

NES/SELAMCO

QUALITY ASSURANCE PROCEDURE

NUCLEAR

EXHIBIT B.5.1, P. 1 OF 2

N-13

Issue
Date: April, 1984

Page 1 of 2

Description

HANDLING, STORAGE, SHIPPING AND PRESERVATION

1.0 PURPOSE

- 1.1 To describe the established measures to control handling, storage, shipping, cleaning, packaging and preservation of material and items.

2.0 SCOPE AND APPLICABILITY

- 2.1 The scope of this procedure encompasses work conducted under contracts requiring compliance with the ASME B & PV Code, Section III, ANSI N45.2, or Appendix B of 10CFR50.
- 2.2 This procedure applies to the Engineering, Material Control, Manufacturing, and Quality Departments.

3.0 RESPONSIBILITY AND AUTHORITY

- 3.1 Manufacturing Engineering is responsible for recognizing the need for, and prescribing the procedure, equipment, and controls necessary for special conditions, handling, storage, cleaning, preservation, packaging, packing and shipping in the Travelers, procedures or instructions referenced therein.
- 3.2 The Quality Assurance Department is responsible to assure that procedures and instructions are adequate for the situation and are provided when necessary.
- 3.3 The Manufacturing and Material Control departments are responsible for abiding by the procedures and instructions in the Travelers or referenced documents.
- 3.4 The Quality Control Department is responsible to verify procedures and instructions prescribed are properly abided by, and results are recorded at Traveler operations involved.

4.0 GENERAL

- 4.1 The implementation of measures for the control of handling, storage, and shipping etc. has been delegated to the appropriate NES/Selamco departments for their respective scope of work. Procedures, practices, and instructions are established and documented as necessary to provide control of handling, storage, cleaning, packaging, preservation, shipping release, and shipping of material and equipment to prevent damage, deterioration or loss during manufacture and shipment as required by the customer specification.

5.0 PROCEDURE

8512100141 851210
PDR GA999 EMVNESM
99901018 PDR

- 5.1 When necessary for a particular item to have special identifications, coverings, handling, storage, special equipment, or special environmental conditions, such as inert gas atmosphere, specific moisture content levels, and temperature levels, etc. they are specified by Manufacturing Engineering in the Traveler and are reviewed by Quality Assurance, performed by Manufacturing and Material Control and are verified by Quality Control.

PREPARED BY:

RELEASE APPROVED BY:

RELEASE DATE:

April 30, 1984

QA1-81

- 5.2 Inspection shall verify compliance to packaging, preservation, shipping and identification requirements in accordance with Procedure N-10 of this manual, per customer and specification requirements referenced.

EXHIBIT B.7.1

016-1



Teletype

Send inquiries and responses to:
Manager, Design Engineering
GPU Nuclear Corporation
c/o Bechtel North American Power Con
15740 Shady Grove Road
Gaithersburg, Maryland 20877-1454

Mr. Frank Sugar
NES Manufacturing
101 Swing Road
Greensboro, NC 27409

November 14, 1985

Defueling Canisters
Three Mile Island Unit 2
Design Engineering
Bechtel Job No. 15737
File 0261/01540/2-M101A.4
BLS- 0180

Dear Mr. Sugar:

Please refer to GPUN letter BLS-0128, attached, regarding the procurement of filter discs for fuel and knockout canisters. In that letter we have made statements relative to "important-to-safety" (ITS) functions which warrant clarification.

Although the completed canister, including all components are classified "Important to Safety," (see Specification Section 7.0) it is permissible to purchase certain components of the canisters as commercial items without invoking nuclear QA requirements or 10 CFR 21. This determination depends upon the nature of the product and its safety function.

Specifically in the case of items, such as the Rigimesh filter discs and LICON cement, which are standard commercially available products, it is permissible to procure them as described above. It is understood however, that receipt inspection and fabrication/installation activities associated with these products are controlled by your QA program to assure specific requirements are met.

If you have any additional questions or comments please do not hesitate to contact us.

