

February 26, 2001

To: Water Resources Division

From: Peter F. Rogerson, Senior Chemist
Office of Water Quality

For: LeRoy Schroder, Chief
Branch of Quality Systems

Subject: Approval of 4 Additional Chloroacetanilide Herbicide Degradation Compounds
by Liquid Chromatography-Mass Spectrometry

The Office of Water Quality (OWQ) has approved the addition of 4 herbicide degradation compounds to a previously approved water-quality analytical method by the U.S. Geological Survey (USGS) Organic Chemistry Research Group, Lawrence, Kansas. The previous method is for the determination of 6 chloroacetanilide herbicide degradation compounds in water by high performance liquid chromatography – mass spectrometry by L. R. Zimmerman, K.A. Hostetler, and E. M. Thurman. U.S. Geological Survey OFR 00-182. It was approved on April 28, 2000.

This water-quality analytical methods approval follows the technical procedure specified in OWQ Tech Memo 98.05. The method performance of the 4 additional and 6 previous compounds is described in:

Methods of Analysis by the U.S. Geological Survey Organic Geochemistry Research Group – Update and Additions to the Determination of Chloroacetanilide Herbicide Degradation Compounds in Water Using High-Performance Liquid Chromatography/Mass Spectrometry, by E.A. Lee, J.L. Kish, L.R. Zimmerman, and E.M. Thurman. U.S. Geological Survey OFR 01-10.

Method O-2134-00 is now approved for 10 herbicide degradation compounds in samples of filtered water. For convenience, the Organic Chemistry Research Group at Lawrence, KS, offers these 10 analytes in Analysis Code LCAA (Acetanilide Acids):

| Parameter Code | Method Code | Analyte Name |
|----------------|-------------|---|
| 61029 | X | Acetochlor ethane sulfonic acid, water, filtered, ug/L |
| 61030 | X | Acetochlor oxanilic acid, water, filtered, ug/L |
| 50009 | X | Alachlor ethane sulfonic acid, water, filtered, ug/L |
| 61031 | X | Alachlor oxanilic acid, water, filtered, ug/L |
| 61951 | X | Dimethenamid ethane sulfonic acid, filtered, ug/L |
| 62482 | X | Dimethenamid oxanilic acid, filtered, ug/L |
| 61952 | X | Flufenacet ethane sulfonic acid, filtered, ug/L |
| 62483 | X | Flufenacet oxanilic acid, filtered, ug/L |
| 61043 | X | Metolachlor ethane sulfonic acid, water, filtered, ug/L |
| 61044 | X | Metolachlor oxanilic acid, water, filtered, ug/L |

The fixed value for the analyzing agency (parameter code 00028) is: 82013 (District Research Water-Quality lab, Lawrence, KS.)

If you would like a copy of either the original or the new report, please contact Betty Scribner (scribner@usgs.gov) (785) 832-3564.

If you have questions about the method approval process, please contact Pete Rogerson (rogerson@usgs.gov) (303) 236-1836.