DOE F1325.8 (08-89) EFG (07-90)

United States Government

Department of Energy

Memorandum

QA: QA

JUN 1 0 2002 DATE:

REPLY TO

ATTN OF: RW-3 (R. B. Murthy/(702)794-1460)

- SUBJECT: VERIFICATION OF CORRECTIVE ACTION AND CLOSURE OF DEFICIENCY REPORT (DR) EM-01-D-145 RESULTING FROM THE OFFICE OF QUALITY ASSURANCE (OQA) AUDIT EM-ARC-01-13
 - TO: EM-5 (S. L. Johnson)

The OQA staff has evaluated the corrective action of DR EM-01-D-145 and determined the results to be satisfactory. As a result, the DR is considered closed.

If you have any questions, please contact either James Blaylock at (702) 794-1420 or James E. Flaherty at (702) 794-1468.

Same Blayfort fr Ram B. Murthy, Acting Director

Office of Quality Assurance

OOA:JB-1299

Enclosure: DR EM-01-D-145

NW2001

cc w/encl:

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	OFFICE OF CIVILIA RADIOACTIVE WASTE MAN U.S. DEPARTMENT OF E WASHINGTON, D.	AN NAGEMENT ENERGY C.	Ć.	8. DE
	DEFICIENCY/CORRECTIVE	ACTION REPO	RT	
1. Nat DO	Controlling Document: ional Spent Nuclear Fuel Program Management Procedure 16.02, E/RW-0333P, Quality Assurance Requirements and Description (C	Rev. 5, ICN 1, ARD), Rev. 10	2. Related Office of Qua ARC-01-13	Report No.: ality Assurance, Audit No. EM-
3. F	tesponsible Organization: ional Spent Nuclear Fuel Quality Assurance Program	4. Discussed Wit Bob Blyth, Don A	h: .rmour	
5. F	Requirement:			
a) _b)	National Spent Nuclear Fuel (NSNF) Program Management Proce "Significant condition adverse to quality". One of the criteria used 1 indicating a QA program breakdown". DOE/RW-0333P, Quality A Section 16.2.4 requires that "Criteria for determining a significant of NSNF PMP 16.02, Section 4.a. (16) (c) requires that NSNF "comp of proposed corrective actions." QARD Rev. 10, Section 16.2.5 re corrective actions taken for all reported conditions adverse to qualit timely manner when actions are complete."	edure (PMP) 16.02 to determine if a co Assurance Require condition adverse to olete all corrective a equires that "The Q ity and close the re	2, Rev. 5, ICN ² andition is cons ments and Des o quality shall t actions within 6 A organization lated corrective	1, Section 3. Defines a sidered significant is: "A condition scription (QARD) Rev. 10, be established. 50 calendar days of acceptance in shall verify implementation of e action documentation in a
6. C	escription of Condition:			
a) b)	 a) Contrary to the above requirements (a)), National Spent Nuclear Fuel (NSNF) Program Deficiency Report (DR) No. 01-NSNF-AU-001-007 does not identify "A condition indicating a QA program breakdown" as significant. The DR describes noncompliant conditions to QARD requirements in Section 2.2.1, "QA program Documents" and 5.2, "Work shall be performed in accordance with controlled implementing procedures." The Deficiency Report cites eight example DRs identified in Internal Audit 01-NSNF-AU-001 where failure to implement program procedures was a cause (two DRs were corrected during the audit). The condition indicates a QA program breakdown and should be identified as "Significant." 			
b) Contrary to the above requirements (b)), a number of corrective actions have remained open for periods of time exceeding 60 calendar days. As of 04/01/01, one corrective action has remained open longer than 500 days, four longer than 300 days, five longer than 200 days, three longer than 100 days, and three longer than 60 days. Further investigation revealed a deficiency (DR No. 00-NSNF-AU-011-DR-005 written by the NSNF, also on timeliness of closure of corrective actions. That DR was issued on 6/19/00 and remains open.				
7. li	nitiator:	9. Does a stop w	ork condition e	xist? (Not required for a DR)
Jan	Res E. Flaherty Date 09/25/01	∐ Yes ⊵ If Yes, Check C]No Ine: 🗌 A []в []с []р
10.	Recommended Actions:			
a) b)	None None			
11.	QA Review:	12. Response Du	e Date:	
$\overset{\circ}{\frown}$	DAR James E. Flaherty Date 09/25/01	10 Working Days	From Issuanc	e
<u> </u>	DOE QA Issuance Approval:	ame Bla	ylord fo	Date 10/4/01
13. F				
13. F 22.	Corrective Actions Verified: DAR Jam E. Jahn Date 5/31/02	23. Closure Approv	ed by: Blaylor	fn Date 6/10/02

