

Andy Peters

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Sent: Friday, February 12, 2021 9:14 AM
To: Andy Peters
Cc: PINNEY Mike; Gerald Fisher
Subject: January 2021 Copper BLM report
Attachments: 101514_Jan2021CuBLM_EDDToxics_Report.pdf

Hi Andy,

Attached is your January 2021 CuBLM sampling event data report.

- The ambient DOC value was estimated due to analyte in the filter blank.

I am noticing that there have been consistent issues with the DOC samples across the 3 sampling events, usually related to the filter blank and/or method blank. While the issue does seem to be improving (the filter blank was much lower than it has been in the past), continued conversations with the contract lab may be warranted.

Aside from DOC, everything appears to be in order otherwise. Let me know if you have any questions.

Regards,
Aliana

Aliana Britson, Ph.D.
Permit Developer
Oregon Department of Environmental Quality
Water Quality Permitting and Program Development
700 NE Multnomah St., Suite #600 Portland, OR 97232
Phone: (503) 229-6044
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State of Oregon
Department of Environmental Quality

EDD Toxics Report for: City of Molalla STP

Permit Number: 101514

Number of Sampling Events: 1

Report Date: 2021-02-12

Aliana Britson

Water Quality Permit Data Steward

Laboratory & Environmental Assessment Division

7202 NE Evergren Parkway Suite 150

Hillsboro, OR 97124

Sampling Information and Pollutants Analyzed

Table 1 contains the sampling dates, project, location, and method of sample collection. A “24 hr Composite” is a sample that was collected over the course of 24 hours. A “Composite” sample is a sample that is made up of six discrete grab samples. Please note that two consecutive days are likely one sampling event, as a 24 hour sample can be started on the same day as other samples and not end until the next day (Dates for 24 hr samples are always the end date of the sample).

Table 1: Sampling Event Information

Sample Date	Project	Station Description	Location ID	Sample Collection Method(s)	Activity ID(s)
2021-01-06	Copper BLM	Molalla STP Effluent Discharge Monitoring Station	34183-ORDEQ	24 Hr Sample, Grab	21-00428-780, 21-00428-780-FM
2021-01-06	Copper BLM	Molalla River Water Intake	Molalla_Ambient	Grab	21-00428-779, 21-00428-779-FM

The following tables contains lists of pollutants (subset by analyte type) analyzed and submitted by the permittee. Please see individual permit for list of required pollutants and the monitoring schedule.

Table 2: Metals

Pollutant	CAS Number	Observations
Aluminum, Total Recoverable	7429-90-5	2
Calcium, Dissolved	7440-70-2	2
Copper, Dissolved	7440-50-8	2
Copper, Total Recoverable	7440-50-8	2
Magnesium, Dissolved	7439-95-4	2
Potassium, Dissolved	7440-09-7	2
Sodium, Dissolved	7440-23-5	2

Table 3: Physical Chemistry

Pollutant	CAS Number	Observations
Alkalinity, total	NA	2
Chloride	16887-00-6	2
Hardness, Ca, Mg	NA	2
Organic carbon, Dissolved	NA	2
pH	NA	2
Sulfate	14808-79-8	2
Temperature, water	NA	2

Water Quality Data Steward Comments:

The data provided to DEQ was reviewed by the Water Quality Permit Data Steward. A summary of data review parameters and any issues noted are as follows:

Quantitation Limits

A quantitation limit (QL) is the lowest amount of a pollutant that can be reliably measured. Permittees are required to use the most sensitive analytical test method, as specified in 40 CFR 122.44(i)(1)(iv). Established QLs were adopted in 2007 for NPDES permits and updated in 2020 by DEQ WQ Permitting and Program Development.

NO KNOWN ISSUES

Methods

Permittees are required to use methods approved under 40 CFR 136. There are some pollutants that have no approved methods under 40 CFR 136. In some cases, permittees may obtain approval to perform different methods for specific pollutants through EPA. These instances are permittee-specific and should be contained within the permit. Please see the individual permit.

NO KNOWN ISSUES

Total Recoverable vs Dissolved

In the analysis of metals, the dissolved fraction of the pollutant should be less than the total recoverable fraction of the pollutant. However, there are some cases where sample contamination from an outside source

or method uncertainty causes the dissolved fraction to be larger than the total recoverable fraction.

