

71-9181  
10C



April 9, 1985

File: PAS-2  
Ref: 3596

Mr. Charles E. MacDonald, Chief  
Transportation Certification Branch  
Division of Fuel Cycle and Material Safety  
Nuclear Regulatory Commission  
Washington, D. C. 20555

PDR  
Return  
to 396SS

Dear Mr. MacDonald:

Enclosed please find 8 copies of the revised pages to convert Revision 3 of the NuPac PAS-2 Safety Analysis Report to Revision 4 of that report. Also enclosed is a check for \$150 to cover the cost of a minor amendment to the Certificate of Compliance.

The proposed change is very minor. Essentially, the user of this package, San Onofre Nuclear Generating Station (SONGS) has indicated that a different storage procedure than currently specified by the SAR would be much more convenient. Therefore, Revision 4 includes the storage procedure which SONGS would like to use. The revised storage procedure has no effect whatsoever on the package's ability to meet the requirements of 10 CFR 71.

If you have any questions, please do not hesitate to call either myself or Mr. Stephen Goetsch. Thank you very much.

Very truly yours,

NUCLEAR PACKAGING, INC.  
*Charles J. Temus*  
Charles J. Temus  
Technical Director

Enclosures



U.S. N.R.C.  
FEE MGMT. BRANCH

85 APR 22 AM 07

RECEIVED

april 85-3

Applicant	.....
Check No.	120.81
Amount/ Fee Category	\$150 - 10C
Type of Fee	Am. direct
Date Check Rec'd	4/21/85
Received By	Jackson

85 APR 19 AM 1:35

8505070211 850409  
PDR ADOCK 07109181  
C PDR

25155

Adv. Copy to FERC 04/19/85

Instructions for Incorporating Revision 4  
Amendments to NuPac PAS-2 SAR

Remove

iii  
7-3  
7-4  
7-5  
7-6

Insert

iii  
7-3  
7-4  
7-5  
7-6

## INDEX (Con't)

	<u>PAGE</u>
4.0 Containment	4-1
4.1 Containment Boundaries	4-1
4.1.1 Containment Vessels	4-1
4.1.2 Containment Penetrations	4-1
4.1.3 Seals and Welds	4-2
4.1.4 Closure	4-2
4.2 Requirements for Normal Conditions of Transport	4-2
4.2.1 Release of Radioactive Material	4-2
4.2.2 Pressurization of Containment Vessel	4-2
4.2.3 Coolant Contamination	4-3
4.2.4 Coolant Loss	4-3
4.3 Containment Requirements for the Hypothetical Accident Condition	4-3
4.3.1 Fission Gas Products	4-3
4.3.2 Release of Contents	4-4
5.0 Shielding	5-1
6.0 Criticality Evaluation	6-1
7.0 Operating Procedure	7-1
7.1 Operational Requirements (unless otherwise noted)	7-1
7.2 Operational Narrative	7-3
7.2.1 Storage Procedure	7-3
7.2.2 Filling Procedure	7-3
7.2.3 Emptying Procedure	7-6
8.0 Acceptance Tests and Maintenance Program	8-1
8.1 Acceptance Tests	8-1
8.2 Maintenance Program	8-1
8.3 Appendix	8-4

- 7.1.4 The shield assembly may only be lifted using the hoist ring on the top of the shield.
- 7.1.5 The loaded packaging shall not be allowed to freeze during the life of the package. If the sample vial is suspected to have frozen while loaded with any aqueous contents, the vial shall be replaced before further use of the packaging.

## 7.2 Operational Narrative

### 7.2.1 Storage Procedure

When not in use, the system shall be stored as follows:

- 7.2.1.1 The PAS-2 cask system shall be stored completely assembled in close proximity to the PAS sample location. All unpainted surfaces of secondary containment vessel shall be kept coated with a high quality vacuum grease to prevent oxidation and to assure a tight seal when in use. The 8 secondary containment vessel lid bolts shall not be installed at any time the sample shield assembly does not contain a sample.
- 7.2.1.2 The sample shield transportation cart, required tools and parts shall be stored in the same location as the PAS-2 cask.

### 7.2.2 Filling Procedure

- 7.2.2.1 Remove the sample shield assembly from the secondary containment vessel.
- 7.2.2.2 The shield assembly shall be positioned on a cart in such a way that the fill ports are positioned conveniently with respect to the PAS sampling ports.
- 7.2.2.3 The fill tubes (Part No. GF-20-02D-A3) shall be installed as per section 7.1.2.

