

TO: D. A. Isom Copy #072	H6-08	TITLE: Laboratories Administration RELEASE NO.: 063 DATE PREPARED: July 7, 1997
I have entered this release into the document per instructions. Signature: <u>DA Isom</u> Date: <u>7/9/97</u>		If you have any questions about this release contact: Jean Feaster Phone: 373-4426

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SECTION NO. AND TITLE(S)	REMOVE			INSERT		
	PAGES	REV	DATE	PAGES	REV	DATE
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Section 3.9, "Laboratory Procedures" PAGE CHANGE 1	11 - 15	6 6	05/13/97 05/13/97	11 12 13 14 15 Att 5 Att 5	6 6, Chg 1 6, Chg 1 6, Chg 1 6, Chg 1 6, Chg 1 6, Chg 1 6, Chg 1	05/13/97 07/07/97 07/07/97 07/07/97 07/07/97 07/07/97 07/07/97

**IMPLEMENTATION NOTICE**

(ROUTE A COPY OF THE IMPLEMENTATION NOTICE TO ALL USERS OF THIS COPY OF THE MANUAL)

Section 3.9, *Laboratory Procedures*, Rev 6: Change issued to page 12 to add new Section 7.3.3, Waste Compatibility Review. New Attachment 5 added to show example of the Compatibility Review form.



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<b>1.0</b>	<b>POLICIES</b>		
1.1	Safety Priority and Procedure Compliance Policy	5	05/13/97
<b>2.0</b>	<b>ORGANIZATION</b>		
NOTE:	The charter for Analytical Services may be found in WHC-CM-1, <i>Company Policies and Charters</i> .		
2.1	Charters — Section Title (no text)		
2.1.1	222-S Analytical Operations Charter	3	04/13/95
2.1.2	222-S Facility Operations Charter (incorporated into 2.1.1)	Canceled	10/22/93
2.1.3	Program Management and Integration Charter	2	04/05/95
2.1.4	Work Control and Data Management Charter	Canceled	04/26/95
2.1.5	Office of Sample Management	Canceled	04/26/95
2.1.6	Plutonium Finishing Plant Engineering Laboratory	Canceled	07/06/95
2.1.7	Process Laboratories and Technology Charter	Canceled	07/11/95
2.1.8	PUREX Analytical Laboratories Charter	Canceled	07/20/95
2.1.9	Engineering and Technology Services Charter	1	03/31/95
2.2	Committees, Boards, and Task Teams	Canceled	08/17/95
2.2.1	Laboratory Instrument Control Board Charter	Canceled	09/18/96
2.2.2	Chemical Hygiene Committee Charter	1	05/31/95
2.2.5	Laboratories ALARA Committee Charter	Canceled	09/14/95
2.2.6	Laboratories Pollution Prevention Team Charter	1	05/01/95
2.2.8	Laboratory Facility Plant Review Committee Charter	Canceled	06/12/96
2.3.1	Waste Sampling and Characterization Facility — Startup Charter	Canceled	04/12/95
2.3.2	Waste Sampling and Characterization Facility — Analytical Operations Charter	2	02/26/96
2.3.3	Quality Systems Charter	1	08/02/96
2.3.4	Laboratory Transition Charter	0	03/21/95
2.3.6	222-S Production/Scheduling Charter	0	08/05/96

