Title: WATTS BAR NUCLEAR PLANT

SUBMISSION OF INCOMPLETE AND INACCURATE INFORMATION BY SITE MANAGEMENT REGARDING WATTS BAR UNIT 1 START-UP EVENT AND VIOLATIONS OF PLANT PROCEDURES BY LICENSEE EMPLOYEES

Licensee:

Tennessee Valley Authority
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Spring City, TN 37381

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SYNOPSIS

This investigation was initiated by the U.S. Nuclear Regulatory Commission (NRC), Office of Investigations (OI), Region II (RII), on August 15, 2016, to determine whether TVA employees deliberately violated the following NRC regulations at Watts Bar Nuclear Plant, Unit 1 (WBN1):

Allegation No. 1

Watts Bar senior managers deliberately took actions which placed Watts Bar senior managers either directly or through the Outage Control Center, as the de facto directors of the licensed activities of the control room operators. This represents a violation of 10 CFR 55.3 which requires that a person must be authorized by a license issued by the Commission to perform the function of an operator or a senior operator which includes directing the licensed activities of licensed operators.

Allegation No. 2

During the Unit 1 start-up from 1RFO13 on October 20,2015, the Standby Main Feed-water Pump was used to feed the S/Gs in order to perform a valve PMT in parallel with unit start-up even after the plant was taken into Mode 2.

Allegation No. 3

Failure to follow the NPG-SPP-1.2, Administration of Site Technical Procedures when making a change to WBN1, 1-GO-1 Start-Up from Cold Shutdown to Hot Standby (drawing the bubble) by the (b)(7)(C) on November 9, 2015.

Allegation No. 4

Watts Bar failed to follow Plant Operating Procedure 1-GO-1 when Unit 1 was transitioned from Mode 5 to Mode 4 without normal let-down in service and continued with 1-GO-1 start-up activities on November 11, 2015.

Allegation No. 5

Submission of incomplete and inaccurate information by TVA Managers on December 14, 2015, to (b)(7)(C) regarding the details surrounding the WBN1 start-up on November 11, 2015.

Allegation No. 6

Submission of incomplete and inaccurate information by TVA Managers to the NRC in response to NRC questions concerning the November 11, 2015 RHR event as documented in Shift Order 15-50 and presented to the NRC during a site visit on January 6, 2016.

Allegation No. 7

Submission of incomplete and inaccurate information by TVA Managers to OI during interviews on December 18, 2015.

Allegation No. 8

Submission of incomplete and inaccurate information by TVA Managers in a Level 2 evaluation associated with Condition Report (CR) 1121520 on January 20, 2016.

Allegation No. 9:

Submission of incomplete and inaccurate information by TVA Managers to the NRC during the February 2, 2016 meeting with the NRC.

Allegation No. 10

Submission of incomplete and inaccurate information by a Senior TVA Executive to the NRC as documented in the March 23, 2016, Special Review Team Report.

Allegation No. 11

Submission of incomplete and inaccurate information by Senior TVA Executives to NRC Senior Executives on March 13, and 15, 2016.

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DETAILS OF INVESTIGATION

Applicable Regulations

10 CFR 50.5: Deliberate Misconduct (2015 and 2016 Editions)
10 CFR 50.7: Employee Protection
10 CFR 50.9: Completeness and Accuracy of Information
10 CFR 50: Appendix B, Criterion V and Criterion VI
10 CFR 55.3: License requirements
18 USC 1001: False Statements
18 USC 371: Conspiracy to Defraud the Nuclear Regulatory Commission
18 USC 1505: Obstruction of Federal Agency Proceedings
18 USC 1519: Destruction, alteration, or falsification of records in Federal investigations
42 USC 2273: (Atomic Energy Act): Unlicensed Operation of a Nuclear Facility

Purpose of Investigation

This investigation was initiated by the U.S. Nuclear Regulatory Commission (NRC), Office of Investigations (OI), Region II (RII), on August 15, 2016, following contact by Assistant United States Attorney (AUSA) (b)(7)(C), United States Attorney's Office (USAO) for the Eastern District of Tennessee, who had requested that OI provide investigative expertise to an on-going criminal investigation relative to TVA personnel at WBN. The AUSA also requested OI to arrange and coordinate NRC technical assistance in support of the investigation. During the course of the investigation, OI obtained information from the USAO related to the potential NRC violations. The information was reviewed by (b)(7)(C), NRC RII, who confirmed that the information did not represent an immediate security or safety concern. Additionally, the USAO expressed a commitment that future information collected during the course of this investigation would be reviewed by the NRC. Specifically, this investigation was initiated to determine whether TVA managers and employees deliberately provided incomplete and inaccurate information to the NRC regarding WBN1 heat-up event on November 11, 2015, (Shift Order, RII-2016-A-0134). During the investigation, OI identified additional potential violations associated with previously closed allegations as outlined under (RII-2015-A-0220, and RII-2015-0214) which were incorporated into this investigation. In particular, the concern related to the failure to follow procedures relative to the use of the Stand-By Main Feed Water Pump and 1-GO-1 performing plant start-up without normal let-down in service. Additionally, OI identified allegations regarding the failure to implement procedure change to 1-GO-1 start-up from cold shutdown to hot standby (Drawing the Bubble) and failure to follow 1-GO-1 after the change was implemented, which are outlined under allegations (RII-2016-A-0169, and RII-2017-0014), and also incorporated into this investigation. To that end, allegation RII-2016-A-0169 was opened to capture issues associated with changing of the plant operating procedure during the start-up of WBN Unit 1 in November 2015.

Furthermore, OI initiated allegation RII-2017-A-0014 to document allegations/concerns identified as part of this joint investigation that were found not to have immediate safety or security concerns.

- Deliberate violation of licensing requirements to perform the function of a licensed reactor operator and a senior reactor operator without being authorized, and/or licensed by the NRC to perform such function.
- Deliberate submission of incomplete and inaccurate information to the NRC in a written response on December 14, 2015.
- Deliberate submission of incomplete and inaccurate Information to NRC during a January 6, 2016, "drop-in."
- Deliberate submission of incomplete and inaccurate information to the NRC in the form of a Level 2 Corrective Action Program (CAP) evaluation, as part of Condition Report (CR) 1121520.
- Deliberate submission of incomplete and inaccurate information to the NRC during a February 2, 2016, "drop-in" meeting with NRC officials.
- Deliberate submission of incomplete and inaccurate information (Special Review Team Report) by a TVA manager to NRC.

Coordination with NRC Staff

On December 16, 2015, a RII ARB requested that OI initiate an Assist to Staff (2-2016-015F) to obtain information from WBN personnel regarding a WBN1 event on November 11, 2015. OI was requested to include additional concerns considered potential deliberate violations of 10 CFR 50 Appendix B and 50.5 by TVA personnel. Beginning with the Assist to Staff and throughout this investigation, (b)(7)(C), NRC, Region II (RII) (b)(7)(C) was consulted and provided technical expertise on a full-time basis since April 2017.

In mid-January 2016, OI coordinated multiple meetings between OI, RII, HQ, and TVA-OIG regarding receipt of several allegations associated with TVA officials. On February 22, 2016, NRC and TVA-OIG held a teleconference to discuss TVA-OIG's interim findings regarding a chilled work environment, potential wrong-doing and other safety concerns associated with the events of November 11, 2015. Also, OI:HQ and TVA-OIG coordinated an agreement which cleared a path for TVA-OIG to provide allegation information to the NRC for analysis and consideration. In addition, since April 2018, OI has briefed representatives from OGC, OE and RII on the status of the investigation and possible violations.

Coordination with Department of Justice (DOJ)

On July 29, 2016, AUSA (b)(7)(C), USAO Eastern District of Tennessee (EDTN) contacted OI requesting investigative support and information regarding an on-going criminal investigation before the USAO-EDTN relative to TVA personnel who potentially engaged in wrong-doing. As mentioned, the AUSA requested that OI arrange for NRC technical assistance in support of the USAO's efforts to determine whether TVA personnel provided false information

to the NRC regarding the events surrounding the heat-up on November 11, 2015. The USAO sought clarification on whether the heat-up was done in an unsafe manner when primary let-down was not available (and assumed available per procedure) as excess let-down did not have adequate capacity to control pressurizer level(s). Additionally, the USAO requested the NRC determine whether the RHR system was operated outside of procedural bounds to compensate for the out of service primary let-down on November 11, 2015.

The initial information that the USAO had reviewed indicated that the Main Control Room (MCR) licensed operators were pressured to adhere to the heat-up schedule when they were ordered to proceed with reactor heat-up and use RHR let-down, even though the licensed operators felt uncomfortable following management's direction in this matter. Therefore, on August 4, 2016, OI, met with AUSA (b)(7)(C), who advised that based on the initial review of the information provided by TVA-OIG, it was the USAO's determination that the matter warranted further investigative actions in order to establish whether criminal charges should be recommended. Then based upon the USAO's request, as well as the determination that a specific indication of wrong-doing existed, OI self-initiated this investigation to determine whether TVA personnel deliberately violated regulations to include providing incomplete and inaccurate information to the NRC regarding the WBN1
heat-up evolution.

Background

As to Allegation No. 1

Watts Bar Managers deliberately took actions which placed Watts Bar senior managers either directly or through the Outage Control Center (OCC), as the de facto directors of the licensed activities of the control room operators. This represents a violation of 10 CFR 55.3 which requires that a person must be authorized by a license issued by the Commission to perform the function of an operator or a senior operator which includes directing the licensed activities of licensed operators.

Beginning in September 2015, Watts Bar senior managers took specific actions to influence the work environment prior to the 2015 fall re-fueling outage. WBN management established a work environment, and reinforced a mindset among licensed operators, whereby raising concerns about or opposing WBN senior management's direction regarding plant operating schedules was unacceptable. This positioned WBN senior managers either directly or through the OCC, as the de facto directors of the licensed activities of the licensed control room operators. The use of disciplinary and other adverse actions affected the mindset and actions of the Reactor Operators (RO) and the Senior Reactor Operators (SRO). This included the assigning or reassigning of operations staff duties and positions based on their willingness to yield to and or support OCC/management direction. Intimidation suppressed the questioning of the authority and direction of WB management by the ROs and the SROs. These actions facilitated WBN senior management usurping the authority of SROs responsible for directing the

licensed activities of licensed operators, effectively performing the function of an operator and a senior operator contrary to 10 CFR. § 55.3.

Overt acts furthering this objective were: intimidation of operators during the September 2015 offsite leadership meeting; (b)(7)(C) directing the removal of (b)(7)(C) (b)(7)(C) from site by security; removal of Unit Supervisor (b)(7)(C) from watch during the October 2015 WBN1 outage; requesting OCC management to verify they were in control as reflected in the use of the SOD/SOM checklist; removal of US (b)(7)(C) from watch in January 2016; (b)(7)(C) failure to use the Adverse Employee Action Program; and (b)(7)(C) intimidation of SRO (b)(7)(C) by pressuring (b)(7)(C) to finish a Work Order review.

OI identified events that indicated the environment was clearly having an effect on the actions of operations personnel to include licensed operators. Events include: the use of the standby main feed-water pump during startup; improperly changing of the Unit 1 startup procedure 1-GO-1 to expedite startup; licensed operators logging that the OCC was directing activities of the MCR operators in December 2015; and the events and violations that occurred on November 11, 2015.

As to Allegation No. 2

During the Unit 1 startup from 1RFO13 on October 20, 2015, the Standby Main Feed-water Pump was used to feed the S/Gs in order to perform a valve PMT in parallel with unit start-up even after the plant was taken into Mode 2.

On October 21, 2015, WBN1 Shift Manager (SM) (b)(7)(C) in concert with (b)(7)(C) (b)(7)(C) directed RO (b)(7)(C) to use the Standby Main Feed-water Pump (SBMFP) instead of the procedurally required Auxiliary Feed-water Pump (AFWP) during the reactor startup from Mode 3 to Mode 2. This was done to enable engineering to perform missed testing and inspections of feed-water valves in containment that are normally done in Mode 5 without delaying plant start-up. (b)(7)(C) initially refused and stated it was not safe to perform the reactor startup using the SBMFP. In response to his push back he was challenged to "show me somewhere where it says that we cannot do this procedurally." (b)(7)(C) also responded that Operations will not be the hold-up of the outage and we will not delay the startup. When asked about the safety component, (b)(7)(C) responded "we're going to be careful." Additionally, radiation protection employee (b)(7)(C) (b)(7)(C) voiced worker safety concerns about the performance of this testing and inspection to the OCC during a reactor startup. (b)(7)(C) had the RP tech removed from the site by security when he continued to push back against (b)(7)(C) and the OCC.

As to Allegation No. 3

Failure to follow the NPG-SPP-1.2, Administration of Site Technical Procedures when making a change to WBN1, 1-GO-1 Start-Up from Cold Shutdown to Hot Standby (drawing the bubble) by the (b)(7)(C) on November 9, 2015.

On November 9, 2015, Unit 1 was performing a plant start-up using 1-GO-1 following a forced outage. The plant hit a point in the start-up where they were to "draw a bubble" in the pressurizer. The procedure required the plant to be heated up to at least 135°F before going any further but the plant needed to remain near 100°F due to work that was ongoing on the head. The OCC requested Unit Supervisor (b)(7)(C) to draw the bubble in the pressurizer with the current plant conditions. (b)(7)(C) showed SM (b)(7)(C) the procedure prohibition to the requested action and communicated it to the OCC. (b)(7)(C) (b)(7)(C) was the OCC Operations representative, and directed his (b)(7)(C) to initiate a change to plant operating procedure 1-GO-1 to compel the Unit 1 operators to continue with the scheduled plant start-up activities with RCS temperature below 135°F. The change was made as a "Minor/Editorial" change not in accordance with TVA procedures but was approved for use by (b)(7)(C) When concerns were raised by the Operators about the validity of the procedure change, (b)(7)(C) responded with "the people who fire people with licenses said to do it."

As to Allegation No. 4

Watts Bar failed to follow Plant Operating Procedure 1-GO-1 when Unit 1 was transitioned from Mode 5 to Mode 4 without normal let-down in service and continued with 1-GO-1 start-up activities on November 11, 2015.

On November 10, 2015, SM (b)(7)(C) held a crew meeting and "berated the crew saying that we were not pushing hard enough on this outage to move the plant forward and were weak." This was reportedly after (b)(7)(C) received a scolding from the (b)(7)(C) (b)(7)(C) the day prior on the same topic. At this time, WBN1 was in the process of starting up the plant from a forced outage. The plant was in Mode 5 and making preparation to go to Mode 4 following the steps of 1-GO-1, Unit Startup From Cold Shutdown To Hot Standby, when a leak required repair on 1-FCV-62-70, Normal Let-down Flow Control Valve. This required the normal let-down system to be removed from service and excess let-down was placed in service Planned repairs overnight from November 10, 2015 to November 11, 2015, were not completed and Normal Let-down was not available as expected to continue with the plant start-up. With the normal let-down system out of service, WBN1 was relying on excess let-down and RHR let-down to control pressurizer level.

On November 11, 2015, WBN made the decision to continue start-up activities of 1-GO-1 and transition the plant to Mode 4 without normal let-down in service. The licensed operators watch standing for Unit 1 indicated they did not agree with the decision because it would require the removal of the RHR system from service and it was providing both inventory and temperature control for the RCS. (b)(7)(C) compelled SM (b)(7)(C) to direct the RHR system be removed from service against the judgement and concerns of the control room operators. RHR was subsequently taken out of service to perform testing on 1-SI-0-905 (Primary Pressure Boundary Isolation Valve Leak Test Residual Heat Removal Return Valves - this test could not be performed while RHR was in service). Due to charging and increases in RCS temperature without RHR in service, PZR level began to rise uncontrollably. The

Operators attempts to control temperature were unsuccessful which resulted in the level in the pressurizer (PZR) rising to 80 percent.

To mitigate the event, the Operators opened the RHR inlet valves, 1-FCV-74-1 and 1-FCV-74-2 (RHR suction from RCS Loop 4 HL), to allow RHR let-down to be placed back into service and regain control of PZR level. These actions were performed outside of the requirements of plant operating procedures. (See NCV 05000390/2016001-05, Failure to Use Approved Procedures to Place RHR Let-down in Service). The (b)(7)(C) sent an email with subject U1 Outage - 60 MIN (b)(7)(C) Update to the (b)(7)(C) (b)(7)(C) and others which included updated details of plant operational schedule for the day. Included in this schedule was information detailing that pressurizer (PZR) level was at 80 percent and the scheduled testing and heat-up were delayed until normal let-down was brought back into service.

As to Allegation No. 5

Submission of incomplete and inaccurate information by TVA Managers on December 14, 2015, to (b)(7)(C) regarding the details surrounding the WBN1 start-up on November 11, 2015.

On November 23, 2015, Concern Individual (CI) RO (b)(7)(C) contacted NRC (b)(7) (b)(7)(C) at WBN with concerns that the WBN1 heat-up performed on November 11, 2015, was done in an unsafe manner. According to the CI, the primary let-down was not available (and assumed available per procedure) and excess let-down did not have the adequate capacity to control pressurizer level. Additionally, the Residual Heat Removal (RHR) System was operated outside of procedural bounds to compensate for the out of service primary let-down, and annunciator alarm response procedures were not followed. Lastly, the CI stated that the Main Control Room (MCR) was ordered to proceed with reactor heat-up and use RHR let-down even though the licensed operators felt uncomfortable.

On December 4, 2015, TVA Senior Executives had a drop-in meeting with (b)(7)(C) (b)(7)(C). In this meeting, (b)(7)(C) conveyed to TVA to pay attention to operations department issues as WBN2 moved into fuel load, low power testing and power ascension testing. Issues in terms of operations behaviors as well as the health of Corrective Action Program (CAP), including the need for NRC to prompt TVA for CAP usage/rigor for WBN2, were also discussed.

On December 8, 2015, information was presented at an NRC RII ARB. At the time, the safety significance was considered to be low, and it was determined that NRC technical staff would review information to determine if a violation occurred without disclosing the issue to the licensee. Although the events in question took place over a federal holiday (Veterans Days) without the NRC resident inspectors on site, the inspectors identified that TVA made no entries in the plant operating logs or in the CAP about the events.

On December 11, 2015, a follow-up ARB was conducted; at which time, the safety significance was elevated to high, due to inspection discoveries and numerous unanswered questions related to how and why the licensed operators operated the plant including the RHR system during recent start-up. The ARB instructed (b)(7)(C) to request information from the licensee surrounding the plant start-up of November 11, 2015. (b)(7)(C) specifically asked the Operations on-Shift Manager (b)(7)(C) "Why were the RHR inlet valves cycled?" This and other questions were articulated to TVA so as not to fingerprint the source of NRC information.

On (b)(7)(C) e-mailed accurate information to (b)(7)(C) (b)(7)(C) concerning the cycling of the RHR inlet valves on November 11, 2015. The e-mail explained that pressurizer level increased, and it became necessary to place RHR let-down back in service to lower pressurizer level. (b)(7)(C) subsequently initiated Condition Report (CR) 1114975 to document (b)(7)(C) concerns and the licensee's responses. Information concerning the loss of control of pressurizer level was not included in the condition report and was not entered into the CAP as required by NPG-SPP-22.301, Condition Report Initiation.

On (b)(7)(C) sent emails to (b)(7)(C) and (b)(7)(C) (b)(7)(C) which contained incomplete and inaccurate information concerning the RHR inlet valves cycling on November 11, 2015. (b)(7)(C) sent an email to the (b)(7)(C) which contained both the accurate information indicating the RHR inlet valves were cycled to manage pressurizer level but also included the inaccurate information concerning the RHR inlet valves cycling received from (b)(7)(C) He noted that this was to be included in response to the NRC ((b)(7)(C)) questions and was intended for (b)(7)(C) to present this information to NRC executives.

On December 14, 2015, in response to the NRC's questions, (b)(7)(C) and (b)(7)(C) met in the NRC resident office with (b)(7)(C) and provided TVA's written response to the questions. This response did not contain information about the loss of control of pressurizer level, but rather the response contained an alternate reason for opening the RHR inlet valves on November 11, 2015, as "This was done to allow the repair of a valve inside containment on the normal let-down line (1-FCV-62-70)." Following the meeting with (b)(7)(C) sent an email to WBN Senior Reactor Operators with accurate information regarding the events on November 11, 2015.

As to Allegation No. 6

Submission of incomplete and inaccurate information by TVA Managers to the NRC in response to NRC questions concerning the November 11, 2015, RHR event as documented in Shift Order 15-50 and presented to the NRC during a site visit in January 6, 2016.

On December 16, 2015, RII held an emergency ARB; at which time, the convening members requested OI:RII perform an Assist to Staff (2-2016-015F) which would encompass interviewing the CI and licensed operators with RII technical assistance to obtain information regarding the

WBN1 event on November 11, 2015. This was a continuation of the response to the allegation previously brought to (b)(7)(C)

On December 16, 2015, TVA (b)(7)(C) interviewed the Control Room Supervisor Dennis REDINGER on shift regarding the events of November 11, 2015. He provided his notes of the interview to (b)(7)(C) and they were forwarded to (b)(7)(C) on December 17, 2015. (b)(7)(C) was present for the interview when it was documented that REDINGER expressed that using excess let-down to manage pressurizer level made the crew uneasy, but Operations tries to get things done to support the plant.

On (b)(7)(C) sent a document titled "(b)(7)(C)" to (b)(7)(C) (b)(7)(C) sent "(b)(7)(C)" to TVA Senior Management including (b)(7)(C) and (b)(7)(C). (b)(7)(C) also sent "(b)(7)(C)" to Watts Bar Management including (b)(7)(C) (b)(7)(C), (b)(7)(C) and (b)(7)(C) The "(b)(7)(C)" described how the loss of control of pressurizer level was unexpected because operators believed that based on their training the excess let-down system could handle changing plant conditions.
On December 18, 2015 (b)(7)(C) approved Shift Order 15-50.

On January 6, 2016, (b)(7)(C) accompanied by a group of NRC officials, conducted a site visit at WBN which included attendance by the (b)(7)(C) (b)(7)(C) (b)(7)(C). During this meeting, the Watts Bar managers jointly made a presentation to the NRC that included information about the events of November 11, 2015. TVA presented information that placed responsibility for the events of November 11, 2015, on poor operator fundamentals, lack of conservative decision-making, and failure to follow internal rules of the licensed operators. The contents of Shift Order 15-50 were questioned NRC, and the content validity affirmed by (b)(7)(C) and (b)(7)(C)

On December 18, 2015, (b)(7)(C) approved Shift Order 15-50. The Shift Order was developed in response to the November 11, 2015, heat-up, with the intent that "The guidance will be used for making plant decisions during degrading conditions." The Shift Order attached the "(b)(7)(C) which indicated that on November 11, 2015, members of the MCR operating crew did not expect the uncontrolled level rise in the pressurizer because they thought they would be able to get 50-60 GPM from excess let-down which would stabilize RCS inventory. The Shift Order attributes these errors in assumption and plant knowledge by the crew as the foundation for the events of November 11, 2015. The Shift Order presents the operators as the sole cause for the events of November 11, 2015.

<u>As to Allegation No. 7</u>

Submission of incomplete and inaccurate information by TVA Managers to OI during interviews on December 18, 2015.

On December 18, 2015, OI conducted interviews of WBN employees associated with the events of November 11, 2015.

(b)(7)(C) made statements during his OI interview under oath that no operators said that they were uncomfortable at any time, including the discussions of whether excess let-down would work the way it is supposed to work. (b)(7)(C) further denied that anyone brought up anything associated with being forced, coerced, or pushed into any kind of corner whatsoever or attempted to hide anything at all about the circumstance and decision-making process.

(b)(7)(C) during his OI interview under oath discussed with OI his motivations for proceeding with the start-up activities, crews concerns, and who made the decision to move forward. (b)(7)(C) later made contradictive statements concerning the testimony he provided OI.

Later on the (b)(7)(C) and (b)(7)(C) exchanged emails discussing their OI interviews. This included details on information that was either withheld and /or misrepresented to OI which specifically pointed to senior management's role in making the decisions on November 11, 2015, and his (b)(7)(C) fear of retaliation if challenging management's decisions.

As to Allegation No. 8

Submission of incomplete and inaccurate information by TVA Managers in a Level 2 evaluation associated with Condition Report (CR) 1121520 on January 20, 2016. In January 2016, as part of CR 1121520, TVA performed a Level 2 Cause evaluation to address the specifics of procedure use and adherence associated with GO-1, SOI-74.01 (RHR) and NPG-SPP-01.2.1, Interim Administration of Site Technical Programs and Procedure for WBN 1 and 2.

On (b)(7)(C) emailed notes generated during interviews of operators and managers about the events of November 11, 2015, to (b)(7)(C) (b)(7)(C) (b)(7) (b)(7)(C) (b)(7)(C) and (b)(7)(C) among others. These notes indicated that the OCC had knowledge of and was directly involved in the decision to take the RHR system out of service for testing. It also indicated that operators were questioning the capability of the plant to be operated in that configuration.