NO KNOWN ISSUES

Estimated Data

Data may be estimated for a variety of reasons including issues with quality control, sampling, hold time, and/or storage that causes the data to be biased high or low. This table does not include “J flag” data, ie results that fall between the method detection limit and quantitation limit, as this data is routinely estimated and does not reflect any potential bias in the result. Estimated data may still be usable for permitting purposes, but must be used with caution.

Table 4: Estimated Data (not including J flag data)

Activity ID	Pollutant	Result	Unit	Comment
21-00428-779	Organic carbon, Dissolved	1.06	mg/l	Analyte in filter blank. Result may be biased high. FILTER BLANK : 0.48mg/L

Water Quality Data Steward Comments:

Rejected Data

In some cases, data does not pass quality control analysis. This data may still be usable for permitting purposes, but must be used with caution.

NO KNOWN ISSUES

Andy Peters

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Sent: Wednesday, December 30, 2020 9:21 AM
To: Andy Peters; BRANDSTETTER Erich; PINNEY Mike
Cc: RABINOWITZ Geoff; NAVARRO Jeffrey; YELTON-BRAM Tiffany; Gerald Fisher
Subject: RE: Tier I/II and CuBLM monitoring issues

Hi Andy,

You are welcome, and thank you for the lovely compliment! It is very nice to know that the report was useful.

I can answer some of your questions on mercury. I have also included Dr. Erich Brandstetter, our point person for mercury, who should be able to help answer the questions I cannot.

1. There isn't a set limit determined by EPA. For toxics, the permit limits are determined on a "permittee by permittee" basis. We compare the data you give us to the mercury Water Quality Criteria that are set out in statute (340-041-8033) using a Reasonable Potential Analysis (RPA) that was developed by EPA. This analysis also takes your mixing zone into account, and we use it to determine whether there is "reasonable potential" for your facility to exceed the water quality criteria and if so, to calculate a limit tailored to your facility. This is why it is important for us to have quality data, because without it we are unable to assess limits for facility and this prevents us from issuing your permit.
2. The short answer is yes, unfortunately, the data is rejected instead of being non-detect. The QL is the level we use to assess whether a data point meets the "sufficiently sensitive" criteria required in CFR 122 and 136. When it comes to assessing the data quality itself and whether we reject or estimate the result, we go solely with the data supplied by the lab. We also can't assume that just because there was contamination in the equipment blank that the data point was actually a non-detect. There may have been analyte in the sample, but we just can't accurately characterize it due to the level of analyte found in the equipment blank.
3. I believe Erich has worked with permittees to help them do method 1631 with an autosampler, and will defer to him on this one. However, please do not switch to method 245.1, as it generally does not meet the "sufficiently sensitive" criteria.
4. Yes, I can get an excel to you shortly. However, we generally do not store any QC values in AWQMS (only the final results) so unfortunately I will not be able to get you blank results. I can make sure that any rejected data is included. You will be able to see the organization that collected the data and the lab used.

Hope your vacation is good. Happy New Year!

Regards,
Aliana

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From: Andy Peters <apeters@cityofmolalla.com>
Sent: Tuesday, December 29, 2020 4:15 PM
To: BRITSON Aliana <Aliana.BRITSON@state.or.us>; PINNEY Mike <Mike.PINNEY@state.or.us>
Cc: RABINOWITZ Geoff <Geoff.RABINOWITZ@state.or.us>; NAVARRO Jeffrey <Jeffrey.NAVARRO@state.or.us>; YELTON-BRAM Tiffany <Tiffany.YELTON-BRAM@state.or.us>; Gerald Fisher <gfisher@cityofmolalla.com>
Subject: RE: Tier I/II and CuBLM monitoring issues

Aliana, thanks for this detailed analysis, it's one of the best I've ever seen from any regulatory agency. We have already made adjustments to some of our procedures based on your reports.

