


United States Nuclear Regulatory Commission Official Hearing Exhibit	
In the Matter of: SHAW AREVA MOX SERVICES (Mixed Oxide Fuel Fabrication Facility)	
	ASLBP #: 07-856-02-MLA-BD01
	Docket #: 07003098
	Exhibit #: APPR10038-00-BD01
	Admitted: 5/21/2013
	Rejected:
Other:	Identified: 5/21/2013 Withdrawn: Stricken:

K-318

APPR10038
Dec. 5, 2012

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U.S. Department of Energy
NNSA Operations Office
Savannah River Site
MOX Fuel Fabrication Facility
DOE Contract DE-AC02-99CH10888

DOCKETED
USNRC

December 5, 2012 (4:30 p.m.)

**SSNM ITEM IDENTITY AND LOCATION
DATA VERIFICATION PROCEDURE**

OFFICE OF THE SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

MFFF-APM-MC-SOP-S-67011, Rev. 1

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Approval: Jerry Riggins _____ _____
MC&A Manager Date



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REVISION DESCRIPTION SHEET

REVISION NUMBER	PAGES/SECTIONS REVISED AND DESCRIPTION
0	Initial Issue
1	<p><u>General. Miscellaneous editorial changes throughout the document for clarity.</u></p> <p><u>General. Miscellaneous sequential adjustments for clarity and ease of performance. In general, references to other parts of the procedure were removed and the appropriate steps duplicated to improve procedure performance and clarity. Step renumbering was also revised accordingly.</u></p> <p><u>General. Changed the term "movement(s)" to "verification(s)" throughout the procedure for clarity.</u></p> <p><u>Section 3.2. Developmental References. Added reference 4: NRC Staff Request for Additional Information on the MOX Services Fundamental Nuclear Material Control Plan revisions dated October 15, 2012.</u></p> <p><u>Section 6. Procedure. Changed "a week" to Seven (7) days.</u></p> <p><u>Section 6.1.3.3. Note. Changed "movements" to "verifications". This is a global change throughout the document.</u></p> <p><u>Section 6.1.3.3. Verification Size Note. Inserted "See parameter 6.1.7".</u></p> <p><u>Section 6.1.4.3. Replaced "False" with "True" and replaced "excluded from" with "included in". This change also changed the default value of this parameter and is carried throughout the document (e.g., Section 6.2 Step 4).</u></p> <p><u>Section 6.1.7. Generate Item Verification Sample List. Entire section added to perform this function more clearly.</u></p> <p><u>Section 6.2 Step 7. Added "LEAVE "Item Verification Sample List" on the default setting –A "False" statement is the default setting; this does not generate an Item Verification List. "True" will generate an Item Verification List for all storage areas that require additional verification."</u></p>



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Section 6.3 Step 6. Added "LEAVE "Item Verification Sample List" on the default setting –A "False" statement is the default setting; this does not generate an Item Verification List. "True" will generate an Item Verification List for all storage areas that require additional verification."

Section 6.3 Step 9. Added "ANALYZE the Intermediate Data Verification Period Report to determine if the "Actual" verifications have met the verification size."

Section 6.3 Step 10. Added "If "Yes" go to 6.5 to PRINT Final Data Verification Period Report". Branching (i.e., decision points) within the procedure were better integrated into the overall procedure sequence throughout the document.

Section 6.3 Step 11. Added "If "No" CONTACT Operations Manager and the current Site Shift Operations Manager to ensure Operations schedules sufficient verifications prior to 30 day expiration." Branching (i.e., decision points) within the procedure were better integrated into the overall procedure sequence throughout the document.

Section 6.3.2 and Section 6.4.1. Text has been deleted that explained the decision point at which MC&A personnel must determine if additional verifications are likely to be needed. This decision point has now been built into Section 6.3 Step 9, Section 6.4 Step 10 and Section 6.6 Step 10 so the explanation text is no longer needed.

Section 6.4.2. Deleted. This action is now performed in Section 6.7 Step 2.

Section 6.4 Step 7. Added "LEAVE "Item Verification Sample..."

Section 6.4 Step 9. Added "PRINT report by selecting "File" from the browser tool bar, and selecting "Print"."

Section 6.5 Step 6. Added "SELECT "True" for "Item Verification Sample List" –A "True" statement is selected to generate an Item Verification List of additional verifications to achieve the required number of verification. "False" which is the default setting will not generate an Item Verification List."