On (b)(7)(C) sent emails to (b)(7)(C) (b)(7)(C) and (b)(7 which contained the written statement of REDINGER concerning the events of November 11, 2015. REDINGER's statement indicated that the OCC was informed that the MCR staff was concerned about the heat-up and capacity of the excess let-down system at low pressure if the RHR system was taken out of service for testing.

On (b)(7)(C) sent emails to (b)(7 which contained the written statement of SM (b)(7)(C) concerning the events of November 11, 2015. (b)(7)(C) statement indicated that the OCC direction was to remove RHR from service and allow RCS to heat up once 1-SI-0-905 was complete and the OCC was informed of the crew's concerns with taking RHR out of service for testing.

On (b)(7)(C) sent a draft copy of the Level 2 produced during the weekend to (b)(7)(C) and (b)(7)(C) requesting feedback stating, "(b)(7)(C) (b)(7)(C)". The apparent cause implicated both the OCC and MCR directly in the cause of the event.

On (b)(7)(C) during a teleconference between (b)(7) (b)(7)(C) and (b)(7)(C) the Level 2 Cause Analysis was discussed. Later that day, (b)(7)(C) directed information be removed from the Safety Culture Analysis for CR 1121520, which indicated that the OCC was directly involved in decision making on November 11, 2015.

On (b)(7)(C) as part of CR 1121520, (b)(7) (b)(7)(C) (b)(7)(C) and (b)(7)(C) participated in the generation of the finalized Level 2 evaluation for CR 1121520. The final evaluation indicates that the decision to remove RHR from service and continue plant heat-up on excess let-down was not recognized or challenged by the OCC on November 11, 2015. The final evaluation attributes errors in assumption and knowledge of plant response and capabilities of the control room operators as the cause of the evolution and its outcome. Information identifying the OCC and management involvement in the events of November 11, 2015, are not included in the final report. Additionally, information detailing that there was no plant operating procedure for the use of excess let-down to control pressurizer level following isolation of the RHR let-down was removed prior to approval of the final evaluation.

As to Allegation No. 9

Submission of incomplete and inaccurate information by TVA Managers to the NRC during the February 2, 2016, meeting with the NRC.

On February 2, 2016, TVA's (b)(7)(C) (b)(7)(C) and (b)(7)(C) made a presentation to the NRC which included information that placed sole responsibility for the events of Nov 11, 2015, on the control room Operators. The presentation specifically cites a lack of conservative decision making and risk review by the Operators; and that the decision was not recognized or challenged by the OCC.

As to Allegation No. 10

Submission of incomplete and inaccurate information by a Senior TVA Executive to the NRC as documented in the March 23, 2016, TVA Special Review Team Report.

On February 24, 2016, TVA OIG briefed Region II management on a summary of information they had gathered during investigative interviews regarding the work environment at WBN. TVA OIG informed RII that the information had also been briefed to TVA management on multiple occasions.

On February 24, 2016, NRC informed TVA that the NRC had received information from TVA OIG that gave the NRC concern for the health of the working environment at WBN, specifically

in the Operations department. The NRC informed TVA that it had entered these issues into the NRC allegation program.

On (b)(7)(C) sent an email to (b)(7)(C) (b)(7)(C) stating (b)(7)(C) Shortly afterward, (b)(7) sent an email to (b)(7)(C) and others which included details of the Problem, Objectives and Key Activities of a team which would come to be known as the TVA Special Review Team (SRT). (b)(5)

On (b)(7)(C) sent (b)(7)(C) his thoughts/guidance regarding a meeting (b)(7)(C) was scheduled to have with (b)(7)(C) on the following Monday ((b)(7)(C)). (b)(7)(C) identified success of the meeting would be to gain an agreement from (b)(7)(C) for the NRC to delay taking any highly visible action against TVA and to first allow TVA to address the TVA OIG concerns. (b)(7)(C) recommendations included: countering parts of TVA OIG's message; attempting to "delink" the need for NRC action from specific WBN2 milestones; and offering additional meetings with RII management. On (b)(7)(C) sent (b)(7)(C) an email containing the SRT's preliminary conclusions. (b)(5)

The next day (b)(7) reinforced the purpose for the SRT in an email sent to (b)(7)(C) (b)(7)(C) and the members of the SRT which identified that, in part, the project was to minimize additional regulatory engagement.

On (b)(7)(C) sent the SRT preliminary conclusions to (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C)

On (b)(7)(C) sent a copy of ECP Report NEC-16-0047 in an e-mail titled (b)(7)(C) to (b)(7)(C) (b)(7)(C) and (b)(7)(C) On (b)(7)(C) (b)(7) forwards (b)(7)(C) email with the copy of ECP Report NEC-16-0047 attached, to the SRT members and (b)(7)(C) On (b)(7)(C) (b)(7)(C) sent an email to (b)(7)(C) detailing the differences between the ECP report and the SRT initial conclusions as being (b)(7)(C) (b)(7)(C) sent (b)(7) an email on (b)(7)(C) which suggested information to be completely removed from the SRT report. (b)(7) approved some of the changes for information removal.

On (b)(7)(C) sent an email to (b)(7)(C) (b)(7)(C) and (b)(7)(C) which detailed a strategy to present the differences to the NRC between the ECP and SRT report conclusions.

On (b)(7)(C) the SRT report Revision 21, to members of the SRT (b)(5)

Agent's Note: Keeping with the chronological order of the report additional information concerning Allegation No. 10 is delineated following Allegation No. 11.

As to Allegation No. 11

Submission of incomplete and inaccurate information by Senior TVA Executives to NRC Senior Executives on March 13 and March 15, 2016.

On March 11, 2016, the NRC completed an initial review of the information provided by TVA OIG associated with their investigation into the work environment at WBN and made a decision to issue a Chilled Work Environment Letter (CEL) to TVA. NRC (b)(7)(C) (b)(7)(C) and NRC (b)(7)(C) held a teleconference with (b)(7)(C) and (b)(7) in which they conveyed that the NRC had issues with the safety culture in the Operations department of WBN and were planning to issue a CEL no later than Tuesday, March 15, 2016. Afterwards, (b)(7)(C) sent an email to (b)(7)(C) (b)(7)(C) and (b)(7)(C) with Revision 21 of the SRT report and detailing that the report will need to be changed in response to the NRC issuing the CEL.

On (b)(7)(C) exchanged emails with (b)(7)(C) on how to approach a personal conversation with NRC (b)(7)(C) aimed at changing the proposed regulatory response communicated to TVA on March 11, 2016. This included communicating that TVA was "not surprised" with the NRC conclusion of a degraded work environment because two independent TVA internal reports had been completed last week which reached the same conclusion as NRC. One of those reports was the SRT report, the ECP report was the other.

On (b)(7)(C), (b)(7)(C) called (b)(7)(C) at his residence to discuss the regulatory response to TVA concerming the work environment at WBN.

On March 14, 2016, (b)(7)(C sent an email which informed NRC leadership that the timeline for issuance of the CEL may be delayed until after the March 22, 2016 public meeting.

On (b)(7)(C) a significantly revised SRT report, Revision 22, to members of the SRT, which changed multiple report conclusions, removed information that conflicted with the ECP report, and added information that made the report align with the information provided by the NRC on March 11, 2016.

On (b)(7)(C), (b)(7)(C) and (b)(7)(C) had a teleconference with (b)(7)(C) that discussed delaying the CEL and discussed the same information provided to (b)(7)(C) on March 13, 2016.

On (b)(7)(C) had an email exchange with (b)(7)(C) (b)(7)(C) in which the two discussed the effects of the calls during the weekend with (b)(7)(C) and (b)(7)(C) They discussed that the issuance of the CEL will be delayed until after the March 22, 2016 public meeting. In addition, they discussed that (b)(7)(C) and (b)(7) are making a visit to Washington, DC on March 17, 2016, to meet with the NRC Commissioners and possibly discuss the WBN work environment issue. On March 18, 2016, (b)(7)(C) sent NRC Closed Session Talking Points to (b)(7)(C) and (b)(7)(C) which contains what (b)(7)(C) described as the initial thoughts of (b)(7) on the messages that need to be conveyed to the NRC. (b)(7)(C) replied with a concern that the talking points say the SRT did things that they did not, and the tact was risky. He also was questioning the point that (b)(7)(C) was still in the process of revising the ECP report.

Continuation of Allegation 10

On (b)(7)(C) forwarded (b)(7)(C) email with the copy of ECP Report NEC-16-0047 attached to (b)(7)(C)

On (b)(7)(C) replied to an email from (b)(7)(C) concerning the conclusion of the ECP report which identified (b)(7)(C) and (b)(7)(C) as the cause of a chilled work environment in Operations. (b)(7)(C) presented his own wording of the conclusion which absolved himself of responsibility and classified the issue as a communication gap which others filled with their own perception. On (b)(7)(C) sent the SRT report and ECP reports to the NRC in which the SRT report documented that:

1. The SRT was assembled by TVA Senior Management in response to a series of issues at Watts Bar Nuclear Plant dated from the fall of 2015 through February 2016.

2. The SRT was established by TVA Nuclear Senior Management after recognizing the serious implications if a concern input into the Watts Bar's Employee Concern Program staff in January 2016 was substantiated.

3. (b)(5)

4.

On (b)(7)(C) approved and sent TVA's CEL response to the NRC which discussed the SRT report and ECP report. It documented information including:

1. The SRT and ECP investigations were independent investigations initiated in response to the receipt of degraded work environment concerns.

2. The SRT was established in March 2016 to perform a review of culture surveys, personnel comments and statements, communications, quality assurance reports, outside organization, and regulatory reports in order to develop prompt and near-term actions to address the degradation in the work environment and correct the behaviors that were most likely driving the degradation.

Allegation No.1

Watts Bar senior managers deliberately took actions which placed Watts Bar senior managers either directly or through the Outage Control Center, as the de facto directors of the licensed activities of the control room operators. This represents a violation of 10 CFR 55.3 which requires that a person must be authorized by a license issued by the Commission to perform the function of an operator or a senior operator which includes directing the licensed activities of licensed operators.

Applicable regulations

10 CFR 55.3: License requirements
10 CFR 50.5: Deliberate misconduct
10 CFR 50.7: Employee Protection

Documentary Evidence

Draft Analysis No Pocket Veto W Enclosures (A1-E1)
All (b)(7)(C) Email Statements (A1-E2)
Email (b)(7)(C) (b)(7)(C) requesting hourly outage updates (A1-E3)
Email Sends (b)(7)(C) SOD SOM Checklists (A1-E4)
Email (b)(7)(C) sends out Checklist (A1-E5)
Email RE U1 Outage - 1930 Dayshift Hourly Update (A1-E6)
Email PM MCR Observation (A1-E7)
EA-17-022 Confirmatory Order ML17208A647 (A1-E8)
EA-17-022 Confirmatory Order ML17208A596 (A1-E9)
IR 050002016013 ML17069A133 (A1-E10)
Email (b)(7)(C) (b)(7)(C) on crew logging By OCC Direction (A1-E11)
Email (b)(7)(C) Stop Logging by OCC direction (A1-E12)
Email (b)(7)(C) I told shift to stop logging by OCC direction (A1-E13)
Email (b)(7)(C) (b)(7)(C) email MCR Observation (A1-E14)

Testimony

Interview of (b)(7)(C) Shift Manager

(b)(7)(C) Shift Manager at WBN was interviewed by TVA OIG on February 17, 2016, wherein he provided the following information in substance. (b)(7)(C) has been employed by TVA for years and (b)(7)(C) He is a licensed SRO and became a SM in (b)(7)(C) (b)(7)(C) stated that "our outages delve into chaos" and stated that re-fueling outages have been planned for 18 months prior to the start of the outage and include a comprehensive review of potential safety issues. However, by the end of the outage, the OCC has put so many things on the operators that they
(the operators) are literally just winging it and making decisions in knowledge space. (b)(7)(C) explained that this means that the operators are relying on their individual knowledge to determine whether something is safe or not which is where most errors can happen. (b)(7)(C) stated that the original plan which was developed in a calm safety conscious manner is thrown out because of the desire to move forward and it is chaos. During the last re-fueling outage (October 2015), (b)(7)(C) was actually sent pictures by email of marked up whiteboard drawings from the OCC showing how they wanted him to proceed (Exhibit T-32).

(b)(7)(C) testified that there was an off-site meeting just before the fall of 2015 re-fueling outage. (b)(7)(C) thought that (b)(7)(C) and (b)(7)(C) were in attendance. According to (b)(7)(C) (b)(7)(C) told him after the meeting, about comments made by (b)(7)(C) and (b)(7)(C) at the meeting. Specifically, (b)(7)(C) was told that (b)(7)(C) stated something like, "If anyone does not think we are ready for this outage then they can get up and leave." Reportedly, (b)(7)(C) told the group that the SRO's were not going to be able to use their "veto power" during the outage. When asked during the interview, what (b)(7)(C) thought (b)(7)(C) was saying in regard to the veto comment. (b)(7)(C) said that (b)(7)(C) was saying that the SRO's could not stop evolutions during the outage if the SRO's thought it necessary. (b)(7)(C) said that the comment made by (b)(7)(C) is still in the back of his mind now and he thinks about that comment as he makes decisions in the MCR (Exhibit T-32).

Interview of (b)(7)(C) Senior Reactor Operator

(b)(7)(C) SRO at WBN was interviewed by TVA OIG on February 24, 2016, wherein he provided the following information in substance.

(b)(7)(C) confirmed that he was present at a pre-outage offsite meeting held at the Springbrook Country Club in Niota, Tennessee. According to (b)(7)(C) the meeting started out talking about the upcoming outage which was scheduled to last 30 days. (b)(7)(C) and (b)(7)(C) were (b)(7)(C) The statement was made that by a show of hands is there anyone here that thinks we cannot make the 30-day outage and if you raise your hand then you can leave. (b)(7)(C) had the feeling like if you walked out the door then you could leave the company. Specifically, (b)(7)(C) felt like he would be fired if he raised his hand

saying he disagreed that they could make a 30-day timeline. He did not feel he could say let's talk about this and the comment set the tone of the meeting which was "inputs neither required nor desired" (Exhibit T-09). (b)(7)(C) stated that toward the end of the meeting that day, clickers were passed out to everyone to use in anonymously answering around ten questions that had been put up on a screen. One of the questions was what (b)(7)(C) had asked earlier about do you think we can get the outage done in 30 days. While no one had raised their hand in front of (b)(7)(C) and (b)(7)(C) earlier, there were now around 40 percent of the attendees saying no they did not think they could do it within 30 days. (b)(7)(C) stated that there is a problem if you cannot raise your hand because you are afraid of the repercussions (Exhibit T-09).

In the original opening statements at the offsite with (b)(7)(C) and (b)(7)(C) (b)(7)(C) stated that another incident happened regarding (b)(7)(C) SRO at WBN. Specifically, (b)(7)(raised his hand and said that we have a history where we do not meet the schedule because it keeps changing and what are we going to do different this time. (b)(7)(C) then stood up, dug his heels in and went at (b)(7)(by saying that is not the attitude they want. (b)(7)(C) then said, "SROs are losing their pocket veto." (b)(7)(C) stated that he felt that (b)(7)(C) meant by that comment that Operations is going to follow the schedule and not point out something that will not work. Either Operators will follow the schedule or face backlash. (b)(7)(C) stated that (b)(7)(C) pocket veto comment was made in front of everyone at the meeting. (b)(7)(C) stated that he was not surprised by the comments about the pocket veto because he has gotten the impression that (b)(7)(C) is not a fan of Operations. He believes (b)(7)(C) feeling is do what you are told to do or hit the door. (b)(7)(C) stated that when (b)(7)(C) got done chewing up (b)(7)(at the meeting there were no more questions, and everyone kept their opinions to themselves (Exhibit T-09).

(b)(7)(C) heard (b)(7)(C) later make a snide comment to (b)(7)(saying "that did not go the way you thought." (b)(7)(C) stated it was a "jab" at (b)(7)(C He stated that morale was not high when they left the meeting. (b)(7)(C) was on the team that did the Appendix R Root Cause Analysis which took thirty days. According to (b)(7)(C) the team put in a lot of work. He stated that some of the team members even slept over in the training center to get it done. The team came up with what they thought was the root cause and one of the things in there was the nuclear safety culture at the site. Specifically, (b)(7)(C) stated that not having a good nuclear safety culture was in the summary as a contributing cause to the inadequacies in the fire protection report. However, "it got squashed" by management. (b)(7)(C) stated that the team lead, (b)(7)(C) presented it the management committee and then came back and said he had been directed to remove the safety culture portion. (b)(7)(C) stated "we had to take the actual words nuclear safety culture out." (b)(7)(C) recommended talking to (b)(7)(C) who has been on several other root cause analysis teams and has had things like this taken out by management before. As part of their analysis the root cause team made up of several people work a minimum of 10 to 12-hour days for 5 days a week and sometimes on weekends on this one issue. They have pulled and reviewed hundreds of documents not readily available as well as conducting interviews. The team meets and come up with their conclusions based on the information and to have management just suddenly change it because they do not like what

it says is frustrating. (b)(7)(C) stated it has come down to "when we have a root cause, it is kind of like just tell us what you want us to say and skip the 30-day part" (Exhibit T-09).

Interview of (b)(7)(C) Unit Supervisor

(b)(7)(C) US at WBN was interviewed by TVA OIG on February 18, 2016, wherein he provided the following information in substance.

(b)(7)(C) stated that he has been a US for (b)(7)(C) years. He began his career at TVA in (b)(7)(C) and received his license in (b)(7)(C). (b)(7)(C) stated that he was not in attendance at an offsite meeting before the re-fueling outage last fall but was aware of the events that transpired. (b)(7)(C) stated that his coworker, (b)(7)(C) told him the (b)(7)(C) said, "SROs do not have a pocket veto." (b)(7)(C) stated to him the statement means he cannot push back and say no even when it comes to a safety concern. (b)(7)(C) stated that he went through the hiring process to become an Operations Lead Instructor. (b)(7)(C) stated that he applied, interviewed, was offered the position, and accepted the position in (b)(7)(C) but was told he could not leave his current position. (b)(7)(C) stated that his boss at that time was (b)(7)(C) who reported to (b)(7)(C) and then (b)(7)(C). (b)(7)(C) could not remember who the Site VP was at that time. (b)(7)(C) and (b)(7)(C) told (b)(7)(C) that he "could not go" to the training department. (b)(7)(C) stated he received an email stating he could join the training department in approximately (b)(7)(C), after the completion of WBN2. (b)(7)(C) agreed to forward a copy of the email to the interviewing agents. The position closed just before the first of this year, so (b)(7)(C) no longer has the ability to move into that position. (b)(7)(C) stated that he believes (b)(7)(C) and (b)(7)(C) found out about the position because Operations Training is under Operations, so it is still in the same chain of command (Exhibit T-10).

(b)(7)(C) stated that at the time he was told he could not go to training he did not push back or cause any problems because he did not want to make any waves, he did not know he had any recourse and he thought WBN2 would go online and he could move to training. (b)(7)(C) stated that (b)(7)(C) or (b)(7)(C) in training were told by Operations that (b)(7)(C) could not go. (b)(7)(C) stated that he was mad about not being able to leave but did not discuss his feelings with anyone at TVA, just with (b)(7)(C) (b)(7)(C) stated that he has been in shift work for (b)(7)(C) years and was tired of working shift work. (b)(7)(C) stated his background is in training with (b)(7)(C) and he thought that going back to training would be the most beneficial for himself and the best way to contribute to TVA. (b)(7)(C) stated that the position was at the same base salary rate, but he would no longer receive the shift differential. (b)(7)(C) stated a new training position recently opened at WBN and (b)(7)(C) has applied for the position as an Operations Instructor. However, (b)(7)(C) stated that the reputation at WBN is that the only way out is to leave the company. (b)(7)(C) stated that he did not tell any of his supervisors that he applied for another training position but stated they will find out because training works for Operations (Exhibit T-10).

(b)(7)(C) stated that the problem at WBN is "bullying by senior management." (b)(7)(C) stated that he started to see this after (b)(7)(C) and (b)(7)(C) were moved into their positions, but it really began with (b)(7)(C) (b)(7)(C) stated that at the re-fueling outage in 2012 he was

promised his Qual card prior to the start of the outage but following the outage he did not get it, and nobody could tell him why. (b)(7)(C) thinks the reason he did not get the Qual card is because he pushed back on the OCC and they missed the schedule by approximately a week. (b)(7)(C) stated that he will still push back if there is a safety issue, but he still thinks twice about it. (b)(7)(C) stated that the staffing at WBN is low and is only getting worse with more people leaving, and there is no current SRO class. (b)(7)(C) stated that since the OIG began investigating it is giving people some hope because at least someone has noticed what is going on. (b)(7)(C) stated that in the last two weeks he has received two blue chips, but prior to that he had not received a blue chip in at least two years. (b)(7)(C) stated that it is like they are trying to bribe us. (b)(7)(C) stated that (b)(7)(C) is not really visible to the SROs, but he interfaces more with the unions. (b)(7)(C) is torn between how he feels and towing the party line. (b)(7)(C) stated that (b)(7)(C) wants to do the right thing, but he is afraid for his job too and could be gone tomorrow (Exhibit T-10).

Interview of (b)(7)(C)

(b)(7)(C) at WBN was interviewed by TVA OIG on April 15, 2016, wherein he provided the following information in substance.

(b)(7)(C)

(b)(7)(C) (Exhibit T-11).

During the WBN1 re-fueling outage in the Fall of 2015, (b)(7)(C) was (b)(7)(C) of the Operations War Room. His job was to provide continuity between the different shops and dispatch the work

(b)(7)(C)

coordinated all the Ops SI activities during the outage which (b)(7)(C) described as very sensitive work and incredibly important. Toward the backend of the outage, (b)(7)(C) came to (b)(7)(C) and said he (b)(7)(C) had been sent home. (b)(7)(C) was not detailed about what had happened but said that he had a problem with how they were setting up on an SI. (b)(7)(C) believes that (b)(7)(C) was trying to get the (b)(7)(C) to see his point about how it was being done and (b)(7)(C) was not getting it (Exhibit T-11).

(b)(7)(C) knew everyone was stressed. (b)(7)(C) told (b)(7)(C) that he might not have been very respectful of (b)(7)(C) and he (b)(7)(C) sent me home. (b)(7)(C) stated that (b)(7)(C) was "physically shaking" and he is a very strong person. (b)(7)(C) stated that he and (b)(7)(C) have done things on shift that would rattle anyone, and (b)(7)(C) would not be rattled. However, "this was the first time I ever saw him practically in tears." (b)(7)(C) stated that what happened with (b)(7)(C) being sent away was the "first time I have ever seen anything like it." (b)(7)(C) stated that no one talked to him about (b)(7)(C) leaving or how it would impact the work. Since there were only four SROs doing the work, the loss of one of them was a large impact. (b)(7)(C) was not given the chance to do a turnover and the situation resulted in

the SI group missing a whole day of work during the outage in doing SIs because they had to figure out where they were at because the information had been in (b)(7)(C) head (Exhibit T-11).

According to (b)(7)(C) there was a more professional way to have done this. At the conclusion of the outage, there was a lesson learned meeting with all the leads. It was not a big deal but rather just a think tank to critique and figure out how they could do things better. (b)(7)(C) was at the front of the room writing down ideas. After about the second or third whiteboard, (b)(7)(C) spoke up and said he knew this was a hard subject, but they needed to look at how they deal with confrontations especially if they lead to sending someone home and losing a day. (b)(7)(C) stated that he made it very generic and clear that he was talking in generalities. (b)(7)(C) brought the topic up in a professional manner. (b)(7)(C) was not aware that (b)(7)(C) had come in and was standing in the back of the room. (b)(7)(C) then spoke up and said "can you provide me any specifics" to which (b)(7)(C) replied that he would prefer not to in front of everyone. (b)(7)(C) then said, "No, I want you to tell me the specific incident you are referring to." When (b)(7)(C) did not say anything, (b)(7)(C) stated, "you're talking about (b)(7)(C), do you know what he said" and then he (b)(7)(C) said something about (b)(7)(C) telling the story like he (b)(7)(C) was a victim. (b)(7)(C) was very angry after (b)(7)(C) comments but kept his cool. (b)(7)(C) did not say another word for the remainder of the meeting. He knew that anything that came out of his mouth would be shot down (Exhibit T-11).

(b)(7)(C) recalls (b)(7)(C) saying, "the fix here is not sending him home – we have to fix the human part and the human part is Operations." (b)(7)(C) took this to mean that (b)(7)(C) represented Operations and that Leadership could not control (b)(7)(C) who could go to the OCC and speak his mind. (b)(7)(C) said, "Ops needs to fix the problem." Because of what happened with (b)(7)(C) at this meeting, (b)(7)(C) does not speak up at meetings anymore. He stated that he will not talk anymore because "I like my job." (b)(7)(C) stated that if (b)(7)(C) cannot even listen to constructive criticism then he (b)(7)(C) does not feel like bringing anything up. (b)(7)(C) stated that every time (b)(7)(C) walks in a room, "my hair stands on end" (Exhibit T-11).

