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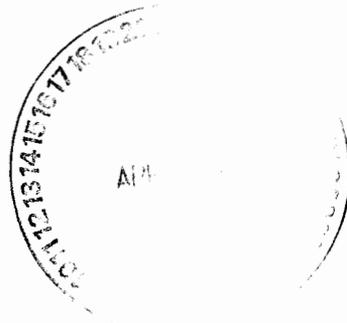**Department of Energy**
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221

APR 2 1 2011

Mr. D. K. Ploetz, Manager
Central Characterization Project
Retrieval, Characterization and Transportation
Washington TRU Solutions, LLC
P.O. Box 2078
Carlsbad, NM 88221-2078

Subject: Evaluation of the CAP for CAR 11-021 from Audit A-11-06, Central Characterization
Project Quality Assurance Program Activities

Dear Mr. Ploetz:

Enclosed are the results of the Carlsbad Field Office (CBFO) review and evaluation of the
Corrective Action Plan (CAP) developed in response to CBFO Corrective Action Report (CAR)
11-021, which resulted from Audit A-11-06, Central Characterization Project Quality Assurance
activities.

The results of the review and evaluation are documented on the enclosed CAR Continuation
Sheet. The evaluation determined that the CAP for CAR 11-021 adequately addresses
concerns identified in the CAR; therefore, the CAP is accepted.

If you have any questions, please contact me at (575) 234-7491.

Sincerely,

Dennis S. Miehls
Acting Director, Office of Quality Assurance

Enclosure

cc: w/enclosure

M. Navarrete, CBFO	*ED	S. Ghose, EPA	ED
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J. Hoff, WTS	ED	G. White, CTAC	ED
M. Mullins, WTS	ED	K. D. Martin, CTAC	ED
T. Peake, EPA	ED	P. Y. Martinez, CTAC	ED
M. Eagle, EPA	ED	WIPP Operating Record	ED
E. Feltcorn, EPA	ED	CBFO QA File	
R. Joglekar, EPA	ED	CBFO M&RC	
		*ED denotes electronic distributic	

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CAR CONTINUATION SHEET

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Block # _____16_____ **Acceptance of Proposed Corrective Actions:**

An evaluation was performed of the corrective action plan (CAP) for Carlsbad Field Office (CBFO) Corrective Action Report (CAR) 11-021. The CAP was submitted via letter CP:11:01186, UFC 2300.00, dated April 5, 2011, from Mr. Mr. D. K. Ploetz, Manager, Central Characterization Project (CCP), Retrieval, Characterization and Transportation, to Mr. D. S. Miehls, Acting Director of Quality Assurance, Carlsbad Field Office.

The following corrective actions, shown in italics, were proposed by CCP to address the conditions adverse to quality identified in the CAR, followed by CBFO's response to those proposed actions.

REMEDIAL ACTIONS

The remedial actions described in this section apply to the 12 SCOs discussed in the Extent of Condition section of this Corrective Action Plan. CCP has determined that the following remedial actions are appropriate, in response to the CAR condition:

a) CCP has reviewed the SCOs that support active P-TS functions that were not transitioned to the new Integrated Data Center (IDC), and there were no cases where the identified Functional Requirements were mismatched with the testing documentation.

b) CCP also performed a review of these same (active P-TS) SCOs for any other cases where Regression Testing was called for, but not performed: there were no such cases. One of the SCOs did correctly call for Regression Testing, and it was performed as required.

Due to CCP reviews of supporting documentation, the Remedial Actions are acceptable.

INVESTIGATIVE ACTIONS

The CAR identifies four conditions, each of which has been investigated; the results are addressed separately in this section of the Corrective Action Plan, for clarity and ease of review. Impacts are identified individually, with a general Extent of Condition discussion at the end of the section.

There is no objective evidence (OE) provided that all the functional requirements for Software Change Order SCO) #1102 (P-75 candidate/supplemental listing module) have been tested.

The discrepancy noted in the CAR was due to an error made during preparation of the Functional Requirements section of SCO #1102. For reasons discussed in more detail in the Root Cause Determination section of this Corrective Action Plan, the documentation for Hanford (RL) software modules was prepared on an expedited basis (both SCO #1102 and SCO #1091 are for Hanford). To save time, the preparers of the software documentation were using existing documents as templates, and editing as necessary to reflect the newly-assigned modules.

The first of the six Functional Requirements (see Table 1) (Section 3.0) in SCO #1102 is identical with the description of the software that appears in the Test Plan, and entirely consistent with the General Purpose statement in the Overview (Section 2.0). The remaining five Functional Requirements are not part of the scope of the software module defined in SCQ #1102; they should have been removed as part of the editing of the existing template. Because of oversight due to the expedited nature of the document preparation, they were inadvertently left in the Functional Requirements section.

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These non-applicable Functional Requirements address entry of BDR numbers and placement of BDRs on hold. The actual function of the software is to use container identification numbers to build candidate lists, based on logic gates built into the module. It has nothing to do with entry of BDR numbers or assignment of containers to a random sampling lot.

Those performing the testing failed to note in the test documentation that only the first Functional Requirement applied to the software, so the testing only validated that function. They also failed to recognize that the set of Functional Requirements contained extraneous requirements, and so they did not go back and revise the document to remove them. Either action would have resolved the apparent discrepancy.

Impact

The reported condition has no impact on the technical adequacy of the software module. The only Functional Requirement that actually applies to the software module is the first one, and the test documentation shows that this functionality was fully tested and documented as satisfactory at the time the testing was done.

There is no objective evidence (OE) provided that all the functional requirements for Software Change Order (SCO) #1091 (RL AK module) have been tested.

