




United States Government

Department of Energy

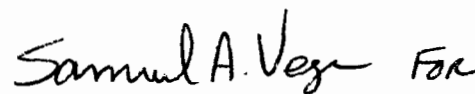
memorandum

Carlsbad Area Office
Carlsbad, New Mexico 88221**DATE:** March 18, 1999**REPLY TO
ATTN OF:** CAO:QA:MAI 99-0567 UFC 2300**SUBJECT:** Audit (A-99-13) of Rocky Flats Environmental Technology Site (RFETS) Canberra SQA**TO:** Joseph A. Legare, RFFO

Please be advised that a team of auditors and technical specialists from the Carlsbad Area Office (CAO) will conduct an audit at RFETS on March 24 and 25, 1999. The audit will be conducted in accordance with the attached audit plan. The purpose of the audit is to evaluate the SQA as implemented by Canberra and evaluated by RFETS for the WIPP Project.

Your representatives are requested to coordinate with the audit team to develop the necessary documentation for the audit team to gain access to RFETS facilities, support the audit, and provide the audit team with access to appropriate documentation and records. RFFO is expected to provide meeting rooms (with overhead projector) to hold approximately 20 people for the entrance and exit meetings, separate working rooms for the audit team, and for the EPA inspectors and EEG observer, full set of documentation applicable to RFFO work for the WIPP, including the applicable procedures, two flip charts and marking pens for the audit team working room, and miscellaneous office supplies (e.g., pens, paper, copy machine, Post-It Notes, stapler, "scotch" tape, etc.) for each working room. 

If you have any questions or comments concerning this audit, please contact Beth Bennington at (505) 234-7482, or me at (505) 234-7484.



Marc A. Italiano
Acting Quality Assurance Manager

Attachment



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990306.5



Joseph Legare

- 2 -

March 18, 1999

cc w/original attachment:
L. Chism, CAO

cc w/attachment:
✓ B. Bennington, CAO
M. Italiano, CAO
B. Stroud, CAO
S. Vega, CAO
D. Winters, DNFSB
B. Walker, EEG
M. Eagle, EPA
S. Monroe, EPA
S. Zappe, NMED
M. Castagneri, RFETS
G. O'Leary, RFETS
P. Rodriguez, CTAC

M

CARLSBAD AREA OFFICE AUDIT PLAN

Audit Number: A-99-13

Organization: Rocky Flats Environmental and Technical Site (RFETS)

Date and Location: March 24 - 25, 1999
Golden, Colorado

Audit Team:

Beth Bennington	Audit Team Leader/CAO
Sam Vega	Management Rep./CAO
Pete Rodriguez	Lead Auditor/CTAC
Mario Chavez	Technical Specialist/SNL
Steve Hans	Auditor/CTAC
Charlie Riggs	Auditor/CTAC

Audit Scope: The audit will evaluate the adequacy, implementation, and effectiveness of the quality assurance activities related to the software QA program as evaluated by RFETS and implemented by Canberra, relative to the Transuranic Waste Characterization Program. The audit team will focus on 1) flow-down of requirements, 2) management of the Canberra contract, and 3) Software Quality Assurance.

Activities/Tasks to be Audited:

The following quality assurance elements of the *CAO Quality Assurance Program Document* (QAPD) will be evaluated:

- Interface Control
- Software Quality Assurance - as implemented by CANBERRA
- Procurement Controls, Requirement flow-down/Supplier Evaluation – related to contract.

Governing Documents/Requirements:

Adequacy evaluations of TWCP documents will be based on the current revisions of the following documents:

CAO Quality Assurance Program Document, CAO-94-1012



Programmatic checklists will be developed from the active revision of the following documents:

- SQM-120 - *Mobile Software Configuration Management* (Canberra)
- SQM-121 - *Mobile Software Configuration Verification* (Canberra)
- 1-J-55-ADM-08.10 - *Subcontractor Quality Evaluations* (RFETS)

Schedule of Audit Activities:

A preaudit conference is scheduled for Wednesday, March 24, at 8:00 a.m. at the RFETS location (T-130J).

An audit team caucus will be held at 4:00 p.m. Wednesday at the RFETS location.

The audit team will meet with the appropriate RFETS management at 8:30 a.m. Thursday at the RFETS location.

A postaudit conference is scheduled for Thursday, March 25, at 4:00 p.m. at the RFETS location.