On Mercury, we are still waiting to hear back from the laboratory on what's possible, and will likely be able to respond in early January. In the meantime, a few questions:

- 1) Your original request for additional sampling (August 28th) states that Mercury should be tested with a QL of 1.0 nano-grams /L. What has the EPA decided for the actual NPDES limit that will need to be achieved for dischargers?
- 2) Is there a need to reject the Ambient River's Mercury tests submitted due to method blank's concentration since both **all results and all blank concentrations** measured less than the QL requested in the letter? This would be the definition of a "No Detect" as I understand it. Do we just need to have the Laboratory report those results differently?
- 3) EPA Method 1631 appears to only be valid for Grab Sampling; it's likely the Mercury tests from the Composite Sampler will not be able to meet the guidelines in the document you forwarded (Method 1669 1996.pdf). Should we switch to Method 245.1 (range 0.2-10.0 Micrograms/L) for the Effluent Composite Samples?
- 4) May we please request an unabridged data dump (in excel) of all other tests in the "AWQMS" database where EPA Method 1631 was used, including the results for any blanks associated with those tests, and including "failures"? This will allow us to see who else has ran these tests, what labs they used, their blank results, and potentially contact them for advice and lessons learned.

I will be out of the office the remainder of the week, returning January 4th. Thank you, and Happy New Year!

Respectfully,

Andy Peters

City of Molalla
Public Works Operations Supervisor
(503) 829-6855 x220
Cell: 503-793-0507
apeters@cityofmolalla.com
117 N Molalla Ave
Molalla, OR 97038

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>

Sent: Wednesday, December 16, 2020 1:20 PM

To: Andy Peters <apeters@cityofmolalla.com>; Gerald Fisher <gfisher@cityofmolalla.com>

Cc: RABINOWITZ Geoff <Geoff.RABINOWITZ@state.or.us>; NAVARRO Jeffrey <Jeffrey.NAVARRO@state.or.us>; PINNEY Mike <Mike.PINNEY@state.or.us>; YELTON-BRAM Tiffany <Tiffany.YELTON-BRAM@state.or.us>

Subject: Tier I/II and CuBLM monitoring issues

Importance: High

Hi Andy,

Thank you for your recent Tier I/II toxics and CuBLM submission. Review of the data is complete. There are a few things to bring to your attention:

Tier I/II Toxics:

The presence of high levels of Mercury in the equipment blank caused the results for mercury to be rejected. Similarly, the results for Bis (2-ethylhexyl) phthalate in the laboratory method blank caused the results for this analyte to be rejected as well. Because of the low number of samples we are requesting, we unfortunately do not have much margin for error and must ask you to resample these analytes. Please resample Mercury and Bis (2-ethylhexyl) phthalate so that they may be included with your **April 15th, 2021** toxics submission.

We recommend speaking with your lab about what can be done in the event of method blank contamination for Bis (2-ethylhexyl) phthalate. For example, you may be able to submit a larger sample so that in the event of a QC issue the sample could be quickly rerun. In the case of Mercury, since it was the equipment blank that caused the rejection of the result, we recommend that you review your sample collection procedures and equipment cleaning procedures to troubleshoot for mercury contamination. You can find a handy resource from EPA outlining potential sample contamination issues here:

https://www.epa.gov/sites/production/files/2015-10/documents/method_1669_1996.pdf. I believe section 4 may be of the most use to you. One of the more unexpected but surprisingly common forms of mercury contamination happens when someone who takes a mercury sample has metal amalgam fillings and accidentally breathes on the sample, so that may be something to consider.

CuBLM:

Temperature and pH results were rejected as they were analyzed by the lab more than 2X beyond holding time. Temperature and pH are field measurements that need to be done within 15 minutes of sample collection. DOC results were also rejected due to significant amounts of analyte found in the laboratory

method blank. For future sampling events, please perform field sampling for Temperature/pH and have a conversation with your contract lab about DOC and what can be done in the event of method blank contamination. We are not requesting a resampling for these analytes at this time, as we should have enough information by the end of the 24 sampling events to be able to make an educated estimate for the missing analytes for our analyses.

Please feel free to contact me with any questions.

Regards,
Aliana

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Andy Peters

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Sent: Wednesday, December 30, 2020 9:49 AM
To: Andy Peters; Gerald Fisher
Cc: YELTON-BRAM Tiffany
Subject: Mercury Data
Attachments: Mercury_AWQMS_forMolalla-20201230.xlsx

Hi Andy,
Attached is a data pull I did from the AWQMS database. I only pulled the last 5 years, and focused on effluent data. Column B has the organization name, column X has the lab name. Please keep in mind that lab names are not standardized in AWQMS (unlike organization name or characteristic name), so there is a lot more variability and the same lab may be listed multiple times under slightly different names.

