JOB PERFORMANCE MEASURE SETUP SHEET

System:	Administrative		
Time Critical:	No	Applicability:	RO
Administrative Topic:	Conduct of Operations	Validated Time:	13 Minutes
Setting:	Classroom/Simulator		
References:	PDB-I0002 Rev 8, PDB-I0003 Rev 17, PDB-I0018 Rev 3, & SOI-E31 Rev 8		
Required Material:	PDB-I0002 - Transmitter To Trip Unit Cross Reference, PDB-I0003 - Trip Unit To Technical Specification Cross Reference PDB-I0018 - E31 Trip Instructions SOI-E31 - Leak Detection System		
Task:	035-519-04-01 Place a NUMAC Temperature Monitoring Channel in the Tripped/Untripped Condition 299-753-03-01 Determine Affected Trip Units or Indicators Associated with a Transmitter		
Task Standard:	Determine required actions for placing 1E31-N700A A2-3 in trip and determine components affected by placing unit in trip.		
K/A:	2.1.7 Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation. Importance: RO 4.4 / SRO 4.7		

1. Setup Instructions: If done in simulator, insert Malfunction pt01_1e31n0034a to “0”.

2. Location / Method: Classroom/ Simulator / Admin Performance

3. Initial Condition: I&C personnel have reported that transmitter 1E31-N034A has failed low. The Unit Supervisor has determined that Tech Spec 3.3.6.1 Condition A is not met and the Required Action to place the channel in trip must be performed.

4. Initiating Cue: Unit Supervisor directs you the Reactor Operator to determine the method for placing the instrument in trip to meet Technical Specification 3.3.6.1 Condition A and determine what components will isolate when channel is tripped.

Start: _____ **Stop:** _____

Candidate: _____

JPM BODY SHEET

Standard: Performer obtains or simulates obtaining all materials, procedures, tools, keys, radios, etc… before performing task.

Standard: Performer follows management expectations with regards to safety and communication standards.

Step 1

PDB-I0002 - Transmitter to Trip Unit Cross Reference
Or
PDB-I0003 - Trip Unit to Technical Specification Cross Reference
Or
PDB-I0018 - Instrument Failure Response Manual Trip Instructions

Operator refers to one or more of the above PDB's to determine that the correct trip unit is NUMAC 1E31-N700A (A2-3)

Critical Step:	Operator determines that the correct trip unit is NUMAC 1E31-N700A (A2-3).
Instructor Cue:	None
Notes:	Operator may also refer to a drawing to ascertain the correct trip unit.

SAT ___ UNSAT ___

Comment(s): _____

Step 2

PDB-I0018 - Instrument Failure Response Manual Trip Instructions

Place TRIP UNIT in trip condition:

1) Place 1E31-N700A in INOP.
2) Press ETC to select menu layer containing MANUAL TRIP.
3) Press MANUAL TRIP.
4) Select Module/Input A2-3.
5) Press TRIP.
6) Press EXIT.
7) Place 1E31-N700A in OPER.

Critical Step:	Operator determines the required actions to place channel in trip from PDB-I0018 page 65 or SOI-E31 - Leak Detection System, Section 7.4.
Instructor Cue:	None
Notes:	PDB-I0018 and SOI-E31, Section 7.4 contain the same information. However, the PDB is specific for this input module and the SOI is not specific.

SAT ___ UNSAT ___

Comment(s): _____

Step 3

PDB-I0018 - Instrument Failure Response Manual Trip Instructions

1) De-energizes E31-N702A-K12
   a) Closes G33F039, G33F004
   b) Closes G33F034, G33F054

Critical Step:	Operator determines Division 1 RWCU isolation valves, 1G33-F004, 1G33-F034, 1G33-F039, and 1G33-F054 will close.
Instructor Cue:	None
Notes:	Terminate the JPM

SAT ___ UNSAT ___

Comment(s): _____

Terminating Cue: Candidate has determined required actions for placing 1E31-N700A (A2-3) in trip and has identified components affected by placing unit in trip.