Prepared By: *Pete Rodriguez*
Pete Rodriguez, Lead Auditor

Date: 3-17-99

Approved By: *Mary E. Bennington*
Mary E. Bennington, Waste Certification Manager

Date: 3/18/99

Approved By: *Samuel Per 102*
Marc Italiano, Acting QA Manager

Date: 3/19/99 

CAO AUDIT CHECKLIST

Revised 8/95

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS) Audit Number: CAO A-99-13

Activities Evaluated: - RFETS Evaluation of Canberra Software Quality Assurance - Date of Evaluation: March 24 - 25, 1999
 Controlling Documents: 1-J55-ADM-08.10, Rev. 0, DCF-CHG-01, Effective: 1/29/99 - Subcontractor Quality Evaluations - and CAO 94-1012 QAPD (Rev.2), Section 6

Item No.	Characteristic(s)	Objective Evidence	*Results
1	<p>Verify the adequacy of RFETS implementing procedures with respect to the RFETS QAPjP.</p> <p><i>NOTE TO AUDITOR: Focus on the RFETS evaluation of Canberra SQA.</i></p> <p>Also, verify the modification of INS-246 (Rev.1), QAPD Procedures Matrix (section 6), Software Requirements) to incorporate applicable RFETS & Canberra procedures.</p> <p>Re.: Task No.: 3</p>	<p>Procedure found to adequately address RFETS QAPjP.</p> <p><i>INS-246 Rev 2 was issued on 3/18/99. It makes reference to RFETS Procedure 1-J55-ADM-08.10, Supplier Quality and Canberra procedures SQM-120, Mobil Software Configuration Management, and SQM-121, Mobil Software Configuration Verification. The applicable procedure(s) are listed for each item from section 6 of the CAO QAPD</i></p>	<p style="text-align: center;"><i>SAT</i></p>

Prepared by: Pete V. Rodriguez Approved by: M. E. Bennington

*Indicate Results: Satisfactory (SAT), Unsatisfactory (UNSAT), Not Applicable (NA)

CAO AUDIT CHECKLIST

Revised 8/95

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS)

Audit Number: CAO A-99-13

Item No.	Characteristic(s)	Objective Evidence	*Results
2	<p>Verify the performance of a subcontractor evaluation of Canberra SQA and completion of the "SQA Implementation Evaluation Report" of Canberra in accordance with 1-J55-ADM-08.10. Examine the Subcontractor evaluation checklist for Canberra.</p> <p>Also, verify that the TWCP QA Officer & SQA Subject Matter Expert have performed a Canberra "SQA program adequacy review" / Evaluation Report</p> <p>Re. : 1-J55-ADM-08.10, Section 6.2.2 and Task Nos.: 1 & 2</p>	<p><i>Per</i></p> <p><i>Reference other checklist completed by P. Rodriguez</i></p> <p><i>use</i> <i>10/15/99</i></p>	

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CAO AUDIT CHECKLIST

Revised 8/95

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS)

Audit Number: CAO A-99-13

Item No.	Characteristic(s)	Objective Evidence	*Results
3	<p>Verify that deficiencies identified during the audit/evaluation of Canberra, are documented on a Subcontractor Corrective Action Request (SCAR) form (Appendix 6). Ensure that sufficient information regarding the deficient condition and applicable requirements are provided. Also, verify that processing of the SCARs, are in accordance with the requirements of 6.4.2.</p> <p><i>Note: Corrective Action responses must address actions taken to correct the identified deficiency, action taken to prevent recurrence of similar deficiencies, and a scheduled date of completion of specified corrective actions.</i></p> <p>Re. : 1-J55-ADM-08.10, Sections 6.3.2 [4] & 6.4.2</p>	<p><i>Reviewed SCAR NO: 99-51-1, 99-51-2, and 99-51-3 and they appear to adequately address the deficient condition and applicable requirements.</i></p> <p><i>Each SCAR addresses actions taken to correct the identified deficiency, action taken to prevent recurrence of similar deficiencies, and a scheduled date of completion.</i></p>	<p style="text-align: center;"><i>SAT</i></p>



CAO AUDIT CHECKLIST

Revised 8/95

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS)

Audit Number: CAO A-99-13

Item No.	Characteristic(s)	Objective Evidence	*Results
4	<p>Verify that an adequacy evaluation of Canberra's NDA system at RFETS, per RMRS-QA-10.02 (Rev. 0), has been completed. Examine the surveillance report reflecting the adequacy of Canberra's NDA system at RFETS.</p> <p><i>Discuss future oversight activities of Canberra by RFETS, and Management Assessments of on-site activities.</i></p> <p>Re.: RMRS-QA-10.02 - - Task No.: 4 -</p>	<p><i>Adequacy was verified during Software Quality Assurance limited Scope of Canberra Industries LCS-034-99 performed March 9-10, 1999. 3 subcontractor CAPs were issued.</i></p> <p><i>Examined Canberra Industries - Mobile NDA Systems Software Configuration Control, Surveillance Number RMRS-99-150, MAC-009-99</i></p> <p><i>Canberra NDA operations listed for June 99 on RFETS TRU Waste Management Assessment schedule</i></p> <p><i>Reviewed Transuranic (TRU) Waste Projects Management Assessment Report March 1998.</i></p>	<p><i>SAT</i></p>

Reviewed Canberra monthly Reports for 2/99 back to 6/98, and Canberra 1998 NCA Trending.