The issue raised in the CAR was apparently due to the fact that there are 15 Functional Requirements and only seven steps in the testing documentation. The CCP investigation showed that some of the steps in the testing documentation cover more than one of the Functional Requirements. So even though the correspondence between Functional Requirements and test steps is not one-to-one, the testingdocumentation does cover the Functional Requirements (see Table 2).

Impact

There is no technical impact, since the testing covers all of the Functional Requirements in SCO #1091.

SCO #1091, Attachment 2, block 15 defines that regression testing be performed, but again there is no OE.

This appears to be similar to the first situation with SCO #1102, described above. To expedite the preparation of the documentation, the preparers were using existing documents as templates, and editing as necessary. The checkmark for Regression Testing is not made manually, but is toggled electronically. In the course of revising the existing template, the preparer neglected to "uncheck" the Regression Testing block.

The CCP investigation showed that Regression Testing is clearly not required for this software scope. When the AK module was first developed and tested, the developer designed the module to accept additions to the list of sites where AK documentation was tracked and distributed. The scope SCO #1091 was simply to add Hanford to the list of sites where the module would begin tracking and distributing AK information. Since the original module had been thoroughly tested, and since the scope of SCO #1091 was limited to the addition of another site - a function which the original module was designed to perform - Regression Testing would not be necessary. The addition of Hanford to the AK list was tested to make sure that the Data Center was now searchable for Hanford containers, and the proper e-mail

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notifications would be sent out for changes to Hanford AK, but there was no technical basis for Regression Testing (performed when the AK module was originally developed and tested).

Those specifying the testing to be performed failed to notice the check block in the existing documentation used as the template, and did not "uncheck" the block when editing the template.

Impact

There is no technical impact, since Regression Testing was not required for the software scope described in SCO #1091.

There is a loss of traceability between the requirements documentation in Section 3.0, which identifies 15 requirements, and the Design Documentation in Section 7.0 for SCO #1091 (RL-AK module, which lists only seven).

The numbering of "Requirements" in Section 2.0, Design Overview, of SCO #1091, is incorrect. It appears that the column of numbers was not correctly edited to correspond with the actual number (fifteen) of Functional Requirements in Section 3.0 of the Requirements Document. The reason is the same as for the other conditions cited in the CAR: the pace of development of the two SCOs forcertification at Hanford resulted in inattention to detail and inadequate clean-up of the templates used to create the new documents.

Impact

CCP has correlated the 11 Design Requirements in Section 2.0 with the 15 Functional Requirements (see Table 3) in Section 3.0, and has determined that the Functional Requirements cover all of the elements in the list of Design Requirements: no Design Requirements were missed in the set of Functional Requirements. For this reason, there is no technical impact from the condition reported in the CAR.

General Discussion of Extent of Condition

WTS/CCP has recently transitioned from the P-TS system to the Integrated Data Center (IDC). Most of the functions previously performed by P-TS are now a part of the IDC. The SCOs associated with those elements of P-TS that are now performed by the IDC have been retired. There are 12 remaining SCOs for P-TS functions that are still active and were not included in the IDC, and it is these SCOs that define the extent of condition.

CCP does not propose to take any action with the retired SCOs that supported the now-obsolete portions of P-TS. The P-TS software had a successful track record of proven performance, and is now out of service.

As noted in the Remedial Actions section of this Corrective Action Plan, CCP has reviewed all SCOs for active P-TS elements, and there are no other cases similar to the CAR conditions. These are isolated discrepancies associated with expedited development to support preparations for the first certification audit of the CCP program at Hanford.

Due to the supporting documentation submitted and based on its reviews done under the remedial actions section [*Under the second condition; "There is no OE provided that all the functional requirements for SCO*

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#1091 (RL AK module) have been tested." Requirement AK_RL_REQ_07 "Identifies activity on the ORNL CH AK Database: is for ORNL and not RL as should have been called out.], the investigative actions are acceptable.

ROOT CAUSE DETERMINATION

Both SCOs cited in the CAR were developed at a time when CCP was preparing for the first certification audit of the CCP program at the Hanford site; the audit was conducted in April 2010. Both modules were required to support CCP activities necessary for the audit, and the documentation was requested on an expedited basis. In order to save time, the developers made use of existing documentation packages and edited them as necessary to reflect the scope of the newly-assigned modules.

The pace of development resulted in incomplete clean-up of the existing templates; some content that should have been removed during editing of the existing templates was inadvertently left in the SCO documentation. In one case, non-applicable Functional Requirements remained in the SCO, the testing only covered the applicable Functional Requirement, and the disconnect was neither explained in the testing documentation nor corrected in the Functional Requirements. In another case, a checkmark in the box for Regression Testing that should have been "unchecked" electronically was inadvertently left in the "checked" position. The root cause is inattention to detail because of the expedited nature of document preparation.

During the CCP investigation, the developers of the SCO packages recommended that CCP-QP-022 be evaluated and clarified to better define the content and format of Design Documents and Requirements Documents.

Due to this determination, the Root Cause Determination actions are acceptable.

ACTIONS TO PRECLUDE RECURRENCE

CCP has determined that the following action is appropriate to prevent recurrence of the CAR condition:

a) The CCP Manager will issue a memorandum to CCP personnel, identifying management expectations for the accomplishment of work

b) CCP will review CCP-QP-022 for possible improvements in the way that the content and format of Design Documents and Requirements Documents are defined

The evaluation indicates that all corrective actions are adequate. Therefore, it is recommended that the Corrective Action Plan be accepted.

Planned Corrective Actions Evaluated By: Priscilla Y. Martinez   4-19-11   Date