CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES
QUALITY ASSURANCE
SURVEILLANCE REPORT

PROJECT NO.: 20-5702-523	REPORT NO.: 93-19	PAGE 1 OF 𝒴 2

SURVEILLANCE SCOPE: CNWRA Conformance to TOP-18, Rev 3, Chg 2, for the Software Packages TWITCH and MARIANA.

REFERENCE DOCUMENTS: TOP-18, Rev 3, Chg 2.

STARTING DATE: 12-6-93	ENDING DATE: 12-10-93

QA REPRESENTATIVE: R. Mielke

PERSONS CONDUCTING TEST/EXAM/ACTIVITY: R. Mielke

SATISFACTORY FINDINGS: CNWRA File #Q199308230024 was reviewed. Software licensing is not an issue. CNWRA developed the software. The software is in an approved language, Fortran. Subroutine MARIANA is only used at this time by program TWITCH. Objective evidence was found to answer requirements for users manual and technical description CNWRA 92-019. Objective evidence was found for the use of some TOP-18 forms, i.e. Software Summary Form (SSF).

UNSATISFACTORY FINDINGS: 1. INEL listings for MARIANA state that it is Version 2.0 while Software Summary Form states it is Version 1.0 (TOP-018, para. 5.4).
2. No objective evidence that the software tools PREFOR, FORWARN, CRAFT, and PCMetrics had been executed (TOP-018, para. 6.3.1).
3. No objective evidence found to indicate that the test case data had been reviewed by technical staff (TOP-018, para. 6.3 and 6.3.1).
4. No objective evidence could be found to indicate that the procedure-required list of authorized users had been generated (TOP-018, Appendix C and 8.1.3).
5. No objective evidence could be found to indicate that any copies of these programs have been officially released to any user (TOP-018, Appendix C).
6. There is evidence (personnel conversations) to indicate that there are other versions of this software in existence (TOP-018, Appendix C).
7. Objective evidence indicates that TWITCH3 was used in the generation of data for CNWRA 92-019. TWITCH6 is the version currently under CM control (TOP-018, para. 6.2.2.2).
8. No objective evidence exists to indicate what version of MARIANA was used for CNWRA 92-019 (TOP-018, para 6.2.2.2).
9. Software Summary Form for TWITCH does not have a version number associated or stated (TOP-018, para. 5.4).

NONCONFORMANCE REPORT NO.: 94-03

ATTACHMENTS: ~~None~~ NCR 94-03   Lett 2/9/94

RECOMMENDATIONS/ACTIONS: 1. The appropriate software tools should be executed on these software packages and the results recorded. Generate the Software Release Notice for this package. Put the latest version of this package under control. Have the code developer/technical expert review INEL code runs and report as appropriate. Consider splitting the package into two objects. CM would be easier.

APPROVED: _[signature]_
CENTER DIRECTOR OF QUALITY ASSURANCE

DATE: 2/7/94

DISTRIBUTION:
ORIGINAL - CENTER QA DIRECTOR - Bruce Mabrito
ORIGINATOR - RWM/TCT
Principle Engineer/Scientist - P. Lichtner
Element Manager - P. Nair
B. Sagar, R. Baca, R. Johnson

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

NONCONFORMANCE REPORT

Project No. 20-5702-523   NCR No. 94-03

PART 1: DESCRIPTION OF NONCONFORMANCE *Surveillance 93-18 identified the following deficiencies in MARIANA & Twitch code documentation* *LK 2/k/k*

1. INEL listings for MARIANA state that it is Version 2.0 while Software Summary Form states it is Version 1.0 (TOP-018, para. 5.4).
2. No objective evidence that the software tools PREFOR, FORWARN, CRAFT, and PCMetrics had been executed (TOP-018, para. 6.3.1).
3. No objective evidence found to indicate that the test case data had been reviewed by technical staff (TOP-018, para. 6.3 and 6.3.1).
4. No objective evidence could be found to indicate that the procedure-required list of authorized users had been generated (TOP-018, Appendix C and 8.1.3).
5. No objective evidence could be found to indicate that any copies of these programs have been officially released to any user (TOP-018, Appendix C).
6. There is evidence (personnel conversations) to indicate that there are other versions of this software in existence (TOP- 018, Appendix C).
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9. Software Summary Form for TWITCH does not have a version number associated or stated (TOP-018, para. 5.4).

Initiated by: _(signature)_   Date: 2/7/94

PART 2: PROPOSED DISPOSITION AND CORRECTIVE ACTION *Responsible: P. Nair* *GDf*
Disposition: *Response Due: 2/18/94* *2/9/84*

Basis of Disposition:

Action to correct nonconformance:

Target date for completion:_____

Proposed by: Date:

PART 3: APPROVAL
Element Manager:_____Date:_____

Director of QA:_____Date:_____
Comments/Instructions:

PART 4: CLOSE OUT
Comments:

Verified by: Date:

CNWRA FORM QAP 9-1