

From: [Melissa Turner](#)
To: [Hartman, Jelena@Waterboards](mailto:Hartman_Jelena@Waterboards); "[Lindsay Nelson](#)"
Cc: [Stephanie Henderson](#); [Mike Johnson](#)
Subject: RE: Request to Amend the ESJWQC MRPP and QAPP
Date: Friday, November 02, 2012 3:01:38 PM
Attachments: [SM9060_Ecoli_StorageRequirements.PDF](#)

Hi Jelena,

For your first question, I've attached language from SM 9060 B which refers to Microbial storage and preservation requirements. The maximum hold time is 24 hours.

I just met with Lindsay regarding your second question (initial preservation and holding requirements for sediment TOC and chemistry) and you are correct that our 2010 QAPP has listed "Store at 4C, freeze (-20C) within 48 hours" for both sediment TOC and sediment chemistry. The MRP has a requirement of "Cool to 4C, dark, up to 48 hours" for TOC and chemistry" and we came upon this discrepancy in our earlier reviews of the QAPP. To give a little background, over the year we have found typos or outdated information that need to be updated in the QAPP and keep a running list. We wait until these warrant a QAPP amendment. Generally these updates are within the requirements of the MRP and therefore are called just updates. From this list we came up with a couple of updates that were not consistent with the MRP and therefore formulated the letter you received. We overlooked an update that we recorded internally for updating the hold time requirements for sediment TOC and chemistry – these should have been included in the letter submitted to the Regional Board for amendments to the QAPP; all other updates are minor and as I mentioned meet the requirements of the MRP.

Briefly, Caltest questioned our hold time requirement of freezing within 48 hours for TOC and organic chemistry. Looking into the requirement further we found that SWAMP has a freeze within 28 hour requirement for TOC and that Method 8270 has a 14 day hold time for organics. We could not find any documentation for why a 48 hour time was necessary for these two constituents and the language within Attachment C, Appendix E (footnote 1 and 2) use the term "should" which made the requirement slightly ambiguous as to that hold time of 48 hours. Regardless, we should have added this to our initial letter as a QAPP amendment request. Since this was overlooked on our part, I see two options for moving forward. One option would be to retract the current letter submitted and amend it to include the change to sediment TOC and chemistry hold times as well as include additional rationale for this change. The second option would be to write a second letter with the additional request; the problem with the second option is that the table in the first letter is still incorrect for Table 1 under the current QAPP column.

Please feel free to call to discuss further. We'd like to proceed as quickly as possible to resolve this issue as well as get our QAPP amendments approved.

Thanks,
Melissa

From: Hartman, Jelena@Waterboards [mailto:Jelena.Hartman@waterboards.ca.gov]
Sent: Friday, November 02, 2012 1:07 PM
To: Lindsay Nelson
Cc: Melissa Turner

Subject: RE: Request to Amend the ESJWQC MRPP and QAPP

Dear Lindsay,

There are only a couple of questions about the ESJWQC's request to update the sample preservation temperatures.

The request letter states that a holding temperature of 8 the maximum holding time for the listed holding temperature? If you are able to include a copy of the relevant sections from the 2006 edition of the Standard Methods that would be helpful.

Should the initial preservation and holding requirements for sediment TOC and chemistry read "freeze (-20°C) within 48 hours" in the column tabulating the current QAPP requirements? I just want to make sure I am looking at the same version of the current QAPP, and I can't find the place where time until freezing is listed as 28 and 14 days (for sediment TOC and chemistry, respectively).

Thank you,

-Jelena

From: Lindsay Nelson [<mailto:lnelson@mjl-llc.com>]

Sent: Wednesday, October 31, 2012 2:32 PM

To: Hartman, Jelena@Waterboards

Cc: Parry Klassen; Michael L. Johnson; Melissa Turner; Rachael West; Stephanie Henderson

Subject: Request to Amend the ESJWQC MRPP and QAPP

Dear Jelena:

Attached is a letter from the ESJWQC requesting to amend the current ESJWQC Monitoring and Reporting Program Plan (MRPP) and the associated Quality Assurance Project Plan (QAPP). Updates have been made to sample preservation temperatures and the analytical method for triazines. I have attached the signed copy and additional information regarding the new method for triazines (QC Package). We will mail the letter with a wet signature to you within the week. Once approved, the Coalition will submit an updated QAPP and EPA 8141A Standard Operating Procedure (SOP). Please let us know if you have any further questions. Thank you-

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Lindsay A. Nelson
Environmental Scientist
Michael L Johnson, LLC
632 Cantrill Drive
Davis, CA 95618
Tel: (530) 756-5200

5. Identifying Data

Accompany samples by complete and accurate identifying and descriptive data. Do not accept for examination inadequately identified samples.

