1993 (58 FR 65622), the Agency proposed to remove Method 353.1, which contains a brucine-sulfanilic acid procedure similar to Method 9200, as approved for the determination of nitrate under 40 CFR 141.23 of the National Primary Drinking Water Regulations. The AWWA also removed the brucine-sulfanilic acid (Method 419 D) method from its publication ''Standard Methods for the Examination of Water and Wastewater''. To be consistent with this and any other related Agency actions, the Agency is not including Method 9200A, a modified version of Method 9200, in Final Update II, and plans to propose the removal of Method 9200 from SW–846 at a later date. (Method 9200A reversed the order of brucine-sulfanilic acid and sulfuric acid reagents from that described in Method 9200 in an unsuccessful attempt to improve reliability.) In the rare cases where nitrate is a target analyte for RCRA-related analyses, the regulated community may use Method 9056—The Determination of Inorganic Anions by Ion Chromatography which is included in this Final Rule, or an appropriate method approved and issued by other Agency programs, such as Method 353.2—Nitrogen, Nitrate-Nitrite, found in the methods manual ''Methods for Chemical Analysis of Water and Wastes''. (Although Method 353.2 provides combined nitrate-nitrite results, separate values can be obtained according to Sec. 2.1 of the method.)

3. Flexibility Allowance in SW–846

Many public comments requested the use of alternative equipment, materials, and procedures during the application of the Update II SW–846 methods. Although the Agency agrees with most of the alternatives suggested by these comments, the Agency did not change the content of any method in response to the comments because the necessary flexibility in equipment, materials, or method application is already allowed by the SW–846 Disclaimer, presented at the beginning of the document, and Sections 2.1.1 and 2.1.2 of Chapter Two. Based on the large number of comments requesting the inclusion of alternatives in SW–846 methods, the Agency believes that this inherent flexibility and performance-based approach allowed by SW–846 is not sufficiently understood by the regulated community. The Agency, therefore, wishes to stress that flexibility in the use of equipment, glassware, and procedures is allowed pursuant to the SW–846 Disclaimer and Secs. 2.1.1 and 2.1.2 of Chapter Two.

Specifically, as stated in the SW–846 Disclaimer, SW–846 methods are designed to be used with equipment from any manufacturer that results in suitable method performance. In general, the equipment specifications and settings given in the SW–846 methods represent the particular instruments used during method development, or subsequently approved for use in the method. However, these specifications need not be explicitly followed. Other equipment may be used as long as the laboratory achieves equivalent or superior method performance appropriate for the particular application.

In addition, many types and sizes of glassware and supplies are commercially available and it is possible to prepare reagents and standards in many different ways. Therefore, as stated in both the SW–846 Disclaimer and Sec. 2.1.2 of Chapter Two, those specified in the methods may be replaced by any similar type as long as the substitution does not affect the overall quality of the analyses. Finally, Sec. 2.1.1 of Chapter Two observes that SW–846 methods were designed through sample sizing and concentration procedures to address trace analyses (<1000 ppm); however, the methods can be made applicable to other analyses through the use of appropriate sample preparation techniques.

4. Consolidation of GFAA Methods

One commenter suggested that the Agency consolidate the separate graphite furnace atomic absorption (GFAA) methods in the 7000 Series into a single method. The commenter found the present approach of separate methods for individual elements to be cumbersome and redundant. The Agency appreciates this point, and is considering both Flame and GFAA method consolidation as a future option for SW–846, provided that analytical flexibility can be retained during analysis of the individual elements. However, it is not possible to combine individual GFAA methods as part of this Final Rule without further study by the Agency and without providing an opportunity for public comment on any new, consolidated method. The Agency believes that adding the individual GFAA methods to SW–846 at this time is more beneficial to the analytical community.

5. SPE as a Preparative Method to Method 8081A

One commenter requested that the Agency add solid phase extraction (SPE) as a preparative method in water matrices for determination by Method 8081A—Organochlorine Pesticides by Gas Chromatography: Capillary Column Technique. The Agency agrees that such a method would be useful, but it cannot be added at this time as part of Final Update II. The addition of this method requires submission of performance data for review by the SW–846 Technical Workgroup, proposal in the **Federal Register** and an opportunity for public comment. SPE is a preparative technique for separating extractable organic analytes from water matrices for determination by gas chromatography or other appropriate technique, and will be considered for inclusion in SW–846 as a 3500 Series method. The Agency is working on the development of a general SPE method which will be included in a future update of SW–846.

6. Deletion of Ultrasonic Extraction (Method 3550) as a Preparative Method for Method 8141A and the Re-Inclusion of Tables 5, 6 and 7 to Method 8141A

One commenter observed that when Method 3550—Ultrasonic Extraction is used as a preparative method for Method 8141A, several analytes of interest are lost. The Agency agrees; a published study has demonstrated that decomposition of compounds of interest during sample preparation by ultrasonic extraction is indeed a problem.[2] Therefore, the Agency has deleted all references to Method 3550 in Method 8141A and has added a section which clearly states that Method 3550 is not an appropriate sample preparation method for Method 8141A because of the potential for target analyte destruction during the ultrasonic extraction process. For consistency with this information, references to Method 8141 were also removed from Table 2 of Method 3550A which delineates specific extraction conditions for various determinative methods.

In addition, the Agency has re-included three organophosphorus compound performance data tables in the final version of Method 8141A which were inadvertently deleted from the proposed version of the method. Specifically, the Agency is re-including Table 5, which provides recovery data from separatory funnel extraction; Table 6, which provides recovery data from continuous liquid-liquid extraction; and Table 7, which provides recovery data from Soxhlet extraction. These tables are unchanged from the original versions which were included in Method 8141 as Tables 4, 5 and 6, respectively.

[2] Kotronarou, et al., Environ. Sci. Technol., 1992, 26, pp. 1460–1462.