RFETS issued a CAP for inattention to detail see attached on 12/9/98

W

Was part of DOE/KH site wide evaluation reported in Audit Report Number 99-151-ENG-1416. This site wide Audit will be an annual event.

CAO AUDIT CHECKLIST

Revised 8/95

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS)

Audit Number: CAO A-99-13

Item No.	Characteristic(s)	Objective Evidence	*Results
5	<p>Verify the revision or issuance of a DCF of 1-J55-ADM-08.10 to include provision for coordination, planning and performance of TWCP related subcontractor evaluations with the TWCP QA Officer.</p> <p>Re.: Task No.: 5</p>	<p><i>pit</i></p> <p><i>Refer to other checklist completed by P. Rodriguez. WPC 10/15/99</i></p>	



CAO AUDIT CHECKLIST

Revised 8/95

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS)

Audit Number: CAO A-99-13

Item No.	Characteristic(s)	Objective Evidence	*Results
6	<p>Verify that the RFETS evaluation/audit of Canberra SQA encompassed the following CAO QAPD, Section 6 Software requirements:</p> <ul style="list-style-type: none"> • Inventory & Classification of Software • Software Control Plans • Software Development • Software Verification and Validation • Software Configuration Control, including Change Control • Software Operation and maintenance • Procured Software • Software Development and Life Cycle • Requirements Phase, Design, Implementation, Testing, Installation and Checkout, Operations and Maintenance Phases & Retirement Phase • Software Verification and Validation <p>Re.: CAO-94-1012, QAPD, Section 6</p>	<p><i>put</i></p> <p><i>Refer to other checklist completed by P. Rodriguez WRL 10/15/99</i></p>	

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**AUDIT A-99-13
PERSONNEL CONTACTED DURING THE AUDIT**

Name	Organization and Department	Title	Evaluation Area
Frank Grady	RFETS/RMRS TRU Waste Project Office	Project Engineer	Canberra SQA
JERRY O'LEARY	RFETS/Waste Ops	MANAGER TRU/TRM Projects	CANBERRA SQA
TERRY GUYN	K-A PROCUREMENT QUALITY ASSURANCE	LEAD AUDITOR	M
Sid Ailes	SAIC/RMRS	SQA Consultant	SQA

CAO AUDIT CHECKLIST

Revised 8/95

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS) Audit Number: CAO A-99-13

Activities Evaluated: - RFETS Evaluation of Canberra Software Quality Assurance - Date of Evaluation: March 24 - 25, 1999

Controlling Documents: 1-155-ADM-08.10, Rev. 0, DCF-CHG-01, Effective: 1/29/99 - Subcontractor Quality Evaluations - and CAO 94-1012 QAPD (Rev.2), Section 6

Item No.	Characteristic(s)	Objective Evidence	*Results
1	<p>Verify the adequacy of RFETS implementing procedures with respect to the RFETS QAPjP.</p> <p><i>NOTE TO AUDITOR: Focus on the RFETS evaluation of Canberra SQA.</i></p> <p>Also, verify the modification of INS-246 (Rev.1), QAPD Procedures Matrix (section 6), Software Requirements) to incorporate applicable RFETS & Canberra procedures.</p> <p>Re.: Task No.: 3 1999-00387</p>	<p>Procedure found to adequately address RFETS QAPjP.</p> <p><i>Reviewed INS-246 Rev. 2 dated 3/18/99 - satisfactorily addressed CAO QAPD, Rev 2 9/98 Repts. - section 6.0 matrix primarily cite 1-155-ADM-08.10 supplier QUALITY EVALS. & the two (2) implementing procedures utilized by Canberra on site</i></p>	<p style="text-align: center; font-size: 2em;">SAT</p> <p style="text-align: right; font-size: 1.5em;">SQA-120 & SQA-121</p>

Prepared by: Pete V. Rodriguez Approved by: M. E. Bennington

*Indicate Results: Satisfactory (SAT), Unsatisfactory (UNSAT), Not Applicable (NA)

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CAO AUDIT CHECKLIST

Revised 8/95

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS)