6. References

1. ZOBELL, C.E. 1941. Apparatus for collecting water samples from different depths for bacteriological analysis. *J. Mar. Res.* 4:173.
2. VAN DONSEL, D.J. & E.E. GELDREICH. 1971. Relationships of *Salmonella* to fecal coliforms in bottom sediments. *Water Res.* 5:1079.

7. Bibliography

PUBLIC HEALTH LABORATORY SERVICE WATER SUB-COMMITTEE. 1953. The effect of sodium thiosulphate on the coliform and *Bacterium coli* counts of non-chlorinated water samples. *J. Hyg.* 51:572.

- SHIPE, E.L. & A. FIELDS. 1956. Chelation as a method for maintaining the coliform index in water samples. *Pub. Health Rep.* 71:974.
- HOATHER, R.C. 1961. The bacteriological examination of water. *J. Inst. Water Eng.* 61:426.
- COLES, H.G. 1964. Ethylenediamine tetra-acetic acid and sodium thiosulphate as protective agents for coliform organisms in water samples stored for one day at atmospheric temperature. *Proc. Soc. Water Treat. Exam.* 13:350.
- DAHLING, D.R. & B.A. WRIGHT. 1984. Processing and transport of environmental virus samples. *Appl. Environ. Microbiol.* 47:1272.
- U.S. ENVIRONMENTAL PROTECTION AGENCY. 1992. Environmental Regulations and Technology Control of Pathogens and Vector Attraction in Sewage Sludge. EPA-625/R-92-013. Washington, D.C.

9060 B. Preservation and Storage

1. Holding Time and Temperature

a. General: Start microbiological analysis of water samples as soon as possible after collection to avoid unpredictable changes in the microbial population. For most accurate results, ice samples during transport to the laboratory, if they cannot be processed within 1 h after collection. If the results may be used in legal action, employ special means (rapid transport, express mail, courier service, etc.) to deliver the samples to the laboratory within the specified time limits and maintain chain of custody. Follow the guidelines and requirements given below for specific water types.

b. Drinking water for compliance purposes: Preferably hold samples at <10°C during transit to the laboratory. Analyze samples on day of receipt whenever possible and refrigerate overnight if arrival is too late for processing on same day. Do not exceed 30 h holding time from collection to analysis for coliform bacteria. Do not exceed 8 h holding time for heterotrophic plate counts.

c. Nonpotable water for compliance purposes: Hold source water, stream pollution, recreational water, and wastewater samples below 10°C during a maximum transport time of 6 h. Refrigerate these samples upon receipt in the laboratory and process within 2 h. When transport conditions necessitate delays in delivery of samples longer than 6 h, consider using either field laboratory facilities located at the site of collection or delayed incubation procedures.

d. Other water types for noncompliance purposes: Hold samples below 10°C during transport and until time of analysis. Do not exceed 24 h holding time.

2. Bibliography

- CALDWELL, E.L. & L.W. PARR. 1933. Present status of handling water samples—Comparison of bacteriological analyses under varying temperatures and holding conditions, with special reference to the direct method. *Amer. J. Pub. Health* 23:467.
- COX, K.E. & F.B. CLAIBORNE. 1949. Effect of age and storage temperature on bacteriological water samples. *J. Amer. Water Works Assoc.* 41: 948.
- PUBLIC HEALTH LABORATORY SERVICE WATER SUB-COMMITTEE. 1952. The effect of storage on the coliform and *Bacterium coli* counts of water samples. Overnight storage at room and refrigerator temperatures. *J. Hyg.* 50:107.
- PUBLIC HEALTH LABORATORY SERVICE WATER SUB-COMMITTEE. 1953. The effect of storage on the coliform and *Bacterium coli* counts of water samples. Storage for six hours at room and refrigerator temperatures. *J. Hyg.* 51:559.
- MCCARTHY, J.A. 1957. Storage of water sample for bacteriological examinations. *Amer. J. Pub. Health* 47:971.
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- LUCKING, H.E. 1967. Death rate of coliform bacteria in stored Montana water samples. *J. Environ. Health* 29:576.
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