mr. Reitz:

The Oregon Health Authority (OHA) and the Department of Environmental Quality (DEQ) have sampled source waters upstream of surface water intakes and at groundwater wells serving public water systems for several years. Reducing contamination in source waters is a cost-effective way to ensure safe drinking water supplies for the future.

Your public water system was part of the July 2012 monitoring, which included locations of source waters from 14 public water systems---7 groundwater and 7 surface water sources. The sampling was conducted during June and July 2012 by the DEQ Laboratory. Monitoring results are typically completed 4-6 months after the sampling is performed, but the July 2012 results were delayed due to DEQ Laboratory implementation of a new database "Laboratory Information System". All data generated after mid-2012 was back-logged and had to be manually entered into the new system with new software. The laboratory results were received by the Drinking Water Protection staff on May 31, 2013.

The analytical results for the samples collected from the water system used by your utility are attached as Table 1. The list of all chemicals and metals that were analyzed for by the DEQ Laboratory is attached as Table 2.

Out of the 230+ chemicals analyzed, thirteen were detected in your source water. There are no human health benchmark concentrations for beta-sitosterol, cholesterol, coprostanol, or stigmastanol; however everyone consumes these natural sterols as part of a normal diet in the foods we eat. The contribution of these sterols from this drinking water would be very small relative to the amount consumed in food.

There is also no human health benchmark concentration for phenanthrene; however this chemical was detected at very low levels near the laboratory limit of detection.

The remaining eight detected contaminants were measured at concentrations tens to thousands of times below human health benchmark concentrations. None of the results indicate any significant risk to public health. However, the presence of sterols in the sample indicates that your source water is somewhat affected by upstream discharges of human or animal waste.

For more information about the public health significance of your results contact David Farrer, a public health toxicologist, at 971-673-0971 or at david.g.farrer@state.or.us.

Overall, the monitoring effort demonstrated that a variety of compounds can be detected at very low levels. These findings show the value of protecting our drinking water sources at both the state and local level. If you wish to discuss potential followup strategies to reduce the occurrences of any contaminants in your drinking water, please contact Sheree Stewart, DEQ Drinking Water Protection Coordinator, at 503-229-5413. Thank you for participating in the source water monitoring studies.

Sincerely,

Kari Salis

Kari Salis, PE
Interim Section Manager and
Region 1 Technical Services Manager
Drinking Water Services

Table 1: OHA/DEQ Drinking Water Source Monitoring Project - 2012
Detected Analytes* for Alderwood Water Development Co. (PWS 00304)

DEQ Lab Report No: 1211017
Sample Date: 10-July 2012

Station Number: 37137 Sample Number: 1211017-02
Source Type: Surface water

Method Number	Analyte	Drinking Water/Health Standards (see notes)	Units	Reporting Limit	Result	Notes
EPA 1698	beta-Sitosterol	Not Available	µg/L	0.00392	0.622	(1)
EPA 1698	Cholesterol	Not Available	µg/L	0.0245	0.989	(2)
EPA 1698	Coprostanol	Not Available	µg/L	0.00196	0.00366	
EPA 1698	Stigmastanol	Not Available	µg/L	0.00489	0.099	(3)
Volatile Organic Compounds by GC/MS						
EPA 8260C	Chloromethane	190 ppb (RSL)	µg/L	0.600	0.670	(4)
Low Level Analysis of Semivolatile Organic Compounds by GC/MS						
EPA 8270D	2,4,5-Trichlorophenol	890 ppb (RSL)	µg/L	0.0119	0.0123	(4)(5)(6)
EPA 8270D	2,4-Dimethylphenol	100 ppb (RSL)	µg/L	0.00593	0.0148	(4)(6)
EPA 8270D	Naphthalene	100 ppb (HBSL)	µg/L	0.0297	0.0548	(4)
EPA 8270D	Phenanthrene	Not Available	µg/L	0.00297	0.00475	(4)
Total Metals and others by Inductively Coupled Plasma Mass Spectrometry						
EPA 200.8	Barium, Total recoverable	2000 ppb (MCL)	µg/L	2.00	9.75	
EPA 200.8	Copper, Total recoverable	1300 ppb (TT-AL)	µg/L	1.50	2.55	
EPA 200.8	Lead, Total recoverable	15 ppb (TT-AL)	µg/L	0.20	2.30	
EPA 200.8	Manganese, Total recoverable	50 ppb (SMCL)	µg/L	2.00	11.2	
General Sample Parameters						
EPA 200.8	Hardness as CaCO3, Total recoverable	Not Available	mg/L	0.75	9.19	
EPA 200.8	Calcium, Total recoverable	Not Available	mg/L	0.20	1.72	
EPA 200.8	Magnesium, Total recoverable	Not Available	mg/L	0.05	1.19	
SM 2130 B	Turbidity	(TT)	NTU	1	1	
SM 2510 B	Conductivity	(TT)	µmhos/cm	1	63	
SM 2540 B	Total Solids	(TT)	mg/L	10.0	46.0	
SM 4500-H+ B	pH	(TT)	pH Units	0.0	7.1	
EPA 170.1	Temperature		°C	0.0	17.6	

Notes

* A complete list of analytical methods, compounds, and typical detection limits is available in the Analytical Report

(1) [Lab reference BK2::A] - Analyte found in the method blank. The sample result is at a concentration sufficiently greater than the blank value where there is no impact on the sample result.

