

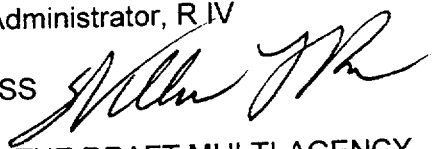


UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

March 3, 2000

MEMORANDUM TO: Ashok C. Thadani, Director, RES  
Samuel J. Collins, Director, NRR  
Paul H. Lohaus, Director, OSP  
Karen D. Cyr, General Counsel, OGC  
Hubert J. Miller, Regional Administrator, RI  
Luis A. Reyes, Regional Administrator, RII  
James E. Dyer, Regional Administrator, RIII  
Ellis W. Merschoff, Regional Administrator, RIV

FROM: William F. Kane, Director, NMSS 

SUBJECT: INTRA-AGENCY REVIEW OF THE DRAFT MULTI-AGENCY  
RADIOLOGICAL LABORATORY ANALYTICAL PROTOCOLS MANUAL

An interagency work group was tasked to develop a "Multi-Agency Radiological Laboratory Analytical Protocols (MARLAP)" manual. This work group included representatives from the U.S. Nuclear Regulatory Commission (NRC), the U.S. Department of Defense (DOD), the U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA), the National Institute of Standards and Technology (NIST), the U.S. Geological Survey (USGS), and the U.S. Food and Drug Administration (FDA). In addition, State participation in the work group included the Commonwealth of Kentucky and the State of California. The work group has completed a draft MARLAP manual and is requesting an intra-agency review and comment by May 10, 2000. The manual has been developed to support radiological laboratory analysis associated with decommissioning and cleanup of nuclear facilities, environmental monitoring, characterization, and waste management activities. To a limited extent, the NRC's MARLAP work group attempted to make this manual consistent with NRC's regulatory guides. Your review and comments should focus on technical issues as well as identifying inconsistencies and incompatibilities with NRC's regulations and regulatory guides. When completed, it is intended that the MARLAP manual would be considered as a reference technical guidance document representing Federal agencies' common views and approaches.

The NRC point of contact (POC) for the MARLAP review is Dr. Rateb (Boby) Abu Eid (e-mail [bae@nrc.gov](mailto:bae@nrc.gov); telephone (301) 415-5811. Each Office should designate an Office review coordinator (ORC) to coordinate MARLAP reviews within that particular Office. The review by the Office of State Programs (OSP) should in addition include coordination with the Agreement States as well. In order to facilitate Office coordination and comment resolution, each ORC would provide the list of reviewers to the POC.

CONTACT: Rateb (Boby) Abu Eid/NMSS  
(301) 415-5811

DFO3

Review of the MARLAP manual is being conducted electronically. The attached work group memorandum (Attachment 1) and the MARLAP Draft Comment System (Attachment 2) provide details regarding this electronic review process. An NRC web page regarding MARLAP has been established at the website "<http://www.nrc.gov/NMSS/DWM/DECOM/marlap.htm>." The designated reviewers can get access to the draft MARLAP document for review and comment through the website "<http://www.eml.doe.gov/marlap/system/login.cfm>." Reviewers need to request a password from NRC's POC to access the website. The NRC's POC and MARLAP work group will compile, resolve, and distribute the comments to the concerned reviewers. Conferences by telephone or meetings will be used to resolve any remaining substantial issues, so that an Agency consensus comments can be carried back to the MARLAP work group to develop a subsequent draft for public review and comment.

Other interested staff or managers may request access to the MARLAP document, "for information only," by contacting Bobby Eid.

