



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUN 04 1979

MEMORANDUM FOR: Docket File 71-6698

FROM: Richard H. Odegaarden, Transportation Branch
Division of Fuel Cycle and Material Safety, NMSS

SUBJECT: MEETINGS WITH APPLICANTS CONCERNING APRIL 6, 1979
ORDER TO SHOW CAUSE

DATE: April 30, 1979

ATTENDEES: Roger Carlson, Nuclear Assurance Corporation
Ross Chappell, NRC, FCTR
Joe Demko, Nuclear Assurance Corporation
Richard H. Odegaarden, NRC, FCTR
Jack Rollins, Nuclear Assurance Corporation
Tom Snead, Duke Power Company
Jim Viebrock, Nuclear Assurance Corporation
Ken Wilson, Duke Power Company

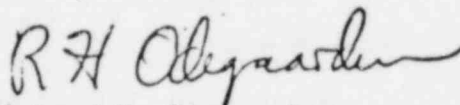
DISCUSSION: Nuclear Assurance Corporation (NAC) presented the preliminary results of actual physical measurements of four (4) Model No. NFS-4 packages (NAC-1B, 1C, 1D, and 1E). It appears that three (3) packagings (NAC-1B, 1D, and 1E) may meet the current Certificate of Compliance concerning roundness and straightness. NAC did not care to discuss the results of Nuclear Fuel Service (NFS) packages (NFS-4A and 4B) because NFS was not present at the meeting but did indicate the packagings were out of straightness by less than 200 mils.

NAC indicated at the meeting that the 0.13 inch straightness criteria shown on the package drawing was only for ease of inserting and replacing the fuel basket and is not discussed in the safety analysis report for the package design. The NRC staff indicated if this is true, then before the packagings could be returned to service an unreviewed safety question (possibility of buckling of the containment vessel) would have to be resolved. This could be done by reference to recognized standards and codes or by analysis.

JUN 04 1979

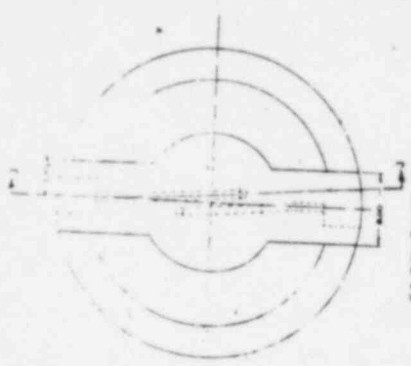
NAC discussed with the NRC staff the type of information that would have to be submitted to satisfy the requirement in the order which required review of the QA records for each package. Basically this should consist of information, including a tabulation of records reviewed, to convince the NRC staff and public that the packages had been fabricated in accordance with the Certificate of Compliance.

NAC left the staff with a marked-up copy of proposed changes to the drawing for the Model No. NFS-4 packaging (4 sheets).

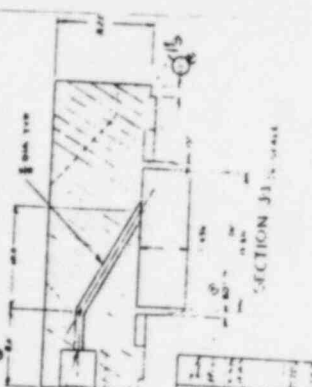
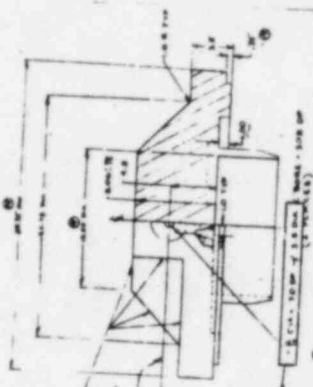


Richard H. Odegaarden
Transportation Branch
Division of Fuel Cycle and
Material Safety

Enclosure

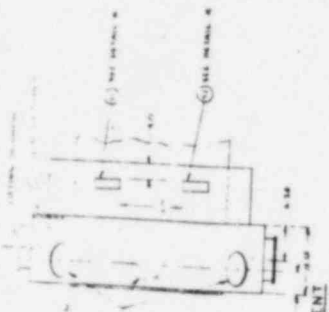


CASH BASE DETAIL-G
IN SCALE



SECTION J1 IN SCALE

NUCLEAR FUEL	ATC	SCALE	DATE
NUCLEAR FUEL	ATC	SCALE	DATE
NUCLEAR FUEL	ATC	SCALE	DATE
NUCLEAR FUEL	ATC	SCALE	DATE



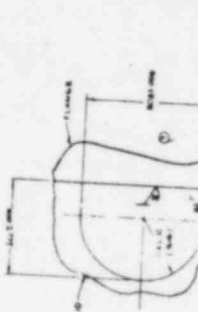
PORT COVER DETAIL-BB
IN SCALE

PER SIDE IMPACT LIMITER WELDMENT
SECTION D-D IN SCALE

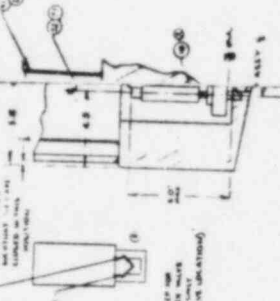


WELD AND BOLT HEADS (NOT SHOWN)
TO BE WELDED TO THE LIMITER WELDMENT
CONSTRUCTION

WIRE FOR BALL BEARING SECTION BB
(CONFORM WITH WIRE TO BE USED IN SECTION BB)