Section 6.5 Step 10. Added "SUSPEND this procedure until the



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	<p><u>Operations staff reports that verifications are complete."</u></p> <p><u>Section 6.5 Step 12. Added "GO TO Section 6.6 to confirm that verifications are complete."</u></p> <p><u>Section 6.6. The steps in this section were duplicated for clarity from an earlier section rather than referencing the earlier section.</u></p> <p><u>Section 6.7 Step 1. Added "PRINT and"</u></p>
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1. PURPOSE

This procedure establishes the process for verifying the data on SSNM item identity and location provided by the Programmable Logic Controllers (PLCs), thus confirming the accuracy of the item monitoring tests that are performed during the operation of the Mixed Oxide (MOX) Fuel Fabrication Facility (MFFF). This is to be done at a frequency of at least every 30 days.

2. SCOPE

This procedure documents actions undertaken to verify the SSNM item identity and location data used in the item monitoring tests at the MFFF.

3. REFERENCES

3.1 Performance References

#	Document #	Document Title
1.	N/A	N/A

3.2 Developmental References

#	Document #	Document Title
1.	MFFF-AEX-OP-GUI-O-10005-00	MFFF Operations & Maintenance Procedure Writer's Guide
2.	DCS01-APM-DS-NTE-S-34002	MC&A Fundamental Nuclear Material Control Plan (FNMCP), April 2010 revision.
3.	DCS-NRC-000330	Kelly. D. Trice letter to NRC Document Control Desk, Submittal of Revised Fundamental Nuclear Material Control Plan Pages, 15OCT12
4	<u>N/A</u>	<u>NRC staff Request for Additional Information on the MOX Services Fundamental Nuclear Material Control Plan revisions dated October 15, 2012</u>



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4. PRECAUTIONS AND LIMITATIONS

N/A

5. PREREQUISITES

5.1 General

N/A

5.2 Staff

N/A

5.3 Equipment and Tools

N/A

5.4 Lockout

N/A



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6. PROCEDURE

This procedure provides instructions for MC&A staff to verify the accuracy of PLC data through the generation of Data Verification Period Reports. Verification of PLC data involves three steps: (1) determination of the necessary verification size based on item inventory; (2) determination as to whether the data associated with the requisite number of stored items has been verified through process operations; and (3) verification of additional items if process operations do not achieve the requisite verification size within the appropriate time period.

The first and second steps to verify PLC data are performed in three stages, using the Data Verification Period Report: Stage 1 is performed at the beginning of the verification period (Preliminary). Stage 2 is performed ~~a week~~ seven (7) days before the end of the verification period (Intermediate). Stage 3 is a final check performed at the end of the verification period (Final). This procedure describes the methodologies for the generation of the Data Verification Period Report at each report stage, and the appropriate parameterization of the Data Verification Period Report function. The parameters for the Data Verification Period Report are listed in Section 6.1 along with each parameter's default value and a brief description. Sections 6.2 through 6.4 define the appropriate parameterization for Data Verification Period Reports at each of the three stages.

The third step which verifies additional PLC data is performed if an insufficient number of items are verified or scheduled to be verified at Stage 2. Section 6.5 provides the procedure for MC&A personnel to perform to ensure that data associated with additional items is verified.

Sections 6.6 and 6.7 require that, once the requisite number of items has been verified, a signed Data Verification Period Report be created for the data verification period.

6.1 Parameters of the Data Verification Period Report

6.1.1 Beginning Date

6.1.1.1 This parameter is a calendar date.

6.1.1.2 It tells the computer what the first day of the Verification Period is.

6.1.1.3 The default value is the current date.

6.1.2 Ending Date

6.1.2.1 This parameter is a calendar date.

6.1.2.2 It tells the computer what the last day of the Verification Period is.

6.1.2.3 The default value is 30 days after the current date.

Note: This criterion gives the MMIS system the parameters needed to generate the current inventory in the individual item storage area(s).

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6.1.3 Verification Size

- 6.1.3.1 This parameter is a Boolean (True / False) term or function.
- 6.1.3.2 It tells the computer if the required verification size is to be included in the report.
- 6.1.3.3 The default value is True and this tells the computer that the required verification size is to be included in the report.

Note: This verification size calculation is programmed into the background of this report. MC&A staff personnel generating this report do not have to perform this calculation. This calculation is performed for each individual storage area based on the beginning inventory for the verification period.