Audit Number: CAO A-99-13

Item No.	Characteristic(s)	Objective Evidence	*Results
2	<p>Verify the performance of a subcontractor evaluation of Canberra SQA and completion of the "SQA Implementation Evaluation Report" of Canberra in accordance with 1-J55-ADM-08.10. Examine the Subcontractor evaluation checklist for Canberra.</p> <p>Also, verify that the TWCP QA Officer & SQA Subject Matter Expert have performed a Canberra "SQA program adequacy review" / Evaluation Report</p> <p>Re. : 1-J55-ADM-08.10, Section 6.2.2 and Task Nos.: 1 & 2 1999-000387</p>	<p>Examined subcontractor software QA Audit checklist; based on CAO 94-1012 QAPD Section 6.0 Rev. 2 & NQA-2, Part 2.7 1984</p> <p>K-H 3/23/99 Letter to Canberra (99-RF-01109) reports results of the 3/9-10/99 audit of Canberra performed by RFETS, TWCP QA Officer, & SOA subject matter expert & KH PQA Lead Auditor</p> <p>Adequacy - SAT. Implementation - <u>UN-SAT</u>; However w/ MINOR CONDITIONS</p>	<p>SAT.</p>

Efficiency - SAT. NOT effecting quality w/ say data

(M)

CAO AUDIT CHECKLIST

Revised 8/95

Organization Evaluated: Rocky Flats Environmental Technology Site (REETS)

Audit Number: CAO A-99-13

Item No.	Characteristic(s)	Objective Evidence	*Results
3	<p>Verify that deficiencies identified during the audit/evaluation of Canberra, are documented on a Subcontractor Corrective Action Request (SCAR) form (Appendix 6). Ensure that sufficient information regarding the deficient condition and applicable requirements are provided. Also, verify that processing of the SCARs, are in accordance with the requirements of 6.4.2.</p> <p><i>Note: Corrective Action responses must address actions taken to correct the identified deficiency, action taken to prevent recurrence of similar deficiencies, and a scheduled date of completion of specified corrective actions.</i></p> <p>Re. : 1-J55-ADM-08.10, Sections 6.3.2 [4] & 6.4.2</p>	<p>EXAMINED SCARS :</p> <p>99-51-1 w/ Expedited completion of 5/11/99</p> <p>99-51-2 w/ expedited completion of 3/22/99 & also per 99-51-1 for actions to preclude recurrence</p> <p>99-51-3 w/ Expedited completion of 6/11/99 as issued by KIH</p> <p>QA as a result of audit, LCS-034-99 (ltr.) performed 3/9-10/99 - deficiencies satisfactorily ID; & Response approved by the TWCP QA officer on 3/22/99</p>	<p>5/11/99</p>



CAO AUDIT CHECKLIST

Revised 8/95

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS)

Audit Number: CAO A-99-13

Item No.	Characteristic(s)	Objective Evidence	*Results
4	<p>Verify that an adequacy evaluation of Canberra's NDA system at RFETS, per RMRS-QA-10.02 (Rev. 0), has been completed. Examine the surveillance report reflecting the adequacy of Canberra's NDA system at RFETS.</p> <p><i>Discuss future oversight activities of Canberra by RFETS, and Management Assessments of on-site activities.</i></p> <p>Re.: RMRS-QA-10.02 - - Task No.: 4 - 1999-000387</p>	<p><i>Referto checklist completed by C. R. 995 WMC 10/15/99</i></p>	<p><i>SAT C.R.</i></p>



CAO AUDIT CHECKLIST

Revised 8/95

Organization Evaluated: Rocky Flats Environmental Technology Site (REETS)

Audit Number: CAO A-99-13

Item No.	Characteristic(s)	Objective Evidence	*Results
5	Verify the revision or issuance of a DCF of 1-J55-ADM-08.10 to include provision for coordination, planning and performance of TWCP related subcontractor evaluations with the TWCP QA Officer. Re.: Task No.: 5 1999-000387	Examined DCF #: CHG-03 of J-55-ADM-08.10 Rev. 0 9's 6.2.1 [2], 6.2.2 [3] & 6.3.1 [1] revision issued to include provisions for TWCP QA officer (Mark Castagneri) or designee to coordinate plan & participate w/ the subcontractor evaluation (of TWCP/WIPP related subs.)	SAT



CAO AUDIT CHECKLIST

Revised 8/95

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS)