Very truly yours,

R. L. Rider
Manager, Design Engineering

JVS:tlj

Attachment: As Stated

See page 2 for cc list

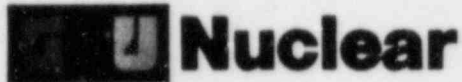
Letter to Mr. Sugar

BLS-0180

Page 2

November 14, 1985

cc: Manager, EPD Quality Assurance - J. A. Berneen, w/l
 Asst. Project Engineer - G. K. Boldt, w/l
 Task Leader, Defueling Ops. - P. Bradbury, w/l
 Mechanical/Process/Facilities Group Supv. - W. J. Engel, w/l
 Quality Assurance Manager, Projects - T. I. Gillespie, w/l
 Project Administrator - E. Healy, w/o
 Deputy Manager, EPD Quality Assurance - D. Kansal, w/l
 Manager, Recovery Programs - W. H. Linton, w/l
 Mechanical Engineer - R. Preston, w/l
 Director, Licensing & Nuclear Safety - R. B. Rogan, w/l
 Nuclear Group Supervisor - R. T. Smith, w/l
 Mechanical Engineer - ~~J. W. Smith~~, w/l
 Supervisor, Records Services - A. Stowe, w/l



Send Inquiries and Responses to:
Manager, Design Engineering
 GPU Nuclear Corporation
 c/o Bechtel North American Power Corp.
 15740 Shady Grove Road
 Gaithersburg, Maryland 20877-1454

Mr. Thomas Harmon, Jr.
 Project Manager
 NES Manufacturing
 101 Swing Road
 Greensboro, NC 27409

December 19, 1984

RECEIVED
 DEC 27 1984
 NES MANUFACTURING

Pipe for Defueling Canisters
 Three Mile Island Unit 2
 Design Engineering
 Bechtel Job No. 15737
 File 0261/0201V/2-M-101A.4
 BLS-0128

Dear Mr. Harmon:

Your letter No. 4, copy attached, sought an approval for allowing the fuel and knockout canister filter discs, by Pall Corporation, not to be covered by a Nuclear QA Program.

Please be advised that, since the filter discs do not perform any nuclear safety related or important-to-safety (ITS) function, the discs are not required to be covered by a Nuclear QA Program. Thus requirements of 10CFR50 and 10CFR21 do not apply to the discs. However, a certificate of compliance and chemical properties report are to be submitted per the specification. The structural integrity of the discs shall be verified by testing prior to shipment, and certified test reports shall be submitted.

If you have any questions, please contact us.

Very truly yours,

R. L. Rider
 for R. L. Rider
 Manager, Design Engineering

PBK/dmg

Attachment: As Stated

cc: Asst. Project Engineer - G. K. Boldt, w/a
 Quality Assurance Manager, Projects - T. I. Gillespie, w/a
 Project Administrator - E. Healy, w/a
 QE Group Supervisor - R. C. Lynch, w/a
 Mechanical/Process/Facilities Group Supervisor - R. L. Mays, w/a
 Project Procurement - H. J. Porter, w/a
 Project Quality Assurance Engineer - T. V. Sarma, w/a
 Nuclear Group Supervisor - E. T. Smith, w/a
 Mechanical Engineer - J. V. Smith, w/a
 Supervisor, Records Services - A. Stowe, w/a

EXHIBIT B.14.1

[illegible]

EXHIBIT B.14.2

AK ORDER

ORIGINATOR/DATE

QE. APRV.

nes/se amco

101 SWING ROAD
GREENSBORO, NORTH CAROLINA 27409TELEPHONE NO
(919) 852-3400

PURCHASE ORDER NO.

S 04467 - 84091

SUPERVISOR/DATE

FINAL APRV./DATE

U.S. GOVT CONTRACT NO.