(b)(7)(C) (b)(7)(C) is years old and stated that he has never met a man who does that to him. The recent personnel move where (b)(7)(C) was made the (b)(7)(C) "pissed everyone off." He stated that (b)(7)(C) is an SRO and has told him that everyone in Operations is mad. (b)(7)(C) was in the offsite meeting held before the 2015 re-fueling outage. During the meeting, (b)(7)(C) heard (b)(7)(C) make the "pocket veto" comment in front of everyone in the room. (b)(7)(C) was basically telling everyone that we will not have anyone vetoing work on the schedule. Later at the same meeting, (b)(7)(C) came up to (b)(7)(C) and asked him "how can we stop the pocket vetoes?" (b)(7)(C) believes (b)(7)(C) was saying how can we get people to be less likely to reject the work when it comes up. (b)(7)(C) told (b)(7)(C) that they should give the schedule to the Shift Managers to review ahead of time, so they were aware of what could be an issue (Exhibit T-11). (b)(7)(C) stated the term "pocket veto" sounds bad especially if people did not have the benefit of discussing it further like he did with (b)(7)(C) (b)(7)(C) stated that (b)(7)(C) brought up the pocket

veto statement during his meeting with the SROs. (b)(7)(C) explained to the SRO's (b)(7)(C) interpretation of the comment. At the meeting, one of the SROs told (b)(7)(C) that his explanation was not how the SROs heard it. Also, at the beginning of the re-fueling outage offsite meeting, (b)(7)(C) started talking about the outage being done in thirty days. (b)(7)(C) then spoke up and said "if you guys do not want to execute the plan you can leave. I do not want you on my team." (b)(7)(C) stated that nobody wants to raise their hand and say anything different than (b)(7)(C) (b)(7)(C) stated that since the investigation has started it appears management is backing off. He stated it may possibly be too much although he does think the Shift Managers, though less experienced, will do the right thing. (b)(7)(C) was a Shift Manager for (b)(7)(C) years but stated it was between the period with the old school hardened Shift Managers and the new less experienced Shift Managers. (b)(7)(C) does not remember feeling the pressure or going through what the current Operators have experienced. He stated it was the worst he had ever seen at WBN in regard to morale before the situation came to light (Exhibit T-11).

Back in (b)(7)(C) was working in the Unit 2 OCC as the Operations Representative when the OCC wanted to do sweeps and vents on the RCS with one RCP. They were trying to get sweeps and vents done for discovery and do rod control testing. (b)(7)(C) stated that the sweeps and vents evolution is one of the most dangerous evolutions that Operations performs because of the potential for lifting a PORV (power operated relief valve). (b)(7)(C) stated that (b)(7)(C) was questioning why we were doing sweeps and vents. (b)(7)(C) recalled that (b)(7)(C) was also in the OCC and at some point, they were told that they were no longer going to do the rod control testing. (b)(7)(C) then said why do not we wait to do the sweeps and vents later because it is a complex infrequently performed task/evolution (CIFTE) (Exhibit T-11).

After raising the issue, there was a conference call with (b)(7)(C) (b)(7)(C). During this call, (b)(7)(C) explained to them that he was concerned about what they were doing (a CIFTE) if they were only going to gain twelve hours on the schedule (b)(7)(C) had backed out the numbers). (b)(7)(C) recalls (b)(7)(C) saying "(b)(7)(C), you just do not understand the schedule." (b)(7)(C) then said they needed to go forward with sweeps and vents for discovery at which time (b)(7)(C) stated that it was too risky and that a PORV could be lifted and cost the quals of a crew. (b)(7)(C) was then told that they had already talked to (b)(7)(C) and (b)(7)(C) who were in agreement to do it. (b)(7)(C) also expressed his concern to (b)(7)(C), who told (b)(7)(C) that it was (b)(7)(C) decision to do the evolution because (b)(7)(C) trusted his operators to do it. The sweeps and vents evolution were done the next (b)(7)(C) (December 20th) and the Unit Operator, (b)(7)(C), lifted a PORV. (b)(7)(C) stated that he vented to (b)(7)(C) and (b)(7)(C) and basically said I told you so. (b)(7)(C) stated, "I was livid" and "poor (b)(7)(C) - he was set-up." A little while after his conversation with (b)(7)(C) and (b)(7)(C) (b)(7)(C) was in the restroom stall when he heard someone he believes to be (b)(7)(C) talking on a cell phone. The person (possibly (b)(7)(C)) stated "we need to get the son of a bitch out of the OCC. They are holding up work." (b)(7)(C) stated that he told (b)(7)(C) that it sounded like they were trying to get him (b)(7)(C) out of the OCC (Exhibit T-11).

(b)(7)(C) also later told ECP about this incident. According to (b)(7)(C) what happened to (b)(7)(C) (b)(7)(C) a few weeks later does not make sense. The discrepancy on why it took them so long to taken (b)(7)(C) off watch does not add up. (b)(7)(C) believes (b)(7)(C) and (b)(7)(C) push the managers in the OCC who then put pressure on the operating crews. When (b)(7)(C) or (b)(7)(C) would come in to the OCC, they would point out management deficiencies and rearrange priorities. (b)(7)(C) stated that the OCC is manned because the WBN2 startup is now being treated as an outage. (b)(7)(C) is in the OCC running things now as far as Operations is concerned. (b)(7)(C) stated that the Employee Concern investigation was touted as a (b)(7)(C) internal investigation and something that he set up. This was brought up during the meeting with (b)(7)(C) and the SROs (Exhibit T-11).

Interview of (b)(7)(C) Senior Reactor Operator

(b)(7)(C) SRO at WBN was interviewed by TVA OIG on February 22, 2016, wherein he provided the following information in substance.

(b)(7)(C)

(b)(7)(C) (Exhibit T-12).

When asked during this interview if he heard (b)(7)(C) make any statements at an off-site meeting having to do with a "veto." (b)(7)(C) responded that, "He did hear (b)(7)(C) make a statement." (b)(7)(C) described said that he attended an off-site meeting held before the fall 2015 re-fueling outage. He believes it was in late August 2015. The off-site meeting was held at a country club in Niota, TN. (b)(7)(C) estimated that around a hundred people were in attendance. The purpose of the meeting, according to (b)(7)(C) was "team alignment" since they were about three weeks out from the outage (Exhibit T-12).

(b)(7)(C) opened the meeting by saying to the group, "Is there anybody in this room that does not believe we can do a 30-day outage? If there is, they need to leave now." (b)(7)(C) said that this was the 51st re-fueling outage he has been involved in and he is a firm believer that it is possible to do a good short outage. However, this is the first time he has ever heard a statement like that. (b)(7)(C) and others around him took that statement to mean "you will leave the company" rather than just leave the room. That one statement at the beginning of the meeting set the tone for the entire meeting and everyone was immediately subdued. (b)(7)(C) added that he had a conversation before the meeting with (b)(7)(C) who was working as the (b)(7)(C) at that time. (b)(7)(C) had told (b)(7)(C) that he was going to ask a question during the meeting so that (b)(7)(C) could answer it and highlight all the good things he (b)(7)(C) had done in preparation for the outage. (b)(7)(C) explained to the agents that (b)(7)(C) had mentored (b)(7)(C) (Exhibit T-12).

At one point during the meeting, the group was asked if they had any questions. So (b)(7)(C) raised his hand and said, "(b)(7)(C) what have we done to help ensure that our schedule is better than it has ever been before?" (b)(7)(C) added to the question, "We all know that the past schedules have not been in the best quality and downright dangerous at times." (b)(7)(C) started to answer the question but was interrupted by (b)(7)(C) (b)(7)(C) then proceeded, according to (b)(7)(C) to talk for the next 10 minutes about how that question should not have been asked. During the talk by (b)(7)(C) (b)(7)(C) said, "Operators will no longer be able to use their pocket veto. They will be made to follow the schedule". (b)(7)(C) sat straight up in his chair when that comment was made. (b)(7)(C) stated that he has been in this business for years (b)(7)(C) and had never been talked to like that. He has held a license for over half his life and knows the responsibilities of having a license (Exhibit T-12).

Shortly after saying that, (b)(7)(C) ended his speech and walked out into the audience along one of the walls. (b)(7)(C) worked his way around and through the crowd until he got behind (b)(7)(C) Once he got behind (b)(7)(C) (b)(7)(C) said to (b)(7)(C) "That did not go the way you thought it was going to go did it?" (b)(7)(C) replied back to (b)(7)(C) "Once you started, it went exactly the way I thought it would". (b)(7)(C) told the agents that he did not think anyone heard that comment, but he thinks just about everyone heard the veto comment (Exhibit T-12).

(b)(7)(C) took the veto comment to mean that ops (operations) will do what management wants them to do no matter what the license holder thinks. (b)(7)(C) said this was the first time in his career that he ever heard a manager make such a comment. (b)(7)(C) stated that he did not challenge the comment because (b)(7)(C) felt that if he challenged the comment he would have been fired on the spot. The agent asked (b)(7)(C) what he thought about (b)(7)(C) comment to him in the audience. (b)(7)(C) said that (b)(7)(C) wanted (b)(7)(C) to know that (b)(7)(C) should have just listened and shut his mouth. (b)(7)(C) told the agents that he has never been talked to like that in his career. (b)(7)(C) has never heard operators talked about like that either. (b)(7)(C) said that the rest of the meeting he stayed quiet. On the next break, he and (b)(7)(C) spoke. (b)(7)(C) told (b)(7)(C) that (b)(7)(C) "flame-sprayed" (b)(7)(C) explained to the agents (b)(7)(C) thinks (b)(7)(C) felt challenged by (b)(7)(C) question. (b)(7)(C) wanted the meeting to be a top down directive meeting and not an exchange. (b)(7)(C) believes that is why (b)(7)(C) interrupted (b)(7)(C) answer (Exhibit T-12).

(b)(7)(C) stated that the problem at WBN is the Senior Management. To (b)(7)(C) anyone above the position of Superintendent knows what is going on at WBN. (b)(7)(C) said the problem is not limited to Operations. He says it has infected to all groups. According to (b)(7)(C) (b)(7)(C) and (b)(7)(C) surround themselves with "Yes Men" and "Yes Women". The facts are unimportant to them. The agents asked for an example of a "Yes Women". (b)(7)(C) said (b)(7)(C) was a "Yes Women". He stated that management likes these people because they will not challenge them or bother them with facts. (b)(7)(C) said that (b)(7)(C) veto comment has made its way to the Control Room. The license holders know what he said (Exhibit T-12).

Interview of (b)(7)(C) Shift Manager

(b)(7)(C) SM at WBN, was interviewed by TVA OIG on February 10, 2016, wherein he provided the following information in substance.

(b)(7)(C) started with TVA in (b)(7)(C) He started in Operations and became a SRO in (b)(7)(C). He became a Shift Manager in (b)(7)(C) (b)(7)(C) said that there are times when things do not get logged. He said that nobody gets punished for not updating the logs. He added that if you do not update the logs or record things correctly you open yourself up to negative feedback. The agents asked (b)(7)(C) about the (b)(7)(C) removal from watch matter. (b)(7)(C) said that (b)(7)(C) was working oversight in the Control Room. (b)(7)(C) was the Shift Manager. (b)(7)(C) was working too. (b)(7)(C) and (b)(7)(C) observed the alarm go off. The crew stabilized the plant. (b)(7)(C) contacted (b)(7)(C) and told him what happened. (b)(7)(C) also advised the rest of the duty team. (b)(7)(C) told (b)(7)(C) what all happened and who all was involved. (b)(7)(C) asked if things were stable. (b)(7)(C) told him that they were. (b)(7)(C) also thinks that he called (b)(7)(C) (b)(7)(C) but he is not 100 percent sure. He did a duty call too. (b)(7)(C) said that a duty call is a standard thing to do. He thought that the following people were on the duty call: (b)(7)(C), FNU LNU (Duty Engineer), FNU LNU (OCC) (Exhibit T-34a).

On this call, (b)(7)(C) informed all what happened and what they did in response to what happened. (b)(7)(C) said that they talked about individuals in the Control Room, but only in terms of discussing what happened. There was no talk of punishment, anyone getting removed from watch or anything like that. The call was to inform. (b)(7)(C) said that someone, he thinks an engineer, downloaded information from the shift so that they all could see exactly what happened. (b)(7)(C) said that this information was given to various people that night. After that, the shift ended, and everyone went home. The next day, (b)(7)(C) came back to work as normal. Sometime during the shift, (b)(7)(C) contacted (b)(7)(C) and told (b)(7)(C) to remove (b)(7)(C) from his duties. (b)(7)(C) told (b)(7)(C) that (b)(7)(C) made the call to do it after (b)(7)(C) reviewed the data that had been downloaded. (b)(7)(C) said that (b)(7)(C) did not act fast enough. To (b)(7)(C) being removed from your duties means that you cannot operate any panels on Unit 1 or Unit 2. (b)(7)(C) said that until (b)(7)(C) was placed back on watch; (b)(7)(C) could not do his duties. (b)(7)(C) said that he did not have a problem with (b)(7)(C) being removed from watch if it was only going to be for a couple of days. (b)(7)(C) said that actually disqualifying (b)(7)(C) would have been an overreaction. (b)(7)(C) asked (b)(7)(C) about (b)(7)(C) remediation. (b)(7)(C) said it was to be determined (Exhibit T-34a).

(b)(7)(C) asked if (b)(7)(C) was going to be removed from watch. (b)(7)(C) said to (b)(7)(C) "nothing at this time". (b)(7)(C) also asked the same question to (b)(7)(C) about (b)(7)(C) He was told basically the same thing (nothing at this time). (b)(7)(C) then went to (b)(7)(C) and notified him of the decision. (b)(7)(C) was there and asked (b)(7)(C) if (b)(7)(C) was being removed from watch, (b)(7)(C) said, "Not to my knowledge". (b)(7)(C) also told (b)(7)(C) that nothing had happened to (b)(7)(C) either. The days rolled along, and (b)(7)(C)

had not been remediated. (b)(7)(C) asked (b)(7)(C) what needed to be done to get (b)(7)(C) remediated. (b)(7)(C) did not have an answer. (b)(7)(C) would ask (b)(7)(C) and (b)(7)(C) would ask (b)(7)(C) (b)(7)(C) recalled one time when he asked (b)(7)(C) about (b)(7)(C) (b)(7)(C) said something about 3 days off. (b)(7)(C) told (b)(7)(C) that (b)(7)(C) disagreed with 3 days off. (b)(7)(C) relied back to (b)(7)(C) that (b)(7)(C) figured (b)(7)(C) would disagree. (b)(7)(C) told the agents that he believes if someone is negligent or overtly makes an error, then he is fine with discipline. (b)(7)(C) did not think this was the case with (b)(7)(C) (b)(7)(C) practiced before the incident happened. The situation with (b)(7)(C) kept dragging along. (b)(7)(C) kept asking (b)(7)(C) when he could get (b)(7)(C) back. He never got a definitive answer from (b)(7)(C) A few weeks after the incident, (b)(7)(C) got an email for the Operations Secretary that said (b)(7)(C) and (b)(7)(C) would be moved to (b)(7)(C) for their remediation. This was the first he heard of (b)(7)(C) needing to be remediated (Exhibit T-34a).

(b)(7)(C) replied back with an email to (b)(7)(C) and the Operations Secretary asking when (b)(7)(C) was going to get them both back. (b)(7)(C) recalled that (b)(7)(C) replied back that they were going to be remediated that week and be back on Friday. (b)(7)(C) told the agents that the remediation never happened. The two men ended up having to talk with (b)(7)(C) but there was no real remediation. (b)(7)(C) who had been off work the last few days, asked either (b)(7)(C) or one of the other Shift Managers when he came back why (b)(7)(C) needed to be remediated. He was then told that (b)(7)(C) had been taken off watch. (b)(7)(C) told the agents that it is very unusual for someone to get removed from watch for an event that took place many weeks earlier. (b)(7)(C) stated there was no reason to disqualify (b)(7)(C) and "I cannot think of a good reason why they would do it unless they had a problem, but I do not know why". According to (b)(7)(C) the evolution that day was briefed properly. In addition, (b)(7)(C) stated that (b)(7)(C) instructions that day were clear and he (b)(7)(C) knows because "I was standing right there and heard him". (b)(7)(C) is one of the top guys and is leaned on heavily in Operations. While there have been some problems, (b)(7)(C) stated "if you are on the field all the time then you'll be there when the fumble happens" (Exhibit T-34a).

(b)(7)(C) said that his coworkers told (b)(7)(C) a story about something that (b)(7)(C) said to a group at an off-site last year. It was an off-site meeting leading up to the last Unit 1 re-fueling outage. (b)(7)(C) thinks it was in August 2015. There were a few SRO's at this meeting. (b)(7)(C) told the group that at the upcoming outage the SRO's were no longer going to have their veto cards. (b)(7)(C) told the agents that Dennis REDINGER or (b)(7)(C) heard the comment. (b)(7)(C) explained to the agents that what (b)(7)(C) was saying was that at the upcoming outage the SRO's were not going to be able to slow or stop work. The SROs felt that they were going to be pushed to do things that they would not have done in the past and would not be able to say no that they were not ready for an evolution. (b)(7)(C) stated that he told his SROs that it was not going to happen on his crew. (b)(7)(C) said that his coworkers could be uncomfortable standing up to management. He has no problem doing it though but feels that a lot of people are intimidated. (b)(7)(C) said that management applies so much more pressure on Unit 2 items and Unit 1 outages. To give the agents an example of management pressure in the Control Room, (b)(7)(C) told of an incident that happened after the re-fueling outage when they had work that had to be done on equipment that was located in containment. The

personnel felt like the Work Orders had not been reviewed. The work could not be done until we reviewed the Work Orders (Exhibit T-34a).

(b)(7)(C) told (b)(7)(C) that they (Control Room) were going to review the Work Orders before doing the work. (b)(7)(C) wanted (b)(7)(C) to "keep moving". They were not going to keep moving until the Work Orders were reviewed. It was done for plant safety. (b)(7)(C) gave the Work Orders to (b)(7)(C) She is a licensed SRO. She was working in the Control Room at the time. (b)(7)(C) (b)(7)(C) placed (b)(7)(C) out of the way in the Control Room, so she could do the Work Order review. (b)(7)(C) kept calling the Control Room asking if she was done yet. (b)(7)(C) wanted to know how much longer (Exhibit T-34a).

Finally, (b)(7)(C) came into the MCR and sat in a chair. (b)(7)(C) knew exactly what he was doing. He was pressuring (b)(7)(C) to finish the Work Order review. (b)(7)(C) made sure that he moved his position so that he was between (b)(7)(C) and (b)(7)(C) (b)(7)(C) told the agents that management pressure has completely stopped since the agents showed up on site. According to (b)(7)(C) management now gives them all the time they need. (b)(7)(C) relayed another incident to the agents that happened last fall on Unit 2. It had to do with a certain procedure (RVLIS Calibration) and comments made by (b)(7)(C) This procedure tells the site what the level is inside the reactor. If the procedure was followed from page 1 until the end, then it would have taken a week to complete the procedure. The procedure had to be done at a certain time/sequence because the plant conditions had to be a certain way in order to do the procedure. The site just could not do the procedure anytime they wanted to do it (Exhibit T-34a).

There was a point when a conference call was held to discuss the procedure. (b)(7)(C) recalled that following people were on the call: (b)(7)(C) and FNU LNU (OCC). (b)(7)(C) found that there were some Unit 2 data points that were outside of the ranges listed in the procedure. There would have to have been several Work Orders done on it. We discussed that fact that if we had to redo the entire procedure/test it would take a week. During the phone call, (b)(7)(C) made a statement about the site needing to take a look at the procedure to make sure that the data was really required by the site's licensing docs. He then said that the site did not have to meet the procedure as written as long as the site can justify it. (b)(7)(C) expressed to (b)(7)(C) that he ((b)(7)(C)) was bothered a lot by (b)(7)(C) comments. (b)(7)(C) told (b)(7)(C) that they were not going to do what (b)(7)(C) said. While (b)(7)(C) does not feel that (b)(7)(C) was saying flat out not to do a procedure, that is what (b)(7)(C) believes (b)(7)(C) heard. Rather, (b)(7)(C) said (b)(7)(C) was saying if we can find a way not to do this, then let's do it. (b)(7)(C) does believe it was perceived pressure to the people in on the phone call and the fact that he (b)(7)(C) can still remember this one telephone call out of all the calls he receives says a lot about it. (b)(7)(C) told the agents that management is looking for the fastest way to do something. There is constant pressure. (b)(7)(C) was asked about pressure and health challenges. (b)(7)(C) said that healthy challenges are supposed to be professional, with no screaming or name calling. He said they are just healthy exchanges (Exhibit T-34a).

(b)(7)(C) said there is a lot of mistrust of management on the site as far as Operations. Many in Operations are intimidated. He added that some people will challenge, but most people do not think they will be heard. The agents asked why people would be intimidated. (b)(7)(C) replied that the (b)(7)(C) incident is just one example. The agents asked (b)(7)(C) about the Overtime Form having to do with SRO's that recently went into effect. (b)(7)(C) commented that that was a (b)(7)(C) screw job. (b)(7)(C) was interviewed by Employee Concerns but stated it was not as detailed an interview as this one. Rather, he stated the interviewer had a scripted list of questions. He allowed (b)(7)(C) to elaborate if he needed to, but the interviewer did not ask a lot of specific questions. (b)(7)(C) recalls he was asked to rate the managers. He gave (b)(7)(C) a 2 out of 5 and (b)(7)(C) a 3 out of 5. (b)(7)(C) reviewed a copy of a letter regarding the N/A of procedures. (b)(7)(C) stated that he got the letter in an email from (b)(7)(C) last week. He is not aware of who wrote it. He stated the first statement in the letter about Ops developing a willingness to deviate from procedure to get stuff done is an incorrect statement. (b)(7)(C) stated he will not sign the letter based on the first two paragraphs and the other Shift Managers are in agreement. He feels if he signed it then he would be agreeing to what it said. (b)(7)(C) feels it is a self-serving letter to take the pressure off management and reinforce the perception that it is all the crews' fault (Exhibit T-34a).

Interview of (b)(7)(C)

(b)(7)(C) at WBN, was interviewed by TVA OIG on June 14, 2016, wherein he provided the following information in substances.

(b)(7)(C)

(b)(7)(C) (Exhibit T-35).

At Waterford, (b)(7)(C) was (b)(7)(C) peer at some point and at other times (b)(7)(C) was his boss. The two men went to SRO class together. (b)(7)(C) did not finish the class, so he had to go back to the next class to finish. He and (b)(7)(C) both got their SRO licenses. (b)(7)(C) and (b)(7)(C) ended up both working in the Main Control Room (MCR), but on different shifts. At that point in their careers at Waterford, the two did not work with one another and rarely ran into each other. (b)(7)(C) eventually went on to become (b)(7)(C) Then (b)(7)(C) became the (b)(7)(C) (b)(7)(C) became the (b)(7)(C) Their relationship soured at a manager meeting at Waterford. There was an issue or problem that (b)(7)(C) attempted to blame on (b)(7)(C) department. (b)(7)(C) verbalized this to those at the meeting. (b)(7)(C) did not stand for it because (b)(7)(C) was wrong. (b)(7)(C) was trying to deflect blame off him. (b)(7)(C) chewed out (b)(7)(C) in front of everyone at the meeting. After that, (b)(7)(C) stopped talking to (b)(7)(C) (b)(7)(C) said that (b)(7)(C) is the type of person to hold a grudge and that is what (b)(7)(C) did. (b)(7)(C) eventually became the (b)(7)(C) (b)(7)(C) advised that he realized that (b)(7)(C) promotion would not be good for (b)(7)(C) so he seeked employment elsewhere. Shortly after (b)(7)(C)

(b)(7)(C)

(b)(7)(C) (Exhibit T-35).

(b)(7)(C) said that by all accounts (b)(7)(C) ran Operations. (b)(7)(C) did not have any commercial nuclear experience. (b)(7)(C) never had a license and the WBN licensed guys all knew this, so they came to (b)(7)(C) instead of (b)(7)(C) with their operational questions and issues. According to (b)(7)(C) the MCR guys all knew (b)(7)(C) did not have any commercial nuclear experience. (b)(7)(C) vividly remembers the day that (b)(7)(C) told him that they were getting a new (b)(7)(C) and the guy's name was (b)(7)(C) On that same day, (b)(7)(C) was talking with (b)(7)(C) and (b)(7)(C) about the new guy coming. (b)(7)(C) said that he told all three of them that in 2 years (b)(7)(C) will ruin this plant. (b)(7)(C) told them all to mark his word. (b)(7)(C) told them how bad (b)(7)(C) was as a manager. (b)(7)(C) told the three men that the (b)(7)(C) hire would be a very bad thing for TVA (Exhibit T-35).

