



*Delaware Health  
And Social Services*

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**DIVISION OF MANAGEMENT SERVICES**

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PROCUREMENT

DATE: October 23, 2008

PSC#836

CERTIFIED LABORATORY SUPPORT FOR SAFE DRINKING  
WATER ACT (SDWA) COMPLIANCE MONITORING FOR  
THE OFFICE OF DRINKING WATER IN THE DIVISION OF  
PUBLIC HEALTH

FOR

DIVISION OF PUBLIC HEALTH

Date Due: December 1, 2008  
11:00 AM

ADDENDUM # 1

Please Note:

THE ATTACHED SHEETS HEREBY BECOME A PART OF  
THE ABOVE MENTIONED BID.

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**CERTIFIED LABORATORY SUPPORT FOR SAFE DRINKING WATER ACT (SDWA)**  
**COMPLIANCE MONITORING FOR THE OFFICE OF DRINKING WATER IN THE**  
**DIVISION OF PUBLIC HEALTH**  
**RFP PSC 836**  
**QUESTIONS AND ANSWERS**

Question 1 - Under section B, Scope of Services, can you provide the list of pesticides and the detection levels needed?

Answer 1 - Below are a list of pesticides along with other synthetic organic contaminants and their required detection limits. We probably will not request very many Glyphosate, Endothall, Diquat or Dioxin samples as we have issued statewide waivers for these contaminants.

<b>Contaminant</b>	<b>Detection limit (mg/l)</b>
Alachlor	.0002
Aldicarb	.0005
Aldicarb sulfoxide	.0005
Aldicarb sulfone	.0008
Atrazine	.0001
Benzo[a]pyrene	.00002
Carbofuran	.0009
Chlordane	.0002
Dalapon	.001
1,2-Dibromo-3-chloropropane (DBCP)	.00002
Di (2-ethylhexyl) adipate	.0006
Di (2-ethylhexyl) phthalate	.0006
Dinoseb	.0002
Diquat	.0004
2,4-D	.0001
Endothall	.009
Endrin	.00001
Ethylene dibromide (EDB)	.00001
Glyphosate	.006
Heptachlor	.00004
Heptachlor epoxide	.00002

Hexachlorobenzene	.0001
Hexachlorocyclopentadiene	.0001
Lindane	.00002
Methoxychlor	.0001
Oxamyl	.002
Picloram	.0001
Polychlorinated biphenyls (PCBs) (as decachlorobiphenyl)	.0001
Pentachlorophenol	.00004
Simazine	.00007
Toxaphene	.001
2,3,7,8-TCDD (Dioxin)	.000000005
2,4,5-TP (Silvex)	.0002

Question 2 - Should the lab report data to its statistically derived Method Detection Limit or a specified reporting limit?

Answer 2 - Above are the minimum reporting requirements for EPA under the Safe Drinking Water Act. If I understand your question, you would only be able to report a statistically derived Method Detection Limit if it is below the required EPA detection limit below. In other words, the laboratory reporting level may be below the regulatory minimum reporting level but not above it.

Question 3 - Can we be provided the analytes and reporting limits for each method?

Answer 3 - The analytes we need to have tested are in the list above. We probably will not request very many Glyphosate, Endothall, Diquat or Dioxin samples as we have issued statewide waivers for these contaminants. We also need to have Haloacetic acids tested with the EPA 552 Method. Above are the analytes and the reporting limits. In your RFP please describe what analytes and methods you are certified for that will get you to the required EPA minimum reporting limits. Previously we have ordered analysis by the EPA method. We will consider ordering the analysis by analyte and allowing the lab to choose their EPA Certified Method that will allow them to achieve the minimum reporting requirement. We realize this will have to be negotiated ahead of sampling as it will affect the number of samples and bottles and preservatives required to collect the samples.

Question 4 - We request analyte lists. RFP uses phrases like "Pesticides included in EPA Method 505" and "all other SOCs sampled in DE". We need to know what specific analytes are needed.

Answer 4 - Above are the chemicals we need to have tested and their detection limits right from 40CFR141. We probably will not request very many Glyphosate, Endothall, Diquat or Dioxin samples as we have issued statewide waivers for these contaminants. We also need to contract out the Haloacetic acid part of the disinfection by-products.