PRIORITY RATING

APR. VENDOR REQ'D

YES ☐ NO ☒

ASME

PRESS-RET

BUY AMERICAN

YES ☐ NO ☒YES ☐ NO ☒S
E
L
L
E
R

TELEPHONE

DESCRIPTION

NEED DATE

SHIP DATE

EST. COST

UNIT PRICE

1

ONE

LOT

PER PURCHASE ORDER ATTACHMENT ONE AND SECTION(S) 3.1

VENDOR TO ACCEPT COMPLETE THE FOLLOWING
ITEM FROM MTS. INC. SUPPLY PART NO.
VENDOR SHALL MAINTAIN THIS LOT IDENTIFI-
FY FOR THE LOT # 447.

2

(20) 5

19

FULL COMPUTER HEAD FOR IBM 115094E RIV 3
MTS. INC. TO SUPPLY DISC 14" X 14" X 4" THK
304L SST

3

20 (5) (14)

14

WORKOUT COMPUTER HEAD FOR IBM 115094E RIV 3
MTS. INC. TO SUPPLY DISC 14" X 14" X 4" THK
304L SST

DATE REC'D

ITEM

QTY. REC'D

CUM. QTY.

SHIPPER NO.

7-22-85

8-8-85

8-5-85

7-29-85

REQ. 295

RH# 4062AS

RECEIVING

DATE REC'D

ITEM

QTY. REC'D

CUM. QTY.

SHIPPER NO.

7-17-85

7-18-85

7-22-85

8-29-85

9-3-85

4

3

3

5

5

10

5

14

23

9

20

5

19

40

49

-

-

C-243

-

-

changed 8-19-85

REQ. 295

8-10-85

RN# 3761A

9-9-85

9-7-85

SECRET

SECRET

SECRET

SECRET

SECRET

SECRET

WORK ORDER

44671
ORIGINATOR/DATE
10/18/85

DES/SELAMCO
101 SWING ROAD
GREENSBORO, NORTH CAROLINA 27409

PURCHASE ORDER NO.

04467-54011

SUPERVISOR/DATE
10/18/85

SELLER
APPROVED FOR PURCHASE

SHEET 3 OF 2
CONFIRMED TO
DATE
BUYER
NEED DATE
SHIP DATE
EST. COST
UNIT PRICE

ITEM	QUANTITY	UNIT	DESCRIPTION
4	31 (0.0)	EA	100% COTTON YARN 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 204L 557
5	30 (0.0)	EA	100% COTTON YARN 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100%

DATE RECD	ITEM	QTY. RECD	CUM. QTY.	SHIPPER NO.	DATE RECD	ITEM	QTY. RECD	CUM. QTY.	SHIPPER NO.	DATE RECD	ITEM	QTY. RECD	CUM. QTY.	SHIPPER NO.
9-6-85	2	6	20	-	9-9-85	2	6	33	-	9-24-85	2	6	33	-
"	5	12	61	-	9-11-85	2	3	36	-	CERT. HERE 9-24-85	2	3	36	-
"	2	3	23	-	"	2	5	41	-	CERT. HERE 9-24-85	2	5	41	-
9-11-85	2	4	27	-	9-10-85	3	1	20	-	CERT. HERE 9-24-85	3	1	20	-
	4	11	31	-	9-24-85 CERT. HERE R.N. 409	3	8	28	-	CERT. HERE 9-24-85	3	8	28	-

EXHIBIT B.14.3



American GFM Corporation, 1200 Cavalier Blvd., Chesapeake, VA 23323

Telephone: (804) 487-2442 • Telex: 823414

**SHIPPING NOTE
NO. C-202**NES/SELAMCO
101 Swing Road
Greensboro, NC 27405

31 May 1985

Your Order 04467-84091	Our Order Confirmation 81.00398/CG	Date of Shipment	Shipped by Wilson Trucking Co. - COLLECT -
Shipped to NES/SELAMCO at above address		Packed	Weight Gross _____ Net _____

ITEM	QTY.	DESCRIPTION
1	10	1154014F Rev 2 Bulkhead, Fuel Canister

6-3-85


TAILGATEWe have shipped for your account and
risk and according to our Terms and Conditions.
Authorized Signature