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3.1	Manual Administration	6	03/31/97
3.1-A	Manual Administration — Procedure (incorporated into Section 3.1, Rev. 5)	Canceled	04/05/95
3.2	Out-of-Tolerance Report System	Canceled	01/15/93
3.3	Corrective Action Requirements, Occurrence Categorization, Notification, and Reporting (moved to 6.7)	Canceled	09/13/93
3.4	Data Package Preparation	Canceled	03/03/97
3.5	Administration for Nuclear Materials	4	09/09/96
3.6	Laboratories Entry Requirements	0	03/07/95
3.7	222-S Complex Radiological Postings	Canceled	07/25/95
3.8	Shift Turnover at 222-S Laboratories Complex	Canceled	07/06/95
3.9	<i>Laboratory Procedures</i>	6	05/13/97
	<i>Change 1 (pages 12-15 and Attachment 5)</i>	6, Chg 1	07/07/97
3.10	Procedure Changes and Procedure Change Authorizations (incorporated into 3.9, Rev. 3)	Canceled	03/23/95
3.11	Format and Content Guide for Analytical Services Technical Procedures (see LAP-111-000)	Canceled	11/03/95
3.12	Internal Audit Program (moved to 8.5)	Canceled	08/15/94
3.13	Unreviewed Safety Questions (USQ) Program	Canceled	06/12/96
3.14	Laboratory Sample Tracking	1	03/31/97
3.14-A	Laboratory Sample Tracking — Procedure	Canceled	08/15/94
3.15	Data Package Administrative Verification	1	03/31/97
3.15-A	Data Package Administrative Verification — Procedure	Canceled	08/15/94
3.16	Data Package Control Requirements and Procedure	3	03/31/97
3.16-A	Data Package Control — Procedure (incorporated into 3.16, Rev. 1)	Canceled	03/01/95
3.17	222-S Laboratory Radioactive Material Inventory Control Program	Canceled	09/14/95
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3.26	Terms and Conditions of Requests for Services at the Waste Sampling and Characterization Facility	0	07/30/96
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3.30	Analytical Services Acquisition Evaluation Procedure	0	01/21/97
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<b>5.0</b>	<b>PROCEDURES</b>		
5.1	Analytical Laboratory Procedures (renumbered 3.9)	Canceled	01/15/93
5.2	Supporting Documents	Canceled	09/15/92
5.3	Laboratory Directions	Canceled	09/15/92
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<b>6.0</b>	<b>CONDUCT OF OPERATIONS</b>		
6.1	222-S/WSCF Daily Operating Instructions/Standing Orders	1	09/15/95
6.2	222-S Lockout/Tagout Guidance (replaced by LAP-01-100, 222-S Lockout/Tagout Guidance)	Canceled	01/23/96
6.7	Occurrence Categorization, Notification, and Reporting (Conduct of Operations Chapter 7)	8	04/10/97

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6.8	Lessons Learned Administration	0	01/22/96
6.9	Required Reading Change 1 (Page 2)	0	09/02/96 03/12/97
6.11	Logkeeping Practices (see LAP-12-100)	Canceled	04/10/97
6.17	Operator Aid Postings (Conduct of Operations, Chapter 17)	2	04/10/97
<b>7.0</b>	<b>RECORDS MANAGEMENT</b>		
7.1	Laboratory Data Management Access Control for Data Packages	Canceled	03/12/97
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<b>8.0</b>	<b>QUALITY ASSURANCE/QUALITY CONTROL</b>		
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8.2	Laboratory Instrument Calibration Control System	Canceled	08/05/96
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8.7	222-S Laboratory Management Assessments	1	04/30/97
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9.2	Restricted Access Area Signage	1	06/30/97

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9.7	222-S Equipment and Piping Labeling	0	06/19/97
9.8	Notice of Construction Review	0	08/26/96
<b>10.0</b>	<b>LABORATORY INSTRUMENTS</b>		
10.1	Instrument Preventive Maintenance	1	01/08/96
<b>11.0</b>	<b>RADIOLOGICAL CONTROL</b>		
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11.2	Assignment of Responsibilities	0	12/22/95
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11.4	Radiological and ALARA Performance Goals/Indicators	0	12/22/95
11.5	ALARA Training	0	12/22/95
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11.7	Internal ALARA Program Reviews and Work Practice Assessments	0	12/22/95
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**Laboratory Procedures**

- The response of a system under the direct control of another group is altered and notification of the affected group is required.
- The steps in a procedure may affect the use or operation of equipment under the control of another group.
- Cases where expertise in specific disciplines or specialized training are needed beyond that of the primary reviewer(s) to ensure a complete technical review of the procedure.