Attachments:

1. The MARLAP Manual Work Group Memo
2. The MARLAP Draft Comment System

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1. The MARLAP Manual Work Group Memo
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DISTRIBUTION:

MVirgilio	JHolonich	WTravers	CPaperiello	STreby	JGarrick
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JKottan	RNelson	MLayton	NMamish	DWM r/f	HLWB rf
NMSS r/f	NMSSDirOff r/f	<i>PSantiago</i>	<i>File Center</i>		

DOCUMENT NAME: S:\DWM\HLWB\BAE\MARLAPCOVLTR8.wpd (\*see previous concurrence)

OFC	HLWB*		HLWB*		DCE		HLWB		DWM
NAME	BEid/eab	<i>See previous</i>	SWastler	<i>concur</i>	LCamper	<i>WReamer</i>			JGreeves
DATE	2/18/00		2/22/00		2/22/00		2/22/00		2/22/00
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NAME	<i>WReamer</i>								
DATE	2/13/00								

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HLWB r/f	NMSS r/f	NMSSDirOff r/f			

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DOCUMENT NAME: S:\DWM\HLWB\BAE\MARLAPCOVLTR8.wpd

OFC	HLWB		HLWB		DCB		HLWB		DWM	
NAME	BEid/eab	el/10	SWastler		LCamper		WReamer		JGreeves	
DATE	2/18/00		2/15/00		2/ /00		2/ /00		2/ /00	
OFC	NMSS									
NAME	WKane									
DATE	2/ /00									

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February 11, 2000

**MEMORANDUM**

**SUBJECT:** Request for Intra-Agency Review of Draft MARLAP Manual

**FROM:** Interagency MARLAP (Multi-Agency Radiological Laboratory Analytical Protocols) Manual Work Group

**TO:** Federal Agency Reviewers

The purpose of this letter is to request that you review and comment on the draft Multi-Agency Radiological Laboratory Analytical Protocols (MARLAP) manual. The MARLAP manual is a document which provides guidance for the planning, implementation and assessment phases of those projects which require the laboratory analysis of radionuclides. This guidance is intended for project planners, managers and laboratory personnel. The manual's basic goal is to provide guidance to ensure that radioanalytical laboratory data will meet a project's or program's data requirements and needs.

The MARLAP manual is being developed as a multi-agency guidance document for project managers and radioanalytical laboratories. The document uses a performance-based approach and will support a wide range of data collection activities including site characterization and cleanup; compliance demonstration; decommissioning of nuclear facilities; remedial and removal actions; environmental monitoring; and waste management activities. Current participants include: U.S. Environmental Protection Agency (EPA), U.S. Department of Energy (DOE), U.S. Nuclear Regulatory Commission (NRC), U.S. Department of Defense (DoD), U.S. National Institute of Standards and Technology (NIST), U.S. Geological Survey (USGS), and the U.S. Food and Drug Administration (FDA). State participation in the development of the manual involved contributions from representatives from the Commonwealth of Kentucky and the State of California.

Many of you have already been very helpful in our development of the draft MARLAP manual. Headquarters, regional/field office, and laboratory input through this review process is a critical element in the further development of this manual. Therefore, we are now requesting that you review the draft manual. Where applicable, your office's review is also the vehicle through

which agency concurrence will be obtained in approval of the manual.

The MARLAP manual will be available for review beginning on February 10 through the following website: <http://www.eml.doe.gov/marlap/system/login.cfm>. The MARLAP work group requests that you review the manual and provide comments by May 10, 2000. Your review should focus on technical accuracy, consistency with agency policy, and understandability. We prefer your comments be entered electronically using the format described in the website, as we may be receiving comments from hundreds of reviewers. If you don't use our automated data entry system, your comments are guaranteed to be considered as part of the overall review. However, in order to expedite the review process, we request that you prepare your comments in a format similar to the one described on the website and send them to the appropriate point of contact in your agency.

Passwords to the website can be obtained from the point of contact in your agency. Their addresses and telephone numbers are listed in Attachment 1.

DoD: Air Force: Dale Thomas

Army: Ronald Swatski

Navy: Commander David Farrand

Army Corps of Engineers: Jan Dunker

DOE: Stan Morton

NRC: Bobby Eid

EPA: John Griggs

NIST: Kenneth Inn

USGS: Ann Mullin

FDA: Edmond Baratta

Please note that this draft is for internal agency review only and not for distribution to the public. The MARLAP interagency workgroup plans to seek public comment in a subsequent draft through publication of a notice of availability in the Federal Register.

