



# **SAMPLING GUIDELINES AND PROTOCOLS**

Technological Background and Quality Control/Quality Assurance  
For NYS DEC Spill Response Program

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**DIVISION OF WATER**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

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## Sampling Guidelines and Protocols

Notes on currency of information:

- Caution should be exercised in use of data from Tables that may be outdated, such as the data from Tables A-1, A-2 and A-3.
- For volatile organic compound (VOC) testing referenced in Section 7.0: It is now recommended to use capillary column GC methods (502.2, 8021, 8260, 524.2). Use of the packed column methods are no longer recommended (503.1, 8020, 8240 and 524.1).
- [Consult SW-846](#), EPA, NYS DOH, ASTM, NIOSH, etc. for most recent updates of referenced test methods.

## **PREFACE**

This information has been prepared to acquaint spill response personnel with certain procedures they should consider and follow to perform quality sampling. This document is intended to complement the existing guidelines in the Department and is not meant as a replacement.

Section 1.0 gives an introduction of chemical classifications according to the system established by the U.S. Department of Transportation. Also included are the environmental media of soil, water and air. The interrelation among the media and factors affecting sampling are reviewed. Section 2.0 reviews five different petroleum products from crude oil. Their specifications, characteristic compositions, chromatograms, and fate after being spilled are explained. Section 3.0 describes various types of equipment for different medium sampling. Section 4.0, Equipment and Container Cleaning Procedures, and Section 5.0, Sampling Procedures, are two important procedures which a sampling personnel should follow to provide good sample quality control/quality assurance. Section 6.0, Sampling Interval and Number of Samples, provides techniques for determining sampling interval and number of samples based on the consideration of statistical concepts and the possible impact of human and/or environmental resources. Section 7.0, Analytical Methods, presents information on analytical methodologies which have been established by either the New York State Department of Health or the U.S. Environmental Protection Agency. They are in a form where appropriate analytical method can be chosen to perform proper analyses and provide reliable information.

Constructive suggestions for improvement in the coverage, contents and format of the information should be sent to the Spill Response Section.

**Sampling Guidelines and Protocols -- Technological Background and  
Quality Control/Quality Assurance for NYS DEC Spill Response Program**

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