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TYPE RESPONSE:	OFFICE OF RADIOACTIVE WAS U.S. DEPARTME WASHING	CIVILIAN TE MANAGEMENT NT OF ENERGY TON, D.C.	DR/CAR NO. EM-01-D-145 PAGE 1 OF 3 QA: QA	
·	1			
·····	DEFICIENCY/CORRECTIVE	ACTION REPORT (RESP	ONSE)	
14a. Immediate Actions: N	o remedial actions required.			
Compliance Date: N/A				
14. Remedial Actions:	<u></u>			
This deficiency report (EM- condition (6.a) states that N 'QA Program breakdown'. closures exceeding the NS	01-D-145) identifies two potentially o ISNF Deficiency Report No. 01-NSN The second discrepant condition (6. NF 60 calendar day closure limit.	discrepant conditions related to th IF-AU-001-007 should have beer b) addresses timeliness issues re	ne NSNFP. The first discrepant a classified as 'significant' due to a elated to NSNF corrective action	
EM-01-D-145 Part (6.a.)				
The scope of the NSNFP Q activities. Except for the de showed that the NSNFP QA quality identified as a result	A audit 01-NSNFP-AU-001 focused ficient conditions identified by this a program was effectively implement of the audit.	on procedures, program implem udit, DRs 01-NSNFP-AU-001-DF ted. Therefore, there were no sig	entation and selected work R-001 through -007, the audit results Inificant conditions adverse to	
The audit team held debrief issues. The team also cons	ing meetings to evaluate the prelimination of DRs and restances and restances of DRs and restances of DRs and r	nary results from the audit and de effectiveness of corrective action	etermine if there were any emerging s from the previous QA audit.	
The audit team also recogn need to improve the NSNFF plan to improve the organiza transition period until all org implementing procedures ha for the completion of correct document reviews, the audi	ized that prior to conducting NSNFP ⁹ written program. To that extent, up ational structure and procedure work anization and procedure improveme ave been approved for performance tive actions and closure of all deficie t team did not find evidence of a pro	audit 01-NSNFP-AU-001, NSNF oper NSNFP management impler processes. The current proced ents could be made and impleme of NSNF activities. The correction of NSNF activities. The correction of conditions. Based on the inte gram breakdown.	P management recognized the nented a comprehensive transition - ures remained in effect during the nted at one time. The ve action process provides controls rviews, fieldwork assessments, and	
At the final team debriefing prior to the exit meeting, the audit team determined that an emerging issue was failure to follow procedures. This condition was found in several DRs identified by the audit team. The audit team reviewed the individual DRs to determine if the emerging issue could be combined in an existing DR or identified as a separate DR. The PMP 16.02 criteria for acceptance of remedial and corrective actions were revisited. As an outcome from these discussions, the team believed that numerous examples of failure to follow procedure were enough to warrant a separate DR number (01-NSNFP-AU-001-DR-007).				
In writing 01-NSNFP-AU-00 this manner, the corrective a the extent and impact of fail the remedial and corrective NSNF program transition pla	1-DR-007, the audit team purposely action response to 01-NSNFP-AU-00 ing to implement procedures, not jus action response to 01-NSNFP-AU-0 an would correct the problem.	referenced conditions 01-NSNFI 01-DR-007 would require the res at the individual deficient condition 01-DR-007, when combined with	P-AU-001-DR-001 through -006. In ponsible organization to evaluate ns. The audit team also felt that I the commitments imposed by the	
The audit team discussed 0 the extent and impact of the global revision of PMPs wou indoctrination and training w the effectiveness of procedu	1-NSNFP-AU-001-DR-007 with NSN failure to follow procedures. NSNFI uld be accompanied by personnel ind ras completed prior to January 15, 20 iral compliance will be a primary focu	IFP management and explained P management indicated that con doctrination and training of the er 002. When the 2002 NSNFP full us.	that the objective was to identify mpletion of the transition plan and ntire revised program, this scope internal audit is conducted	
The NSNFP recognizes the with the OCRWM OQA to pe	concern raised by the OCRWM audi erform a formal root cause analysis o	it team. To fully address this cor of the discrepant condition cited t	ncern the NSNF QAPM has agreed by 01-NSNFP-AU-001-DR-007.	
EM-01-D-145 Part (6 h)				

(6.b) states that "a number of corrective actions have remained open for periods of time exceeding 60 calendar days." Part (b) included numerous examples where the corrective action management system does not support timely resolution of conditions adverse to quality. The NSNFP QAS contacted the OCRWM auditors to clarify this finding and corrective actions.