The number of ~~movements~~verifications required during the verification period will not adjust due to increase or decrease of the storage area's inventory as it fluctuates during the period. Required ~~movements~~verifications during the period are based on the inventory captured on the "**Beginning Date**" and the verification size calculation.

When the number of verifications does not meet the required verification size, the Data Verification Period Report will list items for each storage area to be verified by operations. See parameter 6.1.7.

6.1.4 Actual

- 6.1.4.1 This parameter is a Boolean (True / False) term or function.
- 6.1.4.2 It tells the computer if the actual number of verifications performed for the specified date range is to be included in the report.
- 6.1.4.3 The default value is ~~False~~True. This tells the computer that the actual number of verifications performed for the specified date range is to be ~~excluded~~included ~~from~~in the report.

~~6.1.4.4~~6.1.4.3

6.1.5 Storage Areas

- 6.1.5.1 This parameter is a character string (XXXXXX).
- 6.1.5.2 It tells the computer which storage areas are to be included in the report.



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6.1.5.3 The default value is [blank] or no entry. This tells the computer to include all of the storage areas in the report.

6.1.5.4 This parameter may be specified to include any proper subset of the whole set of storage areas.

6.1.6 Preliminary

6.1.6.1 This parameter is a Boolean (True / False) term or function.

6.1.6.2 It tells the computer if the report is to be a preliminary copy or a final copy.

6.1.6.3 The default value is "True" and this tells the computer that the report is to be a preliminary copy. This excludes the signature blocks from the report.

6.1.6.4 If this parameter is entered as False, it tells the computer to print off a final version of the report to include the signature blocks for the MC&A Manager and the MC&A Program Supervisor.

6.1.7 Generate Item Verification Sample List

6.1.7.1 This parameter is a Boolean (True/False) term or function.

6.1.7.2 It tells the computer to select and generate a list withof specific items to verify, or to not generate a list withof items to verify.

6.1.7.3 The default value is "False" and this tells the computer that the report is not to contain a generated list of items.

6.1.7.4 If this parameter is entered as True, it tells the computer that the report is to include a generated list of items to verify based on the storage areas and the number of additional verifications that a storage area needs to meet the required verification size.

6.1.8 Generate Report

6.1.8.1 This generates the report into a browser allowing MC&A staff to review, print, or save the report as a PDF.

Note: The Print option allows MC&A staff to print a hard copy or generate as a PDF; PDFs are saved to the MC&A access controlled folder in the sub-folder "Data Verification Period Report."



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6.2 Stage 1: Generate Preliminary Data Verification Period Report

Generate a Preliminary Data Verification Period Report at the beginning of the Verification Period. This is generally a 30 day period; longer date ranges can be generated on demand.

Complete the following steps. These steps print out a report of the current inventory of every storage location (or specified location) and the required verification size for the inventory.

1. ENTER "Beginning Date" – Period start date
2. ENTER "Ending Date" – Period end date (30 day duration)
3. LEAVE "Verification Size" on the default setting. A "True" statement is the default setting; this generates the verification size required for each storage area or those particular storage areas specified. "False" will leave this column blank.
4. LEAVE "Actual" on the default setting. A "FalseTrue" statement is the default setting; this generates the actual number of verifications of the items performed so far during the verification period. "False" will leave this column blank.
4. ~~"FalseTrue"~~ will leave this column blank
5. LEAVE Storage Areas "Blank" –this will include all eleven storage areas. One or more storage areas specified will generate data for only those areas (e.g., DCM, DCE, TAS).
6. LEAVE "Preliminary" on the default setting. A "True" statement is the default setting, this generates a preliminary report. A Preliminary report is marked accordingly and omits management signatures. "False" will remove "preliminary" markings and *include* spaces for management approval signatures.
7. ~~LEAVE "Item Verification Sample List" on the default setting –A "False" statement is the default setting; this does not generate an Item Verification List. "True" will generate an Item Verification List for all storage areas that require additional verification.~~
7. _____
8. SELECT "Generate" – This generates the report for review in a browser.
9. PRINT Report by selecting "File" from the browser tool bar, and selecting "Print".

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6.3 Stage 2: Generate Intermediate Data Verification Period Report

Generate an Intermediate Data Verification Period Report seven days before the last day of the Verification Period, run the Data Verification Period Report using the steps below.

-These steps print out a report of the beginning inventory of every storage location, the required verification size for that inventory, and the number of verifications that have been performed to date during the current verification period.