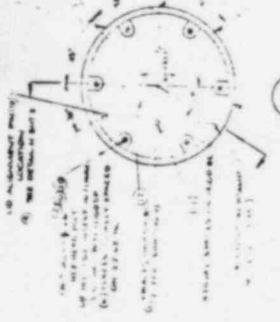
RING GROOVE
DETAIL-AA
IN SCALE



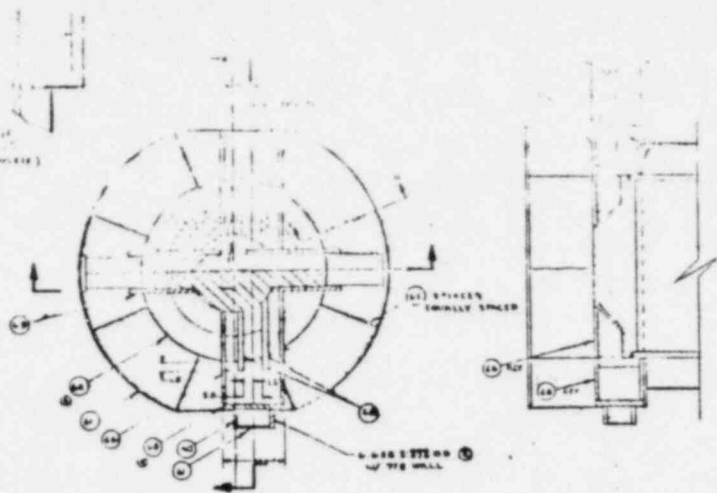
MIXER FIRE VALVE
INSTALLATION DETAIL-BB
IN SCALE (SEE ADDRESS)

COOLANT SUPPLY
INSTALLATION

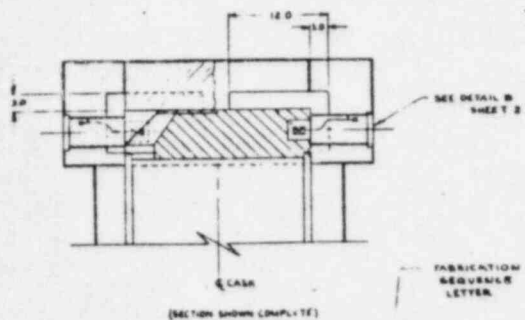
COOLANT SUPPLY
INSTALLATION



DETAIL-AA
IN SCALE



SECTION-EE 1/8" SCALE
 LOWER IMPACT LIMITER & ROTATION TRIMMER
 (SECTION SHOWN ROTATED 180°)



(SECTION SHOWN COMPLETE)

FABRICATION
 SECURITY
 LETTER

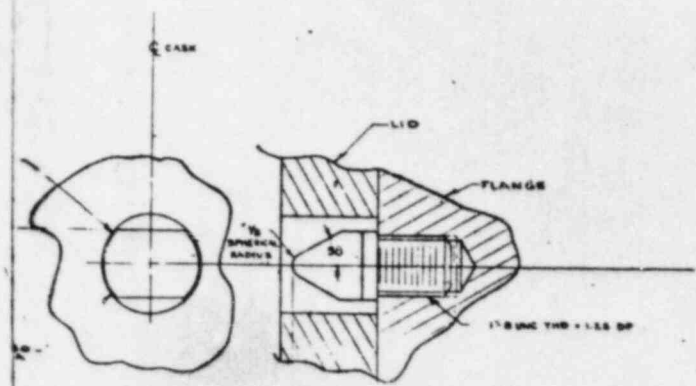
CASK LID IMPACT
 LIMITER
 NFS-4-X
 TORQUE BOLTS TO
 100 FT-LBS

TO BE WELDED TO CENTER OF
 TOP IMPACT LIMITER
 SEE CASK CROSS SECTION
 SHEET 3

SEE THE DOT AND X IN THE
 TABLE LETTERS

NO. NFS-4-X
RADIOACTIVE MATERIALS
 CASK CAVITY SIZE 13.50 DIA X 178.00 LG.
 WT EMPTY _____ LBS. WGT LOADED _____ LBS.
 DOT _____ SERIES
NUCLEAR FUEL SERVICES, INC.
 WEST VALLEY, NEW YORK, U.S.A.