After (b)(7)(C) arrived, (b)(7)(C) did (b)(7)(C) performance evaluation. (b)(7)(C) like always, got a very good evaluation. (b)(7)(C) told (b)(7)(C) that his evaluation put him as a top performer. (b)(7)(C) said that TVA was doing reorganization then. WBN did away with all the "Assistant" positions like his position. (b)(7)(C) was moved to Engineering. He received the same pay, but now his new pay scale was limited more than his old pay scale in his former position. (b)(7)(C) wanted to go to (b)(7)(C). He made this fact known to his supervisors to include (b)(7)(C) (b)(7)(C) knew that he was not going to get to go to that job even though he was very qualified for the job. He said that (b)(7)(C) was not going to let (b)(7)(C) get something that (b)(7)(C) wanted. (b)(7)(C) let (b)(7)(C) know that (b)(7)(C) was working behind the scenes to get the (b)(7)(C) job for (b)(7)(C) The position was vacant at the time. Only one person needed to approve the move and that was (b)(7)(C) (b)(7)(C) would not approve the move. (b)(7)(C) said the (b)(7)(C) was a direct report to (b)(7)(C) (b)(7)(C) did not get the job. (b)(7)(C) was told that (b)(7)(C) made the decision (Exhibit T-35).

(b)(7)(C) then said that under (b)(7)(C) (b)(7)(C) changed. (b)(7)(C) knew that in order for him to survive (b)(7)(C) that (b)(7)(C) had to do what he was told. (b)(7)(C) told (b)(7)(C) that (b)(7)(C) "went to the dark side". (b)(7)(C) said that after the Chilled Work Environment Letter (CWEL) was issued, (b)(7)(C) came to (b)(7)(C) and said to (b)(7)(C) "you were right about (b)(7)(C) (b)(7)(C) said that (b)(7)(C) was referring to (b)(7)(C) prediction that (b)(7)(C) would ruin WBN in 2 years. (b)(7)(C) said that (b)(7)(C) is smarter than (b)(7)(C) (b)(7)(C) said that (b)(7)(C) is a squirmy guy much like an eel and is hard to pin down. (b)(7)(C) discussed that he was at the off-site meeting at the country club just before the Fall 2015 re-fueling outage. (b)(7)(C) recalls hearing (b)(7)(C) or (b)(7)(C) or both of them talk about how the operators no longer had their veto. (b)(7)(C) said all of those in attendance knew exactly what (b)(7)(C) and (b)(7)(C) meant when they said that (Exhibit T-35).

(b)(7)(C) went on further to say that (b)(7)(C) is a smart guy, but (b)(7)(C) does not know the plant. (b)(7)(C) said that (b)(7)(C) is not good technically. (b)(7)(C) is a lot like (b)(7)(C) according to (b)(7)(C) (b)(7)(C) according to (b)(7)(C) is more technical than (b)(7)(C) and

(b)(7)(C) (b)(7)(C) says that (b)(7)(C) just makes bad technical decisions. (b)(7)(C) said that (b)(7)(C) is a hard worker who does what he is told to do. (b)(7)(C) said that it ended up being the perfect storm when (b)(7)(C) (b)(7)(C) and (b)(7)(C) all three were together and managing people and trying to run the plant. (b)(7)(C) is very familiar with the forced outage in the late fall of 2015. He was one of the guys that tried to find the leak after the rod dropped. He added that they did not want to initially shut down. The rod could not be pulled up. So, they shut down to recover the rod and find/fix the leak. (b)(7)(C) said that (b)(7)(C) is doing nothing but laughing at the NRC's CWEL. According to (b)(7)(C) is making so much money at TVA the CWEL is nothing to him. As a matter of fact, to him it was just the cost of doing business (Exhibit T-35).

Interviews of (b)(7)(C) Senior Reactor Operator

(b)(7)(C) SRO at WBN, was interviewed on February 10, 2016, and September 29, 2016, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

On October 19, 2015, (b)(7)(C) was working as the WBN1 (b)(7)(C) He recalled that they had a pretty heavy schedule. They had a number of tests to do. One of the tests called for that day was the Terry Turbine Test. (b)(7)(C) explained that conducting the test that day was challenging. The reason it was challenging had to do with the plant conditions that day. The Terry Test was going to put a big load on the plant that day. (b)(7)(C) said that the last time they did this particular test one of his coworkers had issues with the test. It did not go perfect. The person responsible for the test when it went bad was (b)(7)(C) ended up getting disqualified over the incident. (b)(7)(C) knew that the site had not performed this test well the last time they tried it. So, this time, (b)(7)(C) talked to (b)(7)(C) to get some insight (Exhibit T-13a).

(b)(7)(C) obtained what he called trigger values. They were going to give him a guide, so he would know when to stop the test. This would help prevent making a mistake like what happened to (b)(7)(C) (b)(7)(C) said that the Shift Manager, (b)(7)(C) , wanted the crew to also do another task that same shift. The task had to do with the reactor trip breakers. The goal of that particular job was to make sure all the rods moved. So, in (b)(7)(C) mind, there were two important jobs that were on the plate that day for the shift to do. The surveillance crew came into the Control Room and got with (b)(7)(C) and his coworkers in the Control Room so that they could set up the conditions needed to run the Terry Turbine test. (b)(7)(C) testified that his focus was on the Terry Turbine Test because everyone was there for this test. As they were starting the Terry Turbine Test, (b)(7)(C) came up to (b)(7)(C) and asked when they were going to begin the job with the reactor trip breakers. (b)(7)(C) told (b)(7)(C) that he was only focusing on the Terry Turbine Test. He did not want to take his focus off of that and onto the reactor trip breakers (Exhibit T-13a).

Throughout the Terry Turbine Test, (b)(7)(C) kept asking (b)(7)(C) why he had not started the reactor trip breakers job. He asked around three or four times and (b)(7)(C) kept giving the same response. (b)(7)(C) did not want to mess with the reactor trip breakers

job because doing so would add two forms of reactivity to the core. He told the agents that this was a "No- No". (b)(7)(C) stated that basically there were two reasons he would not do it: (1) his entire focus was on the challenging Terry Turbine test and the second test would take too much of his focus away and (2) adding two forms of reactivity to the reactor was not permitted to do at that power level. When asked during this interview why (b)(7)(C) kept pushing (b)(7)(C) on the reactor trip breakers, (b)(7)(C) said that, (b)(7)(C) does not have a lot of experience. Couple that with the pressure from the OCC and this is what happens. (b)(7)(C) just did not have what was needed to stop the OCC pressure." (b)(7)(C) reported that, "OCC now is directing the shift managers and they are telling them what to do" (Exhibit T-13a).

(b)(7)(C) said that the problem with management and the OCC directing the actions in the control room is that the ones doing the directing are not licensed. Some may have had an active license at some point, but the skill set needed in the control room now versus a few years ago is different. As far as working in the control room, (b)(7)(C) said skills atrophy if not used. The ones pushing now just do not have the skill set to do the pushing. (b)(7)(C) stated that they will say stuff like "but when I was an operator we would do six things at a time." (b)(7)(C) stated that things have changed (Exhibit T-13a).

(b)(7)(C) said that now at WBN the OCC and management's main thrust is to push their agenda. Their agenda is the schedule. Shift managers now just carry the message to their people in the control room. (b)(7)(C) told the agents that he and his crews successfully conducted the Terry Turbine Test. However, (b)(7)(C) did not do what (b)(7)(C) wanted him to do (reactor trip breakers). When the shift ended, (b)(7)(C) asked to meet with (b)(7)(C) in private. (b)(7)(C) told (b)(7)(C) that (b)(7)(C) was being relieved of his unit supervisor duties. (b)(7)(C) told (b)(7)(C) that (b)(7)(C) "was just not pushing hard enough." (b)(7)(C) told the agents that (b)(7)(C) was somewhat relieved when (b)(7)(C) did that because (b)(7)(C) was just too tired of being in that seat. (b)(7)(C) (b)(7)(C) He said that throughout his career both at TVA and (b)(7)(C), he has made a great deal of decisions based off his gut feeling. He stated that sometimes there may not be a technical basis for not doing something but just a gut feeling that something shouldn't be done. According to (b)(7)(C) his gut feeling has worked well. He added that a gut feeling worked (b)(7)(C) He stated that TVA is concerned about a profit. (b)(7)(C) stated that the profit motive is what is disappointing to him about TVA nuclear. (b)(7)(C) told the agents that the shift that followed (b)(7)(C) shift went ahead and did the reactor trip breakers job and moved the rods. It ended up being a big problem. They did the action without two protections in place because two of the protective circuits were in bypass. (b)(7)(C) was the shift manager. It was a huge mistake. (b)(7)(C) stated that he was not happy that it happened by any means, but he did feel vindicated that he had insisted on focusing on just one of the tests (Exhibit T-13a).

(b)(7)(C) said that what happened with the bypassed circuits was in the control room toward the end of the outage the instrument maintenance (MIG) guys did all of their work. They should have been doing it well before the last week of the outage. A lot of tags were covering the instrument panels in the control room. This contributed to (b)(7)(C) crew not seeing the

lights on letting them know that two safety circuits were out of service. (b)(7)(C) told the agents that the issue with (b)(7)(C) has contributed greatly to the atmosphere in operations. (b)(7)(C) said to the agents that the site all saw what happened to (b)(7)(C) (b)(7)(C) who described (b)(7)(C) as one of the smartest guys, said "you send him home because he has the guts to say now is not the time to do it." Operations got the message (Exhibit T-13a).

(b)(7)(C) said that the site is too Mode driven now. (b)(7)(C) thinks that the managers must have money directly deposited into their bank accounts each time they change Modes. (b)(7)(C) said that the current leadership style at WBN has created an atmosphere where nobody can tell their boss the truth. (b)(7)(C) thinks that one thing TVA can do to fix the problem at WBN is to hire one guy whose only job is to tell management the truth. (b)(7)(C) said that after (b)(7)(C) got removed from watch (b)(7)(C) told (b)(7)(C) that the (b)(7)(C) thing sent the wrong public relations message to the troops. (b)(7)(C) agreed. (b)(7)(C) does not think (b)(7)(C) style of leadership works at WBN. (b)(7)(C) is a bully. He tries to use his physical size and loud voice to get what he wants (Exhibit T-13a).

(b)(7)(C) said to the agents that he has had a lot of unpleasant supervisors during his long career. (b)(7)(C) is the only supervisor he has ever that he would describe as "abusive." (b)(7)(C) said that standing up to (b)(7)(C) comes at a cost. (b)(7)(C) stated that he is not having fun now and neither are his coworkers. He stated, "a couple of years ago we had some guys who were all fired up and now they are just trying to withstand the beatings." (b)(7)(C) said that they have made some mistakes in the control room. He said that it does not matter how bad a boss (b)(7)(C) is or anyone else is. The mistakes that have been made in the control room are just screw ups. (b)(7)(C) hopes that TVA management will be more realistic in the future with the schedule. One simple way to cut down on the mistakes is to let the smart people have the right amount of time to think (Exhibit T-13a).

(b)(7)(C) stated that (b)(7)(C) is damaged goods and believes that management had a lot on him. He believes this was part of the issue on November 11, 2015. (b)(7)(C) recalls feeling bad for the crew when he came in on November 11, 2015 because they looked shell shocked. (b)(7)(C) is not aware of whether (b)(7)(C) was in the OCC. He stated that (b)(7)(C) does not let the Shift Managers do their job. According to (b)(7)(C) (b)(7)(C) but has never been on a plant like WBN. (b)(7)(C) brought up the incident involving (b)(7)(C) who was taken off watch several weeks after a trip breaker incident. (b)(7)(C) specifically recalls telling (b)(7)(C) that you cannot punish (b)(7)(C) (b)(7)(C) weeks later. (b)(7)(C) stated that (b)(7)(C) is a bully. According to (b)(7)(C) the way it works is if management cannot get something done then they just wait for another shift. It is shopping for SROs. (b)(7)(C) explained that safety of the plant is his (b)(7)(C) overriding concern. (b)(7)(C) stated, "I go to work with a pit in stomach about what are those guys going to ask me to do" (Exhibit T-13b).

Interview of (b)(7)(C) Shift Manager

(b)(7)(C), SM at WBN, was interviewed by TVA OIG on February 17, 2016, wherein he provided the following information substance.

(b)(7)(C)

(b)(7)(C) has worked at WBN for vears and was earned his operator license in (b)(7)(C) He became a Shift Manager (b)(7)(C) years ago. (b)(7)(C) previously worked as an (b)(7)(C) at (b)(7)(C) advised that (b)(7)(C) was working as the (b)(7)(C) during the most recent re-fueling outage in Fall 2015. (b)(7)(C) was his Shift Manager. (b)(7)(C) stated that his crew (including (b)(7)(C) did very well at the beginning of the outage. He stated that shutting a plant down is scripted and the entire crew prepped and implemented the shutdown well. In fact, (b)(7)(C) crew set a record for shutting it down. (b)(7)(C) stated that the main control room staff was recognized with blue chips and position recognition. (b)(7)(C) stated that (b)(7)(C) did excellent (Exhibit T-14).

After the midpoint of the outage, there is no longer a script because of the emergent issues coming up. He stated that it is not as easy coming out of an outage as they start to restore systems. At this point, (b)(7)(C) stated that we started having issues where there were multiple priorities (between 4-8) per shift. (b)(7)(C) advised that it was hard to schedule maintenance with the emergent issues coming. While the Shift Manager is responsible for all everything in the plant and making sure that everything is done safely, his primary focus is on the safety of the people. In contrast, the Unit Supervisor's main responsibility to making sure the plant equipment is safe (Exhibit T-14).

(b)(7)(C) stated that there can be a planned schedule, but things change. These emergent issues can push the schedule out or hold things up. As the outage was about halfway through, (b)(7)(C) sat down with (b)(7)(C) in the office next to the main control room and asked how he (b)(7)(C) was doing. (b)(7)(C) had seen (b)(7)(C) appear frustrated with keeping up with the number of scheduled activities as well as things not on the schedule. (b)(7)(C) told (b)(7)(C) that he was tired, and (b)(7)(C) asked if he (b)(7)(C) wanted to be relieved. (b)(7)(C) said he was good, so (b)(7)(C) left it open with him. (b)(7)(C) stated that he told (b)(7)(C) to let him know if he needed someone to cover for him for a day or two. (b)(7)(C) stated that part of his job is behavior observation, but (b)(7)(C) was fine. (b)(7)(C) stated that this conversation happened about three weeks into the outage (Exhibit T-14).

About a week later, there had been a few incidents where Operations was not ready to do an evolution on the schedule when it came time for it to be done. There had been a few incidents where critical path activities were scheduled and the crew (not (b)(7)(C) in particular) was not ready. (b)(7)(C) recalls that there was an incident where they were supposed to start a reactor coolant pump (RCP). According to (b)(7)(C) the operators should be looking to see if everything was ready to do the action and not holding up the evolution. However, in this incident the operators had not yet walked down the pump even though they knew about it at the beginning of the day, so Operations held up critical path in the outage for 6 to 8 hours. (b)(7)(C) stated that the OCC was definitely upset because it should not have happened. (b)(7)(C) stated

that it was "not (b)(7)(C) specifically but the main control room staff" who held things up. However, (b)(7)(C) asked (b)(7)(C) about it and why it happened when they knew the evolution was coming. (b)(7)(C) told (b)(7)(C) that they had several other things going on. (b)(7)(C) told (b)(7)(C) to let him know so he (b)(7)(C) could move people around. (b)(7)(C) told him that if he (b)(7)(C) did not understand the priorities then to let him know. (b)(7)(C) told him that they could arrange the personnel to work the right priorities but not put off priorities while waiting on the right personnel (Exhibit T-14).

(b)(7)(C) stated that there were a couple of other instances where they were not ready and he (b)(7)(C) would talk to (b)(7)(C) (b)(7)(C) would tell him that they needed to do a different priority because stuff changes. (b)(7)(C) admitted that there could have been communication issues regarding which was the actual priority. Operations knew the rod testing was coming up, but (b)(7)(C) stated that they were not ready. Specifically, there had been no briefing and no set up of the conditions for the rod testing. Likewise, the support items to do rod testing were not ready. At the end of shift when they were relieved, things were still not aligned for the test. (b)(7)(C) pulled (b)(7)(C) to the side and talked with him again. He told (b)(7)(C) that he seemed tired, frustrated, and overwhelmed. He told (b)(7)(C) that he would no longer be sitting desk as the Unit Supervisor. (b)(7)(C) stated that he was replaced with another SRO, (b)(7)(C), but that he (b)(7)(C) would stay in the control room. (b)(7)(C) stated that (b)(7)(C) was non- confrontational when told of the change (Exhibit T-14).

Before he made the change with (b)(7)(C) (b)(7)(C) told (b)(7)(C) that he thought (b)(7)(C) was tired and having a hard time juggling all the balls in the air. He also recalls telling (b)(7)(C) that (b)(7)(C) seemed overwhelmed with the number of things they had to keep track of and that he (b)(7)(C) wanted to move (b)(7)(C) into (b)(7)(C) position. According to (b)(7)(C) (b)(7)(C) stated to do what he needed do but that they needed to keep (b)(7)(C) in the control room though because he (b)(7)(C) was valuable. (b)(7)(C) only talked with (b)(7)(C) about moving (b)(7)(C) (Exhibit T-14).

(b)(7)(C) does not feel that (b)(7)(C) was lazy but was overwhelmed. (b)(7)(C) would sometimes be looking at the second or third priorities and not realize what should come first. When asked if it was his job as Shift Manager to make sure that the Unit Supervisor was working on the right priority, (b)(7)(C) stated that it was, and he tried to redirect him. (b)(7)(C) stated that (b)(7)(C) would tell (b)(7)(C) that they were doing things to get ready and (b)(7)(C) would be doing multiple things at once. According to (b)(7)(C) (b)(7)(C) was not focusing in the right areas. (b)(7)(C) denied that (b)(7)(C) disagreed with what the priorities were and he (b)(7)(C) does not recall (b)(7)(C) challenging his as to what were the correct priorities. (b)(7)(C) cannot recall what (b)(7)(C) was working on but stated the number one thing that day was the rod testing. Everyone in the OCC and in the management chain was frustrated about the delayed rod testing because it was a critical path activity. (b)(7)(C) stated that (b)(7)(C) is very conservative. He checks, double checks and triple checks himself. (b)(7)(C) believes (b)(7)(C) seems scared to mess up or do the wrong thing. He described (b)(7)(C) as slow and not moving ahead. He believes (b)(7)(C) could not handle the number of things coming at him (Exhibit T-14).

According to (b)(7)(C) (b)(7)(C) was good with having a plan and working the plan. However, when the plan changed, and he had to react to the changes, (b)(7)(C) "was not as good at keeping up with what needed to be done." (b)(7)(C) stated that sometimes priorities change midshift. After the change, the crew asked (b)(7)(C) , why he was up there being the main supervisor. (b)(7)(C) stated that he did tell (b)(7)(C) , that they swapped because (b)(7)(C) seemed overwhelmed. (b)(7)(C) stated that there is a documentation system for coaching. It is called the Electronic Performance Observation Program (EPOP). (b)(7)(C) stated that this is where they put in all the coaching. It is to document any type of observation or coaching. It is used by first line supervisors and above. (b)(7)(C) has to put in at least three observations a month. He stated that this is a management expectation. He does not believe it is very user friendly. He does not recall if he put in anything about (b)(7)(C) (b)(7)(C) stated that some people get upset about getting "EPOP'ed" (Exhibit T-14)

(b)(7)(C) believes the entries are electronically timestamped but there is a place to write a narrative. He stated that he sometimes will save up several to write at one time so the date in the narrative may be different than the time stamp. EPOP is searchable by observer name, date, etc. (b)(7)(C) recommended speaking with (b)(7)(C) who is responsible for EPOP. (b)(7)(C) stated that the amount of work going on at WBN right now is insane. (b)(7)(C) stated that there are days that it can get overwhelming for him but on the whole, he can keep up. He does believe the SROs are having a hard time (Exhibit T-14).

The Operations personnel are not as experienced. He (b)(7)(C) is either 6th or 7th in seniority of the SROs. The majority of SROs came from the Navy and the sheer number of activities at WBN compared to the Navy is astronomical. (b)(7)(C) stated that there were a lot of activities on Unit 1 and now they have added in Unit 2. He stated that the number of activities from Unit 2 coming to the schedule is mind blowing. (b)(7)(C) stated that outages on Unit 1 are planned for 18 months. It is refined, and they know what to expect. Only when they go in and look at the equipment does emergent issues come up. In contrast, Unit 2 is not in an outage but rather is a start-up. The schedule for Unit 2 is at best two weeks out because they cannot really plan when a piece of equipment is turning over. As a result, there are days that the crews come in and do not know what they are doing in advance (Exhibit T-14).

(b)(7)(C) stated that one of the things that he and the other Shift Managers are facing right now (February 2016) is that there are requirements by law (called tech specs) as to how they must operate the plant. He gave the example of having to have both trains of RHR fully operable. If they want to take one out of service, then they can have one train of RHR and 2 Steam Generators (SGs) operable. There are four SGs total but right now there is one out of service and two which have issues with meeting the required narrow range level tech spec requirement for determining water level. This means there is only one SG available, so they do not have the required 2 SGs to go with the one train of RHR to meet the tech specs (Exhibit T-14).

When explained to the OCC, they wanted to know why the operators cannot determine water level with the wide range. While it is possible to determine the water, level using the wide range, (b)(7)(C) stated that it is not acceptable based on the tech specs which say the narrow range levels must be used. (b)(7)(C) advised "I get push back and I have to explain why I

cannot do it." He stated this is "the fight my licensees are doing several times a day." When he was working in Nebraska, (b)(7)(C) did not see this much pressure. (b)(7)(C) stated that they constantly must justify why something is not ok. He said it is like they are put on the stand and have to say why we cannot go around it or why we cannot do it this way. Most of the time, (b)(7)(C) is getting pushback from the (b)(7)(C) but he does not know where he (the (b)(7)(C)) is getting is pressure from. Every Shift Manager has complained, and the pushback stops for a day or two, but it starts back a day or two later (Exhibit T-14).

(b)(7)(C) stated that the operators' licenses are with the NRC and not TVA. His job is the health and safety of the public. However, the SROs and Shift Managers are constantly put on the defensive as to why they cannot get something done. (b)(7)(C) stated that the operators are constantly saying it is not worth the risk because of what can break. Operations personnel should be the ones operating the plant. (b)(7)(C) stated that the operators' pushback is slowing production. He stated that people will bring things forward and then just give up. He stated there was a time when if the Shift Managers said no then that was it. (b)(7)(C) thinks it is dangerous because people now have different thresholds. (b)(7)(C) believes there has been a dramatic positive change in both (b)(7)(C) and (b)(7)(C) demeanors in the last couple of months. Before that, (b)(7)(C) was very demanding, directive and results oriented. Likewise, (b)(7)(C) stated that (b)(7)(C) has high standards, is demanding, and holds people accountable. (b)(7)(C) believes (b)(7)(C) is looking to advance and just does what his bosses want him to do (Exhibit T-14).

(b)(7)(C) recalled an incident where a RCP was started on his shift and everything went well. (b)(7)(C) stated that they were to start a second RCP, but it was getting close to the end of shift. It was around 3:30/4:00 p.m. and turnover was due to start at 5:30/6:00 p.m. (b)(7)(C) stated they needed to move the pump. He talked to the crew and asked if they wanted to do the 2nd RCP. There were benefits as well as risks. He stated that one SRO and one RO on the crew were for it and one SRO and one RO was against it, so it was split down the middle. He told the crew that he appreciated the feedback and to give him 10 minutes to think and make a decision. He decided to do it and called (b)(7)(C) left him a voicemail that he intended to start the next RCP. He also called (b)(7)(C) and told him of his (b)(7)(C) decision. (b)(7)(C) said that he supported (b)(7)(C) 100 percent. (b)(7)(C) stated the OCC wanted it done but that did not enter into his decision (Exhibit T-14).

(b)(7)(C) then went up and told the crew what he had decided and that he did not think the risk outweighs doing it. He told the operators that if they disagreed then they could document it in the logs. He then said it was the end of the update and for everyone to get ready. At this point, (b)(7)(C) approached him. (b)(7)(C) was acting as additional oversight in the control room. (b)(7)(C) said that he wished (b)(7)(C) had talked with him before making the decision to start the second RCP that day. (b)(7)(C) said that he thought (b)(7)(C) was making a mistake because by starting the RCP it looked like he (b)(7)(C) completely disregarded the operators' concerns. (b)(7)(C) told him that he appreciated his (b)(7)(C) feedback but they were moving forward. (b)(7)(C) and (b)(7)(C) then got (b)(7)(C) on the phone. (b)(7)(C) explained his concerns and said it was the wrong message to send. He said the operators who were strongly against the move would take out of all this that the OCC pushed him (b)(7)(C)

and it was done for schedule pressure. (b)(7)(C) stated that (b)(7)(C) and (b)(7)(C) were getting louder because (b)(7)(C) was not getting his point across so (b)(7)(C) left to go talk to (b)(7)(C) in person. (b)(7)(C) then told his crew that he wanted to know who thought he was pushed into making the decision to move forward and two people raised their hands. He then told the crew to stand down that they were not going to start the pump. The two people who raised their hands were (b)(7)(C) and (b)(7)(C) (RO). He then talked to them individually. He told (b)(7)(C) that no one had pushed him, and that the decision was made on his own with no coercion. She was apologetic and said that she did not want to be seen as a troublemaker. He told her not to apologize and that is she is supposed to bring up concerns. He had a similar conversation with (b)(7)(C) (b)(7)(C) stated he could understand the perception that he was being pushed into moving forward (Exhibit T-14).