Let me know if you have questions.

Regards,
Aliana

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Andy Peters

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Sent: Monday, January 11, 2021 3:36 PM
To: Andy Peters
Subject: RE: December CuBLM question

No problem, it happens! Yes, please go ahead and resubmit.

I completely understand. I've got hundreds of lines of code myself (R is my language of choice), to make sure processes are being done consistently and data is formatted correctly on our end (the data report I sent you before is actually auto-generated using an R markup code). I try to automate myself out the of the process as much as I can. I actually missed the error myself, except that when I tried to upload the data to the database it was flagged as inconsistent.

Regards,
Aliana

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From: Andy Peters <apeters@cityofmolalla.com>
Sent: Monday, January 11, 2021 3:21 PM
To: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Subject: RE: December CuBLM question

You are right, the sheet auto filled a day for each line! They should all be the same time as the sample time on the Chain of Custody, 12/3/20 at 9:35. Should I resubmit the dataset through net DMR? I can add the SM 2550B to the Method ID field while I'm in there also.

I've resigned myself to the fact that mistakes are inevitable. I have nearly 15,000 lines of C# code ensuring consistency of data entry through the lab process, net DMR, and EDD... but where a human being is involved there is the potential for error. In this case both our Level III Operator and Myself were doing the data entry together and still missed this one 😞

Thanks,

Andy

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>

Sent: Monday, January 11, 2021 2:57 PM

To: Andy Peters <apeters@cityofmolalla.com>

Subject: RE: December CuBLM question

Hi Andy,

My apologies that I keep peppering you with questions, but I just noticed that for some reason the EDD you submitted has temperature and pH on different days than the rest of the Copper BLM sampling, and also on different days from each other. Was temperature and pH actually collected on different days, or was this an excel error? I know that excel will sometimes "autofill" dates instead of just copying and pasting the same date, and I get the impression that may have happened here.

Regards,
Aliana

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From: Andy Peters <apeters@cityofmolalla.com>

Sent: Monday, January 11, 2021 2:40 PM

To: BRITSON Aliana <Aliana.BRITSON@state.or.us>

Cc: Gerald Fisher <gfisher@cityofmolalla.com>; Jake Ehredt <jehredt@cityofmolalla.com>

Subject: RE: December CuBLM question

Yes, Calibrations are done in March every year. That's specified by our self-monitoring lab's QC manual. I've attached a copy of the last round. The Vendor is:

Quality Control services
2340 SE 11th Ave
Portland Or. 97214
ph# 503-236-2712 Fax 503-235-2535
coordinator@qc-services.com

Andy

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Sent: Monday, January 11, 2021 2:32 PM
To: Andy Peters <apeters@cityofmolalla.com>
Cc: Gerald Fisher <gfisher@cityofmolalla.com>; Jake Ehredt <jearedt@cityofmolalla.com>
Subject: RE: December CuBLM question

Thanks Andy!

The 15 minute requirement is specified in 40 CFR Part 136 Table II endnote 7 for dissolved metals:

"For dissolved metals, filter grab samples within 15 minutes of collection and before adding preservatives. For a composite sample collected with an automated sampler (e.g., using a 24-hour composite sampler; see 40 CFR 122.21(g)(7)(i) or 40 CFR part 403, appendix E), filter the sample within 15 minutes after completion of collection and before adding preservatives. If it is known or suspected that dissolved sample integrity will be compromised during collection of a composite sample collected automatically over time (e.g., by interchange of a metal between dissolved and suspended forms), collect and filter grab samples to be composited (footnote 2) in place of a composite sample collected automatically."

But yes, as long as you're in that 15 minute window filtering them at your own lab is just fine. I believe the setup you are proposing should work. One thing I would recommend is to take and send a filter blank along with the first set of samples (or the first two sets) that you do with your new setup. I have seen instances where there is some metals contamination from filtering so it would be good to make sure your samples aren't being affected.

Thanks for the pH method! For temperature, do you use a NIST certified thermometer or an instrument that is periodically calibrated by a NIST certified thermometer?