EXHIBIT B.14.4

I. T.	P.O.	N.O.	P.O. ITEM	QTY. REC'D	QTY. ACC.	QTY. REJ.	TYPE OF INSPECTION	REMARKS
7/22/85	S-04467	84091	5	10	10	∅	DIMENSIONAL CLEANLINESS P.O. REQ.	
7/29/85	S-04467	84091	5	7	7	∅	DIMENSIONAL CLEANLINESS P.O. REQ.	
8/5/85	S-04467	84091	4	10	10	∅	DIMENSIONAL CLEANLINESS P.O. REQ.	
8/18/85	S-04467	84091	2	5	5	∅	DIMENSIONAL CLEANLINESS P.O. REQ.	
8/10/85	S-04467	84091	3	5	5	∅	DIMENSIONAL CLEANLINESS P.O. REQ.	
8/19/85	S-04467	84091	4	10	10	∅	DIMENSIONAL CLEANLINESS P.O. REQ.	
8/21/85	S-04467	84091	3	14	13	1	DIMENSIONAL CLEANLINESS P.O. REQ.	RN# 376 BN
8/27/85	S-04467	84091	5	9	9	∅	DIMENSIONAL CLEANLINESS P.O. REQ.	CRB
9/19/85	S-04467	84091	5	23	23	∅	DIMENSIONAL CLEANLINESS P.O. REQ.	CRB
9/19/85	S-04467	84091	2	6	6	∅	DIMENSIONAL CLEANLINESS P.O. REQ.	CRB
9/10/85	S-04467	84091	2	3	3	∅	DIMENSIONAL CLEANLINESS P.O. REQ.	BN
9/11/85	S-04467	84091	5	12	12	∅	DIMENSIONAL CLEANLINESS P.O. REQ.	CRB
9/15/85	S-04467	84091	2	9	7	2	DIMENSIONAL CLEANLINESS P.O. REQ.	RN# 406 BN
9/16/85	S-05273	85027	3	1	1	∅	DIMENSIONAL CLEANLINESS P.O. REQ.	CRB
9/24/85	S-04467	84091	2	13	13	∅	DIMENSIONAL CLEANLINESS P.O. REQ.	CRB
↓	↓	↓	3	1	1	∅	DIMENSIONAL CLEANLINESS P.O. REQ.	CRB
9/24/85	S-04467	84091	4	11	7	4	DIMENSIONAL CLEANLINESS P.O. REQ.	R.N. #409

EXHIBIT B.14.5

T.	P.O.	M.O.	P.O. ITEM	QTY. REC'D	QTY. ACC.	QTY. REJ.	TYPE OF INSPECTION	REMARKS
3/19/85	S-04657	B4091	2	22	22	φ	DIMENSIONAL CLEANLINESS P.O. REQ.	
3/29/85	S-04657	B4091	2	62	62	φ	DIMENSIONAL CLEANLINESS P.O. REQ.	
4/9/85	S-04657	B4091	2	53	53	φ	DIMENSIONAL CLEANLINESS P.O. REQ.	
5/10/85	S-04681	B4091	2	42	φ	42	DIMENSIONAL CLEANLINESS P.O. REQ. 341	need coffee cleaned 7-12-85
↓ ↓	S- ↓	↓	3	36	φ	36	DIMENSIONAL CLEANLINESS P.O. REQ. 341	need coffee cleaned 7-12-85
3/14/85	S-04634	B4091	2	99	99	φ	DIMENSIONAL CLEANLINESS P.O. REQ.	
7/12/85	S-04681	B4091	2	227	227	φ	DIMENSIONAL CLEANLINESS P.O. REQ.	
↓ ↓	S- ↓	↓	3	23	23	φ	DIMENSIONAL CLEANLINESS P.O. REQ.	
7/18/85	S-04691	B4091	3	227	227	φ	DIMENSIONAL CLEANLINESS P.O. REQ.	
/ /	S-						DIMENSIONAL CLEANLINESS P.O. REQ.	
/ /	S-						DIMENSIONAL CLEANLINESS P.O. REQ.	
/ /	S-						DIMENSIONAL CLEANLINESS P.O. REQ.	
/ /	S-						DIMENSIONAL CLEANLINESS P.O. REQ.	
/ /	S-						DIMENSIONAL CLEANLINESS P.O. REQ.	
/ /	S-						DIMENSIONAL CLEANLINESS P.O. REQ.	
- /	S-						DIMENSIONAL CLEANLINESS P.O. REQ.	
/ /	S-						DIMENSIONAL CLEANLINESS P.O. REQ.	