Interview of (b)(7)(C), Reactor Operator

(b)(7)(C) RO at WBN, was interviewed by TVA OIG on March 21, 2016, wherein he provided the following information in substance.

(b)(7)(C) has been employed at WBN for about (b)(7)(C) years. In 2010, he became licensed. According to (b)(7)(C) in 2012, 14 out of 17 reactor operators went to the NRC about similar issues. The issue that the reactor operators had back then had to do with "when does pushing back become insubordination". There were also safety conscious work environment issues brought to the NRC's attention. The NRC contacted TVA management about the allegations. TVA management put together a presentation for the NRC in an attempt to mitigate the issue. (b)(7)(C) recalled that he even had a conversation with (b)(7)(C) about the issue. (b)(7)(C) said that there really was no resolution to the issue. (b)(7)(C) said that everyone just moved on and the issue was not resolved (Exhibit T-36).

(b)(7)(C) said that things at WBN are now worse than they were back then. He said that everything they do in the control room revolves around adherence to the schedule. The direction from the OCC to the control room is out of hand. There are more managers in the OCC during an outage than there are operators in the control room. The control room personnel just get overwhelmed. (b)(7)(C) said that it was not that way until recently. The OCC has not always been staffed with so many people. Years back, there were more operators in the control room than managers in the OCC. During the re-fueling outage, (b)(7)(C) heard (b)(7)(C) (b)(7)(C) and (b)(7)(C) all make the comment that "operations would not be the reason we do not make the schedule". (b)(7)(C) said that such a statement can only be taken one way by the licensed operators. Schedule adherence is the top priority. (b)(7)(C) said the shift managers at WBN are fearful that they will be fired if they do not stay on schedule (Exhibit T-36).

As an example, (b)(7)(C) said that (b)(7)(C) was working as a Unit Supervisor during the re-fueling outage. (b)(7)(C) was deemed to be moving too slow, so he was "sent to the minors" by the shift manager. He was replaced by (b)(7)(C). (b)(7)(C) said that the current management at WBN refuses to admit that this scheduling pressure exists. (b)(7)(C) said he has gone to Employee Concerns about this issue. (b)(7)(C) said that an operator's

career path is rewarded if you are viewed as someone that will do what the OCC says to do. If you are viewed by the OCC as someone that pushes back, then you are labeled as not being a team player. (b)(7)(C) said that he hears the same things out of the OCC and management. All he hears is "do it because I said do", "this is critical path" and "we are too far behind". (b)(7)(C) said the slang the operators have for the OCC and management pushing the Operators is "leg humping". (b)(7)(C) gave an example of leg humping. He said during the last re-fueling outage, management made (b)(7)(C) stand in the Control Room during the big evolutions and give the OCC a second by second update as to what specific steps they were on with the evolution (Exhibit T-36).

(b)(7)(C) said that management has created an environment where it feels like a game of tug-a-rope between management/OCC and the control room. (b)(7)(C) said that such a dynamic is very bad for a nuclear plant. He added that they all should be pulling on the same side of the rope. (b)(7)(C) continued by saying that last October a few operators were disciplined for the Source Range Bypass incident. (b)(7)(C) said that management did not discipline everyone. They only disciplined a few people. He said that there is such a staffing problem in the control room that management could not discipline everyone because they could not staff the control room properly then (Exhibit T-36).

(b)(7)(C) said that he had been told that management is saying that the issues out at WBN are the result of accountability. (b)(7)(C) said that he is personally insulted by such a statement. It has nothing to do with accountability, and everything to do with denial. (b)(7)(C) said that out of 70 operators, 5 of them have problems with being held accountable. (b)(7)(C) said he has never heard one manager say to him or anyone else the statement "I was wrong". (b)(7)(C) said that WBN management will never face reality and admit that they messed up. They care more about not admitting fault than they do about fixing the problems (Exhibit T-36).

(b)(7)(C) said that all he hears from this management team is that the workers are bad. The common denominator in all of this, according to (b)(7)(C) is the management team. (b)(7)(C) told (b)(7)(C) that he laughed when they replaced (b)(7)(C) with (b)(7)(C) because the site made a video somewhat recently and there was a segment on the video of (b)(7)(C) The particular segment had to do with the phrase "this is what good looks like". They used (b)(7)(C) as the example on the video of what good looks like. (b)(7)(C) said it has gotten so bad that the OCC now "SRO shops". He explained that during outages when the OCC wants to do something the OCC will call the Control Room and "shop around" for an SRO who will agree to do what the OCC wants the operators to do (the action to take). (b)(7)(C) said that there are two phones in the control room. One number is 3441 and the other is 3874. (b)(7)(C) said that the OCC will call one phone and tell the SRO who answers the phone what they want to do. If that SRO does not agree, then the OCC will wait a few minutes and call the other phone hoping a different SRO will answer the phone (Exhibit T-36).

(b)(7)(C) said that the OCC will also wait until the end of the shift and do the same thing. That way if the OCC gets a "No" on both phones at the end of the shift, the OCC can call back to both phones at the beginning of the next shift and try it all again. (b)(7)(C) said that the lines and boundaries that at one time existed between the OCC/Management and the control room have

been erased. There are no boundaries now. (b)(7)(C) said that it is obvious that a safety conscious work environment does not exist at WBN. He said that one cannot exist if management simply does not listen. (b)(7)(C) said the "coaching push" at the site only revolves around negative things. It only involves negative feedback. (b)(7)(C) never hears anything positive, only negative. The management team at WBN has created an "us vs. them" environment (Exhibit T-36).

(b)(7)(C) said that you have a problem when 70 license holders all say that there is a big problem at WBN having to do with a safety conscious work environment. (b)(7)(C) said that this management group will never admit to the truth for it would be the kiss of death for their careers. (b)(7)(C) said that he has known (b)(7)(C) for a long time and personally likes (b)(7)(C) (b)(7)(C) added that as far as accountability goes, (b)(7)(C) has been a poor performer for at least one year (Exhibit T-36).

(b)(7)(C) said that (b)(7)(C) best skill is telling people that they suck. (b)(7)(C) is also good at telling people how not to suck. Bottom line problem at WBN is that when something happens, management comes up with a story. The story is not accurate. It is not honest. It is a story that they hope satisfies the regulator and does not make them look bad. The problem with doing that is it does not allow you to learn from the mistakes. (b)(7)(C) said that he can think of 2 ways to stop TVA from making up their own version of reality. One way is for the NRC to instruct TVA to stop doing business that way. The other way is to remove TVA upper level managers. (b)(7)(C) said that one good thing has happened because of all of this. He said that it has really brought everyone in the control room together (Exhibit T-36).

Interview of (b)(7)(C) Reactor Operator

(b)(7)(C) RO at WBN was interviewed on April 16, 2019, by OI and TVA OIG wherein he provided the following information in substance.

We [Unit 1 MCR operators] started the standby main feed pump on Unit 1 with the intention to pump forward with it through check valves that are located inside the polar crane wall of the reactor building to satisfy check valve testing that was required prior to start up. The testing required containment entry and would not be possible after reactor start-up. The SBMFP was started and pumped forward [feeding steam generators] with it while the unit was in Mode 3. While that was going on, preparations in the reactor startup was in progress. While we were pumping forward with the standby main feed pump, the unit did transition from Mode 3 to Mode 2 before reactor start up. I do not believe it was critical yet, but it was transitioned, right there at the edge from Mode 3 to Mode 2. After we entered Mode 2, we shut down the standby main feed pump (Exhibit T-15b, p. 7).

(b)(7)(C) identified (b)(7)(C) and (b)(7)(C) as providing direction to use the SBMFP for the testing. He discussed his pushing back on the operation on the basis that it was not the most controllable method of feeding the steam generators. In response to (b)(7)(C) push back he was challenged to prove the operation could not be procedurally performed. (b)(7)(C) explained he had a discussion with (b)(7)(C) to pause the startup for the

testing and (b)(7)(C) replied to the effect that that start-up cannot be stooped for the test and OPS will not be the hold up with starting up the unit. (b)(7)(C) continued that him and (b)(7)(C) discussed the responsibilities of (b)(7)(C) being the Senior License Holder on site and his ability to hold up any activity he wants regarding the operation of the plant. (b)(7)(C) then asked (b)(7)(C) a question to the effect of why do you come to work? (b)(7)(C) responded "To feed my family" where (b)(7)(C) replied that he did also. (b)(7)(C) took that to mean (b)(7)(C) did not feel he had the environment above him to go say they could not perform the testing in parallel and needed to delay the start-up. (Exhibit T-15b, pp. 11-24).

Interviews of (b)(7)(C), Senior Reactor Operator

(b)(7)(C) SRO at WBN was interviewed on January 16, 2016, and September 19, 2016, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) has been employed at WBN for (b)(7)(C) years and has been an SRO for (b)(7)(C) years. He reports to (b)(7)(C) Shift Manager at WBN. (b)(7)(C) advised that he was in the control room for (b)(7)(C) on November 11, 2015, as an (b)(7)(C) (b)(7)(C so that the other operators could focus on the plant as it was coming out of the maintenance outage. The Unit Supervisor that day was Dennis REDINGER. At one point, REDINGER had to leave for the day so (b)(7)(C) relieved him for a couple of hours (Exhibit T-05a).

(b)(7)(C) advised that it was a frustrating day for him and the other operators ("us") because they had come out of a re-fueling outage and went into an unplanned maintenance outage. Things were fixed, and they were projecting up through the Modes when they ran into some sticking points procedurally. According to (b)(7)(C) the General Operating Procedures (GO) are infrequently used so you need to be slow and methodical with heating up. In the GO procedures, there are notes, cautions, and warnings placed at various points in the procedures. Procedurally, there was a caution in the procedure (GO-1) that said do not move forward drawing a bubble in the pressurizer while you are cold and to wait until a certain temperature. According to (b)(7)(C) the operators did not want to heat-up but drawing a bubble is a milestone and a big step to moving forward so the Outage Control Center (OCC) said to do it (Exhibit T-05a).

(b)(7)(C) then showed the procedure to (b)(7)(C), Shift Manager. (b)(7)(C) agreed with (b)(7)(C) that they should not do it and communicated it back to the OCC. The decision was made to revise the procedure, so they could move forward. According to (b)(7)(C) this is not a common thing, but the OCC must have felt they found a safe alternative. (b)(7)(C) though did not believe that and told (b)(7)(C) that "I just want to communicate to you verbally that I am disagreeing with this procedure" and "I said who with an NRC license is saying this is ok" (Exhibit T-05a)

At this point, (b)(7)(C) said "the people who fire people with licenses said to do this." (b)(7)(C) stated that (b)(7)(C) did not name anyone but there are not many people above the shift manager. (b)(7)(C) believes he was talking about the (b)(7)(C) and (b)(7)(C) (b)(7)(C) stated "I was pissed off after this comment because my NRC license is something I'm proud of. It is an agreement between me and the NRC not TVA. I own my license." (b)(7)(C) stated that for the other people in the organization who have milestones to meet to get out of an outage to be able to make decisions on how to run the plant when they do not have a license is making decisions overriding the license holders is not right. Soon after this conversation with (b)(7)(C) REDINGER came back and relieved (b)(7)(C) At that point, the operators moved forward and did as instructed even though "the whole team was against it" (Exhibit T-05a).

According to (b)(7)(C) there are three let-down systems (normal let-down, RHR let-down, and excess let-down). Both the normal let-down and RHR let-down were tagged out and they were only using the excess let-down, so they did not have the ability to remove water from the RCT, so the water went up. They discussed it as a crew and decided that if the pressurizer got up to around 80 percent then they needed to do something to protect the plant. (b)(7)(C) stated that this is what ultimately happened. After it was over, (b)(7)(C) came in the control room. (b)(7)(C) stated "I am the person that (b)(7)(C) hugged in the control room." According to (b)(7)(C) (b)(7)(C) thanked them for protecting the plant that day. (b)(7)(C) believes that (b)(7)(C) may not have known the details, but he was aware of the position they were in and what they had to do to get out of it. (b)(7)(C) stated that the things that happened that day would not have been news to (b)(7)(C) a couple of weeks later (Exhibit T-05a).

(b)(7)(C) became aware a few weeks after the event that NRC was asking questions. (b)(7)(C) was never interviewed by the NRC. He believes it is because his name was not on the logs since he was the extra person that day and not the licensed holders assigned that day. (b)(7)(C) told the NRC resident that he was there but no one ever called him for an interview. He does know that REDINGER was interviewed. REDINGER told him that the NRC questions were mainly about procedure and why they took the action they took as well as about the logs. (b)(7)(C) does not believe there was any intentional wrong-doing regarding the logs but rather they were not detailed because there was so much going on that day (Exhibit T-05a).

(b)(7)(C) advised that operators cannot just walk out of a control room because they do not agree with what is happening. He stated that legal action could be taken against you for leaving your post. He stated that if you say no that you will not do something then either you will get told to do it or you are being relieved. (b)(7)(C) stated "I said no, and they changed the procedure and could safely move on, but I still said I do not agree with this" and "I absolutely believed they would fire me if I did not do it." (b)(7)(C) believes there is a chilled work environment in Operations and the operators are in fear for their jobs. While he is not aware of anyone who has been fired for pushing back, (b)(7)(C) knows there are SROs who have gotten negative performance reviews for not being viewed as a team player and not pushing to get out of an outage. Likewise, he stated that operators are being disqualified or sent home for a few days for making mistakes. (b)(7)(C) stated that he came from (b)(7)(C) and the first step when someone made a mistake was not to send them home (Exhibit T-05a).

(b)(7)(C) stated that both (b)(7)(C) and (b)(7)(C) were given five days off for an incident which occurred about three weeks before the November 11, 2015 event. (b)(7)(C) has over 30 years with TVA. He was the reactor operator when the source range instruments were bypassed during the re-fueling outage. According to (b)(7)(C) (b)(7)(C) that day but did not even set foot in the control due to his other duties. Regardless, he was the person held accountable since (b)(7)(C) (b)(7)(C) and he was sent home. (b)(7)(C) believes the current culture has been built at WBN by (b)(7)(C) and (b)(7)(C) and has dropped down to the department managers. (b)(7)(C) stated it has gotten worse in the past six months. (b)(7)(C) believes the pace that management wants them to keep is too fast and they need to slow down. The OCC is in chaos all the time with trying to figure out how they can get ahead by one hour. (b)(7)(C) is not sure what is driving this push to meet milestones but believes it is either bragging rights or money. He knows there is similar time crunches in other industries but does not believe it should be happening that way in nuclear. According to (b)(7)(C) there is "always an emphasis on safety but we go right up to the line where we are pushing the envelope and we need to slow down" (Exhibit T-05a)

(b)(7)(C) stated that a Unit Supervisor, (b)(7)(C), who is also a licensed SRO was removed from his duties for not pushing hard enough. (b)(7)(C) was in the control room one day focusing on some tasks involving the Auxiliary Feed System when it was communicated through the Shift Manager that management wanted him to do some parallel work on the rod control system. (b)(7)(C) continued to focus his efforts on the Aux Feed System which according to (b)(7)(C) was the right thing to do when he was relieved of his duties for not pushing hard enough. According to (b)(7)(C) (b)(7)(C) was replaced by (b)(7)(C) (b)(7) who is known to be willing to move at a faster pace. (b)(7)(C) removal is common knowledge among the operators and the crews knew about it happening before the November 11, 2015 incident (Exhibit T-05a).

(b)(7)(C) stated that there is currently a lot of scrutiny over Operations due to several events (one event happened on the day that (b)(7)(C) was relieved by (b)(7)). (b)(7)(C) believes all the events have occurred due to how hard Operations is being pushed. Due to these incidents, Operations is currently under an "Operations Excellence Plan" due to four things that have recently happened. (b)(7)(C) described these four things as (1) a nuclear instrument issue (2) the November 11,2015, incident, (3) a few minor clearance issues, and (4) a Unit 2 pressure transient that resulted in the lifting of a relief valve. Being under an Operations Excellence Plan means there are observers in the control room 24/7 including Quality Assurance, the (b)(7)(C) (b)(7)(C), and other members of the management team. (b)(7)(C) stated "I think the pace we have tried to keep is faster than the pace we can handle and the answer from management is not to slow down but bring more people in to watch" (Exhibit T-05a)

(b)(7)(C) stated that many of his friends and peers have been disqualified. He explained that being disqualified means that management has pulled some of your qualifications and you are limited by what jobs you can do. (b)(7)(C) stated that you are at the mercy of management as to how long you are disqualified and when you get to come off of it. (b)(7)(C) knows that REDINGER was disqualified for the November 11, 2015, event even though REDINGER was

against trying to heat-up using the excess let-down. When asked how he knew that REDINGER was against doing it, (b)(7)(C) stated that he heard him. (b)(7)(C) advised that an SRO was recently disqualified, and the operators believe it is for going against management. This happened around this past Christmas (2015). (b)(7)(C) had been the SRO on Unit 2 when they lifted a relief valve. He was not disqualified after this incident and instead continued working doing the same duties for three more weeks when one night he told management that he did not believe he could safely execute a scheduled activity they wanted done on Unit 2 and they needed to wait. Two hours later, (b)(7)(C) was told he was relieved of his post and was being disqualified because of the incident which happened three weeks ago. According to (b)(7)(C) the message that the other operators got from this happening was he pushed back against management and got disqualified (Exhibit T-05a).

(b)(7)(C) does believe that this idea of getting out of outage faster is an industry wide idea. He has friends at other plants who he recently saw at INPO who feel they are also being pushed. Specifically, a guy who works for Robinson Power Plant said it was pretty bad at their site as well. (b)(7)(C) stated that (b)(7)(C) strikes him as a person who is out for his career. He appears to be a very arrogant person. (b)(7)(C) believes that (b)(7)(C) tries to be a people person but then will blindside people. (b)(7)(C) recommended speaking with (b)(7)(C) a female SRO at WBN, (b)(7)(C) There was a meeting the previous week with the SROs, Operations Management, and (b)(7)(C) It was supposed to be a pep talk but "he asked us are any of you afraid right now?" (b)(7)(C) stood up and said that yes, she was afraid for her job right now (Exhibit T-05a).

(b)(7)(C) stated that (b)(7)(C) did not really address it. Rather, he went on to say that he expects 100 percent from everyone 100 percent of the time. (b)(7)(C) stated that he recorded (audio) the meeting and will try to get the OIG a copy of it. He also recommended speaking with (b)(7)(C) a Reactor Operator (ROs). (b)(7)(C) is very vocal and has developed a reputation as a complainer but some of his points are valid. After the meeting with the SROs, a similar meeting was held with the ROs. (b)(7)(C) had said he was going to try to record it. (b)(7)(C) described his shift manager, (b)(7)(C) as a nice guy but a company man who is destined for Corporate. He also thinks (b)(7)(C) and (b)(7)(C) will try to protect management. Likewise, he does not feel the shift managers will be truthful because they all want to move up. (b)(7)(C) stated that (b)(7)(C) has only been in his position for a short time. He replaced (b)(7)(C). (b)(7)(C) described (b)(7)(as "an ass" and "(b)(7)(C) guy." He stated that (b)(7)(C) brought (b)(7)(C) to WBN from SQN. When (b)(7)(C) became (b)(7)(C) (b)(7)(C) suddenly showed up to be the (b)(7)(C) (Exhibit T-05a).

(b)(7)(C) stated that their working schedule changed around four times before Christmas and there is no flexibility. This caused a lot of turmoil for his family due to having to constantly change plans. (b)(7)(C) stated that he made $(b)(7)(C) last year between base, overtime, shift differentials, and some other things but he does not think it is worth it. He said it is upsetting because he has (b)(7)(C) and they are living in their dream house in their dream area. He stated that pay is always a frustrating issue with (b)(7)(C) continually seeming to try to make them give more unpaid time to the company and ask for more days (he now works 4 -12s but it is about to go to 5-12s). (b)(7)(C) stated he would provide an email with his concerns about pay issues.

(b)(7)(C) feels that a big part of the problem is Unit 2 and the push to get it built. He stated that the feeling is come hell or high water they are going to get it started up. (b)(7)(C) stated that "it used to be that we were the last line of defense and now it seems like we are the only line of defense" but "when we push back it falls on deaf ears" (Exhibit T-05a).

When discussing November 11, 2015, (b)(7)(C) was "gun shy" that day because there had been issues in the days before November 11, 2015. (b)(7)(C) said that on November 9, 2015, (b)(7)(C) Unit 1 Supervisor (REDINGER) and the unit was working toward moving out of an outage. (b)(7)(C) recalls the OCC requested the MCR to draw a bubble in the pressurizer without the temperature being achieved as required by approved plant operating procedures. (b)(7)(C) recalls that he showed (b)(7)(C) the procedure that did not allow for them to draw the bubble cold. (b)(7)(C) took the procedure to the OCC. Shortly after that somehow the procedure got changed on the fly to allow for drawing the bubble cold. (b)(7)(C) does not know who in the OCC got (b)(7)(C) to have the procedure changed, but (b)(7)(C) does know that it got changed just so they could draw the bubble (Exhibit T-05b).

(b)(7)(C) said that it was during the procedure change (b)(7)(C) asked (b)(7)(C) who with an NRC license said that doing this was a good idea. (b)(7)(C) replied back that the people who fire people with an NRC license said do it. (b)(7)(C) took this to mean the people in the OCC were saying to do it. (b)(7)(C) stated that it pissed him (b)(7)(C) off and it was upsetting that someone would actually say that. (b)(7)(C) intimated that it was not his call. (b)(7)(C) then told the interviewers that management and the OCC were the ones who drove the entire outage. He added that the OCC was supposed to be in place to support the outage, not drive it (Exhibit T-05b).

(b)(7)(C) then told the interviewers about another incident that happened around November 11, 2015. He said that after turnover one (b)(7)(C) called for a meeting with control room personnel. At this meeting, (b)(7)(C) berated the crew saying that we were not pushing hard enough on this outage to move the plant forward and were weak. (b)(7)(C) said that (b)(7)(C) had just gotten chewed out by someone, so (b)(7)(C) decided to chew out the crew after he got chewed out. (b)(7)(C) told the interviewers that after that butt chewing session (b)(7)(C) learned that (b)(7)(C) had been scolded by the plant manager for not moving the plant fast enough, hence the reason for (b)(7)(C) chewing out the crew (Exhibit T-05b).

Interviews of (b)(7)(C), Reactor Operator

(b)(7)(C) RO at WBN was interviewed on January 27, 2016, and September 19, 2016, by OI, TVA OIG, and AUSA (b)(7)(C), US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) was licensed in (b)(7)(C) and worked on in the MCR on November 11, 2015. (b)(7)(C) explained that he was (b)(7)(C) and did not have a lot of experience. (b)(7)(C) did recall that after the rod dropped (days prior to November 11, 2015); (b)(7)(C) got the crew together and chewed the crew out for not doing enough to get them back online. So, when November 11, 2015, rolled around, (b)(7)(C) did as he was instructed. He took RHR out of

service. He said they had no blueprint to go off of since it was such an unusual alignment. (b)(7)(C) stated that the excess let-down was in place when the RHR was taken out and he was under the impression that it would take water out to keep the plant from going solid. (b)(7)(C) does not know why the decision was made not to wait for the normal let-down system but stated the operators did not wait because "we were being pushed by the OCC (Outage Control Center)." (b)(7)(C) stated that this was his first time dealing with an OCC as an Operator. His understanding of the OCC was that they were the people who understood what was happening and it was their job to come up with a plan. He now believes they are there to push and get the work done. (b)(7)(C) stated that he should have never taken the RHR out with that situation, but it was his first outage and the shift manager that day had a lot of experience and he said to do it (Exhibit T-23a)(T-23b).

Interview of (b)(7)(C), Senior Reactor Operator

(b)(7)(C) SRO at WBN, was interviewed by TVA OIG on February 03, 2016, wherein she provided the following information in substance.

(b)(7)(C) stated that in January 2016 she ran into (b)(7)(C). The two had talked by text before she got there at which time (b)(7)(C) had told her that he had a bad (b)(7)(C) and been removed from watch the previous (b)(7)(C) (b)(7)(C) told her that he had been removed from watch for the PORV lift which had happened the Saturday before Christmas. (b)(7)(C) had been taken off watch the day after the incident, but nothing had been said to (b)(7)(C) at the time (Exhibit T-28).