Regards,
Aliana

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From: Andy Peters <apeters@cityofmolalla.com>
Sent: Monday, January 11, 2021 2:07 PM
To: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Cc: Gerald Fisher <gfisher@cityofmolalla.com>; Jake Ehredt <jearedt@cityofmolalla.com>
Subject: RE: December CuBLM question

Aliana, okay, we can filter the Monthly CuBLM samples. I'm CCing our plant staff so we can get the discussion rolling on our end.

I don't specifically see the 15 minute requirement, but I'm thinking you are referring to 40 CFR Part 136 Appendix C, 8.2: *"For the determination of the dissolved elements, the sample must be filtered through a 0.45 µm pore diameter membrane filter at the time of collection or as soon thereafter as practically possible"*? If so, we can return the sample to our WWTP lab after collection, and filter them through disposable Hach Membrane filters like these ([link](#)). That filter is pretty small, we may need to find a pressure-differential vessel to suck the liquid through the filters. Perhaps our TSS filtering equipment can be used for that. This is new for us, so we will need some time to research and get set up on our end.

https://www.hach.com/filter-membrane-pore-size-0-45-m-diameter-47-mm-100-pk-plain-non-sterile/product?id=7640245271&source=googleshopping&locale=en-US&bt=271172252084&bk=&bm=&bn=g&bt=271172252084&bk=&bm=&bn=g&utm_id=go_cmp-1412033745_adg-59345720561_ad-271172252084_pla-314259651542_dev-c_ext-prd-1353000&utm_source=google&gclid=CjwKCAiA_iD_BRApEiwASslbJ9kQadUvonPbplkB3RJ1LviRyyvuk_ZKEGs8kXnjg9eJYPitSBBLUBoCeNUQAvD_BwE

As for Temp and PH, they are taken at the time of sampling with a Hach HQ40d 2.4.0.738, which says it's an "Ion Selective Electrode" Portable DO/pH Meter compliant with SM 23th Ed 4500. We also have secondary information from our Water Plant that uses "Continuous Monitoring Electrometric pH Meters", method 150.2. I'll be sure and get that in the dataset next time around.

Andy

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Sent: Monday, January 11, 2021 11:45 AM
To: Andy Peters <apeters@cityofmolalla.com>
Subject: RE: December CuBLM question

Hi Andy,

Thanks! In the future, you will need to filter the samples. According to CFR, dissolved metals need to be filtered within 15 minutes of sample collection. Does this also apply to the samples you took back in November?

Could you supply the methods you used for field pH and temperature? I know it seems a bit silly, but the database I work with is pretty exacting when it comes to methodology. If you aren't sure, you can usually find it in the instrument manuals.

Regards,
Aliana

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From: Andy Peters <apeters@cityofmolalla.com>
Sent: Monday, January 11, 2021 11:39 AM
To: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Subject: RE: December CuBLM question

Aliana yes that's right, the PH and Temps I added manually to the spreadsheet, we took in them field at the time we did the samples. That was an update to our procedures from the last round of comments you had. As for filtering, nothing was done on our end, we filled the bottles as prescribed in the Lab's documents, and took them in.

Yes, I'm happy to see 2021 arrive!!

Thanks,

Andy

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Sent: Monday, January 11, 2021 11:32 AM

To: Andy Peters <apeters@cityofmolalla.com>

Subject: December CuBLM question

Hi Andy,

I hope the new year is treating you well! I was just reviewing the Copper BLM data you submitted for December and had a quick question. Did you filter the samples in the field? There wasn't any note on the chain of custody and it is unclear from the report whether the samples were filtered in the field or in the lab.

Also, I noticed that in addition to the field pH measurement you supplied, Edge Analytical also measured pH. The field pH that you collect is the only one I put into the database (pH has a 15 minute hold time, so anything analyzed by the lab is going to be an estimate). While you are welcome to continue having Edge Analytical analyze pH if you so desire, please know that field pH is the analyte of interest and the lab pH will not be used for CuBLM purposes.

Regards,
Aliana

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Subject: RE: December CuBLM question

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ph# 503-236-2712 Fax 503-235-2535
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Subject: RE: December CuBLM question

Thanks Andy!