Evaluation Results: SAT_____ UNSAT_____

End Time: _____

JPM CUE SHEET

INITIAL CONDITIONS:	• I&C personnel have reported that transmitter 1E31-N034A has failed low. • The Unit Supervisor has determined that Tech Spec 3.3.6.1 Condition A is not met and the Required Action to place the channel in trip must be performed.
INITIATING CUE:	• Unit Supervisor directs you the Reactor Operator to determine the method for placing the instrument in trip to meet Technical Specification 3.3.6.1 Condition A and; • Determine what components will isolate when channel is tripped.

JOB PERFORMANCE MEASURE SETUP SHEET

System:	Administrative
Time Critical:	No
Alternate Path:	No
Applicability:	RO/SRO
Admin Topic:	Conduct of Operations
Validated Time:	20 Minutes
References:	ONI-E12-2 Rev. 40, PDB-A019 Rev. 8, PDB-A017 Rev. 11, & PDB-A016 Rev. 16
Required Material:	ONI-E12-2, Loss of Decay Heat Removal PDB-A019, Time to Core Uncovery Curves PDB-A017, Pool Heatup Curves PDB-A016, Decay Heat Curve
Task:	299-827-01-01 Demonstrate the Use of PDB Entries in Tabs A, B, C, D, E, F, G, H, and T
Task Standard:	Determine Time to Boil and Time to Core Uncovery.
K/A:	2.1.25 Ability to interpret reference materials, such as graphs, curves, tables, etc. Importance: RO 3.9 SRO 4.2

1. Setup: Provide color copies of PDB-A016, A017, & A019 and ONI-E12-2 and a ruler.

2. Location / Method: Class Room / Administrative performance.

3. Initial Condition: It is day 20 of Refueling Outage 16. Reactor vessel reassembly is in progress after refueling was completed. Current Reactor level is being maintained near the vessel flange for setting the vessel head. RHR B Loop is in Shutdown Cooling maintaining water temperature at 90 °F. The backup decay heat removal system became unavailable. No alternate decay heat removal systems are in service or currently available.

4. Initiating Cue: The Shift Manager directs you to perform the following in the event of a loss of Shutdown Cooling.:
   1) Calculate Time to Boil per ONI-E12-2 Loss OF Decay Heat Removal Step 4.6.7.
   2) Determine Time to Core Uncovery.

Start: _____ **Stop:** _____

Candidate: _____

JPM BODY SHEET

Standard: Performer obtains or simulates obtaining all materials, procedures, tools, keys, radios, etc… before performing task.

Standard: Performer follows management expectations with regards to safety and communication standards.

Step 1

ONI-E12-2, Loss of Decay Heat Removal

4.0 SUPPLEMENTAL ACTIONS

4.6 IF a loss of reactor decay heat removal has occurred, THEN PERFORM the following:

4.6.7 IF in MODE 5 or At All Times, THEN REFER TO the Perry Work Implementation Schedule (PWIS) OR PDB-A0017 and DETERMINE estimated time to boil.

Standard: Obtains and reviews PDB-A0017.

Instructor Cue: If asked, the PWIS is not available.

Notes: When Candidate identifies the correct PDB, provide him with a copy.

SAT ___ UNSAT ___

Comment(s): _____

Step 2

Determine PDB-A0016 and PDB-A0019 are also needed.

Standard: Determines that PDB-A0016 and PDB-A0019 are also needed.

Instructor Cue: None

Notes: When Candidate identifies the correct PDB's, provide him with a copy.

SAT ___ UNSAT ___

Comment(s): _____

Step 3

Determine Time to Boil.

Critical Step:	Using PDB-A016 p 6 and PDB-A017 p 9 Candidate determines Time To Boil is 7.25 hours.
Instructor Cue:	None
Notes:	Candidate should determine approximately 17.0 Mlbm/hr using PDB-A016 Because of graph readability, 7.0 to 7.5 hours is acceptable.

SAT ___ UNSAT ___

Comment(s): _____

Step 4

Determine Time To Core Uncovery.

Critical Step:	Using PDB-A016 p 6 and PDB-A019 p 9 Candidate determines Time To Core Uncovery is approximately 38 hours.
Instructor Cue:	None
Notes:	Due to readability of the graph, 37-39 hours is acceptable.

SAT ___ UNSAT ___

Comment(s): _____

Terminating Cue: Determines Time to Boil and Time to Core Uncovery.