Question 5 - Page 6 states samples shall be reported down to the required EPA Minimum Detection Limits. We assume this means EPA RDL in 40CFR141, but request clarification on this. Also, if our MDL is lower than this, are we to use this level as our cut-off (meaning no values reported lower than this level)?

Answer 5 - Detection limits are listed above. The lab may report minimum detection limits lower than the EPA minimum detection limits.

Question 6 - Under section B, Scope of Services, can EPA method 525 be used if those pesticides and detection levels meet your requirements?

Answer 6 - EPA Method 525 is an approved method for Alachlor, Atrazine, Benzo(a) pyrene, Chlordane, Di(2-ethylhexyl)adipate, Di(2-ethylhexyl)phthalate, Endrin, Heptachlor epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methoxychlor, Pentachlorophenol, Simazine and Toxaphene as long as you meet the EPA required minimum detection limits.

Question 7 - Clarification under section G, Scope of Services, is the E Coli test just the confirmation of a positive Total Coliform result?

Answer 7 - The E coli test is not a confirmation of a positive total Coliform result. It is an additional procedure run after the positive total Coliform test. See below:

(6) Public water systems must conduct analysis of *Escherichia coli* in accordance with one of the following analytical methods:

(i) EC medium supplemented with 50 µg/mL of 4-methylumbelliferyl-beta-D-glucuronide (MUG) (final concentration), as described in Method 9222G in Standard Methods for the Examination of Water and Wastewater, 19th edition (1995) and 20th edition (1998). Either edition may be used. Alternatively, the 18th edition (1992) may be used if at least 10 mL of EC medium, as described in paragraph (f)(5) of this section, is supplemented with 50 µg/mL of MUG before autoclaving. The inner inverted fermentation tube may be omitted. If the 18th edition is used, apply the procedure in paragraph (f)(5) of this section for transferring a total coliform-positive culture to EC medium supplemented with MUG, incubate the tube at  $44.5 \pm 0.2$  °C for  $24 \pm 2$  hours, and then observe fluorescence with an ultraviolet light (366 nm) in the dark. If fluorescence is visible, *E. coli* are present.

(ii) Nutrient agar supplemented with 100 µg/mL of 4-methylumbelliferyl-beta-D-glucuronide (MUG) (final concentration), as described in Method 9222G in Standard Methods for the Examination of Water and Wastewater, 19th edition (1995) and 20th edition (1998). Either edition may be used for determining if a total coliform-positive sample, as determined by a membrane filter technique, contains *E. coli*. Alternatively, the 18th edition (1992) may be used if the membrane filter containing a total coliform-positive colony(ies) is transferred to nutrient agar, as described in Method 9221B (paragraph 3) of Standard Methods (18th edition), supplemented with 100 µg/mL of MUG. If the 18th edition is used, incubate the agar plate at 35 °C for 4 hours and then observe the colony(ies) under ultraviolet light (366 nm) in the dark for fluorescence. If fluorescence is visible, *E. coli* are present.

(iii) Minimal Medium ONPG-MUG (MMO-MUG) Test, as set forth in the article “National Field Evaluation of a Defined Substrate Method for the Simultaneous Detection of Total Coliforms and *Escherichia coli* from Drinking Water: Comparison with Presence-Absence Techniques” (Edberg et al.), Applied and Environmental Microbiology, Volume 55, pp. 1003–1008, April 1989. (Note: The Autoanalysis Colilert System is an MMO-MUG test). If the MMO-MUG test is total coliform-positive after a 24-hour incubation, test the medium for fluorescence with a 366-nm ultraviolet light (preferably with a 6-watt lamp) in the dark. If fluorescence is observed, the sample is *E. coli* -positive. If fluorescence is

questionable (cannot be definitively read) after 24 hours incubation, incubate the culture for an additional four hours (but not to exceed 28 hours total), and again test the medium for fluorescence. The MMO-MUG Test with hepes buffer in lieu of phosphate buffer is the only approved formulation for the detection of *E. coli*.

(iv) The Colisure Test. A description of the Colisure Test may be obtained from the Millipore Corporation, Technical Services Department, 80 Ashby Road, Bedford, MA 01730.