THIS SIDE UP



ALIGNMENT PIN DETAIL-N
 1/8" SCALE

ITEM NO.	DESCRIPTION	QTY	UNIT
1	CASK SH 1,244	1	EA
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30

REVISIONS		DATE	BY	APP'D
1
2
3
4
5

NUCLEAR FUEL S
 NFS-4
 CASK SH 1,244
 E 1173

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AUTHORITIES PRIOR TO THE START OF WORK.

2. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES. ANY OBSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER AT THE CONTRACTOR'S EXPENSE.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. ANY DAMAGE SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER AT THE CONTRACTOR'S EXPENSE.

4. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SAFETY BARRIERS AND WARNING DEVICES THROUGHOUT THE PROJECT. ALL WORK SHALL BE COMPLETED WITHIN THE DESIGNATED TIME FRAME.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE ENVIRONMENT AND NEIGHBORHOOD. ANY POLLUTION OR NOISE COMPLAINTS SHALL BE IMMEDIATELY REPORTED AND RESOLVED.

6. THE CONTRACTOR SHALL MAINTAIN ACCURATE RECORDS OF ALL WORK PERFORMED, INCLUDING DAILY LOGS, INSPECTION REPORTS, AND MATERIAL QUANTITIES.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL PERSONNEL AND THE PUBLIC. ALL WORK SHALL BE COMPLETED IN A SAFE AND MANNER.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EQUIPMENT AND MATERIALS. ANY LOSS OR DAMAGE SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL DOCUMENTS AND INFORMATION. ANY LOSS OR DAMAGE SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL RIGHTS AND INTERESTS OF ALL PARTIES INVOLVED IN THE PROJECT.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ADJACENT PROPERTIES AND UTILITIES. ANY DAMAGE SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER AT THE CONTRACTOR'S EXPENSE.

12. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SAFETY BARRIERS AND WARNING DEVICES THROUGHOUT THE PROJECT. ALL WORK SHALL BE COMPLETED WITHIN THE DESIGNATED TIME FRAME.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE ENVIRONMENT AND NEIGHBORHOOD. ANY POLLUTION OR NOISE COMPLAINTS SHALL BE IMMEDIATELY REPORTED AND RESOLVED.

14. THE CONTRACTOR SHALL MAINTAIN ACCURATE RECORDS OF ALL WORK PERFORMED, INCLUDING DAILY LOGS, INSPECTION REPORTS, AND MATERIAL QUANTITIES.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL PERSONNEL AND THE PUBLIC. ALL WORK SHALL BE COMPLETED IN A SAFE AND MANNER.

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EQUIPMENT AND MATERIALS. ANY LOSS OR DAMAGE SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL DOCUMENTS AND INFORMATION. ANY LOSS OR DAMAGE SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL RIGHTS AND INTERESTS OF ALL PARTIES INVOLVED IN THE PROJECT.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ADJACENT PROPERTIES AND UTILITIES. ANY DAMAGE SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER AT THE CONTRACTOR'S EXPENSE.

20. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SAFETY BARRIERS AND WARNING DEVICES THROUGHOUT THE PROJECT. ALL WORK SHALL BE COMPLETED WITHIN THE DESIGNATED TIME FRAME.

21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE ENVIRONMENT AND NEIGHBORHOOD. ANY POLLUTION OR NOISE COMPLAINTS SHALL BE IMMEDIATELY REPORTED AND RESOLVED.

22. THE CONTRACTOR SHALL MAINTAIN ACCURATE RECORDS OF ALL WORK PERFORMED, INCLUDING DAILY LOGS, INSPECTION REPORTS, AND MATERIAL QUANTITIES.

23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL PERSONNEL AND THE PUBLIC. ALL WORK SHALL BE COMPLETED IN A SAFE AND MANNER.

24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EQUIPMENT AND MATERIALS. ANY LOSS OR DAMAGE SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL DOCUMENTS AND INFORMATION. ANY LOSS OR DAMAGE SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL RIGHTS AND INTERESTS OF ALL PARTIES INVOLVED IN THE PROJECT.

15 Third stage per ANSI B15, 6 threads per inch. Injection mold is optional. Remove first injection third mold and back. First third eggshell between mold and mold plate is required.

NO.	DESCRIPTION	QTY	UNIT
1	...	...	...
2	...	...	...
3	...	...	...
4	...	...	...
5	...	...	...
6	...	...	...
7	...	...	...
8	...	...	...
9	...	...	...
10	...	...	...

NO.	DESCRIPTION	QTY	UNIT	REMARKS
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100



DATE: 10/10/2023
 TIME: 10:00 AM
 DRAWN BY: [Name]
 CHECKED BY: [Name]