EXHIBIT B.17.1

REVISIONS

MANUFACTURING PLAN AND QUALITY RECORD

SELAMCO

101 Swing Road Greensboro, North Carolina 27409

TRAVELER

SHEET 3 OF 4

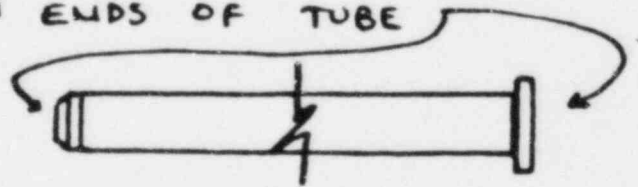
PART NO. 1150946-1		PART NAME POISON TUBE ASSY	WORK ORDER NO. 8409128		TRAVELER SERIAL NO. 0041017				
OPEN MACH NO. GROUP	OPERATION DESCRIPTION	DIM	TOL	DWG ZONE	TOOLING	ACTUAL DIM	MFG STAMP DATE	FIRST ART DATE	FINA INSPE DATE
65	VIBRAETCH TUBES PER INSTN. SMT #1150946								
70	LOAD POISON PELLETS IN PIPE								
	PER PROCEDURE 8409184C								
	HOLD FOR SOURCE INSPECTION								
80	FIT TOP PLUG IN PIPE PER PRINT								
	AND WELD PER WELD MAP								
	USE 316L WIRE								
70 Q	INSPECT & ACCEPT WELDS PER								
	84091PT-V R1								
	IDENT & STORE FOR I/A								

EXHIBIT B, 17.1, p. 2 of 9

INSTRUCTION SHEET FOR

* EACH LOADED POISON TUBE MUST
BE IDENTIFIED BY THE TYPE AND LOT
OF POISON THAT IS INSTALLED IN TUBE.

1. IDENTIFY THE LOT #
2. IDENTIFY THE TRAY #
3. DATE OF INSTALLATION
4. NES Q.A. STAMP APPROVAL.
5. BECHTEL SOURCE INSPECTOR APPROVAL.
(Q.A.'S RESPONSIBILITY)
6. VIBRAETCH TRAY # ON ENDS OF TUBE



SAMPLE

PART DESCRIPTION POISON TUBE 1150946

SERIAL NUMBER	DATE	NES	BECHTEL	SERIAL NUMBER	DATE	NES	BECHTEL
005 - # 0	6-5-86	Q.A. STAMP HERE	BECHTEL SOURCE INSPECTOR SIGNATURE HERE				

EXHIBIT 8.17.1, p. 4 of 9

TITLE POISON TUBE LOADING PROCEDURE

1.0 PURPOSE

- 1.1 To define an acceptable Poison Tube Loading Procedure for the Defueling Canisters for the TMI-2 Nuclear Power Plant.

2.0 SCOPE

- 2.1 This procedure will cover Poison Tube Loading for the Knockout and Filter Canisters.
- 2.2 Two sizes of Poison Pellets will be loaded: 1.955" O.D. x 2.0" long; .770" O.D. x 1.0" long.
- 2.3 Two lengths of 2.125 diameter tube will be loaded with the 1.955 diameter pellets.

3.0 EQUIPMENT

- 3.1 Clean work area.
- 3.2 Buckets to support poison tubes in line with loading tray.
- 3.3 "V" shaped loading tray supported on buckets.