(v) The membrane filter method with MI agar, a description of which is cited in footnote 6 to the table in paragraph (f)(3) of this section.

(vi) E\*Colite<sup>®</sup> Test, a description of which is cited in footnote 10 to the table at paragraph (f)(3) of this section.

(vii) m-ColiBlue24<sup>®</sup> Test, a description of which is cited in footnote 11 to the table in paragraph (f)(3) of this section.

(viii) ReadyCult<sup>®</sup> Coliforms 100 Presence/Absence Test, a description of which is cited in footnote 13 to the table at paragraph (f)(3) of this section.

(ix) Membrane Filter Technique using Chromocult<sup>®</sup> Coliform Agar, a description of which is cited in footnote 14 to the table at paragraph (f)(3) of this section.

(x) Colitag<sup>®</sup>, a description of which is cited in footnote 15 to the table at paragraph (f)(3) of this section.

(7) As an option to paragraph (f)(6)(iii) of this section, a system with a total coliform-positive, MUG-negative, MMO-MUG test may further analyze the culture for the presence of *E. coli* by transferring a 0.1 ml, 28-hour MMO-MUG culture to EC Medium + MUG with a pipet. The formulation and incubation conditions of EC Medium + MUG, and observation of the results are described in paragraph (f)(6)(i) of this section.

(8) The following materials are incorporated by reference in this section with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the analytical methods cited in Standard Methods for the Examination of Water and Wastewater (18th, 19th, and 20th editions) may be obtained from the American Public Health Association *et al.* ; 1015 Fifteenth Street, NW., Washington, DC 20005–2605. Copies of the MMO-MUG Test, as set forth in the article “National Field Evaluation of a Defined Substrate Method for the Simultaneous Enumeration of Total Coliforms and *Escherichia coli* from Drinking Water: Comparison with the Standard Multiple Tube Fermentation Method” (Edberg *et al.* ) may be obtained from the American Water Works Association Research Foundation, 6666 West Quincy Avenue, Denver, CO 80235. Copies of the MMO-MUG Test as set forth in the article “National Field Evaluation of a Defined Substrate Method for the Simultaneous Enumeration of Total Coliforms and *Escherichia coli* from Drinking Water: Comparison with the Standard Multiple Tube Fermentation Method” (Edberg *et al.* ) may be obtained from the American Water Works Association Research Foundation, 6666 West Quincy Avenue, Denver, CO 80235. A description of the

Colisure Test may be obtained from the Millipore Corp., Technical Services Department, 80 Ashby Road, Bedford, MA 01730. Copies may be inspected at EPA's Drinking Water Docket; 401 M St., SW.; Washington, DC 20460, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

[http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Question 8 - Scope of Services, Part B, what analyses are included in the terminology SOC? Are there 1100 of each of these analyses or is this the total # of analyses which may be requested?

Answer 8 - We use the term SOC, synthetic organic contaminants, to describe the EPA regulated organic contaminants minus the VOC, volatile organic contaminants. Our Delaware Public Health Lab routinely runs EPA method 524.2 and so the Office of Drinking Water will not be contracting those samples out. The chemicals with the approved EPA or other method are below.

Contaminant	EPA method <sup>1</sup>	Standard methods	ASTM	Other
23. 2,4-D <sup>4</sup> (as acids, salts, and esters)	515.2, 555, 515.1, 515.3, 515.4		D5317-93, 98 (Reapproved 2003)	
24. 2,4,5-TP <sup>4</sup> (Silvex)	515.2, 555, 515.1, 515.3, 515.4		D5317-93, 98 (Reapproved 2003)	
25. Alachlor <sup>2</sup>	507, 525.2, 508.1, 505, 551.1			
26. Atrazine <sup>2</sup>	507, 525.2, 508.1, 505, 551.1			Syngenta <sup>5</sup> AG-625
27. Benzo(a)pyrene	525.2, 550, 550.1			
28. Carbofuran	531.1, 531.2	6610		
29. Chlordane	508, 525.2, 508.1, 505			
30. Dalapon	552.1 515.1, 552.2, 515.3, 515.4, 552.3			
31. Di(2-ethylhexyl)adipate	506, 525.2			
32. Di(2-ethylhexyl)phthalate	506, 525.2			
33. Dibromochloropropane (DBCP)	504.1, 551.1			
34. Dinoseb <sup>4</sup>	515.2, 555, 515.1, 515.3, 515.4			
35. Diquat	549.2			
36. Endothall	548.1			
37. Endrin	508, 525.2, 508.1, 505, 551.1			
38. Ethylene dibromide (EDB)	504.1, 551.1			
39. Glyphosate	547	6651		