The NSNFP QAS explained that a similar condition was previously identified in deficiency report 00-NSNF-AU-011-DR-005. The proposed corrective and remedial actions for 00-NSNF-AU-011-DR-005 were submitted by the NSNFP management and have been approved by NSNFP QAS. As an outcome of these discussions, the RW auditors agreed to accept these same corrective actions commitments to address the conditions of EM-01-D-145 Part (6.b). Therefore, no additional remedial action will be required.

NSNFP management made a very conscious decision to shift efforts from closing individual corrective actions to revising the written program. They recognized that in the near term the deficiency aging problem would get worse, but that remedying the underlying problems would improve the program and significantly reduce finding recurrence. Revising the written program is a direct response to the self-identified issue of less than acceptable corrective action closure timeliness.

For reference, the corrective action commitments from 00-NSNF-AU-011-DR-005 are summarized below.

- Report to NSNF management the status of NSNF Program corrective action commitments that exceed 60 days. Identify any
 impacts that the overdue deficiencies have on completed or on-going work. Based on the analysis, revise corrective actions or
 issue new DR/CARs to address any newly identified impacts. Identify updated schedules for completion and enter any revised
 completion dates in CATTS.
- Review requirements of PMP 16.02 for the disposition of Deficiency Reports/Corrective Action Requests and the evaluation of responses to Deficiency Reports/Corrective Action Requests with the NSNF QA staff.
- Revise PMP 16.02 to include instructions for escalating inadequate response/late responses or requests for extensions of corrective action completion dates to appropriate levels of management.

Include instructions for monthly reporting of the status of overdue corrective actions to QAPM and NSNF Program Manager.

- Ensure roles and responsibilities for implementing the corrective action program are appropriately assigned within the QA staff.
- To emphasize completion of the annual trending report, the trending report will be made a milestone in the FY-2001 work plan for the NSNF QA group.

15. Extent of Condition:

EM-01-D-145 Part (6.a.)

During the conduct of NSNFP internal audit 01-NSNFP-AU-001, the team evaluated the deficient condition related to DR 01-NSNFP-AU-001-DR-007and compared it to the criteria for determining significance. This criteria is prescribed in NSNF PMP 16.02, Section 3., Definitions, for "significant conditions adverse to quality" and is defined by five criteria (bullets).

The audit team determined that bullets 1, 3, 4, and 5 of the definition of a 'significant' condition were not applicable for the scope of the NSNFP QA audit. None of the deficient conditions identified by the audit team adversely affect SNF acceptance by DOE/RW, compliance with WASRD requirements, or result in invalid SNF data or records.

The audit team considered bullet 2 (QA program breakdown) of the definition of a significant condition adverse to quality. However, as stated in the audit report, the audit team found the NSNFP QA program implementation to be effective and determined that a 'significant condition adverse to quality' did not exist.

EM-01-D-145 Part (6.b.)

The extent of condition is as previously identified in deficiency report 00-NSNF-AU-011-DR-005, which applied to the NSNFP, DOE SNF Sites, NSNFP Suppliers, and the DOE–ID ISFSIs (which are outside of the authority of DOE RW). The DR addressed all of these organizations, therefore the extent of condition has been addressed.

16. Cause: (Attach results of root cause determination prepared in accordance with AP-16.4Q for a significant deficiency.)

EM-01-D-145 Part (6.a.): N/A

EM-01-D-145 Part (6.b.): NSNFP management made a conscious decision to shift efforts from closing individual corrective actions to revising the written program. They recognized that in the near term the deficiency aging problem would get worse, but that remedying the underlying problems would improve the program and significantly reduce finding recurrence.

17. Action to Preclude Recurrence:

EM-01-D-145 Part (6.a.) - NSNFP Program Breakdown

The NSNFP deficiency report 01-NSNFP-AU-001-DR-007 will be processed as deficient condition adverse to quality. As agreed by the NSNF QAPM and OCRWM OQA, NSNF QA will perform a formal root cause analysis of the discrepant condition cited by NSNFP deficiency report 01-NSNFP-AU-001-DR-007. If a discrepant condition is identified as a result of the root cause analysis it will be treated as self identified deficiency.