Evaluation Results: **SAT_____ UNSAT_____**

End Time _____

JPM CUE SHEET

INITIAL CONDITIONS:	• It is day 20 of Refueling Outage 16. • Reactor vessel reassembly is in progress after refueling was completed. • Current Reactor level is being maintained near the vessel flange for setting the vessel head. • RHR B Loop is in Shutdown Cooling maintaining water temperature at 90 °F. • The backup decay heat removal system became unavailable. • No alternate decay heat removal systems are in service or currently available.
INITIATING CUE:	The Shift Manager directs you to perform the following in the event of a loss of Shutdown Cooling.: 1) Calculate Time to Boil per ONI-E12-2 Loss OF Decay Heat Removal Step 4.6.7. 2) Determine Time to Core Uncovery.

JOB PERFORMANCE MEASURE SETUP SHEET

System:	Administrative
Time Critical:	No
Alternate Path:	No
Applicability:	RO/SRO
Admin Topic:	Equipment Control
Validated Time:	15 Minutes
References:	DWG 302-243 Rev. HH & DWG 302-081 Rev. NNN
Required Material:	DWG 302-243, Instrument Air
Task:	398-502-01-05 Interpret System Piping, Physical Layout, and Electrical Drawings (Ability to use drawings to generate tagouts, MFI/LLJ's.)
Task Standard:	Determine isolation boundary for Instrument Air leak.
K/A:	2.2.41 - Ability to obtain and interpret station electrical and mechanical drawings. Importance RO 3.5 SRO 3.9

1. Setup: Provide package of support drawings and have ONI-P52 available upon request.

2. Location / Method: Class Room / Administrative performance.

3. Initial Condition: The Turbine Tour rounds taker reports an Instrument Air leak on the line going in to 1N27-F305, RFBP RCIRC VALVE.

4. Initiating Cue: The Unit Supervisor directs you, a Reactor Operator, to identify the minimum isolation boundary to stop the leak on 1N27-F305 without affecting other components.

Start: _____ **Stop:** _____

Candidate: _____

JPM BODY SHEET

Standard: Performer obtains or simulates obtaining all materials, procedures, tools, keys, radios, etc… before performing task.

Standard: Performer follows management expectations with regards to safety and communication standards.

Step 1

Evaluate Leak Isolation, Drawing 302-243, Instrument Air.

Critical Step: Candidate reviews 302-243 and determines that Instrument Air valve P52-F1405 must be closed.

Instructor Cue: None

Notes: JPM Steps 1 & 2 can be performed in any order.

SAT ___ UNSAT ___

Comment(s): _____

Step 2

Evaluate Leak Isolation, Drawing 302-243, Instrument Air.

Critical Step: Candidate reviews 302-243 and determines that either or both of the following Instrument Air valves must be closed:

P52-F1404
P52-F1403

Instructor Cue: None

Notes: JPM Steps 1 & 2 can be performed in any order.