Audit Number: CAO A-99-13

Item No.	Characteristic(s)	Objective Evidence	*Results
6	<p>Verify that the RFETS evaluation/audit of Canberra SQA encompassed the following CAO QAPD, Section 6 Software requirements:</p> <ul style="list-style-type: none"> • Inventory & Classification of Software ✓ • Software Control Plans ✓ • Software Development ✓ • Software Verification and Validation ✓ • Software Configuration Control, including Change Control ✓ • Software Operation and maintenance ✓ • Procured Software ✓ • Software Development and Life Cycle ✓ • Requirements Phase, Design, Implementation, Testing, Installation and Checkout, Operations and Maintenance Phases & Retirement Phase ✓ • Software Verification and Validation ✓ <p>Re.: CAO-94-1012, QAPD, Section 6</p>	<p>Examined subcontractor Eval. SQA Audit checklist which did encompass the CAO QAPD reqs. -</p> <p>the overall program eval. indicated that Canberra's SQA program controlling the systems are as follows:</p> <p>Adequacy = Sat. Effectiveness = Sat. and Implementation = unsat. (However, minor condition not affecting quality of assay)</p> <p>Reviewed:</p>	<p>SAT.</p>

ISSUED BY KH/POA



SCAR NO: 99-5-1-1 ✓
 99-5-1-2 ✓
 & 99-5-1-3 ✓

data.

MINOR CONDITIONS w/ Responses
 APPROVED BY TWCP QA OFFICER
 on 3/22/99

CAO AUDIT CHECKLIST

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS) Audit Number: CAO A-99-13

Activities Evaluated: RFETS Waste Characterization/Transportation/Certification Programs: SQA Date of Evaluation: March 23-25, 1999

Controlling Documents: Canberra Mobil Waste Assay Services; SQM-120: Mobil Software Configuration Management Dated 01/26

Item No.	Characteristic(s)	Objective Evidence	*Results
SQA - 1	Verify that all software is placed under configuration control as its configuration item is received from Canberra for use in waste characterization activities. (SQM-120 para. 6.2.1.) [QA]	Verified that all Canberra Mobil Waste Assay Services software is under configuration control. Verified that the Lotus Notes Data Base software inventory includes all released software for the three assay system, IQ3, PN, and SGS. Reviewed the following: IQ3; #407J-Genie-PC MGAU V. 2.1CI and TRU-RADA-CMD-3 1.2. PN; TMU-NASSASS.CMD-2 V. 1.1, and # 439J-Genie PC V2.0A. SGS; 432Jgenie-PC-V2.2 and TMURADA.CMD-3 V 1.2	SAT

Prepared by: S. Hans/M. Chavez  Approved by: M.E. Bennington 

*Indicate Results: Satisfactory (SAT), Unsatisfactory (UNSAT), Not Applicable (NA)

CAO AUDIT CHECKLIST

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS) Audit Number: CAO A-99-13

Item No.	Characteristic(s)	Objective Evidence	*Results
SQA - 2	<p>How are the received configuration items uniquely labeled (identified) for changes and for approval? (SQM-120 para. 6.2.1.) [Technical]</p> <p>Verify the labeling system: uniquely identifies each configuration item identifies changes to configuration items by revision or version identifier uniquely identifies each approved configuration of the revised software that is available for use. (SQM-120 para. 6.2.1.) [QA]</p>	<p>The diskettes and all the Documentation comes uniquely labeled from Meriden office of Canberra Industries. There is no labeling on site. See recommendation #1.</p> <p>Verified that the labeling system included unique identification, identification of changes to configuration items by revision and uniquely identifies each approved configuration of the revised software that is available for use. Reviewed IQ3; #407J-Genie-PC MGAU V. 2.1CI and TRU-RADA-CMD-3 1.2. PN; TMU-NASSASS.CMD-2 V. 1.1, and # 439J-Genie PC V2.0A. SGS; 432Jgenie-PC-V2.2 and TMURADA.CMD-3 V 1.2</p>	<p>SAT</p> <p>SAT</p>
SQA - 3	<p>Verify that an inventory of all software is maintained, and includes the following information: the software name, version, classification (also called exemption status), operating environment, the operating area responsible for the software. (SQM-120 para. 6.2.2.) [QA]</p> <p>Who is responsible for maintaining the software inventory PM or QA Officer? Does it include the following elements?</p> <ul style="list-style-type: none"> • Software name • Version • Classification • Operating Environment <p>Operating area] (SQM-120 para. 6.2.2.) [Technical]</p>	<p>Using the following programs: IQ3; #407J-Genie-PC MGAU, V. 2.1CI and TRU-RADA-CMD-3 1.2. PN; TMU-NASSASS.CMD-2 V. 1.1, and # 439J-Genie PC V2.0A. SGS; 432J Genie-PC-V2.2 and TMURADA.CMD-3 V 1.2, verified that Software name, Version, Classification, Operating Environment were included in the inventory.</p> <p>After the SQA process is completed for a particular software item, the software inventory is maintained by the Canberra IT staff in Meriden and made available through Lotus Notes. The inventory is not changed on-site without approval. See recommendation #1. The elements identified in the procedure were included in the baseline list available on the Canberra Lotus Notes Database.</p>	<p>SAT</p> <p>SAT</p>



