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NATIONAL WATER QUALITY LABORATORY TECHNICAL MEMORANDUM 1999.09

December 17, 1999

Subject: Removal of Two Constituents from Lab Schedules 1324 (Organochlorine Pesticides in Water) and 1398 (Low-Level Organochlorine Pesticides in Water) and Addition of One or Two Surrogates to Lab Schedules 1324, 1364 (Polychlorinated Biphenyls in Water), 1398, and 1608 (Organochlorine Pesticides in Storm Water Run-Off)

Effective date
of changes: January 3, 2000

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Revision: None

Supplemental: None

PURPOSE

This technical memorandum announces the removal of two constituents, perthane and gross-polychlorinated naphthalenes (PCNs), from the National Water Quality Laboratory lab schedules 1324 and 1398. In addition, two new surrogates have been added to the following schedules: 1324, 1398, and 1608. Lab schedule 1364 will only have one new surrogate added.

BACKGROUND

In the organochlorine schedules 1324 and 1398, there are two constituents that have rarely been detected in the past and that are difficult to identify and quantify. The first, perthane, has a poor method performance by gas chromatography and electron-capture detection, responding at about 10% or less of the other organochlorine compounds. The second, PCNs, are often masked by polychlorinated biphenyls (PCBs). This masking can create false positive as well as false negative reports of PCNs. Like PCBs, PCNs are a complex mixture of chlorinated congeners. PCBs are frequently detected in environmental samples, making it difficult to reliably identify PCNs.

In the organochlorine pesticide schedules 1324, 1398, 1364, and 1608, isodrin had been the only surrogate used to monitor the method performance¹. In general, isodrin recoveries do not follow the recoveries of the other method constituents, with the exception of a few. Two additional surrogates, alpha HCH-d6 and 2,2,3,3,4,4,5,6,6-nonachlorobiphenyl (PCB #207) have been added to provide a better representation of the method performance of constituents during sample preparation and analysis. Although there will be the addition of two new surrogates, isodrin will remain. Isodrin recoveries relate to the recoveries of three of the most heat-sensitive organochlorine compounds: aldrin, heptachlor, and endrin. Therefore, isodrin is useful for monitoring method performance for these three compounds.

REPORTING CHANGES

As of January 3, 2000, perthane and PCN's will be removed from lab schedules 1324 and 1398. Also, as of January 3, 2000, lab schedules 1324, 1398, and 1608 will have three surrogates reported. Schedule 1364 will only have two reported, as alpha HCH-d6 is lost during the clean-up preparation steps used in the method. The parameter codes for PCB #207 and alpha HCH-d6 have been created for each of the above mentioned schedules with the exception of PCB #207 for schedule 1364.

Table 1. Reporting changes for perthane and PCN's in lab schedules 1324 and 1398

Constituent	Parameter Code*	Lab Code	Reported prior to January 3, 2000	Reported beginning January 3, 2000
Schedules 1324 and 1398				
Perthane	39034A	348	Yes	No
PCNs	39250B	393	Yes	No

Table 2. Reporting changes of surrogate compounds in lab schedules 1324, 1364, 1398, and 1608

Constituent	Parameter Code*	Lab Code	Reported prior to January 3, 2000	Reported beginning January 3, 2000
Schedules 1324				
Isodrin	90567A	1611	Yes	Yes
Alpha HCH-d6	99776A	2512	No	Yes
PCB #207	99779A	2513	No	Yes
Schedules 1364				
Isodrin	90569A	1929	Yes	Yes
PCB #207	99222A	2517	No	Yes

Table 2. Reporting changes of surrogate compounds in lab schedules 1324, 1364, 1398, and 1608
(Continued)

Constituent	Parameter Code*	Lab Code	Reported prior to January 3, 2000	Reported beginning January 3, 2000
Schedules 1398				
Isodrin	90571A	1928	Yes	Yes
Alpha HCH-d6	99777A	2510	No	Yes
PCB #207	99780A	2511	No	Yes
Schedules 1608				
Isodrin	90570A	1931	Yes	Yes
Alpha HCH-d6	99778A	2514	No	Yes
PCB #207	99781A	2515	No	Yes

*The letter following the 5-digit parameter code represents the method code for the schedule.

CHANGES TO DATABASE

No changes to historic database.

REFERENCES

Wershaw, R.L., Fishman, M.J., Grabbe, R.R., and Lowe, L.E., eds., 1987, Methods for the determination of organic substances in water and fluvial sediments: U.S. Geological Survey Techniques of Water-Resources Investigations, book 5, chap. A3, p. 27-31.

/signed/
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This memorandum does not supersede any other NWQL Technical Memorandum.

Key Words: Schedule 1321, Schedule 1324, Schedule 1398, Schedule 1364, Schedule 1608, insecticides, Polychlorinated naphthalenes, PCNs, Polychlorinated biphenyls, PCBs, Perthane, Surrogate, Lab code, Parameter code, Alpha HCH-d6 PCB #207