Requests for cross-disciplinary reviews may be documented on page 2 of the PRAF and review signatures captured on page 1 in the "Procedure Review" section.

### 7.3.1 Verification

Procedure verification is performed by the technical authority on new and revised procedures and documented by signature on the PRAF. Verification also includes additional reviews requested by the technical authority by any other organizations, personnel, or disciplines to ensure the procedure is free of technical errors.

- Verify information contained within the procedure is accurate and complete
- Verify the procedure is free of errors, easy to understand, and meets the guidelines for content and format
- Verify applicable safety requirements or limits are identified and satisfied. The reviewer checks for omissions of Technical Specification or Operational Safety Requirements provisions that may not be identified in the procedure.
- Verify the procedure does not contain steps that could potentially lead to Technical Specification or Operational Safety Requirements violations, expose personnel or the environment to hazardous conditions, or cause equipment damage.
- Verify the procedure can be accomplished in the sequence written.
- Verify the procedure provides for easy interaction between groups, and efficient use of resources.
- Verify references specified in the procedure are applicable to the procedure being performed.

### 7.3.2 Validation

Procedure validation is performed on all new procedures and procedure revisions, excepting LAPs, by one of the methods described below. It is not required for procedure modifications. The validation method is determined by the technical authority based on the scope, hazard risk, and application of each procedure. Validation is normally performed by personnel who use the procedure.

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Validation is documented by signature on the PRAF and retained in the procedure history file. The validation steps contained in the checklist in Attachment 4 are addressed or the checklist itself may be used and included in the history file.

The "walk-through" method is preferred for validation. Alternate methods may be used when a walk-through is not practical. The following explain the walkthrough method and some alternate methods.

- Walk-through method. A method in which the intended users take the procedure to the location where the task is to be done and, without actually performing the task, ensure that each step is correct and readily usable as written. Where available, a simulator may be used for this method.
- Reference method. A method where an analytical review that does not simulate actual operation, but validates the procedure through document reviews. This method may be used for procedures developed from a previously performed procedure (such as a work package, test procedure or vendor technical manual). To use this method, the procedure must have been performed using the parent document and must contain the same instructions.

The procedure is then validated based on the fact that the instructions were performed successfully via another document.

- Simulation Method. A method whereby personnel who would normally perform the procedure do so on simulators or mock-ups of the equipment.
- Table Top Method. A method whereby personnel explain and/or discuss procedure action steps. Appropriate drawings and references are used.

### 7.3.3 Waste Compatibility Review

The technical authority shall perform a compatibility review of chemical waste streams on 222-S procedures to evaluate the potential reactions/hazards of the waste generated during a process. This review is documented by signatures on the Compatibility Review Form (see Attachment 5). The completed Compatibility Review Forms will be maintained as part of the procedure history file as defined in paragraph 7.5.2 of this section.

- Current procedures will receive the compatibility review at the time of the next reissue.
- New procedures will receive the compatibility review prior to release.
- Test plans will receive the compatibility review prior to release.

**Laboratory Procedures****7.3.4 Periodic Review**

To ensure the technical accuracy and adequacy of procedures, the following review cycle has been established for HAS procedures, based on the associated approval designator:

- Any Safety (S) approval designator — 2 years
- Any Environmental (E) or Quality (Q) approval designator — 3 years
- Any Not Applicable (NA) approval designator — 5 years.

This review cycle meets the requirements of WHC-SP-0708, *Westinghouse Hanford Company Conduct of Operations Manual*, Chapter 16, "Operations Procedures" and WHC-CM-3-5, Section 12.5. Periodic reviews are based on the time interval from initial release of the procedure, with the cycle reset for any completed revision. The new date of periodic review is established from the date of release.

Procedures are tracked by PA to determine when periodic reviews are required. Technical authorities are notified to ensure periodic review and any required changes are completed as scheduled. The review is documented on the PRAF and submitted to PA for processing.