1. **ENTER** "Beginning Date" – Period start date
2. **ENTER** "Ending Date" – Period end date (30 day duration)
3. **LEAVE** "Verification Size" on the default setting. A "True" statement is the default setting; this generates the verification size required for each storage area or those particular storage areas specified. "False" will leave this column blank.
4. **LEAVE** "Actual" on the default setting. A "True" statement is the default setting; this generates the actual number of movements/verifications of the items performed so far during the verification period. "False" will leave this column blank.
4. _____
5. **LEAVE** Storage Areas "Blank" –this will include all eleven storage areas. One or more storage areas specified will generate data for only those areas (e.g., DCM, DCE, TAS).
- 5.6. **LEAVE** "Preliminary" on the default setting. A "True" statement is the default setting; this generates a preliminary report. A Preliminary report is marked accordingly and omits management signatures. "False" will remove "preliminary" markings and include spaces for management approval signatures.
6. **LEAVE** "Item Verification Sample List" on the default setting –A "False" statement is the default setting; this does not generate an Item Verification List. "True" will generate an Item Verification List for all storage areas that require additional verification.
7. _____
- 7.8. **SELECT** "Generate" – This generates the report for review in a browser.
9. **PRINT** Report by selecting "File" from the browser tool bar, and selecting "Print".
10. **ANALYZE** the Intermediate Data Verification Period Report to determine if the "Actual" verifications have met the required Verification Size.
11. If "Yes" go to Section 6.6 to PRINT the Final Data Verification Period Report.



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8.12. If "No" CONTACT the Operations Manager and the current Site Shift Operations Manager to ensure that Operations will schedule sufficient verifications prior to the 30 day expiration.

~~If MC&A personnel determine that operations will not have enough of the "Actual" movements needed to meet the verification size, then the MC&A personnel will contact the Operations Manager and the current Site Shift Operation Manager to determine if the required number of movements will occur by the end of the 30 day verification period. If enough movements are not expected to occur, MC&A personnel will generate an Item Verification Sample List. The Item Verification Sample List contains a list of items that have been randomly selected, for each storage unit that will not meet the required number of movements. The number of items, for each storage unit, in the Item Verification Sample List is the number of "Actual" movements needed to meet the verification size.~~

6.4 Stage 3: Generate a Pre-Final Data Verification Period Report

Generate a Pre-Final Data Verification Period Report by using the steps listed below. This stage is to be run 2 days prior to the end of the 30-day verification period.

~~6.4.1 Confirm that the number of verifications performed in each storage unit during the verification period meets or exceeds the required verification size for the storage area. When confirmation is complete, take this final report, including the signature blocks, to the MC&A Manager (or delegate) and the MC&A Program Supervisor (or delegate) for signature. If verifications performed do not meet the required verification size, see Section 6.5 below.~~

~~6.4.2 Verification Report will then need to be filed appropriately.~~

1. ENTER "Beginning Date" – Period start date
2. ENTER "Ending Date" – Period end date (30 day duration)
3. LEAVE "Verification Size" on the default setting. A "True" statement is the default setting; this generates the verification size required for each storage area or those particular storage areas specified. "False" will leave this column blank.
4. LEAVE "Actual" on the default setting. A "True" statement is the default setting; this generates the actual movements/verifications of the items performed so far during the verification period. "False" will leave this column blank.
5. LEAVE Storage Areas "Blank". This default selection will include all eleven storage areas in the report. One or more storage areas specified will generate data for only those areas (e.g., DCM, DCE, TAS).
6. LEAVE "Preliminary" on the default setting. A "True" statement is the default setting; this generates a preliminary report. A Preliminary report is marked accordingly and omits



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management signatures. "False" will remove "preliminary" markings and include spaces for management approval signatures.

7. LEAVE "Item Verification Sample List" on the default setting – A "False" statement is the default setting; this does not generate an Item Verification List. "True" will generate an Item Verification List for all storage areas that require additional verification.
8. **SELECT "Generate"** – This generates the report for review in a browser.
9. **PRINT Report** by selecting "File" from the browser tool bar, and selecting "Print".
9. —
10. **REVIEW** Final Data Verification Period Report. If the number of process movements verifications is equal to or exceeds the required number of verifications, then Generate the Final Data Verification Period Report for signature (section 6.6).— If enough verifications movements are not expected to occur, MC&A personnel will generate an Item Verification Sample List (section 6.5).