(b)(7)(C) asked (b)(7)(C) how this had happened. He told her about how he had gone to the Shift Manager and told him that there were not the right people in the control room to do the "sweeps and vents" activity which was on the schedule. (b)(7)(C) told (b)(7)(C) that about two hours later he was told that he could not stand watch because of the PORV lift event from December (Exhibit T-28).

(b)(7)(C) was working (b)(7)(C) that day (on January 12, 2016) when she was told that they were going to do the evolution on (b)(7)(C) This was the same evolution that the previous night's crew had been unable to do because of inadequate staffing. According to (b)(7)(C) there was a mixed crew on the day shift and she was not aware of whether everyone had been through just in time training. Her Shift Manager on this temporary crew was (b)(7)(C) (she typically is under (b)(7)(C)). (b)(7)(C) asked (b)(7)(C) if she was comfortable doing it and she said she needed time to look into it. (b)(7)(C) then gave (b)(7)(C) the time and a couple of hours later after reading the procedures and talking to people she said she was good with going ahead. (b)(7)(C) stated that her specialty is (b)(7)(C) during an outage (Exhibit T-28).

After briefing several times, (b)(7)(C) advised that they then went ahead with starting up one RCP. It was done in two steps. Everything went smoothly, and it was done safely. A short time later, (b)(7)(C) stated that suddenly the OCC or someone else said let's do another one. (b)(7)(C) stated that she was kind of like "what the hell?" (b)(7)(C) advised that a plan had

been in place for a week with all the pre-calculations and because one worked they suddenly wanted to start up another RCP. About a half hour to an hour later, (b)(7)(C) was asked to come to the briefing room for the second start up since she was (b)(7)(C) The entire evolution was briefed. (b)(7)(C) then spoke up stating that there was no contingency plan. She also asked a lot questions including what are we gaining by doing this. She stated the Shift Manager said that we want to get out of solid. (b)(7)(C) then said if we try to do this and lift a PORV then we will be in solid much longer (Exhibit T-28).

(b)(7)(C) wanted to look at the risk versus benefit. She said that if they did this then they would be beating the schedule by about two hours. However, (b)(7)(C) stated there was no need to rush and be changing plans. According to (b)(7)(C) (b)(7)(C) listened to her but was not in agreement. She stated that a reactor operator challenged her in a good way that the crew had just done it, so it made sense to use the same crew. After some discussion, the meeting broke and (b)(7)(C) said he was going to think about it. (b)(7)(C) then saw (b)(7)(C) on the phone and about ten minutes later they again met around the horseshoe. (b)(7)(C) said it was pretty formal. At this time, (b)(7)(C) started out by saying this is my decision and my decision alone and that they were going to start the reactor coolant pump. (b)(7)(C) thought that saying it was his decision alone was an unusual thing to say. When she found out they were going to move forward, (b)(7)(C) stated that she was honestly in shock because most of the people there had sided with (b)(7)(C) that they were not comfortable moving forward with the second pump (Exhibit T-28).

(b)(7)(C) remembered being upset but stated that she is (b)(7)(C) (b)(7)(C) . However, (b)(7)(C) did ask for a contingency plan for how to deal with the filter, so she started researching it. She stated at this point her relief was already there and (b)(7)(C) was still on the phone. At this point, (b)(7)(C) came back to the group and asked if anyone thought this was not his decision. (b)(7)(C) stated that she said yes, I do. He then asked if anyone has a problem starting this RCP and (b)(7)(C) again said yes, I do. (b)(7)(C) then said end of brief that we are not doing it. (b)(7)(C) felt like she was in a weird position having to do this because it was done in public. (b)(7)(C) felt very uncomfortable (Exhibit T-28).

(b)(7)(C) then took her aside at the end of the shift. He said he wanted her to know that it really was his decision. (b)(7)(C) told him that she believed him but the position he has been in has been bulldozed for so long that she felt like he had given up the fight. He said he understood and appreciated it (Exhibit T-28).

(b)(7)(C) stated that she went home and was pissed. It had been a rough day starting out with what happened to (b)(7)(C) . She then got an email about a mandatory meeting at 7:30 a.m. the next day with the (b)(7)(C) (b)(7)(C) was happy about the meeting because she had a lot to say about the constant pushing going on. (b)(7)(C) stated that she was already upset about (b)(7)(C) who had been taken off watch 3 weeks and 3 days prior but was doing stuff like vacuuming the control room rather than being remediated. She stated it was stupid because (b)(7)(C) is a workhorse. She knew that (b)(7)(C) had gone to (b)(7)(C) (b)(7)(C) but nothing had changed. (b)(7)(C) had even gone to (b)(7)(C) and said the

deal with (b)(7)(C) was bullshit. She told him that (b)(7)(C) had tried a hard evolution and you are killing him. She then told (b)(7)(C) that (b)(7)(C) may never come back the same (Exhibit T-28).

The next (b)(7)(C) was thinking on the drive in that she was going to tell the (b)(7)(C) (b)(7)(C), what she thought even though she was worried about losing her career. She stated, "we are a number to them." She stated that management has no idea what the operators do, what are the individual skill sets and who is smart. She stated that it is "probable the more you do the more chance of an error" (Exhibit T-28).

During the (b)(7)(C) meeting that (b)(7)(C) asked if anyone there was afraid, and (b)(7)(C) replied "yes, I'm afraid." (b)(7)(C) was immediately interrupted by two SROs. (b)(7)(C) then came back to (b)(7)(C) and asked why she was afraid. (b)(7)(C) told him that the stuff she is catching should not be getting to her since she is the last barrier. She is worried about missing it and how she will be punished because of it. She stated that no one wants to tell because they are afraid to raise the issue. She stated that she has been part of cover-ups where things are kept at the operators' level because they are afraid of repercussions. She clarified to the agents that she does not mean cover-ups in the sense of falsifications but rather that if they realize a coworker missed something on a work order then they'll fix it for them (Exhibit T-28).

(b)(7)(C) stated that the respect for the Shift Managers has gone done so the OCC is just bulldozing right through them now. In October 2015, the common saying was "is it because you do not want to do it or is it the law?" (b)(7)(C) stated that sometimes it is not black and white, but it is stupid. She stated that this pushing results in the operators putting themselves in risky situations since they are made to do stuff they are not comfortable with. (b)(7)(C) stated "I am afraid because something big can go wrong" with the way things currently are happening. She stated "we are letting them push and get to us" which causes mistakes. According to (b)(7)(C) management claims they are giving us (the operators) time but that is not what is happening. Rather, management says it is perception but that is BS (Exhibit T-28).

In November 2015, (b)(7)(C) stated they were trying to startup after the forced outage and the pushing got so bad that she was ready to leave. She was meticulously reviewing the work orders when she realized that they had not met all the criteria. She stated management wanted to start up the nuclear reactor and they began pushing her. She was angry because she was being pushed to sign a work order that gotten missed. She stated that (b)(7)(C) and (b)(7)(C) were the ones doing the pushing and asking what she needed. She stated that their tone was basically implying why aren't you going faster. She stated they did offer help, but it was stressful. She felt like they were pushing her to sign the work order but "I did not, I refused to sign it the way it was written (Exhibit T-28).

(b)(7)(C) recommended speaking with another SRO, (b)(7)(C) (b)(7)(C) described (b)(7)(C) as perfect for the main control room because of his knowledge and ability to see the big picture but also because "he has balls" and will say no. As a result, (b)(7)(C) felt like he

was a good person to be a unit supervisor during the outage. She stated that (b)(7)(C) had early in the outage had a need violation, but she still felt like he was a good choice (Exhibit T-28).

(b)(7)(C) heard that (b)(7)(C) was removed from the controls during the last outage by his Shift Manager, (b)(7)(C), because he said refused to do rod testing because he wanted the whole control room focused on the Terry Turbine test. The perception is that he was removed for the pushback because he wanted to do the testing in series rather than in parallel. According to (b)(7)(C) (b)(7)(C) is doing parallel tasks all the time so if he said not then there was a reason (Exhibit T-28).

Interview of (b)(7)(C) Senior Reactor Operator, Unit Supervisor

(b)(7)(C) US at WBN, was interviewed by TVA OIG on, March 3, 2016, wherein he provided the following information in substance

(b)(7)(C) told the agents that on February 24, 2016, (b)(7)(C) (b)(7)(C) and (b)(7)(C) met with all SRO's on (b)(7)(C) The theme of the meeting was that management was letting the SRO's know that management would back the SRO's in the event the SRO's stopped work or slowed down work for safety reasons. The meeting started at (b)(7)(C) and ended at (b)(7)(C) During the meeting, (b)(7)(C) and (b)(7)(C) let the group know that ECP investigated issues relating to retaliation and concluded that there was no retaliation. (b)(7)(C) said that (b)(7)(C) and (b)(7)(C) stood up front and were holding some type of victory celebration (Exhibit T-68).

(b)(7)(C) went on further to explain to the group that (b)(7)(C) was supposed to have been removed from watch weeks earlier, but was not due to a communications error. (b)(7)(C) stated he was caught by surprise when he called the Shift Manager to tell him good job for stopping the evolution. The Shift Manager told (b)(7)(C) that it was not him but rather was (b)(7)(C) (b)(7)(C) then stated wait a minute I thought he was removed from watch standing. (b)(7)(C) confirmed to the agents that (b)(7)(C) said it was a conversation between him and the Shift Manager when (b)(7)(C) first became aware of (b)(7)(C) involvement and that he (b)(7)(C) was still watch standing. (b)(7)(C) then said that he contacted (b)(7)(C) and (b)(7)(C) to have them remove (b)(7)(C) from watch (Exhibit T-68).

(b)(7)(C) told the SROs that he realized they had a communication error once he realized that (b)(7)(C) was still watch standing. (b)(7)(C) told the group of SRO's that (b)(7)(C) was surprised that (b)(7)(C) was watch standing that night (Exhibit T-68).

The agents asked (b)(7)(C) what his impressions were of that story given to the SRO's by (b)(7)(C) (b)(7)(C) said that he knew that (b)(7)(C) was telling the SRO's what the "story is going to be" about that particular incident. (b)(7)(C) knew that it did not add up because how on earth would (b)(7)(C) not have known (b)(7)(C) had been watch standing for three weeks. (b)(7)(C) is the (b)(7)(C) and that is his job (Exhibit T-68).

The agents asked (b)(7)(C) if he was involved in the (b)(7)(C) watch removal incident last year. He said that he was working on the Unit 2 side that day when (b)(7)(C) was on Unit 1. (b)(7)(C) was the Shift Manager. (b)(7)(C) came up to (b)(7)(C) and asked him to move to Unit 1 because he (b)(7)(C) felt that (b)(7)(C) had not been executing as well as he could have been and was not looking ahead (Exhibit T-68).

(b)(7)(C) stated that he was not aware that on the day that (b)(7)(C) was removed that he (b)(7)(C) was being asked to do the Terry Turbine test as well as move the rods at the same time. (b)(7)(C) stated that you cannot do those two activities at the same time and (b)(7)(C) would have expected (b)(7)(C) to stop (Exhibit T-68).

When asked how two items could be scheduled to be done at the same time when they are not supposed to, (b)(7)(C) stated that if there is any clear schedule, the OCC will throw things at the wall and see what sticks. He stated that activities will not always get reviewed so if they are trying to be proactive or if the schedule is behind and needing to get caught up then it can end up in a position where they are taking shots on goal which is not good (Exhibit T-68). (b)(7)(C) stated that the SROs are trying to unionize. (b)(7)(C) is not for joining a union based on his previous work experience but he heard a comment that recently concerned him. Specifically, (b)(7)(C) was talking with (b)(7)(C) and (b)(7)(C) when he (b)(7)(C) said he was going to take (b)(7)(C) Qual Card away because (b)(7)(C) could not have one of his shift managers organizing the others to join the union. (b)(7)(C) stated that (b)(7)(C) also said that unionizing the SROs will make him (b)(7)(C) quit. (b)(7)(C) told the agents what (b)(7)(C) said because (b)(7)(C) knows what (b)(7)(C) is doing is wrong (Exhibit T-68).

Interview of (b)(7)(C)

(b)(7)(C) was interviewed by TVA OIG on February 8, 2016, wherein he provided the following information in substance.

(b)(7)(C) started working at TVA in Operations (b)(7)(C)
(b)(7)(C)
(b)(7)(C). (b)(7)(C) thinks the operators are "scared shitless" for their jobs. He feels the control room personnel are scared to speak up. (b)(7)(C) stated he has heard that a Unit Supervisor was taken off watch by the (b)(7)(C) for raising a concern, but it was said it was for something (a lifted valve) that had happened three weeks before. (b)(7)(C) feels that what happened to this operator is "total bullshit" and "they sent a message to the entire operations department – cross me" (Exhibit T-69).

(b)(7)(C) stated that he has never seen anyone disqualified weeks after an event. Rather, an operator would be taken off the day of or the day after the event. They would then be promptly remediated and returned. According to (b)(7)(C) once the operator was allowed to assume watch the next week he had already made too many operational decisions to take him off watch (Exhibit T-69).

Interview of (b)(7)(C)

(b)(7)(C) was interviewed by TVA OIG on January 20, 2016, wherein he provided the following information in substance.

(b)(7)(C) stated that the current management of (b)(7)(C) and (b)(7)(C) is very different from former management. He stated there is pressure to move things forward. They have usually decided a course of action before a meeting and just want the groups to ratify the decision they have already made. They basically say stuff like "this is what we are going to do, does anyone want to speak out against that" and no one does. According to (b)(7)(C) "we do not have the environment where we can push back" (Exhibit T-70). (b)(7)(C) stated the SROs are especially uncomfortable going against management on control room decision. Recently, SRO (b)(7)(C) told management he could not do a required action on the reactor coolant pump (RCP) because he did not have enough trained people. Management backed off but the very next morning (b)(7)(C) was disqualified for a previous event that had happened over three weeks ago. (b)(7)(C) believes he was being punished for not doing what management wanted on the RCP (Exhibit T-70).

Interview of (b)(7)(C) Unit Supervisor

(b)(7)(C) US, was interviewed by TVA OIG on February 8, 2016, wherein he provided the following information in substance.

(b)(7)(C) is licensed. He is a Senior Reactor Operator (SRO). He obtained his license in (b)(7)(C). He has been with TVA since (b)(7)(C) was asked if he recalled working on January 11, 2016. He said he worked that (b)(7)(He was working (b)(7)(C) for both Unit 1 and Unit 2. (b)(7)(C) was the Unit Supervisor that (b)(7)(C) was the Shift Manager. After he was told he was being taken off watch, (b)(7)(C) stated that he was going to put in the narrative logs that he was taken off watch for raising a safety issue. (b)(7)(C) stated that he and (b)(7)(C) told (b)(7)(C) to take a walk and calm down rather than write anything because there was no reason to poke the bear. The agents asked (b)(7)(C) why he thought (b)(7)(C) had been removed from watch. (b)(7)(C) said that to him it was a message "to get on board or we will get you out of the way." (b)(7)(C) blamed (b)(7)(C) (b)(7)(C) said nobody in Operations will stand up to him. The message to Operations is to get on the team or else (Exhibit T-71).

(b)(7)(C) also recalls (b)(7)(C telling him on January 11, 2016, that (b)(7)(C) had said on a phone call that he (b)(7)(C) told me you can do it and "do not give me any of that nuclear safety bullshit." (b)(7)(C) stated that (b)(7)(C said (b)(7)(C) had called him back later to apologize. (b)(7)(C) believes the attitude at WBN is "to not do anything to jeopardize the schedule" is the root of the problem. The pressure is to "make the published date." This pressure is from the top. (b)(7)(C) believe the SROs are in fear of losing their jobs. (b)(7)(C) said that they do just about anything to stay on the published schedule and do not do anything to jeopardize the schedule is the answer the operators get most of the time. They move required maintenance out of the way just to stay on schedule. The problem is that certain

maintenance must be done at certain times. They end up either changing the procedure to match what they want to do based off plant conditions or not doing the maintenance at all. (b)(7)(C) stated that management will get engineers to sign off on anything and the engineers are in the same spot as the operators and do not want to make waves (Exhibit T-71).

(b)(7)(C) said the people pushing to move forward and stay on the published schedule do not have a license. (b)(7)(C) thinks that (b)(7)(C) is the problem because he used to have a license and feel as though he knows it all even though he was never licensed at WBN. Furthermore, (b)(7)(C) has never been an SRO at a commercial plant and the OCC managers only have SRO certifications. He stated that very few of these people hold a license but are trying to run the plant and make decisions over the licensed personnel (Exhibit T-71).

Interviews of (b)(7)(C), Shift Manager

(b)(7)(C) SM at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

> Agent's Note: In his initial interview with OI on December 18, 2015, (b)(7)(C) failed to provide the same level of detail and specifics as he provided in subsequent interviews.

On December 18, 2015, (b)(7)(C) was interviewed by OI concerning the events of November 11, 2015, and provided the following information. (b)(7)(C) was in the (b)(7)(C) from (b)(7)(C) in many different nuclear power plants, DOE facilities, engineering firms. (b)(7)(C) has been licensed since (b)(7)(C) and a Shift Manager since (b)(7)(C) explained the plant had removed normal let-down from service the night previous to the shift that he took over on the (b)(7)(C) of November 11, 2015. At (b)(7)(C) we had heated up to enter Mode 4 which is 200 degrees. At (b)(7)(C) we secured both trains of RHR to allow the RCS to continue heating up. The plan for November 11, 2015 was to heat-up and pressurize RCS and enter Mode 3 at some point during that day or that night. The normal let-down system for CVCS was out of service for repair to a leaking valve and they had placed the alternate let-down system, excess let-down, in service for let-down capabilities. Other than that, all the other plant conditions were normal as to be expected for Mode 5 and Mode 4 (Exhibit T-22a, pp. 4-11).

(b)(7)(C) discussed that nobody raised any concerns nor did any of the crew have any questions or concerns about trying to do a heat-up on excess let-down. (b)(7)(C) explained that the crew discussed the fact that they had not done it before and were willing to start it and see how it went. (b)(7)(C) stated he thought they had enough excess let-down flow to be able to control pressurizer level on excess let-down. When asked about the crew's reaction to planned events of the day, (b)(7)(C) stated he did not remember any big push back from the crew. However, (b)(7)(C) remembered being a little bit anxious continuing the start-up activities with only excess let-down because he had never done it like that before and was not 100 percent sure that it was going to go the way that he anticipated it to. (b)(7)(C) reasoned that he did not challenge the path to move forward because he had no basis for saying it would

not work. When asked about influences on his decision concerning schedule pressure or any information coming from outside the control room that might have unduly influenced him in his decision he stated he did not remember any specific undo pressure (Exhibit T-22a, pp. 15-19, pp. 21-40, pp. 43-56).

On January 19, 2016, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) explained that on the (b)(7)(C) of November 11, 2015, WBN1 was at Mode 5. WBN1 had just reassembled the reactor and the temperature was less than 200 degrees. OCC directed the MCR to move to Mode 4 which would have kept the site on schedule. The operating crew moved to Mode 4 as planned and as instructed. (b)(7)(C) further explained that around (b)(7)(C) hours, all prerequisites to move to Mode 4 had been handled. (b)(7)(C) instructed the MCR to go to 210 degrees and maintain that temperature which placed the plant into Mode 4. According to (b)(7)(C) the OCC told (b)(7)(C), OPS OCC representative, to inform (b)(7)(C) to go to Mode 3 and take the temperature up to 350 degrees. (b)(7)(C) further explained that around (b)(7)(C) the OCC directed (b)(7)(C) to take RHR out of service, and then move to Mode 3. (b)(7)(C) testified that he informed (b)(7)(C) that he was uncomfortable moving to Mode 3 and that they needed to stay where they were and wait for the let-down system to come back into service in a few hours. (b)(7)(C) said he mentioned to (b)(7)(C) that the OCC was pushing too hard. According to (b)(7)(C) (b)(7)(C) was also uncomfortable with the decision. (b)(7)(C) explained that the OCC was pushing too hard and wanted to stay on schedule (Exhibit T-22b).

(b)(7)(C) said that (b)(7)(C) raised (b)(7)(C) concerns to the OCC and recalled that (b)(7)(C) gathered everyone around a table and told them of (b)(7)(C) concern. (b)(7)(C) stated that (b)(7)(C) also told them that they were pushing the operators too hard and he wanted it to stop. According to (b)(7)(C) the OCC dismissed the concern and instructed (b)(7)(C) to move to Mode 3. (b)(7)(C) said that he would have pushed back harder on November 11, 2015, but he was worried that he would be somehow reprimanded for not getting on board with the decision to move to Mode 3. His actions in the MCR were heavily influenced by his fear of losing his job (Exhibit T-22b).

On July 20, 2016, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) advised that there was no discussion on November 11, 2015, that it might be possible to get 70gpm using the excess let-down. (b)(7)(C) stated, “I do not think you could ever get 70gpm out of excess let-down.” If someone had said 70gpm was possible, (b)(7)(C) stated that the conditions would have to be “absolutely perfect” at full pressure to ever get close to that and even then, it would be a “slim chance.” Regardless, (b)(7)(C) stated in the MCR that (b)(7)(C) “no one had the number 70gpm on our brain anywhere.” (b)(7)(C) stated that no one said that night that they knew the heat-up using excess let-down could be done. Rather, everyone said that they did not know how it would react and they (licensed operators) knew they had “stuff” they could do if it went wrong. (b)(7)(C) stated that the “big guys” were saying “go” and the operators had actions in their back pocket to use if it failed. (b)(7)(C) stated that no one in the MCR wanted to move forward. (b)(7)(C) is not aware of whether any of the other guys talked to (b)(7)(C) About a month later when the NRC brought up the issue, (b)(7)(C) was in (b)(7)(C) office with

(b)(7)(C) and (b)(7)(C) At which time, (b)(7)(C) asked (b)(7)(C) if (b)(7)(C) should be removed from watch until they found out the answers to the questions. (b)(7)(C) said "Yes." (b)(7)(C) stated that he was glad he had been in the meeting and heard the conversation because he realized it was not a punitive thing but rather just a conservative measure until the NRC was comfortable. (b)(7)(C) also believes it was to position themselves to look better to the NRC. (b)(7)(C) said this was normal and he would have done the same thing. (b)(7)(C) went back to his regular work control job and was able to fill in the next time he was asked for help in watch standing. (b)(7)(C) said he was never remediated. (b)(7)(C) never heard (b)(7)(C) or (b)(7)(C) talk about taking anyone else off watch because "the buck stops with me (b)(7)(C) (Exhibit T-22c).

On September 6, 2016, (b)(7)(C) was interviewed by AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, TVA OIG and OI wherein he provided the following information. Although (b)(7)(C) asserted that he was not worried about raising issues to the OCC, (b)(7)(C) was certainly not comfortable about challenging the (b)(7)(C) and (b)(7)(C) about plant decisions. (b)(7)(C) emphasized that once the first engineering test was over, he called (b)(7)(C) to inquire how much longer before the valve (normal let-down) was in-service. According to (b)(7)(C) (b)(7)(C) told him the valve would be ready soon. (b)(7)(C) said the schedule called for WBN1 to proceed to Mode 3. (b)(7)(C) stated there were no procedures in place about what to do or not to do when heating up using excess let-down, (b)(7)(C) said there was nothing in writing saying it cannot be done. (b)(7)(C) disclosed that he was uneasy about proceeding partly due to the fact that he had no experience heating up using excess let-down. (b)(7)(C) stressed that WBN1 was not at full pressure, but (b)(7)(C) admitted he had no idea how using the excess let-down would affect the pressurizer level. Likewise, (b)(7)(C) was unable to estimate how much inventory (water) they expected to get out using excess let-down, no numbers were discussed (Exhibit T-22d).

(b)(7)(C) stated that he knew there were ways to control the plant if excess let-down did not work and if the plant did what he was "afraid" it would do. (b)(7)(C) explained that the procedures are not written for every step (scenario). (b)(7)(C) stated that he knew how to recover the plant if excess let-down did not work and understood that the pressurizer level will go up during heat-up. (b)(7)(C) stated that the first step for heat-up was to remove the RHR. Once the RHR was removed, the temperature in the RCS would increase. (b)(7)(C) stated that prior to removing the RHR, (b)(7)(C) set some trigger values to ensure they took action. At this point, nobody could put their finger on why they should not heat-up. According to (b)(7)(C) if he did not have contingencies then he would have been more concerned. (b)(7)(C) stated that the licensed operators were not overly experienced and once it was discussed none of them had an opinion one way or the other except (b)(7)(C) (b)(7)(C) stated that no one else said it was not a good idea which caused (b)(7)(C) to start doubting himself because he seemed to be the only one that was uneasy. In regard to (b)(7)(C) (b)(7)(C) testified that (b)(7)(C) basically said something to the effect that, "He (b)(7)(C) felt (b)(7)(C) pain but we have a schedule." (b)(7)(C) confirmed that he set a trigger value of 80 percent pressurizer level where they were to open the PORV to control the rate of heat-up. They then took the RHR out of service and the pressure quickly got to 79 percent which was

faster than they anticipated. (b)(7)(C) said the rate of heat-up is what "killed" us because it out ran the excess let-down system which is what (b)(7)(C) suspected was going to happen. At this point, REDINGER opened the RHR inlet valves and the pressure level went down (Exhibit T-22d).