4.0 PROCEDURE

- 4.1 Place poison tube with one end plug welded in place on loading bucks.
- 4.2 Select appropriate package of poison pellets for size and length of tube and load into loading tray. All of pellets from package must be placed in tray.
- 4.3 Slide pellets into poison tube; horizontal.
- 4.4 Quality Control to verify all pellets installed and complete C of C for each pipe filled. If necessary add one or more BAC Spacers to fill tube with-
in 1" of its fill length.
- 4.5 Place end plug in tube and secure per applicable traveler.

1	Rev A 4.4. added COFC form.	5/30/85			
0	Original Issue	5/15/85			
REV.	DESCRIPTION	DATE			
REVISIONS			APPROVALS		

V/O # 84091

PART	DESCRIPTION	POISON TUBE	1150946
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[illegible]

MANUFACTURING PLAN AND QUALITY RECORD

nes manufacturing

101 Sarno Road Greensboro, North Carolina 27409

ASSEMBLY TRAVELER

SHT 1 OF 4

TRAVELER SERIAL NO.

004101 H

CHG LTR NIC	DATE 4-26-85	ANI	DATE	PART NO. 1150946-1	N/A W/O NO.	N/A DWG NO.	W.O. NO. 8409128-9
M.E. H	DATE 4/26/85	PRO. MGR. WD	DATE 4-26-85	PART NAME POISON TUBE ASS'Y	SERIAL NUMBER	QTY / ASSY	MFG QTY 2418
QA H	DATE 4-30-85			CUSTOMER BECHTEL			START DATE 0.52P DUE DATE 9-5-85

[illegible]

LTR.	REVISIONS
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LTRA

REVISIONS

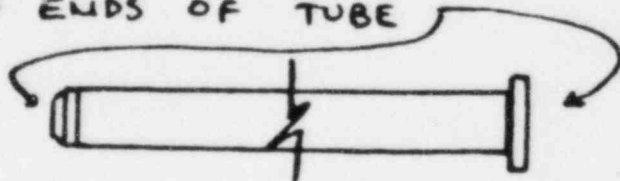
Exhibit B.12.1 P.6 of 9

EXHIBIT B.17.1, p. 7 of 9

INSTRUCTION SHEET FOR

* EACH LOADED POISON TUBE MUST
BE IDENTIFIED BY THE TYPE AND LOT
OF POISON THAT IS INSTALLED IN TUBE.

1. IDENTIFY THE LOT #
2. IDENTIFY THE TRAY #
3. DATE OF INSTALLATION
4. NES Q.A. STAMP APPROVAL.
5. BECHTEL SOURCE INSPECTOR APPROVAL.
(Q.A.'S RESPONSIBILITY)
6. VIBRAETCH TRAY # ON ENDS OF TUBE



SAMPLE

RT DESCRIPTION POISON TUBE 1150946

NUMBER	DATE	NES	BECHTEL	SERIAL NUMBER	DATE	NES	BECHTEL
1	1987	Q.A. STAMP HERE	BECHTEL SOURCE				
6-C-AC							

SERIAL NUMBER	DATE	NES	BECHTEL	SERIAL NUMBER	DATE	NES	BECHTEL
009/047	9/3/85	RDH 9-3-85					
010/046	9/3/85	RDH 9-3-85					
010/045	9/3/85	RDH 9-3-85					
010/044	9/3/85	RDH 9-3-85					
010/043	9/3/85	RDH 9-3-85					
010/042	9/3/85	RDH 9-3-85					
010/041	9/3/85	RDH 9-3-85					
025/160	9/3/85	RDH 9-3-85					
027/206	9/9/85	9-9-85 J.B.S.					
027/207	9/9/85	9-9-85 J.B.S.					
025/154	9/9/85	9-9-85 J.B.S.					
025/153	9/9/85	9-9-85 J.B.S.					
025/156	9/9/85	9-9-85 J.B.S.					
025/155	9/9/85	9-9-85 J.B.S.					
025/157	9/9/85	9-9-85 J.B.S.					
025/158	9/9/85	9-9-85 J.B.S.					