SAT ___ UNSAT ___

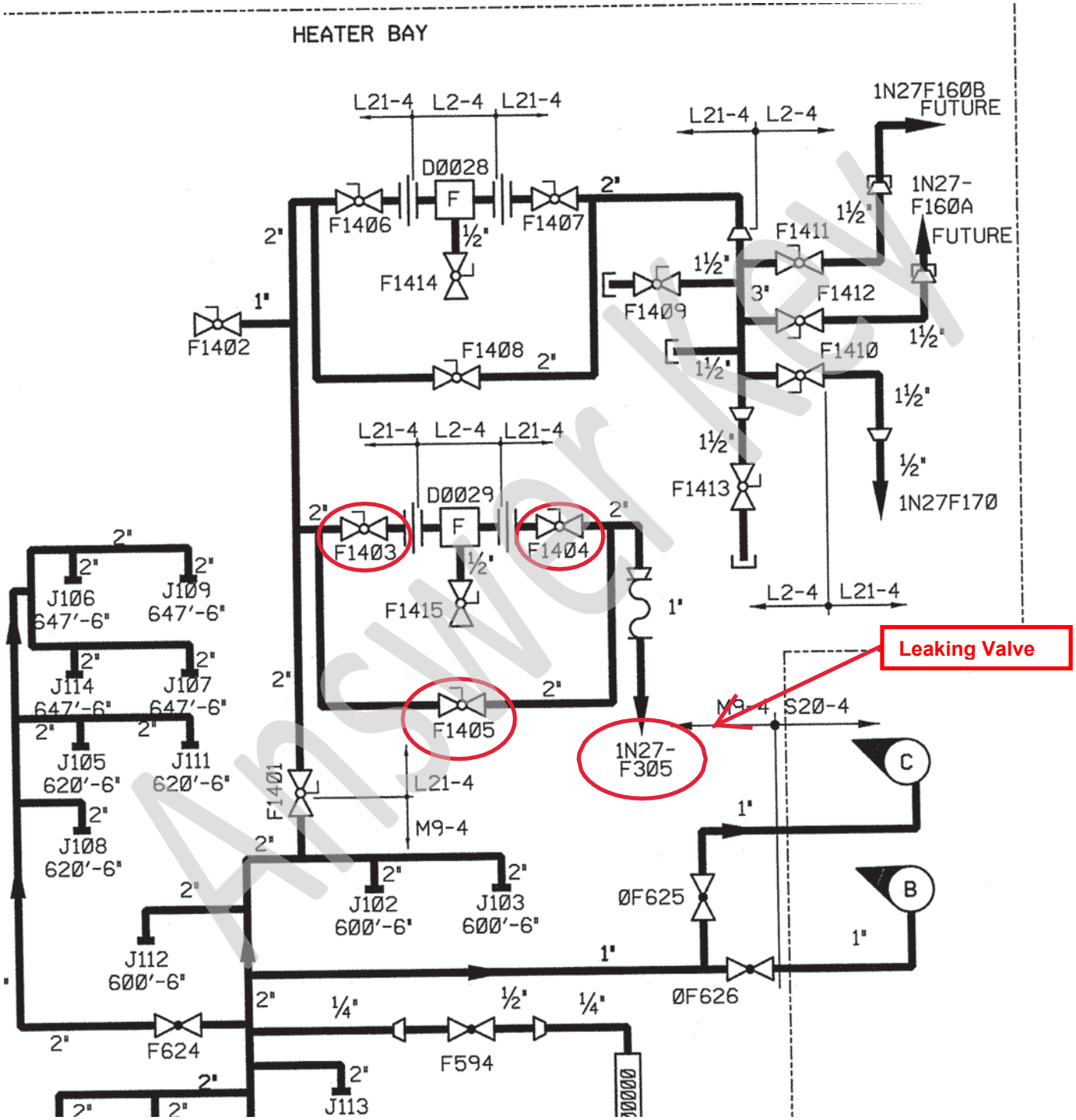
Comment(s): _____

Terminating Cue: Determines Instrument Air valves P52-F1405 and either P52-F1404 or P52-F1403 must be closed to isolate air to 1N27-F305.

Evaluation Results: **SAT_____** **UNSAT_____**

End Time _____

Drawing 302-043 (partial_



JPM CUE SHEET

INITIAL CONDITIONS:	The Turbine Tour rounds taker reports an Instrument Air leak on the line going in to 1N27-F305, RFBP RCIRC VALVE.
INITIATING CUE:	The Unit Supervisor directs you, a Reactor Operator, to identify the minimum isolation boundary to stop the leak on 1N27-F305 without affecting other components.

JOB PERFORMANCE MEASURE SETUP SHEET

System:	Administrative
Time Critical:	No
Alternate Path:	No
Applicability:	RO/ SRO
Safety Function:	Radiation Control
Validated Time:	14 Minutes
References:	Dwg 304-625 Rev J VSDS IB-599 Survey Map
Required Material:	IB-599 Survey Map, Calculator
Task:	299-502-03-01 Maintain Radiation Exposure as Low as Reasonably Achievable (ALARA) 299-848-01-01 Comply with the Administrative Requirements for the Perry Plant Radiation Dose Control Program
Task Standard:	Determine radiological conditions and calculate dose.
K/A:	2.3.7 Ability to comply with radiation work permit requirements during normal or abnormal conditions. Importance: RO 3.5 SRO 3.6

1. Simulator Setup: N/A

2. Location / Method: Class Room / Administrative performance.

3. Initial Condition: While investigating a leak in the FPCC Heat Exchanger Room, an NLO became incapacitated against the east wall near the "A" HX. He is unable to move. Another NLO was unable to move him but stated that he is directly below the P42-F440 valve. The NLO has suffered unknown injuries. You and a Fire Brigade member will stabilize and rescue the NLO.