> Agent's Note: Testimony from the other control room operators (REDINGER, (b)(7)(C) (b)(7)(C) and (b)(7)(C) on shift during the November 11, 2015, events contradicts (b)(7)(C) statement that none of the other operators had an opinion on removing RHR from service.

Once the normal let-down got fixed they reconfigured everything and moved on. (b)(7)(C) said that they should have just waited until the normal let-down was fixed. About ten minutes after they opened the relief valve and recovered, (b)(7)(C) came in the MCR and thanked everyone for not letting the plant get out of control. (b)(7)(C) said it was clear that (b)(7)(C) had been in the OCC watching the event on the monitors and knew what had just happened. (b)(7)(C) said the event was not logged and no CRs were written. (b)(7)(C) admitted that he did not check the logs and acknowledged that they made mistakes. (b)(7)(C) could not recall who the Unit Supervisor was on the day of the event, but confirmed that later that afternoon, he sent an email to the other Shift Managers telling them, "Do not try to heat-up the plant using excess let-down." The comment on the email about not letting anyone talk you into it was made because it was not his idea to proceed with the heat-up without normal let down in service. (b)(7)(C) does not believe anyone in the OCC would have put the plant at risk on purpose. However, the lack of experience, knowledge, and schedule pressure all happened because they were trying to see how fast they can get back to making money. (b)(7)(C) expressed that everyone knew what he was doing, why he was doing it and what he had to do to recover the plant. (b)(7)(C) stated that at the time all these "smart people" were saying it is "ok" to do it and he (b)(7)(C) was the only one saying "no" so he talked himself into thinking it was alright because everyone else felt it was alright (Exhibit T-22d).

On April 3, 2017, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) said that he recalled (b)(7)(C) (b)(7)(C) or (b)(7)(C), telling him to do it on November 11, 2015. He said that he could not remember which one it was, but he did recall it was the person in the (b)(7)(C) position. (b)(7)(C) also said that during the same conversation he was informed that (b)(7)(C) and (b)(7)(C) wanted it done or were for it. (b)(7)(C) said that he let others in the OCC know that he was not in favor of doing it and did not want to do it. (b)(7)(C) said that the OCC knew how he felt. (b)(7)(C) told the agents that he could not remember exactly who all he told in the OCC, but he did know it was more than just (b)(7)(C) (b)(7)(C) added that he has a family to feed (Exhibit T-22e).

Interviews of (b)(7)(C) Unit Supervisor

(b)(7)(C) US at WBN was interviewed on multiple occasions by TVA OIG wherein he provided the following information in substance.

(b)(7)(C) has been a licensed SRO for about (b)(7)(C) years. He was asked what the problem was at WBN. He stated the problem was the people in charge of the plant. (b)(7)(C) said that the Shift Managers are no longer making Control Room decisions. Shift Managers are just a pass through from the OCC/Management to the people working in the Control Room. (b)(7)(C) dictates what he wants done and (b)(7)(C) dictates what he wants done. Nobody will say 'that is not a good idea." The Shift Managers have stopped pushing back (Exhibit T-27a).

The agents then asked (b)(7)(C) what happened recently with (b)(7)(C) getting removed from duty. (b)(7)(C) said the initial event occurred at the end of (b)(7)(C) when he was working in the Control Room as the Unit Supervisor just like normal. He had been in the Control Room serving in that capacity just about every day since the maintenance outage. He even had conversations with (b)(7)(C) in the Control Room prior to that day. On that particular day, they were going to do an evolution called Sweeps and Vents. They were starting up a reactor coolant pump. There are 4 reactor coolant pumps. Sweeps and Vents is a slow methodical procedure because when you start the procedure the pressure in the plant can vary widely. This means that the people in the Control Room must watch the pressure while they are engaged in the process. Before they did the evolution that day they went to the simulator in the Training Center and practiced. (b)(7)(C) explained that if the pressure gets too high then that is a bad thing and the Control Room personnel must react. If it gets too low, they must react as well. The pressure must stay between two levels during the evolution. If the pressure gets too high, a relief valve opens up as a safety. The opening of the relief valve during the evolution is not a good thing (Exhibit T-27a).

The operator for the evolution was (b)(7)(C) During the evolution, the pressure got too high and the relief valve opened. (b)(7)(C) was removed from his duties for the mistake. (b)(7)(C) had no problem with being removed for the mistake. (b)(7)(C) was not removed. (b)(7)(C) even asked if he was removed as well and was told no. (b)(7)(C) Shift Manager told him that he was not being removed. (b)(7)(C) was in the Control Room when it happened as well as (b)(7)(C). The action taken on (b)(7)(C) did not happen immediately. An hour or so later, (b)(7)(C) walked up to where (b)(7)(C) and (b)(7)(C) were located in the Control Room and told (b)(7)(C) That is when (b)(7)(C) asked if he was being removed as well. (b)(7)(C) recalled that he said to (b)(7)(C) "what about me." (b)(7)(C) replied something like "you are fine." (b)(7)(C) said that was the end of that and everyone finished the shift and went home. For the next three weeks, (b)(7)(C) continued working as normal in the Control Room. Everyone saw him working to include (b)(7)(C) (b)(7)(C) even had conversations with (b)(7)(C) in the Control Room. (b)(7)(C) and (b)(7)(C) knew he was working in the Control Room. He had conversations with them as well (Exhibit T-27a).

About three weeks later things changed. (b)(7)(C) was working in the Control Room as usual. He was working on Unit 1 and Unit 2 was starting a reactor coolant pump (the same thing he and (b)(7)(C) did three weeks ago). (b)(7)(C) was asked to go to Unit 2 and serve as the Unit Supervisor on the reactor coolant pump start up. He did as instructed and of note two reactor operators called in sick that day so in order to have the control room staffed, two of the SROs had to serve as reactor operators. (b)(7)(C) took survey of the situation and realized that they did not have the correct staffing personnel in place to start the reactor coolant pump. He told

the agents that starting the reactor coolant pump was in the schedule/plan for that day. SM (b)(7)(C) then communicated the concern up the chain of command. (b)(7)(C) would later learn that (b)(7)(C) spoke to (b)(7)(C) and (b)(7)(C) about the issue (Exhibit T-27a).

(b)(7)(C) then communicated the concern up the chain of command. (b)(7)(C) would later learn that (b)(7)(C) spoke to (b)(7)(C) and (b)(7)(C) about the issue. It was during a conference call that (b)(7)(C) called from the Control Room. After the call ended, (b)(7)(C) walked back to where (b)(7)(C) was located. (b)(7)(C) asked (b)(7)(C) something to the effect of "what did they say?" (b)(7)(C) replied, "You are not going to like this." (b)(7)(C) told (b)(7)(C) that (b)(7)(C) was relieved of his duties. (b)(7)(C) was angry and replied, "Are you fucking kidding me." He also said, "I bring up an issue and I get removed." (b)(7)(C) told (b)(7)(C) that (b)(7)(C) was going to record what happened in the Control Room's narrative log. He told (b)(7)(C) he was going to write in the log that he brought up a concern and was removed (Exhibit T-27a).

(b)(7)(C) said to (b)(7)(C) that it sure was odd that they waited three weeks to remove him. (b)(7)(C) said that nobody realized that (b)(7)(C) had been watch standing. (b)(7)(C) said that that was not true because everyone had seen him on the job at work in the Control Room. On site after the incident, people from all sorts of departments engaged (b)(7)(C) in conversations about the event. (b)(7)(C) told everyone that he was relieved from watch due to the relief valve event. He told everyone the "company line." He told the agents that he wanted to tell everyone the truth but was afraid to do so for fear of it getting back to management. He reasoned if they did this to him they would do anything. He wanted off their radar and he wanted to be thought of by management as a team player, so he stuck to the party line (Exhibit T-27a).

(b)(7)(C) was asked if it was possible that his removal from watch standing on (b)(7)(C), was done in an attempt to get him out of the way so the site could do the planned evolution that night. (b)(7)(C) responded that based off the timeline of events that night that it was very possible that (b)(7)(C) was removed from watch standing for that very reason. (b)(7)(C) said that his removal from watch standing happened well before WBN management gave up trying to get the evolution done that night. (b)(7)(C) knows this to be true because (b)(7)(C) was removed from watch, then later that night (b)(7)(C) listened in on a conference call that took place between (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) No one knew (b)(7)(C) was listening except for (b)(7)(C) On this call, (b)(7)(C) was questioning (b)(7)(C) about the crew composition. (b)(7)(C) said that during this call the site still had not given up on getting (b)(7)(C) to do the evolution. Finally, (b)(7)(C) recalled that it became apparent to everyone toward the end of the call that the evolution was not going to happen. (b)(7)(C) then decided on the call that they were going to not do the evolution (Exhibit T-27c).

(b)(7)(C) was questioned regarding his interview with (b)(7)(C) as part of the Special Review Team (SRT) report. (b)(7)(C) stated the following: (b)(7)(C) was shown a picture of (b)(7)(C) and stated that he remembered the interview which was held in the Shift Manager's conference room. (b)(7)(C) was under the impression that (b)(7)(C) was interviewing everyone on shift that evening. He recalls being candid with (b)(7)(C) because he thought it was confidential. (b)(7)(C) believes that (b)(7)(C) told him it was confidential. (b)(7)(C) was not aware that (b)(7)(C) provided the notes from his (b)(7)(C) interview which identified (b)(7)(C)

as making the statements to (b)(7)(C) (b)(7)(C) or (b)(7)(C). (b)(7)(C) stated that this was not "okay." (b)(7)(C) advised that he told the truth about how he felt because the tone of the interview was that it would be confidential. (b)(7)(C) feels that management knowing what he said could have hurt him in his career (Exhibit T-27d).

Interview of (b)(7)(C) Reactor Operator

(b)(7)(C) RO at WBN, was interviewed by TVA OIG on February 10, 2016, wherein he provided the following information in substance.

(b)(7)(C) was asked to tell the agents about when he was removed from watch in (b)(7)(C) (b)(7)(C) said that he was in the Control Room working. They were conducting an action (starting a pump). During the action, (b)(7)(C) did not respond swiftly enough when the conditions changed which resulted in a relief valve (PORV) being activated/opened. (b)(7)(C) recalled that the incident happened just before Christmas. It was the next day that (b)(7)(C) told him that he was removed from watch (Exhibit T-72).

He was asked why (b)(7)(C) was removed from watch (b)(7)(C) as (b)(7)(C) was removed from watch. (b)(7)(C) said that was obvious. The perception from people in the control room is that he pushed back and was magically disqualified. (b)(7)(C) told the agents that he is not afraid to push back. He is protected by the union. A grievance process is available for him. He said that the SRO's do not have protection. (b)(7)(C) said that the pushing that is being done now is wrong. Pushing like management does now causes mistakes to happen. This new push, according to (b)(7)(C) all has to do with getting Unit 2 online. (b)(7)(C) said that no matter how hard he is pushed, he will not do anything that is unsafe. He said he will walk out of the Control Room before he does something unsafe because he is getting pushed. (b)(7)(C) added that if the OCC or management wants him to do something that he thinks is stupid, but still safe, then he will do it. Again, he added that he had union protection (Exhibit T-72).

Interview of (b)(7)(C)

(b)(7)(C) at WBN, was interviewed on February 29, 2016, by TVA OIG wherein he provided the following information in substance.

(b)(7)(C) stated that during the outage, (b)(7)(C) would come into the shop and not talk to anyone. According to (b)(7)(C) would just sit down in a chair and glare at people and did not talk, he just stared at people. (b)(7)(C) stated adding to the schedule pressure during the outage was the statement made by (b)(7)(C) before the outage. (b)(7)(C) said that (b)(7)(C) told a large group meeting offsite just before the outage started that if anyone did not think they could do the schedule in 30 days then they needed to leave (Exhibit T-73).

(b)(7)(C) described the intimidation at WBN was horrible. (b)(7)(C) explained that (b)(7)(C) (b)(7)(C) is a (b)(7)(C) (b)(7)(C) Allegedly, (b)(7)(C) and stopped it (Exhibit T-73).

Interviews of (b)(7)(C)

(b)(7)(C) at WBN, was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C), US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) came to WBN in (b)(7)(C). He served in this capacity until he became the (b)(7)(C) He was previously licensed as an SRO at (b)(7)(C) (b)(7)(C) (b)(7)(C) stated there were basically three options: (1) stay in Mode 5 and wait until the normal let-down was back in service or (2) heat-up to Mode 4 and stay on RHR or (3) do option 2 and then take RHR out of service and the cooling mechanism would be the main steam dump. The decision was made to go with option no. 3 (Exhibit T-21a).

(b)(7)(C) recalled in the re-fueling outage that SRO (b)(7)(C), slowed down for four hours to review a package before they moved forward with heating up. He knows she felt pressure because all eyes were on her. (b)(7)(C) believes that the issues happening at WBN are because (b)(7)(C) and (b)(7)(C) are holding people accountable now. (b)(7)(C) stated this is the first time in the Operations organization where they have been held accountable to this degree. (b)(7)(C) stated that there are a lot of individuals who feel because they work here they have some privilege with not doing the work. (b)(7)(C) believes that people are angry now because they are being held accountable (Exhibit T-21a).

When discussing the removal and disqualification of (b)(7)(C) on January 11, 2016, (b)(7)(C) discussed that the investigation (done by (b)(7)(C) as part of the PER) into this matter took approximately a week and a half at which time it was determined that (b)(7)(C) had not given clear direction to the UO in this case to reduce charge. As a result, the decision was made in discussions with (b)(7)(C) that (b)(7)(C) should also be disqualified. However, (b)(7)(C) stated that he failed to communicate with (b)(7)(C) that (b)(7)(C) was disqualified because they had a lot going on due to the RHR event (Exhibit T-21a).

According to (b)(7)(C) (b)(7)(C) raised the concern and did not say it was the operators. They discussed who was currently in the control room and (b)(7)(C) realized that there was not an effective staff to be successful at starting the RCP. (b)(7)(C) called (b)(7)(C) and told him the situation and (b)(7)(C) requested that (b)(7)(C) send him the manning sheet, so he knew who was on duty. When (b)(7)(C) got the sheet, he saw that (b)(7)(C) was working. (b)(7)(C) called (b)(7)(C) back and told him that (b)(7)(C) was working. (b)(7)(C) said, "I thought we had taken him out of rotation earlier." (b)(7)(C) admitted he had made a mistake and had not pulled (b)(7)(C) from watch standing. (b)(7)(C) then said, "We cannot leave him

in there to make an error and move him." (b)(7)(C) then contacted (b)(7)(C) with the news, so he could tell (b)(7)(C) (b)(7)(C) replied that "oh you've got to be kidding." (b)(7)(C) stated that the whole thing is "obviously poor timing." (b)(7)(C) estimated that he goes into the control room 4 to 5 times a week. He is aware that (b)(7)(C) was conducting his licensed duties during the time between the events. (b)(7)(C) stated that being taken off watch is not disciplinary, but it is also not fun (Exhibit T-21a).

When discuss communication on the night of January 11, 2016, (b)(7)(C) could not recall (b)(7)(C) saying, "Do not give me any of that nuclear safety bullshit." However, he does recall (b)(7)(C) using inappropriate language and telling (b)(7)(C) something to the effect that basically he was "chickenshit" for not moving forward (Exhibit T-21b).

(b)(7)(C) was asked by the agents about all the talk the agents have been hearing about pushing. (b)(7)(C) stated, "That pushing is common and I have had much worse." In his opinion, operations are not doing well because there are some fundamental areas with operators' performance and they have failed to correct the low-level behaviors. Some examples of these include communications, responses, and board monitoring. (b)(7)(C) believes the only recent event that could even remotely be associated with pushing would be the RHR event because the whole OCC team was pushing to move forward (Exhibit T-21b).

According to (b)(7)(C) Operations knows the knowledge level is lower than it should be, and that management needs to be in an oversight role to make sure the people who do the actions understand what they need to do. While these oversight managers may not have an active license or be a license holder, they have the required knowledge from past experience to make decisions and assist in what happens in Operations. (b)(7)(C) believes it is inappropriate for someone to say that (b)(7)(C) should not be involved in the control room decisions since he is the (b)(7)(C), who (b)(7)(C) believes is very knowledgeable (Exhibit T-21b).

(b)(7)(C) confirmed that (b)(7)(C) is an inactive license holder but was basically telling the Shift Manager, a licensed holder, that he was a "chickenshit" for not moving forward with something he (the licensed holder) felt was not safe. The operators have the license and responsibility to the site and the public. (b)(7)(C) stated, "If they absolutely feel it is unsafe, they need to stop." When asked what if the shift managers do not know whether it is "absolutely unsafe" but they are uncomfortable doing it. (b)(7)(C) replied that there would be a discussion about the differing opinions and the Shift Manager has the ultimate decision. (b)(7)(C) feels like the Shift Managers now will tell him if they are not comfortable with something (Exhibit T-21b).

(b)(7)(C) stated the level of management involvement and the need for justification is determined by the length of the delay. (b)(7)(C) said anything that is going to be off by three hours needs to be justified to (b)(7)(C) does not think there is anything wrong with having to prove why you cannot perform a scheduled action (Exhibit T-21b).

When discussing the events of November 11, 2015, (b)(7)(C) identified had been talking to (b)(7)(C) on a regular basis that day about what was happening. In addition, (b)(7)(C)

would have been in the OCC frequently that day. (b)(7)(C) stated that (b)(7)(C) was for moving forward that day, but the decision was made by (b)(7)(C) (b)(7)(C) stated that he and (b)(7)(C) were good with moving forward that day because they thought they could do it safely. He stated that everyone was good with moving forward in the beginning about November 11, 2015, but now say how bad the decision was. There have been "a lot of Monday morning quarterbacks" about this issue. (b)(7)(C) does feel like there was a lot of miscommunication. It was clear to (b)(7)(C) that day that the decision was made by (b)(7)(C) who was the shift manager (Exhibit T-21c).

(b)(7)(C) discussed that during outages (b)(7)(C) wanted to know minute by minute what was going on. In the OCC, (b)(7)(C) and (b)(7)(C) were part of the Senior Leadership Team. (b)(7)(C) stated that information to (b)(7)(C) would go through him (b)(7)(C) while decisions went from (b)(7)(C) to (b)(7)(C) (b)(7)(C) would then go to (b)(7)(C) with the decision. (b)(7)(C) said that there was discussion in the OCC to remove RHR and allow the heat-up to begin. (b)(7)(C) said that they had many discussions about that in the OCC and in the main control room with (b)(7)(C) (b)(7)(C) questioned (b)(7)(C) about what was going to happen to the pressurizer level if they took the action. (b)(7)(C) had multiple conversations with a few people about that and these conversations took place over the course of a few hours. (b)(7)(C) said that the Shift Manger's crew also asked that same question. (b)(7)(C) recalled interacting with the Shift Manager and the Unit Supervisor that day (Exhibit T-21d).

(b)(7)(C) said that on November 11, 2015, (b)(7)(C) and (b)(7)(C) both were involved in the decision and both knew exactly what was going on. (b)(7)(C) stated that both (b)(7)(C) and (b)(7)(C) were in favor of removing the RHR system. (b)(7)(C) said that he spoke to (b)(7)(C) about it and his crew, but the idea was not (b)(7)(C) idea. (b)(7)(C) was asked if (b)(7)(C) told (b)(7)(C) to instruct (b)(7)(C) to take the action. (b)(7)(C) said that (b)(7)(C) did not tell (b)(7)(C) to tell (b)(7)(C) to do it. (b)(7)(C) said it came about after the conversations in the OCC after which the OCC came to the conclusion to do it and (b)(7)(C) communicated that to (b)(7)(C) (b)(7)(C) stated that he (b)(7)(C) went to the control room and told (b)(7)(C) that "this is the path that we would like to go down because we feel it is appropriate" (Exhibit T-21d).

Interview of (b)(7)(C)

(b)(7)(C) at WBN was interviewed on May 26, 2016, by TVA OIG wherein he provided the following information in substance.

(b)(7)(C) was hired by TVA in (b)(7)(C). (b)(7)(C) advised that he worked (b)(7)(C)
(b)(7)(C)
(b)(7)(C) (Exhibit T-33).

During the interview (b)(7)(C) was asked about an offsite meeting prior to the re-fueling outage in October 2015, (b)(7)(C) recalled said there were over a hundred people at the meeting contends that WBN was notorious for not following previous outage schedules. He had not even been in an outage at WBN before and he knew people did not want to work on a schedule. (b)(7)(C) stated that he had never heard the term "pocket veto" until he got to TVA. (b)(7)(C) testified that he first heard the term, "pocket veto" while working in the OCC in July 2015. At the offsite meeting, (b)(7)(C) believes it was (b)(7)(C) who said it in the context of we (TVA) were going to follow the schedule and there are "no pocket vetoes." (b)(7)(C) stated that pocket veto meant a group of people determining they were not going to follow the schedule (Exhibit T-33).

(b)(7)(C) stated that all this was happening at a period of poor operations where there were some serious mistakes. (b)(7)(C) believes the operator fundamentals were not right and it led to people becoming uncomfortable with a new standard. (b)(7)(C) stated that he knows what a good operator is because he was an operator. He stated that the best people are not making these mistakes. (b)(7)(C) does not have a high opinion of the operators he has seen at WBN. He described them as on the lower scale (Exhibit T-33).

Interviews of (b)(7)(C)

(b)(7)(C) at WBN was interviewed on multiple occasions by TVA OIG, wherein he provided the following information in substance.

(b)(7)(C) advised that he is not a licensed operator. (b)(7)(C) was shown an email sent by (b)(7)(C) on November 11, 2015, at the conclusion of (b)(7)(C) shift in the Control Room. The body of the email stated, "(b)(7)(C) (b)(7)(C) (b)(7)(C) ." (b)(7)(C) read the email to himself then commented that he had never seen the email before. He said based off the email a CR should have been written that day. (b)(7)(C) said that he did not know who (b)(7)(C) was talking about in the email when he said not to let anyone talk you into removing RHR from service without the normal let down in service. (b)(7)(C) was asked if he recalled speaking with (b)(7)(C) on November 11, 2015. (b)(7)(C) could not recall any specific conversations with (b)(7)(C) that day (Exhibit T-00b).

(b)(7)(C) told the agents that being on schedule at a nuclear plant is the safest place to be. He was asked what they do when they get ahead of schedule. (b)(7)(C) said that they change or modify the schedule then. He added that the OCC has critical path scheduling responsibility. (b)(7)(C) told the agents that the November outage did not go well. He blamed it on complacency on the part of the leadership team. He said they all had a false sense of security. (b)(7)(C) was asked about the pocket veto comment made at the offsite meeting. (b)(7)(C) said he made the comment and (b)(7)(C) did not. (b)(7)(C) said he was "crystal" clear to the group about the comment. He has since heard that some people took the comment the wrong way, but that was not his intent (Exhibit T-00b).

(b)(7)(C) told the group that everyone was going to follow the schedule. He said that they could not have one group doing one thing and another group doing something else. (b)(7)(C) wanted to remove barriers preventing them from having a successful outage. He also said that he never asked anyone to leave. He told the agents that nobody from ECP asked him about the pocket veto comment. He added that his ECP interview for the Phase 2 portion of the ECP investigation was not much of an interview. The man who interviewed him just asked (b)(7)(C) to comment on the Phase 1 results. (b)(7)(C) said that the guy who interviewed him was a former detective. (b)(7)(C) remembered the guy telling (b)(7)(C) that he was not going to ask him any questions. (b)(7)(C) said the senior leadership team at Watts Bar met on more than one occasion. They came up with a formula (Performance= Behavior + Results). (b)(7)(C) said that it was not an initiative that WBN came up with on their own. (b)(7)(C) (b)(7)(C) and (b)(7)(C) were all on board. (b)(7)(C) added that WBN's performance just was not where it needed to be. They were lagging in many areas and towards the bottom quartile in most measures. (b)(7)(C) said that the lagging performance was a concern because Unit 2 was coming online (Exhibit T-00b).

With regard to (b)(7)(C), on January 11, 2016, (b)(7)(C) was asked if he got mad at (b)(7)(C) and had him removed from watch standing. (b)(7)(C) said that he did not get mad and had him removed from watch standing. (b)(7)(C) was asked if (b)(7)(C) thought being removed from watch standing was an adverse employment action. (b)(7)(C) said he did not think it was. (b)(7)(C) continued by saying that (b)(7)(C) was working in December of 2015 when a relief valve was lifted. (b)(7)(C) said that when the event took place both (b)(7)(C) and the OAC ((b)(7)(C)) were removed from watch standing (Exhibit T-00c).

