ATTACHMENT 7
Time Validation – Performance of SBO and Starting of Division 2 Diesel Generator

Time Validation of Performance of Station Black Out and Starting of Division 2 Diesel Generator

Equipment Operator: Paul Saunders

Evaluator/Time Validator: Kevin C. Kalmer

Date Performed: May 21, 2018

Initial Conditions: Equipment Operator (EO) simulated being either C-area or Safe Shutdown Qualified (SSQ) located at the Radiation Protection Desk receiving brief.

TIME	ACTIVITY
12:49:00	Lights go dark, receives call from Reactor Operator (RO) to go to the Division 2 DG room
12:49:37	Arrives in the Division 2 DG room
12:50:19	Reports to RO and pull the Annunciator Alarm book the following alarm, FAILURE TO START ALARM 5285-3D
12:50:32	EO communicates with the RO the list of possible causes and status: 1) Low starting air pressure – Reports no Alarm currently in for Low Starting Air Pressure 2) Lockout Relay Not Reset – Reports Lockout relay is tripped as listed in the Auto Actions 3) Overspeed trip handle not reset – Reports the Overspeed trip handles are in the reset position 4) Safety shutdown circuits not reset – Reports not reset 5) Engine Maintenance switch in LOCKOUT position – Reports to RO currently in the Operate position and not in the LOCKOUT POSITION
12:52:57	EO communicates with the RO the OPERATOR ACTIONS 1) EO communication "Verify DG 1B is ready to start per CPS 3506.01, Diesel Generator and Support Systems (DG). I need a 3506.01 procedure." RO communication "Is that all it states?" EO communication "No, states if 4160V Bus 1B1 is deenergized after DG 1B failure to start refer to CPS 3501.01. Also, says if required, proceed to CPS 4200.01, Loss of AC Power. RO communication "Ok, you need CPS 3506.01 procedure to ensure the Div 2 DG is ready to start" EO communication "That is correct, do you want me to come up stairs and get the procedure?"

RO communication "No, we will send someone down with 3506.01 and looking at 3506.01 right now, the ready to start means the Diesel is in standby. We will be sending down a copy of 3506.01 and 3506.01P002.
EO communication "Sending down 3506.01 and 3506.01P002"
RO communication "That is correct"

2) EO walks around the Division 2 Diesel Generator looking for anything obvious, oil, something broken off, etc.

12:55:31 EO communicates to RO "1DG160 and 1DG161, air receiver outlet valves are shut, these should be open"

RO communicates to EO "1DG160 and 1DG161 are shut"

EO communicates to RO "That is correct"

12:57:41 EO communicates to RO "I don't really see any except the air receiver outlet valves shut"

RO communicates "Didn't find any except the air receiver outlet valves shut"

EO communicates "That's correct"

RO communicates "OK. Is the 3506.01 and 3506.01P002 there yet?"

EO communicates "No not yet"

12:59:40 Receives CPS 3506.01 and CPS 3506.01P002.

EO communicates "I have 3506.01 and 3506.01P002 now"

RO communicates "You have 3506.01 and 3506.01P002"

EO communicates "That is correct, do you want me to just do the air system?"

RO communicates "No, do the whole 3506.01P002"

EO communicates "Perform all of 3506.01P002"

RO communicates "that is correct"

13:01:18 Commence 3506.01P002 Section 2.1

13:09:37 EO Places in Maintenance Switch in LOCKOUT per step 2.1.8.1

13:16:14 Completes Section 2.1

13:16:35 Starts Section 2.2

13:18:10	Opens 1DG160, Air Receiver A outlet per 2.2.6.1
13:18:39	Opens 1DG161, Air Receiver B outlet per 2.2.6.2
13:20:02	Completes Section 2.2
13:20:03	Starts Section 2.3
13:21:18	Completes Section 2.3
13:21:30	Starts Section 2.4
13:22:41	EO communicates to RO "step 2.4.4 states to place the control switch for the Fuel Oil Transfer Pump, 1DO01PB, in Auto-After-Stop"
	RO communicates to EO "Division 2 DG fuel oil transfer pump is in the AUTO-AFTER-STOP position"
	EO communicates to RO "the Division 2 DG fuel oil transfer pump is in the AUTO-AFTER-STOP position"
	RO communicates: "that is correct"
13:25:17	Completes section 2.4
13:25:19	Starts Section 2.5
	EO communicates to the RO "Verify Div 2 ECCS Initiation logic reset"
	RO communicates to the EO "I understand you are on section 2.5, Section 2.5.1.1 and 2.5.2 is complete"
	EO communicates to RO "Section 2.5.1.1 and 2.5.2 are complete"
	RO communicates to EO "That is correct"
13:26:51	EO performs Emergency Stop of Division 2 DG per 2.5.4
	EO communicates to RO "Placing the Division 2 DG to OPERATE"
	RO communicates to EO "Placing the Division 2 DG to OPERATE"
	EO communicates to RO "That is correct"
13:27:17	Places the Division 2 DG Maintenance Switch to OPERATE per 2.5.5
13:28:29	Completes step 2.5.6, Reset of Lockout Relay
13:29:05	Completes Section 2.5.6