4. Initiating Cue: Review the survey map for the FPCC HX Room and determine the following using the most direct route to get to the injured person:
   1. What is the highest contamination level?
   2. What is the highest contact radiation level?
   3. What is the highest general area dose rate level?
   4 What is the estimated dose if it takes you 8 minutes to stabilize and prepare to remove the NLO? (Disregard dose for traveling to and from door to the NLO.)

Start: _____ **Stop:** _____

Candidate: _____

JPM BODY SHEET

Standard: Performer obtains or simulates obtaining all materials, procedures, tools, keys, radios, etc… before performing task.

Standard: Performer follows management expectations with regards to safety and communication standards.

Step 1

Determine the highest contamination level on travel route.

Critical Step: Determines the highest contamination level is 2000 DPM/100 cm^2 at smear location 2.

Instructor Cue: None

Notes: None

SAT ___ UNSAT ___

Comment(s): _____

Step 2

Determine the highest contact radiation level.

Critical Step: Determines the highest contact radiation level is 80 mr/hr at DR-7.

Instructor Cue: None

Notes: The contact dose readings are lower than the 30 cm readings due to the 30 cm reading being taken closer to the HX.

SAT ___ UNSAT ___

Comment(s): _____

Step 3

Determine the highest general area dose rate level.

Critical Step:	Determines the highest general area dose rate level is 350 mr/hr at DR-5.
Instructor Cue:	None
Notes:	None

SAT ___ UNSAT ___

Comment(s): _____

Step 4

Determine the estimated dose to stabilize and prepare to remove the incapacitated NLO.

Critical Step:	Calculates the dose to stabilize and prepare to remove NLO.
Instructor Cue:	None
Notes:	Dose 30 cm from P42-F440 is 100 mr/hr @ 8 min = 13.3 mr each. (13 to 14 mr is acceptable) (If Candidate calculates dose for himself and the Fire Brigade Member, 26 to 28 mr is acceptable)

SAT ___ UNSAT ___

Comment(s): _____

Terminating Cue: Determines highest contamination level, contact dose rate, general area dose, and dose received.

Evaluation Results: **SAT_____ UNSAT_____**

End Time _____

JPM CUE SHEET

INITIAL CONDITIONS:	• While investigating a leak in the FPCC Heat Exchanger Room, an NLO became incapacitated against the east wall near the "A" HX. • He is unable to move. • Another NLO was unable to move him but stated that he is directly below the P42-F440 valve. • The NLO has suffered unknown injuries. • You and a Fire Brigade member will stabilize and rescue the NLO.
INITIATING CUE:	Review the survey map for the FPCC HX Room and determine the following <u>using the most direct route</u> to get to the injured person: 1. What is the highest contamination level? 2. What is the highest contact radiation level? 3. What is the highest general area dose rate level? 4 What is the estimated dose if it takes you 8 minutes to stabilize and prepare to remove the NLO? (Disregard dose for traveling to and from door to the NLO.)

VSDS Standard Map Survey Report

Survey PY-M-20120905-4

General Information

Title: Pre RWP

Survey Date/Time: 9/5/2012 12:42
Survey Type: Other - Composite Survey
Counted By: G Augustyniak 9/5/2012 12:43
RWP #: N/A
Status: Approved by: Joe Spahr, 9/5/2012 14:54:37
Ready for Review by: Greg Augustyniak, 9/5/2012 00:00:00

Lead Surveyor: Greg Augustyniak
Work Order/Task #:
Rx % Pwr: 100%
SAP/Contract ID: 17669
SAP/Contract ID: 17460
SAP/Contract ID: 17669

Dose Rate (DR) Object Prefixes/Suffixes

Dose Rates with Prefixes:
' = Contact
+ = 30cm

Dose Rates with No Prefixes:
Gen Area

Default Prefixes:
HS = Hot Spot

Default Suffixes:
"n" = Neutron
"b" = Beta
"c" = Corrected

Postings Legend

CA=Contaminated Area

LHRA=Locked High Radiation Area

Map Location

File Name	Image Description	Location Code	Bldg/Area Name	Location Description
IB\I59910	I59910 - FPCC Heat Exchanger Ro	Intermediate Building	IB599	FPCC Heat Exchanger Rc

