

## What to Do With Results Greater Than Zero (Detections)

Oregon Health Authority Drinking Water Services, Updated October 2016

Problem	Action Needed	Resolution	OAR Citation	
<b>Inorganics (including Arsenic)<sup>a</sup></b>				
Result over the MCL	Confirmation sample plus quarterly monitoring <sup>a</sup> . Confirmation sample must be taken within 2 weeks. Average initial + confirmation sample to determine compliance.	Review after 2 quarters for GW, after 4 quarters for SW. Sample qtrly until R&C <sup>b</sup> below MCL, but if running annual average (RAA) is above MCL, treatment is required. For arsenic, DWS generally requires 4 quarters for all systems before review.	OAR 333-061-0036(2)(g) OAR 333-061-0036(2)(a)(D) OAR 333-061-0036(2)(i)(B)	Confirmation sample Quarterly monitoring RAA calculation & compliance determination
<b>Nitrate and Nitrite<sup>a</sup></b>				
Result over the MCL	Confirmation sample plus quarterly monitoring.	If avg of initial + confirmation is above MCL, treatment is required. If avg < MCL, monitor quarterly until R&C <sup>b</sup> below MCL.	OAR 333-061-0036(2)(g) (B&C) and OAR 333-061-0036(2)(i)(C) OAR 333-061-0036(2)(d) OAR 333-061-0036(2)(e)(C)	Confirmation sample  Quarterly monitoring nitrate Quarterly monitoring nitrite & at least annually after that
Result $\geq \frac{1}{2}$ the MCL	Quarterly monitoring	Continue monitoring qtrly. Review annually to determine whether system should continue quarterly monitoring. If results are R&C <sup>b</sup> below the MCL (for GW) or below $\frac{1}{2}$ the MCL (for nitrates, SW), then system can return to annual monitoring.	OAR 333-061-0036(2)(d) OAR 333-061-0036(2)(e)(C and D)	Quarterly monitoring nitrate Quarterly monitoring nitrite, & at least annually after that (in same quarter as the highest previous result)
<b>Lead and Copper<sup>a</sup></b>				
Above Action Level	Review sampling protocol. Collect source testing and WQPs <sup>c</sup> , submit treatment recommendation. May need public education.	Install corrosion control, or make necessary adjustments. 2 six-month rounds less than Action Level, minimum WQPs <sup>c</sup> set.	OAR 333-061-0036(2)(c)(G-H) and 333-061-0034(4) OAR 333-061-0036(2)(c)(F) OAR 333-061-0034(2) & (3) OAR 333-061-0034(5) OAR 333-061-0036(2)(c)(D)(ii)	Source water testing  WQP requirements Treatment requirements Lead public notice/education Monitoring after installing tx
<b>Volatile &amp; Synthetic Organics<sup>a</sup></b>				
Result over the MCL	Confirmation sample plus quarterly monitoring. <sup>d</sup>	Compliance is based on running annual average.	OAR 333-061-0036 (3)(b)(F) OAR 333-061-0036 (3)(a)(F) OAR 333-061-0036 (3)(b)(E) OAR 333-061-0036 (3)(a)(E) OAR 333-061-0036 (3)(b)(H) OAR 333-061-0036 (3)(a)(H)	VOC confirmation sample SOC confirmation sample VOC quarterly monitoring SOC quarterly monitoring VOC annual compliance SOC annual compliance

<b>Problem</b>	<b>Action Needed</b>	<b>Resolution</b>	<b>OAR Citation</b>	
<p>Result &gt; Detection Limit (for VOCs); Result ≥ Detection Limit (SOCs)</p> <p>Detect limit for VOCs is 0.0005 mg/l.</p> <p>Detect limits for SOCs vary.</p>	<p>Confirmation sample plus quarterly monitoring.<sup>d</sup></p> <p>Vinyl chloride samples required following certain VOC detections in GW systems.<sup>f</sup></p>	<p>If avg of initial + confirmation is below detection limit, or if original sample can be shown to be non-representative, resume routine monitoring schedule. Document the decision.</p> <p>If avg &gt; detection limit, must monitor quarterly. Review after 2 Qs for GW, after 4 Qs for SW. If average &gt; MCL, treatment is required. If R&amp;C<sup>b</sup> below MCL, sample annually. Review GW after 3 yrs – reduction if no detects.</p>	<p>(1<sup>st</sup> paragraph under <b>Resolutions</b> per DWS policy)</p> <p>OAR 333-061-0036 (3)(b)(F) OAR 333-061-0036 (3)(a)(F) OAR 333-061-0036 (3)(b)(D) OAR 333-061-0036 (3)(a)(D) OAR 333-061-0036 (3)(b)(D)(i)  OAR 333-061-0036 (3)(a)(D)(i)</p>	<p>VOC confirmation sample SOC confirmation sample VOC quarterly monitoring SOC quarterly monitoring VOC annual sampling reduction SOC annual sampling reduction</p>
<b>Disinfection By-Products (TTHM &amp; HAA5s)<sup>a</sup></b>				
Result over the MCL	Quarterly monitoring at all locations.	<p>Compliance is based on the LRAA at each location.</p> <p>Modifications to treatment or operations may be necessary.</p>	<p>OAR 333-061-0036(4)(c) OAR 333-061-0036(4)(e) OAR 333-061-0036(4)(c)(D) OAR 333-061-0050(4)(b)(G)</p>	<p>Routine monitoring Increased monitoring Compliance DBP Best Avail. Technology</p>
Running Annual Average ≥ 80% of MCL	Conduct disinfection profile (surface water and GWUDI sources only).	Have results available for review by DWS.	OAR 333-061-0030(4)(l)	Disinfection profiling
Operational Evaluation Levels (OELs) over the MCL	PWS must conduct an operational evaluation and submit a written report to DWS within 90 days.	Eval must examine the WS's treatment & distribution practices that may contribute to TTHM/ HAA5 formation. Identify steps the PWS could take to avoid future exceedances.	<p>OAR 333-061-0036(4)(f)</p> <p>See also DWS OEL webpage</p>	Operation evaluation levels
<b>Radionuclides (Gross-Alpha, Radium-226/228, and Uranium)<sup>e</sup></b>				
Result over MCL	Quarterly monitoring.	Compliance is based on running annual average.	OAR 333-061-0036 (7)(a)(A)(v) and OAR 333-061-0036 (7)(c)	
Result > ½ MCL	Must monitor every 3 years.	Re-evaluate frequency each round.	OAR 333-061-0036 (7)(a)(B)(iii)	
Result ≥ Detection Limit	Must monitor every 6 years.	Re-evaluate frequency each round.	OAR 333-061-0036 (7)(a)(B)(ii)	

a For Community and Non-Transient water systems only.

b R&C = Reliably and Consistently. As determined by OHA Drinking Water Services.

c WQPs = Water Quality Parameters.

d Confirmation sample must be taken within the same quarter. If collected in the following quarter, it will count towards the new quarterly monitoring schedule. A non-detect is considered to be a zero.

e For Community water systems only.

f Certain VOC detects in groundwater systems require vinyl chloride to be sampled as well. See OAR 333-061-0036(3)(b)(D)(iii).