- 7.2.2.4 Modified eye-bolts shall be installed in the top of the shield body.
- 7.2.2.5 Remove the actuator rod closure plate.
- 7.2.2.6 Set the valves using the procedure in Paragraph 7.1.4 above, such that the arrows indicate flow through the sample loop.
- 7.2.2.7 Position cart and shield assembly so that the pig-tail assemblies may be easily attached to the PASS ports. Attach pigtails to the appropriate fitting.
- 7.2.2.8 Run the coolant through the sample loop for a period to be determined so that the internal temperatures of the vial is very close to the temperature of the coolant and a representative sample may be taken.
- 7.2.2.9 Set the valves, using the procedure in Paragraph 7.1.4 above, out flow valve first, so that the arrows indicate flow through the flush (bypass) loop.
- 7.2.2.10 Shut down reactor coolant flow to the NuPac PAS-2 Cask.
- 7.2.2.11 Direct non-radioactive flush water through the sample vial. Flush for several minutes.
- 7.2.2.12 Install actuator rod closure plate.
- 7.2.2.13 Direct a compressed gas source through the vial. The gas should not be pressurized through the vial to a pressure greater than 250 psi.
- 7.2.2.14 Allow gas to flow until passages are dry.



- 7.2.2.15 Remove pigtail assemblies and fill tubes. Be sure that the fill tube O-rings are on the tubes after removal.
- 7.2.2.16 Install shield closure plugs per Paragraph 7.1.2.
- 7.2.2.17 Transport shield assembly on cart to the partially assembled overpacks.
- 7.2.2.18 Perform Leak Test LT-16 on the sample shield to verify assembly of the sample shield.
- 7.2.2.19 If the optional secondary containment vessel is used, this secondary containment vessel shall have been verified to be leak-tight to better than  $1 \times 10^{-7}$  scc/sec at its most recent maintenance helium leak test, which shall have been performed not more than one year prior to use. If the secondary containment vessel is not to be used, skip to step 7.2.2.19.
- 7.2.2.20 Place the secondary containment vessel body in the inner overpack.
- 7.2.2.21 Place the sample shield in the secondary containment vessel. Secure the secondary containment vessel lid with its 8 bolts.
- 7.2.2.22 Perform the applicable part of LT-16 on the secondary containment vessel (the section entitled 'Assembly verification leak test of the Optional Secondary Containment Vessel'.
- 7.2.2.23 Install shoring within the inner overpack as required to prevent excessive movement of the shield relative to the inner overpack during shipping.

7.2.2.24 Place the top foam piece into the inner overpack. Secure the inner overpack closure devices. NOTE: No shoring is required between the inner and outer overpacks.

7.2.2.25 Install the upper portion of the outer overpack and secure.

### 7.2.3 Emptying Procedure

7.2.3.1 Remove the covers of the outer and inner overpacks, and the secondary containment vessel cover, if the optional secondary containment vessel is used.

7.2.3.2 Remove shield assembly and place where vial is to be emptied.

7.2.3.3 Remove shield closure plugs and install Fill Tubes. See Paragraph 7.1.1 above.

7.2.3.4 Connect upper fill tube to a source of pressurized gas and lower fill tube to a testing storage tank. Pressure shall not exceed 250 psi.

7.2.3.5 After removing the valve operator cover, turn upper valve operator to the sample loop, then set lower valve operator to the sample loop, thus releasing the sample into the testing storage tank. See Paragraph 7.1.3 above.

7.2.3.6 After entire sample has been transferred into the storage tank, redirect the flow from the lower fill tube into the facility waste water system.

7.2.3.7 Attach the upper fill tube to a source of demineralized water.

DOCKET NO. 71- 9181  
CONTROL NO. 25155  
DATE OF DOC. 04/09/85  
DATE RCVD. 04/19/85  
FCDF \_\_\_\_\_ PDR ✓  
FCAF \_\_\_\_\_ LPDR \_\_\_\_\_  
WM \_\_\_\_\_ I&E REF. ✓  
WMUR \_\_\_\_\_ SAFEGUARDS \_\_\_\_\_  
FCTC ✓ OTHER \_\_\_\_\_

DESCRIPTION:

Copies of the  
revised pages  
to convert Revision  
3 of the Safety  
Analysis Report  
04/26/85 INITIAL cec