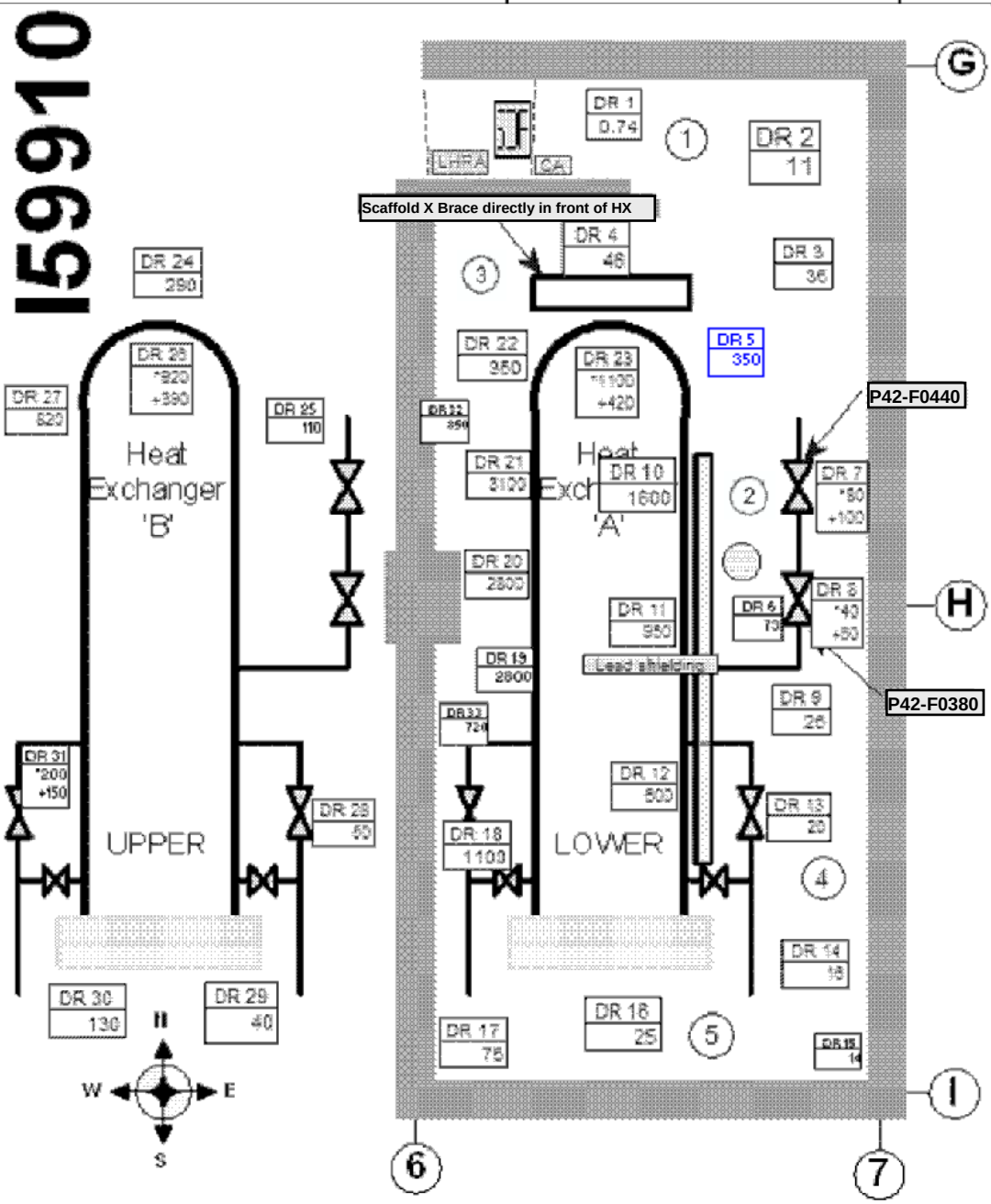
Instruments Used

#	Instrument Model	Instrument Serial #	Calibration Date/Time
1	TELEPOLE	072T	7/24/2012
2	TELEPOLE	072R	7/24/2012
3	RM-25	021T	4/11/2012