40. Heptachlor	508, 525.2, 508.1, 505, 551.1		
41. Heptachlor Epoxide	508, 525.2, 508.1, 505, 551.1		
42. Hexachlorobenzene	508, 525.2, 508.1, 505, 551.1		
43. Hexachlorocyclopentadiene	508, 525.2, 508.1, 505, 551.1		
44. Lindane	508, 525.2, 508.1, 505, 551.1		
45. Methoxychlor	508, 525.2, 508.1, 505, 551.1		
46. Oxamyl	531.1, 531.2	6610	
47. PCBs <sup>3</sup> (as decachlorobiphenyl)	508A		
48. PCBs <sup>3</sup> (as Aroclors)	508.1, 508, 525.2, 505		
49. Pentachlorophenol	515.2, 525.2, 555, 515.1, 515.3, 515.4		D5317-93, 98 (Reapproved 2003)
50. Picloram <sup>4</sup>	515.2, 555, 515.1, 515.3, 515.4		D5317-93, 98 (Reapproved 2003)
51. Simazine <sup>2</sup>	507, 525.2, 508.1, 505, 551.1		
52. Toxaphene	508, 508.1, 525.2, 505		

To cover this group of chemicals you would need to run several different methods. In previous years we have used a combination of methods to capture these chemicals starting with the EPA Method 505, 508, 525, 515, 504 and 531. If you counted all of the samples for each of these methods you would arrive at approximately 1100 samples per year.

Question 9 - Page 8 re: immediate notification of hits... states within 24 hours of result being finalized. Need clarification: is this result finalized?, method finalized?, report finalized, etc? Who do we contact and how? Is this any detect? Any detect above MCL?, etc.

Answer 9 - The "State of Delaware Regulations Governing Public Drinking Water Systems" requires for chemical samples, "If a sample exceeds a MCL as specified in the regulations the laboratory must report the results by the end of the business day, or if it is after business hours, then by the end of the next business day." This would apply to that result being finalized. We allow the lab to notify us by an e-mail group, phone call to a live person or a fax. We would set up a convenient method for you to contact us during contract negotiations. This only applies to MCL exceedances.

Question 10 - Page 6 states "results must pass all quality assurance quality control standards or be repeated at no additional cost". Do they allow any exceptions? Examples: J-values in MB and samples; CCV/LCS high with samples BDL; X # analytes fail when full-list is used; etc.

Answer 10 - Some exceptions are: We would accept J values and you would not have to repeat them. If the regulated compounds passed and the unregulated in the same method did not then this sample would

not have to be repeated. We were basically thinking if your surrogate recovery was not in specs then we should not have to pay for the resamples.

Question 11 - In general, are method substitutions allowed?

Answer 11 - Yes

Question 12 - Section II Scope of Services, Section B specifies that there will be 1,100 SOC samples. Will these samples be for all of the SOCs or selected subsets? If there are subsets, is there a breakdown of the approximate number of each method needed available? (such as 100 method 548, 200 method 531 and the like).

Answer 12 - A very rough estimate would be that there will be very few 547, or 548 methods approximately 160 each of the 531 test, 504 test, 515 test, 525 test and 508 test. We will probably have about 30 HAA5 or more. We conducted a lot of our triennial monitoring in 2004 and 2007 and will again in 2010. This is a little short of the 1,100 which I pulled out of the historical results in our database. Other monitoring is scattered along due to new wells and detects.

Question 13 - Item D, pg 7-- Inorganic compounds (Trace metals) including asbestos: Does lab has to be certified in all inorganic trace metals or just few metals? I believe bidder can bid any item A-G listed on these pages.

Answer 13 - A lab may bid on any portion of the RFP that they are certified for.