Thank you for your support in our guidance development effort. Please contact your agency point of contact if you have any questions concerning this request.

John Griggs  
U.S. Environmental Protection Agency

Kenneth Inn  
U.S. National Institute of Standards and Technology

Bobby Eid  
U.S. Nuclear Regulatory Commission

Dale Thomas  
Department of Defense  
U.S. Air Force

Stan Morton  
U.S. Department of Energy

Ronald Swatski  
Department of Defense  
U.S. Army

Ann Mullin  
U.S. Geological Survey

Commander David Farrand  
Department of Defense  
U.S. Navy

Jan Dunker  
U.S. Army Corps of Engineers

Edmond Baratta  
U.S. Food and Drug Administration

Attachments:  
Agency Contacts

## Agency Contacts

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Winchester, MA 01890

Phone Number: 781-729-5700 (x728)  
Email: ebaratta@ora.fda.gov

## MARLAP Draft Comment System

Welcome to the MARLAP Draft comments site. From here, you can browse the MARLAP Draft, make comments, or you can administer the users from your agency if you are an agency representative. If you are logging in for the first time, please read the following instructions completely; your questions will be answered.

### Note To Reviewers

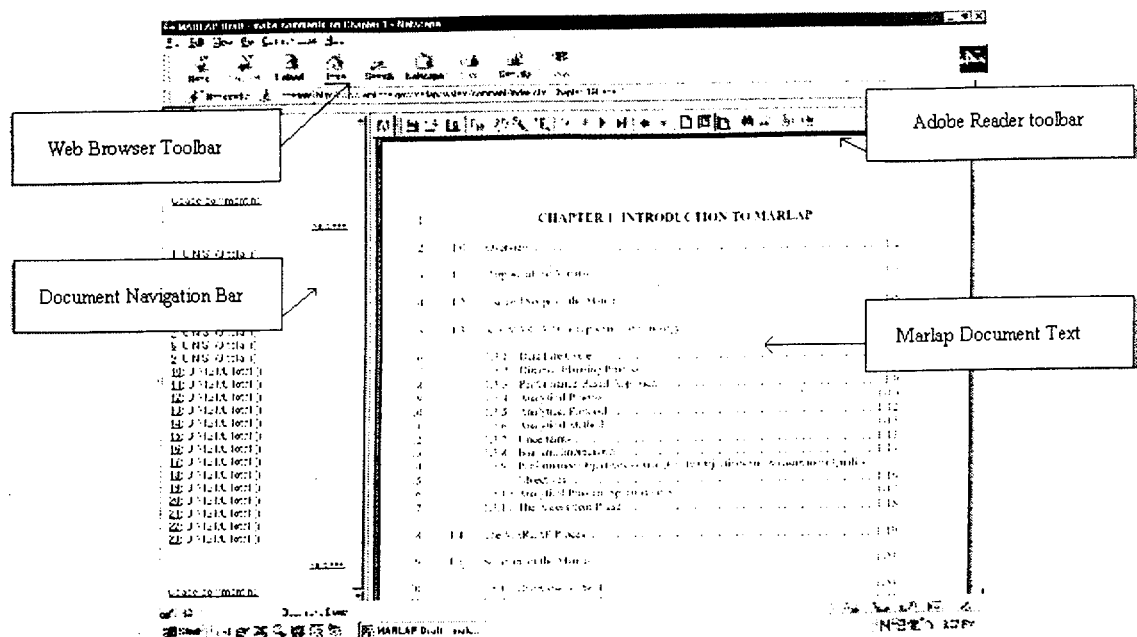
The MARLAP Workgroup would like for reviewers to be aware of the following recommendations, requests and items of information before they review the MARLAP Manual.