CAO AUDIT CHECKLIST

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS) Audit Number: CAO A-99-13

Item No.	Characteristic(s)	Objective Evidence	*Results
SQA - 4	<p>Verify that an inventory for each operating trailer and NDA system is maintained in the Waste Assay Documents database, under the heading "Software Inventory</p> <p>Verify that copies of the configuration status are maintained in the Canberra Mobil Services administration trailer for review. (SQM-120 para. 6.2.2.) [QA]</p>	<p>Selected IQ3 trailer and verified that an inventory of NDA system waste Assay Documents software existed in the trailer on the computer.</p> <p>The IQ3 trailer is the administration trailer and a copy of the configuration status is maintained in the trailer.</p>	<p>SAT</p> <p>SAT</p>
SQA - 5	<p>Verify that upon initial receipt of a software package but prior to installation, the NDA Operator enters the release label information of the software on the applicable Software Inventory. (SQM-120 para. 6.2.3.) [QA]</p> <p>How are the quality grading criteria of use for determining Not exempt "NQA" and Exempt "STD" classifications documented.</p> <ul style="list-style-type: none"> • Engineering, Scientific, Testing, Data collection, Design Analysis, Operations activities, Safety significance <p>(SQM-120 para. 6.2.3.) [Technical]</p> <p>If all NDA software are NQA why the above determination? (SQM-120 para. 6.2.4.1) [Technical]</p>	<p>No software packages are in this status i.e. received but not installed. All software has been installed, the inventory reflects the compliance with this step.</p> <p>There is no on-site grading, any QA grading is performed at the Meriden office and documented in the Model and System notebooks under the Baseline and Traceability document. See recommendation #1.</p>	<p>SAT</p> <p>SAT</p>



CAO AUDIT CHECKLIST

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS) Audit Number: CAO A-99-13

Item No.	Characteristic(s)	Objective Evidence	*Results
SQA - 6	<p>Initial receipt How is a "certification activity" defined differently from certifying the software? (SQM-120 para. 6.2.4.3 typo) [Technical]</p>	<p>There is no local software certification activity. Software is always approved at the Meriden office prior to being delivered to remote operations. See recommendation #1.</p>	SAT
SQA - 7	<p>After Certification What happens if the software is not certified? What happens after 6.4.6? (Installation Test and Release for Production Use); and during section 6.6? (Software problem reporting) (SQM-120 para. 6.2.5.) [Technical]</p> <p>Verify that after a software item is certified as available for distribution, a Software Inventory Master File List is created for the new distribution and placed in document SQM-122. (SQM-120 para. 6.2.5.1) [QA]</p>	<p>See SQA-6. See recommendation #1.</p> <p>Verified that a signature by the Director of QA Camberra is the certifying act. Reviewed Form SQM – 122 on screen and found the master file list had been created and the programs were identified.</p>	SAT SAT



CAO AUDIT CHECKLIST

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS) Audit Number: CAO A-99-13