Any procedure that has not been reviewed, and/or had changes completed, and been released by its required periodic review date is considered invalid for use. It will be inactivated on the day following the periodic review due date. These procedures will be removed from controlled locations and remain in inactive status until review is completed or notice of reactivation is processed.

**7.3.5 Final Administrative Review**

Before release for use, a final administrative review is performed by PA to ensure the procedure is accurate and consistent with the procedure process defined herein. The following are addressed in the final review.

- The procedure meets guidance for format and content.
- References specified in the procedure are current and applicable.
- Reviews are performed by all identified reviewers.
- Any change made after initial reviewer signature has been rereviewed and approved (as determined by the TA).
- Comments are dispositioned and incorporated, as applicable.

**Laboratory Procedures****7.4 Approval and Telecon Approval**

A procedure is approved, at a minimum, by the TA, approval authority, and PA in accordance with the assigned approval designator. Procedure approval is obtained on the PRAF and can be in written form with signature or initials, by documented telephone conversation (telecon), or sent electronically via cc:Mail or telefax. Signatures are required in black ink only.

- The person called to perform the review and grant an approval accepts full responsibility for ensuring that the review performed is adequate for the approval granted.
- The person requesting approval documents the approval on the PRAF or procedure by printing the date and the name of the person called near the change made and approved; then signs and prints their name near the name of the person giving approval and indicates the approval was "per telecon."

**7.5 Records**

Procedure Review and Approval Forms and associated procedure process documentation become quality records. Use care to ensure readability and comprehension. Use black ink only.

**7.5.1 Indexes and Files**

The following indexes and files are maintained by PA. Most hard-copy and history files are maintained in the LTIC.

- A master database of procedures
- A master file containing a controlled master of the most current version of the procedure generating goldenrods.
- The back-up electronic (computer based) procedure master file
- Emergency operating procedures are maintained in both hard-copy and electronic format.

**7.5.2 History File**

A history file is established and maintained for each procedure. It contains a record of procedure reviews, approvals, and comments and their disposition. It may also include basis documents such as developmental references as provided by the TA. The file is available in hard-copy or via other archival media.

**Laboratory Procedures****7.5.3 Disposition**

Any records generated as a result of employing HAS procedures will be processed through data package, work control, or other laboratory activities and dispositioned in accordance with applicable sections of WHC-CM-3-5, *Document Control and Records Management Manual*, and applicable Records Inventory and Disposition Schedules.

**8.0 DESIGNATED REVIEWERS**

<u>Designated Reviewing Organizations</u>	<u>MSIN</u>
Procedures Administration (Champion)	T6-03
222-S Procedures Conduct of Operations Champion	T6-20
Quality Systems	T6-16
Operations Support	T6-51
WSCF	S3-28
222-S Operations	T6-12

**9.0 REFERENCES**

LAP-106-100, *Waste Stream Fact Sheet Development and Issuance (Predesignation of Waste)*, Hanford Analytical Services, Richland, Washington.

LAP-111-000, *Laboratory Procedure Process*, Hanford Analytical Services, Richland, Washington.

WHC-CM-3-5, *Document Control and Records Management Manual*.

WHC-CM-7-5, *Environmental Compliance Manual*.

WHC-SP-0708, *Westinghouse Hanford Company Conduct of Operations Manual*.

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Attachment 5. Example of Compatibility Review

Compatibility, in this case, means that two or more substances can be mixed with no adverse effects occurring over an extended period. Incompatibility means contact of two or more substances could result in an explosion, the rapid evolution of gases, or the formation of substances that are highly toxic and/or flammable.

Procedure number:

Chemicals of concern (where reactivity/concentration pose a potential compatibility issue) in analysis/waste stream

Maximum concentration

Compatibility hazards, including special storage requirements, possible reactions, and results of mixing incompatible waste streams:

Recommended waste streams:

Container(s) material:

Reference documents used in compatibility study:

\_\_\_\_\_  
Preparer Date

\_\_\_\_\_  
Reviewer Date

**Laboratory Procedures**

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