EM-01-D-145 Part (6.b.) - Timeliness of Corrective Action Completion

The NSNFP QA believes that the corrective action commitments for closure of 00-NSNF-AU-011-DR-005 (summarized in block 14 above) are sufficient to address the deficient conditions posed by EM-01-D-145 Part (6.b). Those corrective action commitments have been completed and DR 00-NSNF-AU-011-DR-005 has been closed, therefore no further action is required.

18. Due Date: 5/3//02	19. Response by:	Don A. Armour	
d^{-2} - 3113102	DonAA	·····	
For completion of corrective action 2 5 2 3/13/03	Date: 02/25/02	Phone	e: 208-526-3512
20. Evaluation: Accept Deartially Accept Reject	21. Concurrence:		
PAR Jamp E. Flatent Date 315/02	DOQA James	Blaybork for	Date 3/12/02
Exhibit AP-16.1Q.1		0 +	Rev. 12/20/1999

7200.1 NSNF-QA-02-024

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CONCURRENCE

RECORD NOTES:

- 1. Transmittal of NSNFP response to Deficiency Report EM-01-D-145 from OQA Audit EM-ARC-01-13.
- 2. Memo prepared by Don Armour, NSNFP QA.
- 3. This letter/memo closes CATS number N/A.
- 4. The attached correspondence has no relation to the Naval Nuclear Propulsion Program. Naval Reactors concurrence is not required.

7200.3 NSNF-QA-01-040

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RECORD NOTES:

- 1. NSNFP Root Cause Analysis and Response to Deficiency Report EM-01-D-145.
- 2. Memo prepared by Don Armour, NSNFP QA.
- 3. This letter/memo closes CATS number N/A.
- 1. The attached correspondence has no relation to the Naval Nuclear Propulsion Program. Naval Reactors concurrence is not required.

CONCURRENCE

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Root Cause Analysis For Deficiency Report 01-NSNFP-AU-001-DR-007

I. Executive Summary

While the objectives of the National Spent Nuclear Fuel Program (NSNFP) have remained relatively constant since its inception, the technical work scope has evolved in stages to coincide with the evolving licensing strategy of the Yucca Mountain Project. Beginning as a coordination and communication activity the NSNFP gradually expanded into technical support activities. The envisioned end use of the NSNFP technical support tasks changed and evolved as the Yucca Mountain Project approached the license application submittal phase. The changes ranged from taking the lead for developing a standardized canister and transportation system for DOE Spent Nuclear Fuels to advising on these and other issues.

As the technical activities evolved in stages, the NSNFP Quality Assurance (QA) Program reacted with the addition or modification of procedures. The changes to the QA Program were also influenced by five changes to the Yucca Mountain QA Program (DOE/RW-0333P) in the same timeframe as the technical work scope changed.

These ad hoc changes from two sources caused the NSNFP QA Program to exhibit variations in approach and inconsistencies in interpretation. Inconsistent and inadequate selection and communication of policies and administrative controls resulted from the effects of these changes.

Entering the license application process will stabilize the technical work scope. As the NSNFP technical work scope stabilizes, the end use of technical products will be better defined and communicated. Actions to establish and maintain consistent administrative controls appropriate to well communicated NSNFP technical work scope will reduce the frequency and magnitude of future occurrences of the conditions cited by Deficiency Report 01-NSNFP-AU-001-DR-007.

II. Background

In November of 1996 the Office of Civilian Radioactive Waste Management (OCRWM) accepted the NSNF QA program implemented by DOE-ID. This program is based on the OCRWM DOE/RW-0333P Quality Assurance Requirements and Description; which is a derivative of the compliance based ASME NQA-1 quality assurance standard.

In January 1999 Revision 1 of the Memorandum of Agreement between the DOE Assistant Secretary for Environmental Management and the DOE Director of the Office of Civilian Radioactive Waste Management was issued for Acceptance of Department of Energy Spent Nuclear Fuel and High-Level Waste. That agreement is now outdated and a draft change is underway as of January 2002.

In October 1995 DOE/RW-0333P Quality Assurance Requirements and Description Revision 5 was issued. Two revisions followed in 1997, one in 1998, and two in 2000.