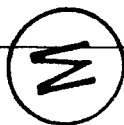
Item No.	Characteristic(s)	Objective Evidence	*Results								
SQA - 8	<p>Software Distribution and Control How is the software provided to the trailers? LAN, remotely, extra copies of the SW? (SQM-120 para. 6.3) [Technical]</p> <p>Determine how the Project Manager/QA Officer does the following: "It is the responsibility of the Project Manager / QA Officer to ensure that software verification and validation of software has been performed by Canberra before being placed into use for waste characterization."</p> <p>Verify that in cases where V & V is not done prior to the certification of software, the portions of software that have not been verified and validated are identified and controlled. (SQM-120 para. 6.3.1.) [QA]</p>	<p>The software arrives via electronic media and is installed with the diskettes provided following SQM -121 "Mobil Software Configuration Verification". No extra copies are made of the software since Canberra has duplicate storage at the Meriden office.</p> <p>No software packages are currently available on site for which the V&V has not been complete and certified. This para. Is being modified by a Response Document Library document. This was CDA.</p>	<p>SAT</p> <p>SAT</p>								
SQA - 9	<p>Verify that this test includes: that the program copied, migrated, or compiled properly on the production server or production server partition assuring that the program is operating as intended.</p> <p>Verify that this test is defined, documented, and approved using the request form. (SQM-120 para. 6.4) [QA]</p> <p>Is there any evidence that shows how the testing or prototyping is kept out of the production directory? (5th paragraph) (SQM-120 para. 6.4.3) [Technical]</p>	<p>Verified that the following programs copied, migrated, and compiled property on the production server by reviewing the following test results files.</p> <table border="0" style="width: 100%;"> <tr> <td>IQ3 FILES.TEXT</td> <td>PN FILES.TXT</td> </tr> <tr> <td>IQ3 Results. Doc</td> <td>PN RESULTS.DOC</td> </tr> <tr> <td>Gamma.Bat</td> <td>MNEUTRONFILE.DOC</td> </tr> <tr> <td>MGMA file. Doc.</td> <td>NEUTRON.BAT.</td> </tr> </table> <p>There is no prototyping or testing performed on the production machines. See recommendation #1. Control can be verified by following the authentication procedure described in SQM-121.</p>	IQ3 FILES.TEXT	PN FILES.TXT	IQ3 Results. Doc	PN RESULTS.DOC	Gamma.Bat	MNEUTRONFILE.DOC	MGMA file. Doc.	NEUTRON.BAT.	<p>SAT</p> <p>SAT</p>
IQ3 FILES.TEXT	PN FILES.TXT										
IQ3 Results. Doc	PN RESULTS.DOC										
Gamma.Bat	MNEUTRONFILE.DOC										
MGMA file. Doc.	NEUTRON.BAT.										



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Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS) Audit Number: CAO A-99-13

Item No.	Characteristic(s)	Objective Evidence	*Results
SQA - 10	What are minor changes to user definable software and how are they defined and documented? (3 rd paragraph)? (SQM-120 para. 6.4.) [Technical]	The software is never changed on-site this is a Meridan activity only. See recommendation #1.	SAT
	Verify that test problems have been run after installation of modified software.	Test problems were run FEB 2, 16,17, and 22. All after the installation of the modified software.	SAT
	Verify that the tests are documented, and performed by an individual technically competent.	Reviewed test problem results for IQ3 test report performed 2/16/99 including Gamma Spec., Gamma Waste Assay, Radioassay datasheets for Drums D88678 #2 , #3 #4, #5, and #6.	SAT
	Verify that the test results serve as the basis for determining if the software meets specified requirements. NOTE: These test problems are as specified by the NDA Operating procedures. As an example, such in-use tests are daily calibrations, replicate counts, etc. (SQM-120 para. 6.5) [QA]	Verified that the test results are the basis for determining the software meets specified requirements.	SAT
SQA - 11	In-Use tests How are the test problems defined by the NDA operating procedure prior to the software's installation?	The main functional requirements such as Neutron and Gamma counting never change. Therefore "in-use" tests defined by the calibration process are an effective way to demonstrate acceptance.	SAT
	Is there any objective evidence that shows how the tester is able to determine that the specified requirements are met?	All changes to the software are tested and approved at the Meridan office. The changes are external requirements in nature (e.g., i/o) and are documented in the Model and System document. See recommendation #1.	SAT
	Where and how are these calibrations documented? (SQM-120 para. 6.5.) [Technical]	The other tests besides the daily "in-use" test was a recent Y2K check . The request Form was used to document the results.	SAT



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Item No.	Characteristic(s)	Objective Evidence	*Results
SQA - 12	<p>Verify that a system has been implemented to: record, classify, analyze, track, and report software problems (in released versions) and the associated corrective actions. (SQM-120 para. 6.6) [QA]</p> <p>How are changes to software proposed, approved and implemented? How is it documented? (SQM-120 para. 6.6.) [Technical]</p>	<p>This paragraph deleted and modified to reflect the field only reports software problems. CDA</p> <p>The Project Manager can request enhancements with the request form. The changes are not implemented or approved on-site, this is a Meriden function. See recommendation #1.</p>	<p>SAT</p> <p>SAT</p>
SQA - 13	<p>Determine if any problems have been discovered in software or software results.</p> <p>If yes, verify that Project Manager/QA Officer determine the affect on previous use(s) and the need for corrective action (SQM-120 para. 6.6) [QA]</p> <p>What evidence is available that software errors are identified, evaluated, documented and corrected if needed? Who else is notified of any software errors? (SQM-120 para. 6.6.) [Technical]</p>	<p>No problems in software identification at RFETS Camberra Mobil services. The system is in place for reporting problems if necessary.</p> <p>N/A</p> <p>The project Manager reports errors to the Meriden office with the request form. The changes are not implemented or approved on-site. See recommendation #1.</p>	<p>SAT</p> <p>SAT</p>