6.5 6.5—Generate a Data Verification Period Report with the Item Verification Sample List Option

When the Number-number of Process Movements verifications from routine processing Does does Not not Equal equal or Exceed exceed the Verification Size number, then use the steps listed below to generate the Data Verification Period Report with the Item Verification Sample List.

- ~~1. **NOTIFY** The Operations Manager and the current Site Shift Operations Manager that verification is required for the remaining number of items, the deadline for that verification, and that the Data Verification Report will be provided.~~
2. **GENERATE** Data Verification Report:
- 3.1. **ENTER** "Beginning Date" – Period start date.
- 4.2. **ENTER** "Ending Date" – Period end date (30 day duration).
- 5.3. **LEAVE** "Verification Size" on the default setting. A "True" statement is the default setting; this generates the verification size required for each storage area or those particular storage areas specified. "False" will leave this column blank.
6. **LEAVE** "Actual" on the default setting. A "True" statement is the default setting; this generates the actual number of movements verifications of the items performed so far during the verification period. "False" will leave this column blank.



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4. _____
 5. **LEAVE** Storage Areas “Blank” –this will include all eleven storage areas. One or more storage areas specified will generate data for only those areas (e.g., DCM, DCE, TAS).
 - 7.6. **LEAVE** “Preliminary” on the default setting. A “True” statement is the default setting; this generates a preliminary report. A Preliminary report is marked accordingly and omits management signatures. “False” will remove “preliminary” markings and include spaces for management approval signatures.
 - ~~8.7. **SELECT** “True” for “Item Verification Sample List” on the default setting –A “True” statement is selected to generate an Item Verification List of additional verifications to achieve the required number of verifications. “False” which is the default setting will not generate an Item Verification List.~~
 - 9.8. **SELECT** “Generate” – This generates the report for review in a browser.
 10. **PRINT** Report by selecting “File” from the browser tool bar, and selecting “Print”.
 - ~~11.9. _____~~
 10. **TRANSMIT** the Item Verification Sample List to the Operations Manager and the current Site Shift Operations Manager. Confirm in person or on the phone that the Data Verification Period Report was received.
 - ~~12.11. **SUSPEND** this procedure until the Operations staff reports that verifications are complete.~~
 12. **RECEIVE** confirmation (either verbal or written) from the Operations Manager or the Site Shift Operations Manager that the verification is complete by the deadline.
 13. **GO TO** Section 6.6 to confirm that verifications are complete.
 - ~~14.13. _____~~
- 6.6 Generate the Final Data Verification Period Report and Confirm the Number of Verifications**
1. **ENTER** “Beginning Date” – Period start date.
 2. **ENTER** “Ending Date” – Period end date (30 day duration).
 3. **LEAVE** “Verification Size” on the default setting. A “True” statement is the default setting; this generates the verification size required for each storage area or those particular storage areas specified. “False” will leave this column blank.



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4. LEAVE "Actual" on the default setting. A "True" statement is the default setting; this generates the actual number of verifications of the items performed so far during the verification period. "False" will leave this column blank.
5. LEAVE Storage Areas "Blank" –This will include all eleven storage areas. One or more storage areas specified will generate data for only those areas (e.g., DCM, DCE, TAS).
6. SELECT "False" in "Preliminary". A "False" statement is generated to produce the final report. "False" will remove "preliminary" markings and generate blank lines for management to document approval via signature. "True" is the default setting.
7. LEAVE "Item Verification Sample List" on the default setting –A "False" statement is the default setting; this does not generate an Item Verification List. "True" will generate an Item Verification List for all storage areas that require additional verification
8. SELECT "Generate" – This generates the report for review in a browser.
9. PRINT Report by selecting "File" from the browser tool bar, and selecting "Print"
10. CONFIRM number of performed verifications is equal to or exceeds the required number of verifications.
11. GO TO Section 6.7.

6.7 Signature Authority of Confirmed Data Verification Period Report

1. Once the Final Data Verification Period Report is completed, **PRINT** and **COLLECT** signatures on the Final Data Verification Period Report for the time period from to the MC&A Manager (or delegate) and the MC&A Program Supervisor (or delegate).
1. —
2. —**FILE** Final Data Verification Period Report.
- 3.2. —

7. RESTORATION

N/A

8. ATTACHMENTS

N/A

9. FORMS

N/A



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