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Thanks for the pH method! For temperature, do you use a NIST certified thermometer or an instrument that is periodically calibrated by a NIST certified thermometer?

Regards,
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From: Andy Peters <apeters@cityofmolalla.com>
Sent: Monday, January 11, 2021 2:07 PM
To: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Cc: Gerald Fisher <gfisher@cityofmolalla.com>; Jake Ehredt <jehredt@cityofmolalla.com>
Subject: RE: December CuBLM question

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Andy

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Sent: Monday, January 11, 2021 11:45 AM
To: Andy Peters <apeters@cityofmolalla.com>
Subject: RE: December CuBLM question

Hi Andy,
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Regards,
Aliana

Aliana Britson, Ph.D.
Permit Developer
Oregon Department of Environmental Quality
Water Quality Permitting and Program Development
700 NE Multnomah St., Suite #600 Portland, OR 97232
Phone: (503) 229-6044
Email: Britson.Aliana@deq.state.or.us

PUBLIC RECORDS LAW DISCLOSURE: This is a public document. This email may be subject to the state retention schedule and made available to the public.

From: Andy Peters <apeters@cityofmolalla.com>
Sent: Monday, January 11, 2021 11:39 AM
To: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Subject: RE: December CuBLM question

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Yes, I'm happy to see 2021 arrive!!

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Andy

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Sent: Monday, January 11, 2021 11:32 AM
To: Andy Peters <apeters@cityofmolalla.com>
Subject: December CuBLM question

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Andy Peters

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Sent: Monday, January 11, 2021 2:43 PM
To: Andy Peters
Cc: Gerald Fisher; Jake Ehredt
Subject: RE: December CuBLM question

Thanks much! As an FYI, I'm going put the temperature method down as SM 2550B.

Aliana Britson, Ph.D.
Permit Developer
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From: Andy Peters <apeters@cityofmolalla.com>
Sent: Monday, January 11, 2021 2:40 PM
To: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Cc: Gerald Fisher <gfisher@cityofmolalla.com>; Jake Ehredt <jehredt@cityofmolalla.com>
Subject: RE: December CuBLM question

Yes, Calibrations are done in March every year. That's specified by our self-monitoring lab's QC manual. I've attached a copy of the last round. The Vendor is:

Quality Control services
2340 SE 11th Ave
Portland Or. 97214
ph# 503-236-2712 Fax 503-235-2535
coordinator@qc-services.com

Andy

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>
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To: Andy Peters <apeters@cityofmolalla.com>
Cc: Gerald Fisher <gfisher@cityofmolalla.com>; Jake Ehredt <jehredt@cityofmolalla.com>
Subject: RE: December CuBLM question

Thanks Andy!

The 15 minute requirement is specified in 40 CFR Part 136 Table II endnote 7 for dissolved metals:

“For dissolved metals, filter grab samples within 15 minutes of collection and before adding preservatives. For a composite sample collected with an automated sampler (e.g., using a 24-hour composite sampler; see 40 CFR 122.21(g)(7)(i) or 40 CFR part 403, appendix E), filter the sample within 15 minutes after completion of collection and before adding preservatives. If it is known or suspected that dissolved sample integrity will be compromised during collection of a composite sample collected automatically over time (e.g., by interchange of a metal between dissolved and suspended forms), collect and filter grab samples to be composited (footnote 2) in place of a composite sample collected automatically.”

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Thanks for the pH method! For temperature, do you use a NIST certified thermometer or an instrument that is periodically calibrated by a NIST certified thermometer?

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Andy Peters

From: BRANDSTETTER Erich <Erich.Brandstetter@state.or.us>
Sent: Thursday, January 7, 2021 5:34 PM
To: BRITSON Aliana; Andy Peters; PINNEY Mike
Cc: RABINOWITZ Geoff; NAVARRO Jeffrey; YELTON-BRAM Tiffany; Gerald Fisher
Subject: RE: Tier I/II and CuBLM monitoring issues

Andy –

I have just a couple of follow-up comments for you:

1. DEQ's approach to the mercury limit is to have a non-numeric, "narrative limit" that consists of a Mercury Minimization Plan and ongoing monitoring.
3. Composite samples can be created by combining multiple grab samples. There must be at least 4 samples that are either flow –based for facilities with variable flow or time based if the facility has a constant flow rate (either way it needs to be representative of the discharge).