- The MARLAP Workgroup strongly recommends that all reviewers read Chapter 1, *Introduction to MARLAP* before reading and reviewing any of the other chapters or appendices. In addition to providing an important introduction to key MARLAP concepts and terms, Chapter 1 explains how the manual is organized to effectively target the primary audiences of the manual - project planners, managers and laboratory personnel.
- In addition to providing comments on the contents of the manual, the MARLAP Workgroup requests that reviewers provide any suggestions they have on additional information which should be included in the manual. In particular, the MARLAP Workgroup welcomes additional guidance or references which could be incorporated into the chapters in Part II which seek to provide guidance and information primarily to laboratory personnel.
- Although every effort was made to complete the entire manual, which consists of twenty chapters and nine appendices, prior to this review process, some parts of the manual are still being developed or revised. Chapter 7, appendices C and D and the glossary are being developed by the MARLAP Workgroup and Chapters 15 and 18 are being revised. Chapters 15 and 18 will be available for review via the website by March 30.
- In the revised version of the manual, SI units will be used throughout the manual and more traditional units (e.g., pCi/g) will be shown in parentheses.

### Procedural Instructions

Linked below are all of the available chapters and appendices of the MARLAP document in PDF format. Reading lengthy documents on a computer screen can be tiring, so users may prefer to download and print out the chapters; click on the appropriate chapter in the [Read the document](#) section below and then click Print on your web browser. Once the chapter has been read, go to the [Make comments](#) section and click on that chapter. Each comment must be linked with a specific line in the document. Choose the line which is most appropriate - the line on which an error appears, for example, or the first line of a section (probably the title) for general comments about that section, or the first line of a chapter for general comments about the chapter, or the line immediately before or after an illustration for comments about the illustration (illustrations are not numbered).

(Note: There is also a shortcut option at the bottom of this page for users who have printed out and read the documents and do not need to review the document online as they are making their comments.)



Your screen should look like this when you are making comments on MARLAP chapters.

When making comments, you should see a navigation frame on the left side of your screen and the chapter you are commenting on in the right-hand frame. They should not be in separate windows. If the chapter opens in its own window, please see **Technical Instructions below** - you will need to install the latest version of the Acrobat Reader software. You can move forward or backwards in the chapter by using the [Next==>](#) and [<==Previous](#) links in the left navigation frame. Please use those links to navigate through the document - if you use the Adobe navigation bar at the top of MARLAP document on the right side of the screen to page through the document, the navigation frame will not update with the line numbers on the current page. When you reach a place where you would like to make a comment, look at its line number in the chapter, then find that same number in the left side navigation frame. Each of those numbers is a clickable hyperlink which will enable you to make comments on that particular line of the document. Click on the number of the line that you would like to comment upon.

A new window should pop up. This window allows you to type in the body of your comment, and make several suggestions about how it should be handled. You can select the type of comment (Editorial, General, Organization, Policy, Technical, or Other), and the priority you believe it should be assigned (High, Medium, Low). Enter your comment and click the button which says "Add Comment to Database". This window will close and you will return to the previous page. If you later desire to modify your comment, click on the same line that you submitted your comment for previously (lines which you have commented on will be underlined), and this time you will be presented with your comment to edit. Simply edit it and click Update Comment to update it in the database.

### Technical Instructions

In order to read and make comments on the MARLAP draft, you will need a web browser with Javascript and cookies enabled, and with a recent version of the Adobe Acrobat plug-in installed to view files in the PDF format. This website uses temporary cookies to hold your login information; when you exit your web browser, those cookies are deleted.

Browsers which support Javascript and cookies are available at no cost from the microsoft.com and netscape.com websites. The Adobe Acrobat "plug-in" is available at no cost from the adobe.com website.

To date, the problems encountered with this review system have centered around the Adobe plug-in software. **If the MARLAP PDF document opens in a separate window from your web browser, then the Adobe software is configured as a "helper application" rather than as a "plug-in", which will make this website difficult to use.** Installing the latest version of the Acrobat reader on your computer should automatically configure your browser to display PDF documents in the web browser window; alternately you can follow the directions linked below to ensure that Adobe is set up as a plug-in, which involve moving a file installed by the Adobe software to the Netscape/IE plug-ins directory on your computer.