In January 1993 the Waste Acceptance System Requirements Document was issued as Rev 00. This document contains the currently accepted or needed technical parameters for fuel receipt. The document includes parameters that remain to be determined by engineering analysis. The document has been updated on an interim basis resulting in Draft Revisions 4 though 4h. As of April 2002, Draft Revision 5 is in review.

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Root Cause Analysis For Deficiency Report 01-NSNFP-AU-001-DR-007

III. Root Cause Analysis Method

17.

The evaluation utilized the TAPRoot process and the Cause Codes listed in Attachment B of QAS 16.03, Revision 2. The analysis was based on a review of past deficiencies listed in the NSNFP Corrective Action Tracking and Trending System (CATTS). Change analysis was applied to effect the corrections on the QA Program participants. An historical perspective was gained through discussions with NSNFP personnel.

The two statements in Deficiency Report 01-NSNFP-AU-001-DR-007 were evaluated separately and the results were then considered in combination. The separate statements are provided below.

The NSNFP is not fully implementing approved procedures for the performance of quality affecting work.

This audit identified multiple examples where approved PMPs are not fully implemented. Examples are found in Deficiency Report 01-NSNFP-AU-001-DR-001, 002, 003, 004, 005, CDA-001 and 002.

A. Discussion

An examination of the Change Analysis Worksheet (Exhibit A) showed substantial shifts in direction without adequate forethought.

In regard to the first statement of the Deficiency Report, the evaluation revealed that the procedures did not provide clear, complete, or consistent communication. Multiple sections of multiple procedures did not logically cross-reference. This situation, and the absence of a workflow based procedure format, resulted in an overly complex administrative control system. Often, personnel referred directly to DOE/RW-0333P in an attempt to avoid making a mistake when implementing the NSNFP procedures. This lead to variations in approach and inconsistencies in interpretation ["Does not describe how the requirement will be implemented," Cause Code 1Bg(4)].

Due to difficult logistics procedure revisions were not prompt. To overcome the logistics problem the use of an expedited change process became predominate. As these expedited changes multiplied, the procedures format and continuity were fractionated further. As a result, the administrative controls represented by the NSNFP procedures became increasingly confusing, incomplete, inconsistent, and not representative of actual or NSNFP preferred practice.

By design the use of procedures was limited to quality affecting work. This created an opportunity to "opt out" if the work was thought to be nonquality affecting. Communication in regard to quality affecting versus nonquality affecting was less than adequate and often confusing (Cause Code 3C). This confusing communication lead to false starts and nonuse of the NSNFP procedures in some cases.

Engineering procedures were introduced as a second tier administrative control. The engineering procedures (EPs) were developed in an attempt to remedy the confusion for work performed by the technical staff. Work was performed to these procedures. The use of EPs was later challenged. The direction then taken called for ending the use of EPs before alternate procedures were in place ("No/incomplete documents/procedure',

Response: Deficiency Report EM-01-D-145

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Root Cause Analysis For Deficiency Report 01-NSNFP-AU-001-DR-007

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Cause Code 1Aa). The impact to work in progress was not considered. Eliminating the use or reference to EPs was implemented on a retroactive basis.

Individual NSNFP procedures referred to as Program Management Procedures (PMPs) were placed on annual review schedules in attempt to improve the maintenance of the procedures. Various individuals at various times throughout the calendar year performed these reviews on an individual procedure basis. Lack of continuity resulted from this approach because disconnects in the flow of work widened. The end point of a process did not flow to the beginning of the next process in all cases ("Sequencing wrong, Cause Code 1Ba).

For the first statement of the Deficiency Report the basic cause "Procedure not used" (Cause Code 1A) is attributable to the root cause, "Procedure use not required but should be" (Cause Code 1Ae).

The second statement of the Deficiency Report involves the general cause "Procedures/Implementing Documents (Cause Code 1). The contributing factors discussed above are also factors leading to this condition. In addition, the use of the assessment process itself is a factor.

To trouble shoot and restore confidence in the system a succession of assessments were planned. Assessments were performed monthly for greater than 24 consecutive months. The succession of assessments yielded additional deficiency reports that yielded additional case-by-case interpretations and expedited changes. The majority of the assessments focused on a single procedure, a section of the QARD, or on a single technical task. The correction of procedure flaws occurred on a case by case and relied substantially on the expedited change process. Thus, as managed, the assessment process and corrective action process further compounded the problem.