Please let us know if you have further questions.

Erich

From: BRITSON Aliana <Aliana.BRITSON@deq.state.or.us>
Sent: Wednesday, December 30, 2020 9:21 AM
To: Andy Peters <apeters@cityofmolalla.com>; PINNEY Mike <Mike.PINNEY@state.or.us>; BRANDSTETTER Erich <Erich.Brandstetter@deq.state.or.us>
Cc: RABINOWITZ Geoff <Geoff.RABINOWITZ@state.or.us>; NAVARRO Jeffrey <Jeffrey.NAVARRO@state.or.us>; YELTON-BRAM Tiffany <Tiffany.YELTON-BRAM@state.or.us>; Gerald Fisher <gfisher@cityofmolalla.com>
Subject: RE: Tier I/II and CuBLM monitoring issues

Hi Andy,

You are welcome, and thank you for the lovely compliment! It is very nice to know that the report was useful.

I can answer some of your questions on mercury. I have also included Dr. Erich Brandstetter, our point person for mercury, who should be able to help answer the questions I cannot.

1. There isn't a set limit determined by EPA. For toxics, the permit limits are determined on a "permittee by permittee" basis. We compare the data you give us to the mercury Water Quality Criteria that are set out in statute (340-041-8033) using a Reasonable Potential Analysis (RPA) that was developed by EPA. This analysis also takes your mixing zone into account, and we use it to determine whether there is "reasonable potential" for your facility to exceed the water quality criteria and if so, to calculate a limit tailored to your facility. This is why it is important for us to have quality data, because without it we are unable to assess limits for facility and this prevents us from issuing your permit.

2. The short answer is yes, unfortunately, the data is rejected instead of being non-detect. The QL is the level we use to assess whether a data point meets the “sufficiently sensitive” criteria required in CFR 122 and 136. When it comes to assessing the data quality itself and whether we reject or estimate the result, we go solely with the data supplied by the lab. We also can’t assume that just because there was contamination in the equipment blank that the data point was actually a non-detect. There may have been analyte in the sample, but we just can’t accurately characterize it due to the level of analyte found in the equipment blank.
3. I believe Erich has worked with permittees to help them do method 1631 with an autosampler, and will defer to him on this one. However, please do not switch to method 245.1, as it generally does not meet the “sufficiently sensitive” criteria.
4. Yes, I can get an excel to you shortly. However, we generally do not store any QC values in AWQMS (only the final results) so unfortunately I will not be able to get you blank results. I can make sure that any rejected data is included. You will be able to see the organization that collected the data and the lab used.

Hope your vacation is good. Happy New Year!

Regards,
Aliana

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From: Andy Peters <apeters@cityofmolalla.com>
Sent: Tuesday, December 29, 2020 4:15 PM
To: BRITSON Aliana <Aliana.BRITSON@state.or.us>; PINNEY Mike <Mike.PINNEY@state.or.us>
Cc: RABINOWITZ Geoff <Geoff.RABINOWITZ@state.or.us>; NAVARRO Jeffrey <Jeffrey.NAVARRO@state.or.us>; YELTON-BRAM Tiffany <Tiffany.YELTON-BRAM@state.or.us>; Gerald Fisher <gfisher@cityofmolalla.com>
Subject: RE: Tier I/II and CuBLM monitoring issues

Aliana, thanks for this detailed analysis, it’s one of the best I’ve ever seen from any regulatory agency. We have already made adjustments to some of our procedures based on your reports.

On Mercury, we are still waiting to hear back from the laboratory on what's possible, and will likely be able to respond in early January. In the meantime, a few questions:

- 1) Your original request for additional sampling (August 28th) states that Mercury should be tested with a QL of 1.0 nano-grams /L. What has the EPA decided for the actual NPDES limit that will need to be achieved for dischargers?
- 2) Is there a need to reject the Ambient River's Mercury tests submitted due to method blank's concentration since both **all results and all blank concentrations** measured less than the QL requested in the letter? This would be the definition of a "No Detect" as I understand it. Do we just need to have the Laboratory report those results differently?
- 3) EPA Method 1631 appears to only be valid for Grab Sampling; it's likely the Mercury tests from the Composite Sampler will not be able to meet the guidelines in the document you forwarded (Method 1669 1996.pdf). Should we switch to Method 245.1 (range 0.2-10.0 Micrograms/L) for the Effluent Composite Samples?
- 4) May we please request an unabridged data dump (in excel) of all other tests in the "AWQMS" database where EPA Method 1631 was used, including the results for any blanks associated with those tests, and including "failures"? This will allow us to see who else has ran these tests, what labs they used, their blank results, and potentially contact them for advice and lessons learned.