Another possible problem is that clicking the Next==> and <==Previous links advances the line numbers in the left frame, but the PDF document always shows the very first page of the chapter. (This will occur if you are using version 3 of the Adobe Acrobat Reader software.) Again, the solution is to download and install the latest version of the Adobe Acrobat reader software.

Installation procedure for Adobe Acrobat Reader:

1. Download the latest version of the Acrobat Reader plug-in - note that you need not provide your name or email address to Adobe in order to download the plug-in
2. Uninstall any previous versions of the Acrobat Reader software by going to My Computer->Control Panel->Add/Remove Programs and picking the name of the program, then "Add/Remove" to uninstall
3. Install the new version of the Adobe Acrobat Reader software by double-clicking on the file you downloaded in step 1 and following the instructions
4. Reboot your computer

If you have difficulty, please contact us for assistance.

- Upgrade your web browser if necessary
- Download the latest version of the Acrobat Reader plug-in - note that you need not provide your name or email address to Adobe in order to download the plug-in
- Setting up the Adobe plug-in for Internet Explorer/AOL
- Setting up the Adobe plug-in for Netscape

One final note: several of the chapter files are large and can take a few minutes to download when you access them for the first time. Your web browser has the ability to automatically cache (store) downloaded information for a short period of time so that an internet document does not need to be downloaded again if you refer to it multiple times in a row. If you notice that there is a significant delay when paging through any of these chapters, it may be because your web browser is not caching the Adobe file, but is re-retrieving it each time you move forward one page. You can make sure your web browser is set up to cache files by going to Edit->Preferences->Advanced->Cache (for Netscape) or Tools->Internet Options->Temporary Internet Files->Settings (for Internet Explorer) and making sure that caching is enabled for your web browser and that at least several megabytes of space is allocated for the cached files.

Make comments on the document:

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- [Review Chapter 1](#)
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- [Review Chapter 15](#)
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- [Review Chapter 19](#)
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**Appendices**

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- [Review Appendix I](#)
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Click [here](#) to review all the comments that you or your agency reviewers have made on the draft to date.

Read (or Print) the document: [\(no comments\)](#)

- [Entire Document](#) - 5.4 Mb, zipped

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- [Chapter 2](#) - Project Planning Process
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- [Chapter 4](#) - Project Plan Documents
- [Chapter 5](#) - Obtaining Laboratory Services
- [Chapter 6](#) - Selection and Application of an Analytical Protocol
- [Chapter 7](#) - Evaluating Radioanalytical Methods and Laboratories
- [Chapter 8](#) - Radiochemical Data Verification and Validation
- [Chapter 9](#) - Data Quality Assessment

**Part II**

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- [Chapter 12](#) - Laboratory Sample Preparation
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- [Chapter 14](#) - Separation Techniques
- [Chapter 15](#) - Nuclear Counting Instrumentation
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- [Chapter 18](#) - Laboratory Quality Control
- [Chapter 19](#) - Measurement Statistics
- [Chapter 20](#) - Waste Management in a Radioanalytical Laboratory

**Appendices**

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- [Appendix B](#) - The Data Quality Objectives Process
- [Attachment B1](#) - Decision Error Rates and the Gray Region
- [Appendix C](#) - Example Application of the Data Quality Objectives Process
- [Appendix D](#) - Basic Concepts in Radiation
- [Appendix E](#) - Measurement Quality Objectives for Measurement Uncertainty and Detection and Quantification Capability
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[Shortcut comment addition process:](#)

If you have printed out chapters of the MARLAP document and already established where you would like to make comments, you can use this to shortcut the above process and jump straight to the appropriate comment location. (For Chapter, put in the number of the chapter, the letter of the appendix, or "GL" for the Glossary.)

Chapter:  Line Number: