



Public Service

Public Service
Company of Colorado
P.O. Box 840
Denver CO 80201-0840

May 15, 1991
Fort St. Vrain
Unit No. 1
P-91138

A. Clegg Crawford
Vice President
Nuclear Operations

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

ATTN: Dr. Seymour H. Weiss, Director
Non-Power Reactor, Decommissioning and
Environmental Project Directorate

Docket No. 50-267

SUBJECT: INITIAL RADIOLOGICAL SITE CHARACTERIZATION PROGRAM -
CONTAINS PROPRIETARY INFORMATION (ATTACHMENT 1)

REFERENCE: 1) NRC Meeting Summary, by Peter B. Erickson, dated
March 12, 1991 (G-91054)

Dear Dr. Weiss:

Attached for your information are the Fort St. Vrain (FSV) Initial Radiological Site Characterization Program Description and a list of system survey locations. Public Service Company of Colorado (PSC) committed to provide this information during a meeting with the NRC on February 27, 1991 (Reference 1).

Attachment 1 is the "Fort St. Vrain Initial Radiological Site Characterization Program", Revision 2 (Proprietary), which is designated as Scientific Ecology Group procedure FSV-P-SCP-100. This procedure describes the methodologies that will be used to determine and document the current radiological status of FSV structures, equipment and systems, reactor components, and the immediate site environment.

Attachment 2 is a preliminary list of selected system survey locations. This list represents PSC's current planning for the system survey effort, although system availabilities or other currently unforeseen considerations may result in actual survey locations that are different from this list.

APOT

P-91138
Page 2
May 15, 1991

The information in Attachment 1 is considered proprietary by Westinghouse Electric Corporation, under the criteria set forth in 10 CFR 2.790. Attachment 3 is the non-proprietary version of this procedure. The following documents are also submitted with this letter:

- (1) One copy of the Application for Withholding Proprietary Information from Public Disclosure, Westinghouse letter CAW-91-158, Attachment 4,
- (2) One copy of the Copyright Notice, Attachment 5,
- (3) One copy of the Proprietary Information Notice, Attachment 6, and
- (4) One copy of the accompanying affidavit, Attachment 7.

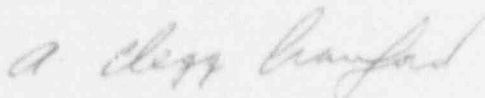
As Attachment 1 contains information proprietary to Westinghouse Electric Corporation, it is supported by an affidavit signed by Westinghouse, the owner of the information. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.790 of the Commission's regulations.

Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR Section 2.790 of the Commission's regulations.

Correspondence with respect to the proprietary aspects of the Application for Withholding or the supporting Westinghouse affidavit should reference CAW-91-158 and should be addressed to R. P. DiPiazza, Manager, Operating Plant Licensing Support, Westinghouse Electric Corporation, P.O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

If you have any questions regarding the attached information, please contact Mr. M. H. Holmes at (303) 480-6960.

Very truly yours,



A. Clegg Crawford
Vice President
Nuclear Operations

ACC/SWC/lmb

Attachments

P-91138
Page 2
May 15, 1991

The information in Attachment 1 is considered proprietary by Westinghouse Electric Corporation, under the criteria set forth in 10 CFR 2.790. Attachment 3 is the non-proprietary version of this procedure. The following documents are also submitted with this letter:

- (1) One copy of the Application for Withholding Proprietary Information from Public Disclosure, Westinghouse letter CAW-91-158, Attachment 4,
- (2) One copy of the Copyright Notice, Attachment 5,
- (3) One copy of the Proprietary Information Notice, Attachment 6, and
- (4) One copy of the accompanying affidavit, Attachment 7.

As Attachment 1 contains information proprietary to Westinghouse Electric Corporation, it is supported by an affidavit signed by Westinghouse, the owner of the information. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.790 of the Commission's regulations.

Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR Section 2.790 of the Commission's regulations.

Correspondence with respect to the proprietary aspects of Application for Withholding or the supporting Westinghouse affidavit should reference CAW-91-158 and should be addressed to R. P. DiPiazza, Manager, Operating Plant Licensing Support, Westinghouse Electric Corporation, P.O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

If you have any questions regarding the attached information, please contact Mr. M. H. Holmes at (303) 480-6960.

Very truly yours,

A. Clegg Crawford
A. Clegg Crawford
Vice President
Nuclear Operations

Licensing Review By: *Duane L. Fyfe*

Date: *5-15-91*
Attachments provided by Westinghouse

ACC/SWC/lmb

Attachments

P-91138
Page 3
May 15, 1991

cc: Regional Administrator, Region IV

Mr. J. B. Baird
Senior Resident Inspector
Fort St. Vrain

Mr. Robert M. Quillin, Director
Radiation Control Division
Colorado Department of Health

ATTACHMENT 2

TO P-91138

SELECTED SYSTEM SURVEY LOCATIONS

SELECTED SYSTEM SURVEY LOCATIONS

SYSTEM 21: PRIMARY COOLING SYSTEM

<u>COMPONENT NUMBER</u>	<u>COMPONENT DESCRIPTION</u>
Either:	
F-2108	Coalescing Filter 1B
F-2109	Coalescing Filter 1A
Any of:	
A-2103X	Dryer Bed 1A
A-2105X	Dryer Bed 1B
A-2104X	Dryer Bed 1C
A-2106X	Dryer Bed 1D
Either:	
M-21844	Strainer
M-21845	Strainer
Any of:	
F-2101	Bearing Water Filter 1A
F-2101s	Bearing Water Filter 1B
F-2102	Bearing Water Filter 1C
F-2102s	Bearing Water Filter 1D
Any of:	
P-2101	Bearing Water Filter 1A
P-2101s	Bearing Water Filter 1B
P-2102	Bearing Water Filter 1C
P-2102s	Bearing Water Filter 1D
P-2106	Bearing Water Filter 1E
P-2107	Bearing Water Filter 1F
Either:	
T-2117	He Recovery Compress Knock Out Drum
T-2118	He Recovery Compress Knock Out Drum
Either:	
M-21819	Separator (H ₂ O sample, if possible)
M-21820	Separator (H ₂ O sample, if possible)
Either:	
T-2132	He Recovery Compress Loop II K/O Pot (H ₂ O sample, if possible)
T-2133	He Recovery Compress Loop I K/O Pot (H ₂ O sample, if possible)
Any of:	
T-2106	High Pressure Separator 1A
T-2107	High Pressure Separator 1B
T-2108	High Pressure Separator 1C
T-2109	High Pressure Separator 1D
Any of:	
M-21130	In-line Filter
M-21132	In-line Filter
M-21131	In-line Filter
M-21133	In-line Filter

SYSTEM 21 CONTINUED

COMPONENT NUMBER

COMPONENT DESCRIPTION

Each:

C-2104B	He Circulator-Historical
V-211799	PTM Helium Dryer (Sample of H ₂ O from V-21799 or V-211833)
V-211833	PTM Helium Dryer
C-2106	Buffer Helium Recirculator 1B

SYSTEM 22: SECONDARY COOLING SYSTEM

COMPONENT NUMBER

COMPONENT DESCRIPTION

Any of:

PCV-2289	Steam Dump Tank Vent
V-2279	
V-2280	

Any of:

V-22303
V-22172
V-22173

Any of:

M-2206	Filter
M-2207	Filter
M-2208	Filter
M-2209	Filter
M-2210	Filter
M-2211	Filter
M-2212	Filter
M-2213	Filter
M-2214	Filter
M-2215	Filter
M-2216	Filter
M-2217	Filter

Any of:

HV-2250	Circular 1C	Steam	Turbine	Trip
	Valve, Loop 2			
HV-2252	Circular 1D	Steam	Turbine	Trip
	Valve, Loop 2			
HV-2249	Circular 1A	Steam	Turbine	Trip
	Valve, Loop 1			
HV-2251	Circular 1B	Steam	Turbine	Trip
	Valve, Loop 1			

SYSTEM 23: HELIUM PURIFICATION SYSTEM

<u>COMPONENT NUMBER</u>	<u>COMPONENT DESCRIPTION</u>
Either:	
C-2301	Purified Helium Compressor 1A
C-2301s	Purified Helium Compressor 1B
Either:	
M-2318	Strainer
M-2322	Strainer
Either:	
A-2309	Hydrogen Getter Unit 1A (Sample, if possible)
A-2309s	Hydrogen Getter Unit 1B (Sample, if possible)

SYSTEM 24: HELIUM STORAGE SYSTEM

Coupling between trailer and V-24119

<u>COMPONENT NUMBER</u>	<u>COMPONENT DESCRIPTION</u>
Any of:	
V-2433	
V-2434	
T-2401	Helium Storage Tank (3 vessels)
V-2435	
V-2436	
Each:	
HV-2401	Purified Helium Pumpdown Line
V-24123	
M-2406	In-line Filter
HV-2403	Helium Supply Bypass
T-2403	Surge Tank
C-2401	Helium Transfer Compressor
A-2401	Oil Absorber
V-24106	(Oil catch tank)
V-2447	
T-2402	High Pressure Helium Supply Tank
V-2458	
V-2454	
V-2456	
M-24801	C-2401 Inlet Filter (Sample from, probably Minnie or Mickey)
M-24806	C-2403 Fifth Stage Water Separator (Sample from, probably Minnie or Mickey)
P-2401	Condensate Receiver Drain Pump (Sample from, probably Minnie or Mickey)

SYSTEM 24 CONTINUED

COMPONENT NUMBER

COMPONENT DESCRIPTION

Each:

V-24169

Condensate Receiver Drain Pump
Discharge Check Valve (Sample from,
probably Minnie or Mickey)

M-24810

C-2404 Inlet Filter (Sample from,
probably Minnie or Mickey)

M-24815

C-2404 Fifth Stage Water Separator
(Sample from, probably Minnie or
Mickey)

P-2403

Condensate Receiver Drain Pump
(Sample from, probably Minnie or
Mickey)

M-24193

Condensate Receiver Drain Pump
Discharge Check Valve (Sample from,
probably Minnie or Mickey)

SYSTEM 25: NITROGEN SYSTEM

COMPONENT NUMBER

COMPONENT DESCRIPTION

Any of:

PDV-2548

Moisture Monitor 1117 Cooling

PDV-2549

Moisture Monitor 1115 Cooling

PDV-2550

Moisture Monitor 1119 Cooling

PDV-2551

Moisture Monitor 1121 Cooling

PDV-2552

Moisture Monitor 1118 Cooling

PDV-2553

Moisture Monitor 1120 Cooling

PDV-2554

Moisture Monitor 1116 Cooling

PDV-2555

Moisture Monitor 1122 Cooling

Either:

HV-2502-1

Liquid Nitrogen Return From Absorber

HV-2504-1

Liquid Nitrogen Return From Absorber

SYSTEM 29: GAS CHARGING SYSTEM

COMPONENT NUMBER

COMPONENT DESCRIPTION

Either:

M-2962

Y Strainer (Sample for H₂)

M-2961

Y Strainer (Sample for H₂)

Each:

M-2907

Inlet Filter

SYSTEM 29 CONTINUED

<u>COMPONENT NUMBER</u>	<u>COMPONENT DESCRIPTION</u>
Each:	
M-2937	Inlet Filter
M-2902	High Pressure Hose

SYSTEM 31: FEEDWATER AND CONDENSATE

Ultra Filter System Under Condenser, 1 Vessel

<u>COMPONENT NUMBER</u>	<u>COMPONENT DESCRIPTION</u>
Any of (Resin sample from any):	
A-3307x	Condensate Demineralizer Vessel
A-3308x	Condensate Demineralizer Vessel
A-3308sx	Condensate Demineralizer Vessel
Each:	
V-31420	

SYSTEM 32: FEEDWATER HEATER VENTS AND DRAINS

Any filter, strainer, pump or valve available in the system.

SYSTEM 33: WATER TREATMENT

Any reverse osmosis filter, if available.
Sample of back flush may be adequate.

SYSTEM 41: CIRCULATING WATER SYSTEM

<u>COMPONENT NUMBER</u>	<u>COMPONENT DESCRIPTION</u>
Each:	
V-4119	
V-4118	
E-4101	Main Condenser (Inside Water Boxes)
E-4103	Main Cooling Tower

SYSTEM 42: SERVICE WATER SYSTEM

COMPONENT NUMBER

COMPONENT DESCRIPTION

Each:

V-42398

HV-4221-3

V-4291

Return to Service Water Cooling
Tower

SYSTEM 43: CHEMICAL INJECTION SYSTEM

Service Water Cooling Tower Basin

SYSTEM 44: DOMESTIC WATER SYSTEM

COMPONENT NUMBER

COMPONENT DESCRIPTION

Each:

V-44800 1 1/2

V-4416

SYSTEM 45: FIRE PROTECTION SYSTEM

Survey of 5 hose reels in Reactor Building:

2 on Level 10

2 on Level 1

1 on Level 7

COMPONENT NUMBER

COMPONENT DESCRIPTION

Either:

V-4536

V-45805

SYSTEM 46: REACTOR PLANT COOLING WATER SYSTEM

COMPONENT NUMBER

COMPONENT DESCRIPTION

Either:

P-4601

P4601s

Each:

T-4601

Loop 1 Pump

Loop 1 Pump

Surge Tank

SYSTEM 46 CONTINUED

COMPONENT NUMBER

COMPONENT DESCRIPTION

Cooling Water Return

Each:

V-46109	6" PCRV Discharge Isolation Valve
V-46368	3/4" Vent and Drain Valve for PCRV Bottom Head Header
V-4697	6" Core Support Discharge Isolation Valve
V-46365	3/4" Vent and Drain Valve for Core Support
V-46117	4" Top Penetration Discharge Isolation Valve
V-46369	3/4" Vent and Drain Valve for Top Penetration Discharge Isolation Header
V-46604	6" Top PCRV Barrel Cooling Discharge Isolation Valve
V-46372	3/4" Vent and Drain Valve for Top PCRV Barrel Cooling Header
V-4699	6" Bottom PCRV Barrel Discharge Isolation Valve
V-46425	3/4" Vent and Drain Valve for the Bottom PCRV Barrel Cooling Water
F-4601	Loop 1 Filter
A-4601	Loop 1 Demineralizer

SYSTEM 47: PURIFICATION COOLING WATER SYSTEM

COMPONENT NUMBER

COMPONENT DESCRIPTION

Each:

T-4702	Purification Cooling Water Expansion Tank
P-4702	Purification Cooling Water Pumps

Cooling Water Return

Each:

V-4731	Loop 2 Discharge
E-2302	Pressure Relief Valve

SYSTEM 48: ALTERNATE COOLING WATER SYSTEM

Survey of air intakes

COMPONENT NUMBER

COMPONENT DESCRIPTION

Either:

F-4802x

IACM Building Vent Filter

F-4801x

IACM Building Vent Filter

SYSTEM 51: TURBINE GENERATOR AND AUXILIARIES

Inside generator casting DR's and smears at 6 sites

SYSTEM 52: TURBINE STEAM

Dose rate and contamination HP Turbine Buckets/r.
Dose rate and contamination IP Turbine Buckets.

COMPONENT NUMBER

COMPONENT DESCRIPTION

Each:

K-5101

Turbine Generator

T-5201

Bypass Flash Tank

Either:

M-5206

Surge Tank

M-5207

Surge Tank

SYSTEM 53: EXTRACTION STEAM

Any component that is open.

SYSTEM 54: TURBINE LUBE OIL PURIFICATION

COMPONENT NUMBER

COMPONENT DESCRIPTION

Each:

F-5402

Turbine Lube Oil Bypass Filter

F-5401

Turbine Lube Oil Purifier

SYSTEM 55: TURBINE VENTS AND DRAINS

5 drain funnels in Turbine Building.

<u>COMPONENT NUMBER</u>	<u>COMPONENT DESCRIPTION</u>
M-5511	Steam Trap

SYSTEM 61: DECONTAMINATION SYSTEM

P-6101 replaced with M-6105.

<u>COMPONENT NUMBER</u>	<u>COMPONENT DESCRIPTION</u>
<u>Hot Side</u>	
Each:	
V-6111	
V-6158	
F-6101	Decontamination System Filter (Open)
T-6101	Decontamination Solution Tank (Dose rate exterior)
P-6102	Decontaminant Recycle Pump (Open)
M-6105	Strainer

<u>Clean Side</u>	
Each:	
V-6108	
V-6104	
V-6105	
V-6154	
V-6153	
V-82850	

SYSTEM 62: RADIOACTIVE LIQUID WASTE SYSTEM

Oil separator down stream of 62247

<u>COMPONENT NUMBER</u>	<u>COMPONENT DESCRIPTION</u>
Any of:	
F-6201	Liquid Waste Filter 1A (Open smears and sample of filter)
F-6201s	Liquid Waste Filter 1B (Open smears and sample of filter)

SYSTEM 62 CONTINUED

<u>COMPONENT NUMBER</u>	<u>COMPONENT DESCRIPTION</u>
Any of:	
T-6202	Liquid Waste Receiver 1A (Dose rates exterior, smear exterior)
T-6203	Liquid Waste Receiver 1B (Dose rates exterior, smear exterior)
T-6204	Liquid Waste Monitor Tank (Dose rates exterior, smear exterior)
Each:	
HV-62249	Air Operated Globe Valve
T-6201	Liquid Waste Sump (Dose rates on exterior)

SYSTEM 63: RADIOACTIVE GAS SYSTEM

<u>COMPONENT NUMBER</u>	<u>COMPONENT DESCRIPTION</u>
Either:	
F-6302	Core Support Floor Vent Filter 1A (Dose rate, smear sample of filter)
F-6302s	Core Support Vent Filter 1B (Dose Rate, smear sample of filter)
Either:	
F-6301	Gas Waste Filter 1A (Dose rate, smear sample of filter)
F-6301s	Gas Waste Filter 1B (Dose rate, smear sample of filter)
Either:	
C-6302	Gas Waste Exhaust Blower 1A (Smear)
C-6302s	Gas Waste Exhaust Blower 1B (Smear)
Either:	
V-6365	(Smear, H ₂ O sample?)
V-6366	(Smear, H ₂ O sample?)
Either:	
C-6301	Gas Waste Compressor 1A (Dose rate, smear on 1st stage)
C-6301s	Gas Waste Compressor 1B (Dose rate, smear on 1st stage)
Either:	
M-63800	Filter
M-63801	Filter

SYSTEM 72: REACTOR BUILDING DRAIN SYSTEM

<u>COMPONENT NUMBER</u>	<u>COMPONENT DESCRIPTION</u>
Either:	
F-7215	Filter
F-7215s	Filter
Either:	
F-7216	Filter
F-7216s	Filter
Either:	
F-7217	Filter
F-7217s	Filter
Each:	
P-7203	Reactor Sump Proportioning Pump
M-7270	55 Gallon Drum
HV-7204-2	Reactor Building Sump
V-72320	
T-7201	Trap Drain Tank
T-7202	Trap Drain Return Pump
T-72155	Filter

SYSTEM 73: REACTOR PLANT VENTILATION

<u>COMPONENT NUMBER</u>	<u>COMPONENT DESCRIPTION</u>
Either:	
C-7303	Instrument Room Exhaust Fan 1A
C-7303s	Instrument Room Exhaust Fan 1B
Either:	
C-7307	PCRV Piping Cavity Recirc. Fan 1A
C-7307s	PCRV Piping Cavity Recirc. Fan 1B
Either:	
F-7304x	PCRV Ventilation Air Recirculating Filter
F-7304sx	PCRV Ventilation Air Recirculating Filter
Either:	
F-7304s	Intake Filter
F-7304	Intake Filter
Any of:	
S-7306	Reactor Plant Water Chiller 1A
S-7307	Reactor Plant Water Chiller 1B
S-7307s	Reactor Plant Water Chiller 1C
Either:	
S-7321	Reactor Plant Water Chiller 1D
S-7321s	Reactor Plant Water Chiller 1E
Each:	
S-7316	PCRV Pipe Cavity Alt. Unit 1A
S-7317	PCRV Pipe Cavity Alt. Unit 1B

SYSTEM 73 CONTINUED

COMPONENT NUMBER

COMPONENT DESCRIPTION

Each:

S-7318	PCRV Pipe Cavity Alt. Unit 1C
S-7319	PCRV Pipe Cavity Alt. Unit 1D
S-7320	PCRV Ventilation Air Handling Unit 1C
S-7320s	PCRV Ventilation Air Handling Unit
C-7321	Bottom Head Supply Fan - East
C-7320	Bottom Head Supply Fan - West
F-7301	Reactor Plant Exhaust Filter 1A
F-7302	Reactor Plant Exhaust Filter 1B
F-7302s	Reactor Plant Exhaust Filter 1C
C-7309	Fuel Store Well Emergency Fan
C-7308	Reactor Plant Equipment Room Vent Fan
C-7306	Helium Storage Tank Room Vent Fan
Open Pipe	(Smears β (Beta), γ (Gamma), exhaust reactor building roof)

SYSTEM 75: TURBINE HVAC

COMPONENT NUMBER

COMPONENT DESCRIPTION

Each:

P-7501	Turbine Building Sump Pump 1A
P-7501s	Turbine Building Sump Pump 1B
S-7537	Control Room Water Chiller
S-7538	Service Building Water Chiller

Either:

F-7507	HVAC Filter - Upper Turbine Building Vent
F-7508	HVAC Filter - Lower Turbine Building Vent

Each:

V-75553	
V-75552	
V-75554	
C-7513	Service Building Toilet and Locker Room Exhaust Fan

SYSTEM 79: RC LAB VENTILATION

COMPONENT NUMBER

COMPONENT DESCRIPTION

Each:

F-7902	Radio Chemical Lab Hood Exhaust Filter (DR, smears, samples)
F-7903	Radio Chemical Lab Hood Exhaust Filter
C-7903	Radio Chemical Lab Exhaust Fan (Smears/DR)

SYSTEM 82: INSTRUMENT AND SERVICE AIR SYSTEM

COMPONENT NUMBER

COMPONENT DESCRIPTION

Any of:

M-82808	Filter (Survey and sample)
M-82809	Filter (Survey and sample)
M-82810	Filter (Survey and sample)
M-82811	Filter (Survey and sample)
M-82812	Filter (Survey and sample)
M-82813	Filter (Survey and sample)
M-82814	Filter (Survey and sample)
M-82815	Filter (Survey and sample)

Each:

V-8212	Survey
V-8220	
V-82878	
V-82879	
V-82293	

SYSTEM 84: AUXILIARY BOILER AND HEATING SYSTEM

Any available boiler water supply valve, pump, etc.

SYSTEM 91: HYDRAULIC OIL SYSTEM

<u>COMPONENT NUMBER</u>	<u>COMPONENT DESCRIPTION</u>
Any of:	
F-9101x	High Pressure Oil Filter 1A (Filter sample, oil sample, dose rate, smears)
F-9101sx	High Pressure Oil Filter 1B (Filter sample, oil sample, dose rate, smears)
F-9102x	High Pressure Oil Filter 1A (Filter sample, oil sample, dose rate, smears)
F-9102sx	High Pressure Oil Filter 1B (Filter sample, oil sample, dose rate, smears)
Each:	
F-9105x	Strainer (Filter sample, oil sample, dose rate, smears)
F-9106x	Strainer (Filter sample, oil sample, dose rate, smears)

SYSTEM 93: CONTROLS AND INSTRUMENTATION SYSTEM

Filter media in sample sink.