(2) [BK6::A] - Analyte found in the field (transfer, transport, or equipment) blank . The sample result is at a concentration sufficiently greater than the blank value

(3) [EMPC::B] - Analyte peak did not meet the criteria for ion ratio. The analyte concentration reported is the estimated maximum possible concentration (EMPC).

(4) [BK5::B] - Analyte found in the field (transfer, transport, or equipment) blank. Sample result may be biased high.

(5) [BK3:B] - Analyte found in the method blank. Sample result may be biased high.
(6) [SU2::B] - Sample results may be biased due to high surrogate recovery.

Acronyms:

OHA - Oregon Health Authority
ug/L - micrograms per liter (parts per billion (ppb))
ng/L - nanograms per liter (parts per trillion (ppt))
DEQ - Oregon Department of Environmental Quality
mg/L - micrograms per liter (parts per million (ppm))
NTU - nephelometric turbidity units

Drinking Water / Health Standard Abbreviations:

Where MCLs have not been developed, other values are listed to provide a health/risk-based context for the values that were measured in raw water.

(MCL) Primary Maximum Contaminant Level - MCLs are legally binding standards under the Safe Drinking Water Act for public water systems to meet (post-treatment)

(SMCL) Secondary Maximum Contaminant Level

(TT) / (TT-AL) Treatment Technique required – Action Level is given

(CCL) Currently unregulated - proposed for further evaluation on the federal Contaminant Candidate List

(HBSL) USGS/EPA Health-based Screening levels (Toccalino, P.L., Norman, J.E., Booth, N.L, and Zogorski, J.S., 2008, Health-based screening levels: A tool for evaluating what water-quality data may mean to human health: U.S. Geological Survey, National Water-Quality Assessment Program, accessed October 6, 2008 at http://water.usgs.gov/nawqa/HBSL/)

(Derived¥) - Derived from RfD (0.33 mg/kg-day) developed by Minnesota Department of Health using methods approved by the Agency for Toxic Substances and Disease Registry

(RSL*) - Regional Screening level developed by EPA (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/pdf/restap_sl_table_run_NOV2012.pdf)

(HHBP#) - Human Health Benchmark for Pesticide developed by EPA (http://iaspub.epa.gov/apex/pesticides/f?p=HHBP:home)

(LTHA) - Lifetime health advisory developed by EPA (http://water.epa.gov/action/advisories/drinking/upload/dwstandards2012.pdf)

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Table 2. Potential Sources of Chemicals Detected in the 2012 DW Source Monitoring.

*Chemical Compounds Detected**	*Primary potential contaminant source(s)*
HERBICIDES *DEQ Method 11-LAB-0031-SOP or EPA Method 8270D*	
Atrazine	forestry, agriculture, residential
Deisopropylatrazine	degradation product -forestry, agriculture, residential
Desethylatrazine	degradation product -forestry, agriculture, residential
Diuron	agriculture, utility right-of-ways
Prometon	agriculture, utility right-of-ways
Simazine	agriculture, residential lawns
Tebuthiuron	agriculture, utility right-of-ways
INSECTICIDES *DEQ Method 11-LAB-0031-SOP or EPA Method 8270D*	
DEET	wastewater (insect repellent)
2,4-Dimethylphenol	industry, wood products, agriculture, wastewater (cleaner, disinfectant)
Pentachlorophenol	wood products industry, agriculture
2,3,4,6-Tetrachlorophenol	wood products industry, agriculture
2,4,5-Trichlorophenol	wood products industry, agriculture
METALS *Method 200.8 plus Method 245.1*	
Arsenic	natural sources, wood treatment, agriculture
Barium	industry, metal manufacturing
Copper	natural sources, agriculture (vineyards)
Iron	industry, natural sources
Lead	industry, water pipes/joints
Manganese	industry, natural sources
Nickel	industry, natural sources
Zinc	industry, metal manufacturing, agriculture
BACTERIA/PATHOGENS	
Coliform (E Coli)	human wastewater, animal wastes

DRUGS/HORMONES *EPA Method 1698*	
beta-Sitosterol	human wastewater, animal wastes
Cholesterol	human wastewater, animal wastes
Coprostanol	human wastewater, animal wastes
Estrone	human wastewater, animal wastes
Stigmastanol	human wastewater, animal wastes
VOCs *EPA Method 8260C*	
Chloromethane	industry, rubber manufacturing, plastics, wood products
CHLORINATED BIPHENYLS *EPA Method 1668C*	
PCB-106	industry, manufacturing, electrical parts, lubricants
BROMINATED DIPHENYLS *EPA Method 1614A*	
PBDE-209	fire retardant- wastewater, urban runoff (furniture)
SOCs *EPA Method 8270D*	
Butylbenzylphthalate	plasticizer- industry, urban wastewater
Napthalene	fuel combustion, industry, air deposition and runoff
Phenanthrene	fuel combustion, industry, air deposition and runoff

NOTES

*There are other priority contaminants that the DEQ Laboratory cannot currently analyze for. These include: 4-nonylphenol, Tri (2-chloroethyl), Tri (dichlorisopropyl)phos, Bisphenol-A, Glyphosate, 17-alpha and 17-beta estradiol, plus other drugs.