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Item No.	Characteristic(s)	Objective Evidence	*Results
SQA - 14	<p>When used, verify that the corrective action include:</p> <p>Problems are identified, evaluated, documented, and, if required, corrected; Problems are assessed for their impact on past and present uses of the software; Changes to software are in accordance with the software configuration management requirements. Results are provided to the affected users along with any revised software documentation.</p> <p>(SQM-120 para. 6.6) [QA]</p>	None	N/A
SQA - 15	<p>Verify that controls have been established to authorize access to software that has been accepted.</p> <p>Verify that installations of certified software on production systems is protected by password entry or keyed entry access.</p> <p>(SQM-120 para. 6.6) [QA]</p>	<p>Verified the computer systems in the trailers were screen saver password protected.</p> <p>Observed operators entering passwords to gain access to the production program.</p>	<p>SAT</p> <p>SAT</p>



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Item No.	Characteristic(s)	Objective Evidence	*Results
SQA - 16	Verify that the following are maintained as QA Records: Applicable Request Forms Software Inventory Log Software Configuration Verification Forms Any NCRs generated as a result or error or problem reporting. (SQM-120 para. 7.0) [QA]	Verified that the following records are being maintained: Applicable Request Forms (ELECTRONIC) Software Inventory Log (ELECTRONIC) Software Configuration Verification Forms (ELECTRONIC) Any NCR's generated as a result or error or problem reporting. Reviewed hard copies. Of NCR's.	SAT
SQA - 17	Verify that the Project Manager / QA Officer, Record Clerk, and software change requesters are trained to this procedures. (SQM-120 para. 8.1) [QA]	Verified Craig Davision the Project Manager was trained to SQM 120.	SAT



CAO AUDIT CHECKLIST


CAO AUDIT CHECKLIST

Organization Evaluated: Rocky Flats Environmental Technology Site (RFETS) Audit Number: CAO A-99-13

Activities Evaluated: RFETS Waste Characterization/Transportation/Certification Programs SQA Date of Evaluation: March 23-25, 1999

Controlling Documents: Canberra Mobil Waste Assay Services; SQM-121; Mobil Software Configuration Verification, Dated 01/26 Modified 03/03/99

Item No.	Characteristic(s)	Objective Evidence	*Results
SQA - 1	Verify that once each quarter, the Project Manager / QA Officer has verified the software models and versions on the waste characterization processes match those listed in the applicable Software Inventory Log. (SQM-121 para. 6.1) [QA]	This procedure was implemented on 2.5.99 no quarterly reports available. The process was observed during the audit.	SAT

Prepared by: Stephen Hens  Approved by: M.E. Bennington
 *Indicate Results: Satisfactory (SAT), Unsatisfactory (UNSAT), Not Applicable (NA)

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Item No.	Characteristic(s)	Objective Evidence	*Results
SQA - 2	Verify that NQA classified software is verified on a system by system basis by comparing the actual files on the system to a master file list. (SQM-121 para. 6.1.1) [QA]	Observed at IQ3 trailer. Observed the process of comparing the actual files to the master file list.	SAT
SQA - 3	Verify that the Project Manager / QA Officer has created and used a Software Configuration Verification Form. (SQM-121 para. 6.1.2) [QA]	Observed the Software Configuration Verification Form on the computer.	SAT



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Item No.	Characteristic(s)	Objective Evidence	*Results
SQA - 4	Verify that the Software Inventory Logs report indicates no disk errors of any kind. (SQM-121 para. 6.1.6) [QA]	Observed the operators in IQ3 trailer performing the verification and getting no errors.	SAT
SQA - 5	Verify that if any errors from any Software Inventory Log inspection are uncovered, the Project Manager / QA Officer has evaluated the errors. If the errors are found to be condition adverse to quality the Project Manager/QA Officer requests an immediate Stop Work. (SQM-121 para. 6.1.9.6) [QA]	None found as of this audit.	N/A



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Item No.	Characteristic(s)	Objective Evidence	*Results
SQA – 6	Verify that the Project Manager / QA Officer, NDA Operator and any other employee designated by the Project Manager / QA Officer to perform this procedure have been trained to this procedure. (SQM-121 para. 7.0) [QA]	Reviewed training file for Doug Cramer operator of IQ3 system.	SAT
SQA – 7	Verify that the Software Configuration Verification Form is maintained as a QA Record. (SQM-121 para. 8.0) [QA]	Observed on screen for IQ3 trailer. Dual storage is done by Camberra backup.	SAT