The Root Cause for the second statement of the deficiency report is "Procedures not adequate/cannot be followed" [Cause Code1Bg (1)].

B. Impact of Condition

Ultimately a review of the accumulated open and closed deficiencies allowed a clear understanding of the problem. This lead to undertaking a global correction that was in progress at the time. Deficiency 01-NSNFP-AU-001-DR-007 was issued. This approach addressed the multiple causes. The approach impacted the duration of open Deficiency Reports that relied on commitments to improve a single procedure per the past expedited change practice.

C. Extent of Condition

None of the Deficiency Reports, impact evaluations, or responses reviewed on CATTS indicated that an error in a technical report, engineering analysis, or test had resulted from the cited deficiency.

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D. Root Cause Statement

Based on the information reviewed for this evaluation for each statement, the existing procedures did not accomplish one of the basic goals of administrative controls. That goal is to communicate methods to accomplish work in a manner consistently understood by the target audience.

This conclusion supports the selection of the single root cause "Inadequate communication of Standards, Policies, Administrative Controls (SPAC)" (Root Cause Code 3Ac).

E. Action to Preclude Recurrence

NSNFP has undertaken and completed a revision of the QA Program Implementing Documents as a coordinated joint effort involving the technical staff and QA staff. This approach addressed the multiple causes. Future changes to the QA program should follow this example and consider each proposed change in the context of the entire inventory of QA program documents as well as the forecasted scope and end use of the technical work.

Exhibit A

Change Analysis Worksheet

Previous or Ideal Condition	Present Condition	Differences	Evaluation of Effect.on the Undesirable Condition
Procedures planned to match anticipated work scope	Procedures changed at randomly selected intervals	Proactive planning with program stability	Time lag in procedural development and work start
Procedures relatively static as nature of work remained similar	Expedited changes introduced to catch up to program scope changes	Procedures became confusing and erratic	Use of procedures became more difficult.
Use of procedures applied to all work	Q or non-Q determinations introduced without guidance for non-Q processes	Loss of process continuity between similar tasks	False starts and nonuse of procedures
Engineering procedures were introduced to explicitly address engineering related processes used by technical staff	Engineering procedures cancelled without alternate procedures in place or planned	In progress work not supported by procedures sanctioned by management	In progress or completed work that referenced engineering procedures challenged
Broadly focused annual and periodic assessments reviewed program performance for all criteria and all aspects of the work	Narrowly focused assessments performed at close intervals	A rapid fire expedited change process ensured	Use of procedures became more difficult; procedures displayed increase in discontinuity

Prepared by Neal S. MacKay /s/ Neal S. Mackay

Date: May 16, 2002

Response: Deficiency Report EM-01-D-145

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	CIVILIAN RADIOACTIVE WASTE MANAGEMENT U.S. DEPARTMENT OF ENERGY	No: <u>EM-01</u> -D-145	
	WASHINGTON, D.C.	Page <u>1</u> of <u>1</u>	QA: QA

CONDITION ADVERSE TO QUALITY CONTINUATION PAGE

Review of Committed Corrective Actions

Deficiency Report EM-01-D-145 addressed two Conditions Adverse to Quality (CAQ); EM-01-D-145 Part (6a) "NSNFP Program Breakdown" and, EM-01-D-145 Part (6b) "Timeliness of Corrective Action Completion".

EM-01-D-145 Part (6a): The National Spent Fuel (NSNF) Quality Assurance Program Manager (QAPM) and OQA had determined that a formal Root Cause Analysis of the CAQ identified in deficiency report 01-NSNFP-AU-001-DR-007 would be an appropriate corrective action. NSNFP QA developed the Root Cause Analysis using the Taproot method and concluded that the single root cause was "Inadequate communication of Standards, Policies, and Administrative Controls. The Root Cause Analysis was transmitted to OQA as Memorandum NSNFP-QA-02-040, dated May 30, 2002. The Memorandum was evaluated by the QAR responsible for DR EM-01-D-145 and found to be adequate in addressing the deficiency.

EM-01-d-145 Part (6b): NSNFP had identified this problem as DR 00-NSNF-AU-11-DR-005. OQA agreed that the corrective actions identified for DR 00-NSNF-AU-011-DR-005 were appropriate. Those corrective action commitments have been completed.

Based on the objective evidence of committed corrective actions taken associated with Deficiency Report EM-01-D-145, it is recommended that the Deficiency Report be closed.

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James E. Flaherty

Date: May 31,2002