VSDS Standard Map Survey Report

I59910 - FPCC Heat Exchanger Room	Survey #: PY-M-20120905-4	Date/Time: 9/5/2012 12:42

Handout - page 2 of 3



Comments: Composite survey using historical surveys PY-M-20110718-5, 1000701, 1003172

Summary of Highest Readings
(All available values may not be listed)

Smears	Air Samples & Wipes
3) 5000 DPM/100 cm2 β/γ	

Type: Other - Composite Survey

Symbol Legend (for example only)

Dose Rate
*150 Contact Reading
+ 75 30 cm Reading
20 General Area
HS-50 Hot Spot
RCA Posting
Drip Bag
15 Smear 15 Air Sample RM 15 Wipe

RWP #: N/A
Reactor Power = 100%

Unless otherwise noted, dose rates in mrem/hr.

Lead Surveyor: Greg Augustyniak	Status: Approved by: Joe Spahr, 9/5/2012 14:54:37
Location Code: Intermediate Building	Bldg/Area Name: IB599
Location Description: FPCC Heat Exchanger Room	

Image File: IB\I59910

VSDS Standard Map Survey Report

Data Point Details

Survey #: PY-M-20120905-4

Map: IB\I59910

#	Type	Inst.	Value	Units	Position	Notes
1	DR γ	N/A	0.74	mrem/hr		
2	DR γ	N/A	11	mrem/hr		
3	DR γ	N/A	35	mrem/hr		
4	DR γ	N/A	46	mrem/hr		
5	DR γ	N/A	350	mrem/hr		
6	DR γ	N/A	73	mrem/hr		
7	DR γ	N/A	* 80	mrem/hr		
		N/A	+ 100	mrem/hr		
8	DR γ	N/A	* 40	mrem/hr		
		N/A	+ 60	mrem/hr		
9	DR γ	N/A	26	mrem/hr		
10	DR γ	N/A	1600	mrem/hr	Behind lead wall, Between HX	
11	DR γ	N/A	950	mrem/hr	Behind lead wall, Between HX	
12	DR γ	N/A	600	mrem/hr	Behind lead wall,Between HX	
13	DR γ	N/A	20	mrem/hr		
14	DR γ	N/A	16	mrem/hr		
15	DR γ	N/A	14	mrem/hr		
16	DR γ	N/A	25	mrem/hr		
17	DR γ	N/A	75	mrem/hr		
18	DR γ	N/A	1100	mrem/hr	1' from HX	
19	DR γ	N/A	2800	mrem/hr	1' From HX	
20	DR γ	N/A	2800	mrem/hr	1' from HX	
21	DR γ	N/A	3100	mrem/hr	1'from HX	
22	DR γ	N/A	350	mrem/hr		
23	DR γ	N/A	* 1100	mrem/hr		
		N/A	+ 420	mrem/hr		
24	DR γ	N/A	290	mrem/hr	Scaffold	
25	DR γ	N/A	110	mrem/hr		
26	DR γ	N/A	* 920	mrem/hr		
		N/A	+ 390	mrem/hr		
27	DR γ	N/A	820	mrem/hr		
28	DR γ	N/A	50	mrem/hr		
29	DR γ	N/A	40	mrem/hr	Scaffold	
30	DR γ	N/A	130	mrem/hr	Scaffold	
31	DR γ	N/A	* 200	mrem/hr		
		N/A	+ 150	mrem/hr		
32	DR γ	N/A	850	mrem/hr	1' from wall	
33	DR γ	N/A	720	mrem/hr	1' from wall	
1	Smear	N/A	β/γ 1000	DPM/100 cm2	Floor	
2	Smear	N/A	β/γ 2000	DPM/100 cm2	Floor	
3	Smear	N/A	β/γ 5000	DPM/100 cm2	Floor	
4	Smear	N/A	β/γ 3000	DPM/100 cm2	Floor	
5	Smear	N/A	β/γ 2000	DPM/100 cm2	Floor	
	Text		Lead shielding			
	Posting		LHRA			
	Posting		CA			

Image File: IB\I59910