I will be out of the office the remainder of the week, returning January 4th. Thank you, and Happy New Year!

Respectfully,

Andy Peters

City of Molalla
Public Works Operations Supervisor
(503) 829-6855 x220
Cell: 503-793-0507
apeters@cityofmolalla.com
117 N Molalla Ave
Molalla, OR 97038

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>

Sent: Wednesday, December 16, 2020 1:20 PM

To: Andy Peters <apeters@cityofmolalla.com>; Gerald Fisher <gfisher@cityofmolalla.com>

Cc: RABINOWITZ Geoff <Geoff.RABINOWITZ@state.or.us>; NAVARRO Jeffrey <Jeffrey.NAVARRO@state.or.us>; PINNEY Mike <Mike.PINNEY@state.or.us>;

YELTON-BRAM Tiffany <Tiffany.YELTON-BRAM@state.or.us>

Subject: Tier I/II and CuBLM monitoring issues

Importance: High

Hi Andy,

Thank you for your recent Tier I/II toxics and CuBLM submission. Review of the data is complete. There are a few things to bring to you attention:

Tier I/II Toxics:

The presence of high levels of Mercury in the equipment blank caused the results for mercury to be rejected. Similarly, the results for Bis (2-ethylhexyl) phthalate in the laboratory method blank caused the results for this analyte to be rejected as well. Because of the low number of samples we are requesting, we unfortunately do not have much margin for error and must ask you to resample these analytes. Please resample Mercury and Bis (2-ethylhexyl) phthalate so that they may be included with your **April 15th, 2021** toxics submission.

We recommend speaking with your lab about what can be done in the event of method blank contamination for Bis (2-ethylhexyl) phthalate. For example, you may be able to submit a larger sample so that in the event of a QC issue the sample could be quickly rerun. In the case of Mercury, since it was the equipment blank that caused the rejection of the result, we recommend that you review your sample collection procedures and equipment cleaning procedures to troubleshoot for mercury contamination. You can find a handy resource from EPA outlining potential sample contamination issues here: https://www.epa.gov/sites/production/files/2015-10/documents/method_1669_1996.pdf. I believe section 4 may be of the most use to you. One of the more unexpected but surprisingly common forms of mercury contamination happens when someone who takes a mercury sample has metal amalgam fillings and accidentally breathes on the sample, so that may be something to consider.

CuBLM:

Temperature and pH results were rejected as they were analyzed by the lab more than 2X beyond holding time. Temperature and pH are field measurements that need to be done within 15 minutes of sample collection. DOC results were also rejected due to significant amounts of analyte found in the laboratory method blank. For future sampling events, please perform field sampling for Temperature/pH and have a conversation with your contract lab about DOC and what can be done in the event of method blank contamination. We are not requesting a resampling for these analytes at this time, as we should have enough information by the end of the 24 sampling events to be able to make an educated estimate for the missing analytes for our analyses.

Please feel free to contact me with any questions.

Regards,
Aliana

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Andy Peters

From: BRITSON Aliana <Aliana.BRITSON@state.or.us>
Sent: Wednesday, December 30, 2020 9:49 AM
To: Andy Peters; Gerald Fisher
Cc: YELTON-BRAM Tiffany
Subject: Mercury Data
Attachments: Mercury_AWQMS_forMolalla-20201230.xlsx

Hi Andy,
Attached is a data pull I did from the AWQMS database. I only pulled the last 5 years, and focused on effluent data. Column B has the organization name, column X has the lab name. Please keep in mind that lab names are not standardized in AWQMS (unlike organization name or characteristic name), so there is a lot more variability and the same lab may be listed multiple times under slightly different names.

Let me know if you have questions.

Regards,
Aliana

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