The decision to remove (b)(7)(C) from watch back in December 2015, was made by (b)(7)(C) (b)(7)(C) It was made pending an investigation into the incident. According to (b)(7)(C) (b)(7)(C) was on leave when the event happened. (b)(7)(C) told (b)(7)(C) that both men had been removed from watch standing and were to be remediated. (b)(7)(C) said that (b)(7)(C) returned (b)(7)(C) to watch, but not (b)(7)(C) (b)(7)(C) returned from leave and told (b)(7)(C) that neither (b)(7)(C) or (b)(7)(C) had been remediated. (b)(7)(C) told (b)(7)(C) to find out why and what we needed to do (Exhibit T-00c).

(b)(7)(C) came back to (b)(7)(C) and told (b)(7)(C) that (b)(7)(C) talked to (b)(7)(C) (b)(7)(C) said that both men needed to be remediated. (b)(7)(C) said that both men were responsible. (b)(7)(C) said that the three-way communication in the control room could have been better. (b)(7)(C) according to (b)(7)(C) must not have seen to it that (b)(7)(C) and (b)(7)(C) were remediated. On January 11, 2016, (b)(7)(C) said he was at home when he got a call from the (b)(7)(C) told (b)(7)(C) that "ops" was not moving the plant and they were falling back on schedule. (b)(7)(C) said that this type of phone call is common. He is supposed to be kept in the loop. (b)(7)(C) said that the night crew was supposed to start a reactor coolant pump. (b)(7)(C) continued by saying that (b)(7)(C) was the Shift Manager.(b)(7)(C) said he did not feel comfortable moving the plant with the staff at hand (Exhibit T-00c).

(b)(7)(C) said that around 0100 on January 12, 2016, (b)(7)(C) (b)(7)(C and (b)(7)(C) spoke on the phone. During the call, (b)(7)(C) challenged (b)(7)(C) (b)(7)(C) told (b)(7)(C) to stop. (b)(7)(C) told (b)(7)(C) that the Shift Managers makes the call. (b)(7)(C) told (b)(7)(C) that (b)(7)(C) supported the decision. When that call ended, (b)(7)(C) called (b)(7)(C) and coached him on CHALLENGING the Shift Manager. (b)(7)(C) told the agents that (b)(7)(C) should not have done that to (b)(7)(C) (b)(7)(C) then called (b)(7)(C) (b)(7)(C) congratulated (b)(7)(C) for not moving the plant forward. It was during this call that (b)(7)(C) learned that (b)(7)(C) was watch standing (Exhibit T-00c).

(b)(7)(C) hung up with (b)(7)(C and talked immediately with both (b)(7)(C) and (b)(7)(C) (b)(7)(C) was not clear to the agents if he talked to each man separately or did the three have a conference call. (b)(7)(C) asked both men if (b)(7)(C) had been remediated. (b)(7)(C) told the agents that (b)(7)(C) and (b)(7)(C) did not know if he had been remediated. (b)(7)(C) then told them that (b)(7)(C) needed to be removed from watch. The next (b)(7)(C) or (b)(7)(C) talked to (b)(7)(C) and explained to (b)(7)(C) that it was their fault (Exhibit T-00c).

Interview of (b)(7)(C)

(b)(7)(C) at WBN was interviewed by OI and TVA OIG on May 16, 2017, wherein she provided the following information in substance.

In discussing why (b)(7)(C) did not engage in the adverse action process as required by TVA procedures. (b)(7)(C) provided that it was more the philosophy around his thoughts. (b)(7)(C) stated that (b)(7)(C) would review and question the situation. (b)(7)(C) stated for some reason (b)(7)(C) had a philosophy debate about the program not signing the action (Exhibit T-30, pp. 16-17).

Interview of (b)(7)(C)

(b)(7)(C) was interviewed by TVA OIG on July 14, 2016, wherein he provided the following information in substance.

(b)(7)(C)
(b)(7)(C) is convinced based on what he heard through the interviews that management took (b)(7)(C) off watch for raising a safety concern. (b)(7)(C) stated the event for which (b)(7)(C) was allegedly removed took place three weeks prior to when he was actually taken off. According to (b)(7)(C) management had looked into the situation and said that (b)(7)(C) had done a fine job and the fault was with the reactor operator. (b)(7)(C) stated that a few weeks later (b)(7)(C) is taken off watch which “makes absolutely no sense whatsoever.” In addition, (b)(7)(C) thinks the statement that (b)(7)(C) just forgot to tell anyone that (b)(7)(C) was to be taken off is ridiculous. In addition, (b)(7)(C) stated that SROs are at a premium at WBN right now so there would be no reason take him off three weeks after an event in which he was found to have no fault. (b)(7)(C) believes (b)(7)(C) was taken off watch that night

because he was the main one objecting to them not moving forward with the crew on site. (b)(7)(C) believes that management perceived (b)(7)(C) as the roadblock to keeping the Shift Manager, (b)(7)(C), from agreeing to do it. (b)(7)(C) stated it was a Unit 2 sweep and vent which is nothing more than a test which could have been done later. (b)(7)(C) stated that in their interviews, both (b)(7)(C) and (b)(7)(C) used the exact same words saying "we wanted to protect (b)(7)(C) from making another mistake. It appeared obvious to (b)(7)(C) that (b)(7)(C) and (b)(7)(C) had rehearsed their stories (Exhibit T-29).

(b)(7)(C) believes that management will continue to stand by their story that (b)(7)(C) was removed due to the earlier incident because they are still in protection Mode. He stated that what happened to (b)(7)(C) is "serious I&H (Intimidation and Harassment)" and it would be really bad if the NRC believed someone was retaliated against and faced an adverse action for raising a safety concern. He stated that TVA will not admit they violated the code of regulations and (b)(7)(C) removal from watch would be considered an adverse action by TVA. (b)(7)(C) stated that they did interview (b)(7)(C) about this incident and it was obvious that he had been told what had happened before he met with the ECP investigators. (b)(7)(C) believes that (b)(7)(C) is the motivator behind some of the irrational decisions and made it very hard to not go off the schedule. (b)(7)(C) stated that the "operators told us time and time again that meeting schedule was more important than safety (Exhibit T-29).

Interview of (b)(7)(C)

(b)(7)(C), was interviewed by TVA OIG on May 20, 2016, wherein he provided the following information in substance.

(b)(7)(C) has been involved in the nuclear power industry since (b)(7)(C)
(b)(7)(C)
He has done consulting work at numerous nuclear plants across the United States. His area of expertise centers on safety culture and safety conscious work environment (Exhibit T-77).

(b)(7)(C) told the investigator that TVA never thought that they would get a Chilled Letter. He said that NRC Region II is the most lenient region in the NRC. He said that this is common knowledge in the nuclear industry. (b)(7)(C) said that he does not think that TVA has any special connection or relationship with anyone at the NRC. He said that TVA has gotten by this far because Region II is so lenient (Exhibit T-77).

(b)(7)(C) said that (b)(7)(C) is arrogant. (b)(7)(C) said that the nuclear industry is small. He said TVA knew what they were getting when they hired (b)(7)(C) (Exhibit T-77).

(b)(7)(C) then said that he recalled that (b)(7)(C) told (b)(7)(C) about how the site treated (b)(7)(C) after he made a safety related decision not to move the plant. (b)(7)(C) told (b)(7)(C) that (b)(7)(C) went to (b)(7)(C) after (b)(7)(C) had been removed from watch and told (b)(7)(C) that many people on the site think the site only removed (b)(7)(C) because (b)(7)(C) raised a safety concern. (b)(7)(C) then went back to (b)(7)(C) and asked (b)(7)(C) if (b)(7)(C) came to (b)(7)(C) and told (b)(7)(C) that many on the site think the site removed (b)(7)(C) from watch because he raised a safety concern.

(b)(7)(C) confirmed to (b)(7)(C) that (b)(7)(C) did tell (b)(7)(C) that (b)(7)(C) then asked (b)(7)(C) what he and the site did after they were told this information by (b)(7)(C) (b)(7)(C) told (b)(7)(C) that they did not do anything (Exhibit T-77).

(b)(7)(C) was asked if TVA wanted (b)(7)(C) to fix their problem. He said that TVA wanted to fix it themselves. He said that TVA was working on "their fix" while (b)(7)(C) and (b)(7)(C) were still doing interviews (Exhibit T-77).

Interview of (b)(7)(C)

(b)(7)(C) for TVA, was interviewed by TVA OIG on September 04, 2018, wherein he provided the following information in substance.

(b)(7)(C) first became aware of the RHR issue at WBN when he received a call around (b)(7)(C) from (b)(7)(C) According to (b)(7)(C) (b)(7)(C) said that he ((b)(7)(C)) and (b)(7)(C) were having a conference call with the NRC at (b)(7)(C) that (b)(7)(C) about the RHR issue at WBN and he needed (b)(7)(C) to contact the plant to find out what had happened. (b)(7)(C) then called the plant and talked to (b)(7)(C) and a few other people (names unknown). (b)(7)(C) stated that what struck him when he called (b)(7)(C) about the RHR issue was that "you could feel the hesitation" and it was like "oh shit." (b)(7)(C) then proceeded to tell (b)(7)(C) the technical aspects and about how the (b)(7)(C) workers didn't do it and the (b)(7)(C) got talked into moving ahead on excess letdown and it did not go well (Exhibit T-78).

(b)(7)(C) eventually came to understand that on 11/11/15 there was a lot of disagreement on when normal letdown would be back. The (b)(7)(C) crew came on and "they" talked the crew into moving forward on excess letdown. When asked who "they" were, (b)(7)(C) stated the management team who at that time was "very pushy about getting things done." (b)(7)(C) further stated that if an operator wasn't fast enough then he would be replaced with someone else. According to (b)(7)(C) he was aware of all this because the operators at the plant told him what was going on. (b)(7)(C) stated that the operators felt like if they didn't do the heat up on 11/11/15 then they would be retaliated against. According to (b)(7)(C) "it got a little extreme at WBN" and usually management will push but not that much (Exhibit T-78).

(b)(7)(C) believes the (b)(7)(C) did the right thing by not going forward but that the (b)(7)(C) on 11/11/15 was either pushed or made to believe it was ok. (b)(7)(C) is not surprised that none of the operators were disciplined because it was not their decision and they were made to do it. Regardless, it was not a conservative decision either way whether the operators decided to go forward or got talked into it. (b)(7)(C) discussed that the OCC can "highly recommend, push, influence, kick" but they cannot direct or make an operator do something. It is ok for the OCC to provide technical information to the Shift Manager so they can decide what to do but it is wrong for the OCC to mislead a Shift Manager (Exhibit T-78).

Agent's Analysis

In summary, OI determined that the events surrounding the control of plant operations at WBN indicates that licensee management established a work environment, and reinforced a mindset among licensed operators, whereby raising concerns about or opposing WBN senior management's direction regarding plant operating schedules was unacceptable. This positioned WBN senior managers either directly or through the Outage Control Center (OCC), as the de facto directors of the licensed activities of the licensed control room operators.

The use of disciplinary and other adverse actions affected the mindset and actions of the Reactor Operators and the Senior Reactor Operators. This included the assigning or reassigning of operations staff duties and positions based on their willingness to yield to and or support OCC/management direction. Intimidation suppressed the questioning of the authority and direction of WB management by the Reactor Operators and the Senior Reactor Operators. These actions facilitated WBN senior management usurping the authority of Senior Reactor Operators responsible for directing the licensed activities of licensed operators, effectively performing the function of an operator and a senior operator contrary to 10 C.F.R. § 55.3.

OFFSITE MEETING

On September 4, 2015, (b)(7)(C) and (b)(7)(C) exhibited intimidating behaviors during a pre-outage meeting held off-site from Watts Bar. The audience for this meeting included Senior Reactor Operators (SROs) working at WBN1 and was presided over by (b)(7)(C) and (b)(7)(C) sharing primary speaking rolls. The purpose of this meeting was to prepare for a scheduled re-fueling outage that was set to occur in October 2015. Accounts vary as to which speaker, (b)(7)(C) or (b)(7)(C) specifically voiced each statement but it was clear that they were presenting jointly. During the beginning of the meeting either (b)(7)(C) or (b)(7)(C) made the statement to the effect that if you do not think we [WB] can complete the outage in 30 days you can leave now because they did not want you on their team. This was received by some operators to mean you can leave the company not just the meeting or potentially suffer some repercussions for speaking out against management (Exhibit T-32)(T-09)(T-11)(T-12)(T-73).

During the same meeting, it was reported that (b)(7)(C) and (b)(7)(C) further intimidated those present which caused the SROs to believe that retaliatory personnel actions were likely if the SROs resisted the instructions of (b)(7)(C) and (b)(7)(C) (b)(7)(C) and (b)(7)(C) told the SROs that their decisions would be driven by the schedule they were given and that they would not have the authority to "veto" scheduled plant activities. Testimonial evidence indicates that the intent of the "No More Pocket Veto" discussion was to limit the authority for decision making of the licensed control room operators as it related to plant operations and transfer it to the OCC/Management under the banner of "following the schedule." This was echoed in ECP Report NEC-16-00047/127. When discussing this issue, (b)(7)(C) described his interpretation of a 'pocket veto' in that 'pocket veto' meant a group of people determining they were not going to follow the schedule (Exhibit A1-E1)(Exhibit T–9)(Exhibit T-10)(Exhibit T-11)(Exhibit T-12) (Exhibit T-34a)(Exhibit T-32)(Exhibit T-35)(Exhibit T-00b)(Exhibit T-33).

REMOVAL OF (b)(7)(C) *AS UNIT SUPERVISOR*

On October 19, 2015, the Shift Manager, (b)(7)(C) with the consent of the (b)(7)(C) (b)(7)(C) removed the WBN 1 Unit Supervisor (b)(7)(C) from his position because he, "was just not pushing hard enough." This action was taken after (b)(7)(C) refused to conduct parallel tasks that would add two forms of reactivity to the reactor at once. (b)(7)(C) described that everyone in the OCC and in the management chain was frustrated about the delayed rod testing because it was a critical path activity. (b)(7)(C) was replaced by (b)(7)(C) who stated that he was not aware that on the day that (b)(7)(C) was removed that he (b)(7)(C) was being asked to do the Terry Turbine test as well as move the rods at the same time. (b)(7)(C) stated that you cannot do those two activities at the same time and (b)(7)(C) would have expected (b)(7)(C) to stop. Other operators viewed the replacement as a response for not pushing hard enough and pushing back against performing the two operations simultaneously (Exhibit T-05)(T-28)(T-36) (T-02b, pp. 35-36)(T-25a).

USE OF THE SBMFP DURING STARTUP (See Allegation 2 for additional details)

On October 21, 2015, Shift Manager (b)(7)(C), with the assistance of (b)(7)(C) (b)(7)(C) directed Reactor Operator (b)(7)(C) to improperly use the Standby Main Feed-water Pump (SBMFP) instead of the procedurally required Auxiliary Feed-water (AFW) Pump during the reactor startup from Mode 3 to Mode 2. This was done to enable engineering to perform missed testing and inspections of Feed-water valves in containment without delaying plant start-up. (b)(7)(C) testified that he initially refused and expressed to (b)(7)(C) it was not safe to perform the reactor startup using the SBMFP. (b)(7)(C) responded that Operations will not be the hold-up of the outage and we will not delay the startup. When challenged about the safety component, (b)(7)(C) responded, "We are going to be careful." Fearing that if he did not agree to proceed they would have been replaced and label as not a team player, (b)(7)(C) proceeded as directed (Exhibit T-15a) (Exhibit T-15b, p. 7, pp. 11-24).

The performance of the feed water test/inspection at this point in the reactor start-up required a lower containment entry while the plant was in Mode 2. Radiation protection tech (b)(7)(C) voiced worker safety concerns about the performance of the associated testing and inspection to the OCC during a reactor startup because it was normally performed in Mode 5. After becoming adamant and animated about his concerns, (b)(7)(C) had (b)(7)(C) removed from the site by security. Following the event (b)(7)(C) had members of the OCC present write statements concerning what happened (Exhibit A1-E2).

DRAWING THE BUBBLE (See Allegation 3 for additional details)

During the forced outage in November 2015, WBN management took additional actions to reinforce/exercise their control over the licensed operators. To that end, on November 9, 2015, WBN1 was performing a plant start-up using 1-GO-1 following a forced outage. The plant was

unable to "draw a bubble" in the pressurizer due to a procedural restriction on required plant temperature. As reported, Unit Supervisor (b)(7)(C) refused to draw the bubble in the pressurizer with the current plant conditions after being requested to do so by the OCC. In response, (b)(7)(C) directed one of his subordinate procedure writers ((b)(7)(C)) to initiate an improper change to plant operating procedure 1-GO-1 to remove the restriction and compel the operators to continue with the scheduled plant activities (drawing a bubble in the pressurizer). When concerns were raised by the operators about the validity of the procedure change, SM (b)(7)(C) responded, "The people who fire people with licenses said to do it." This demonstrates that final decision making was being based outside the control of the licensed operators (Exhibit T-01c) (Exhibit T-05a)(Exhibit T-05b).

It was reported that the next day following the delays from not proceeding with drawing the bubble prior to the procedure change, (b)(7)(C) called a crew meeting where he berated the crew and told them, "They were not pushing hard enough on this outage to move the plant forward and were weak." This was reportedly after (b)(7)(C) received a scolding from the (b)(7)(C) the day prior on the same topic (Exhibit T-05b)(Exhibit T-23b).

EVENTS OF NOVEMBER 11, 2015 (See Allegation 4 for additional details)

On November 11, 2015, WBN management demonstrated their control when they compelled SM (b)(7)(C) to instruct the licensed operators to continue start-up activities of 1-GO-1 after transition of the plant to Mode 4 without normal let-down in service. The licensed operators watch standing for Unit 1 indicated they did not agree with the decision because it would require the removal of the RHR system from service and it was providing both inventory and temperature control for the RCS. The evidence shows that with the endorsement of both (b)(7)(C) and (b)(7)(C) (b)(7)(C) compelled (b)(7)(C) to direct the RHR system removed from service against the judgement and concerns of the control room operators. RHR was subsequently taken out of service to perform 1-SI-0-905 (Primary Pressure Boundary Isolation Valve Leak Test Residual Heat Removal Return Valves). Due to charging and increases in RCS temperature without RHR in service, PZR level began to rise uncontrollably. Operator attempts to control temperature were unsuccessful which resulted in the level in the pressurizer (PZR) rising to 80 percent at which time the operators took actions outside of procedural requirements to stop the level increase (Exhibit T-22b)(Exhibit T-22c)(Exhibit T-22d) (Exhibit T-22e)(Exhibit T-21a)(Exhibit T-21c)(Exhibit T-21d)(Exhibit T-21d)(Exhibit T-33) (Exhibit T-00a, pp. 12-16, pp. 31-33)(Exhibit T-00b).

SOD/SOM CHECKLIST

On November 11, 2015, (b)(7)(C) sent multiple e-mails displaying his expectations that management in the OCC would be controlling plant operations. This was specifically aimed to solidify his involvement and management's control over plant operations even after the loss of control of pressurizer level event.

- E-mail to the (b)(7)(C) and management members of the OCC requesting them to send (b)(7)(C) detailed hourly status updates on plant status (Exhibit A1-E3).

- E-mail to the (b)(7)(C) containing the SOD/SOM Checklist. (b)(7)(C) sent the SOD/SOM Checklist to OCC managers effectively implementing the process. This checklist required OCC Directors/Managers to review various aspects of the plant situation including two which showcase his proclivities for the roll of the OCC in plant operations (Exhibit A1-E4) (Exhibit A1-E5):

  - 1) ARE YOU DRIVING OR RIDING?
  - 2) ARE YOU IN CONTROL?

- E-mail to OCC Managers which instructed "(b)(7)(C) (b)(7)(C) " (Exhibit A1-E6)

UNIT SUPERVISOR REMOVED FROM WATCHSTANDING DUTIES

Unit Supervisor (b)(7)(C) was removed from watch standing duties following a January 11, 2016, incident where he pushed back against performing a plant operation he felt the crew was not properly staffed to perform. On January 11, 2016, (b)(7)(C) raised concerns to his Shift Manager (b)(7)(C) when he decided not to perform a scheduled plant operation (sweeps and vents) he believed the crew was not properly prepared to perform. (b)(7)(C) informed the (b)(7)(C) and (b)(7)(C) on a teleconference where (b)(7)(C) replied with what has been quoted by others as "Do not give me any of that nuclear safety bullshit." When discuss communication on the night of January 11, 2016, (b)(7)(C) could not recall (b)(7)(C) saying "do not give me any of that nuclear safety bullshit." However, he does recall (b)(7)(C) using inappropriate language and telling (b)(7)(C) something to the effect that basically he was a "chickenshit" for not moving forward. (b)(7)(C) on the direction of (b)(7)(C) directed the removal of (b)(7)(C) from watch standing duties under the auspices of a previous uncompleted remediation (T-21a, b, c, d)(Exhibit T-27a, b, c, d).

Management's stated reasoning for (b)(7)(C) removal was the unplanned lifting of a Unit 2 PORV during an evolution he supervised on December 19, 2015, (almost a month prior) even though the other operator involved in the PORV lift was removed from watch standing immediately following the incident pending upgrade. Additionally, a formal observation was being conducted during the evolution found no fault on the part of (b)(7)(C) (Exhibit A1-E7).

(b)(7)(C) said the decision to remove (b)(7)(C) from watch standing duties, was made by him. During the discussion about the shift not wanting to perform sweeps and vents, (b)(7)(C) stated he sent an email about the crew composition (at 9:47 p.m.) to (b)(7)(C) and immediately called (b)(7)(C) During that call, (b)(7)(C) and (b)(7)(C) discussed that (b)(7)(C) was on the crew working as the Unit Supervisor. (b)(7)(C) told (b)(7)(C) to "move

him." (b)(7)(C) contacted (b)(7)(C) and informed him that (b)(7)(C) was being taken off watch. (b)(7)(C) responded that he did not agree with the action because too much time had gone by. (b)(7)(C) intimated to (b)(7)(C) that the decision was not (b)(7)(C) but (b)(7)(C) (b)(7)(C) said that they could not leave him in there to make an error. (b)(7)(C) stated he called (b)(7)(C) and instructed him to tell (b)(7)(C) that he was being "removed from watch standing" because of the events on December 19, 2015, when the PORV lift occurred but never told (b)(7)(C) which caused (b)(7)(C) to continue to stand watch (Exhibit T-00B)(T-21a, b, c, d).

Management's stated reasoning strains credulity by the follow-up actions of TVA managers. (b)(7)(C) stated that (b)(7)(C) and he did not know (b)(7)(C) objected and he was removed many hours after they had decided not to move the plant. In a previous interview during the ECP investigation (b)(7)(C) stated that after (b)(7)(C) was removed from watch standing, (b)(7)(C) contacted the Shift Manager (b)(7)(C) again and asked him to move forward, however the Shift Manager still refused and (b)(7)(C) had to call (b)(7)(C) back and tell him that the Shift Manager still would not move forward (Exhibit T-29)(T-21a, b, c, d).

Additionally, (b)(7)(C) the investigator performing the ECP investigation concerning the work environment at Watts Bar, believed that (b)(7)(C) was removed from his watch for raising a safety concern and what happened to (b)(7)(C) was a serious intimidation and harassment issue (Exhibit T-29).

Various operators took the events as an indication of how you will be treated if you fail to deliver on OCC/Management's requests:

> SRO (b)(7)(C) advised that an SRO was recently disqualified, and the operators believe it is for going against management. This happened around this past Christmas (2015). (b)(7)(C) had been the SRO on Unit 2 when they lifted a relief valve. He was not disqualified after this incident and instead continued working doing the same duties for three more weeks when one night he told management that he did not believe he could safely execute a scheduled activity they wanted done on Unit 2 and they needed to wait. Two hours later, (b)(7)(C) was told he was relieved of his post and was being disqualified because of the incident which happened three weeks ago. According to (b)(7)(C) the message that the other operators got from this happening was (b)(7)(C) pushed back against management and got disqualified (Exhibit T-05a).
>
> SRO (b)(7)(C) discussed during her interview that (b)(7)(C) then began listing out the events that had happened from October to now in the control room and stated that the operators needed to get back to the fundamentals. (b)(7)(C) then told the story of (b)(7)(C) who was a Shift Manager when (b)(7)(C) had been a (b)(7)(C) (b)(7)(C) and he (b)(7)(C) went on to tell a story about how he learned how important and powerful the Shift Manager is. (b)(7)(C) then stated that they would stand behind Operations and if you say no then we'll say no. (b)(7)(C) stated that this did not really go over well after what had happened two nights ago with (b)(7)(C)

Likewise, (b)(7)(C) comments at the meeting came across as false because it was a total change over from the way things normally went so it did not seem sincere (Exhibit T-28).

SRO (b)(7)(C) discussed during his interview that SRO (b)(7)(C) told management he could not do a required action on the reactor coolant pump (RCP) because he did not have enough trained people. Management backed off but the very next (b)(7)(C) was disqualified for a previous event that had happened over three weeks ago. (b)(7)(C) believes he was being punished for not doing what management wanted on the RCP (Exhibit T-70).

SRO (b)(7)(C) was asked why he thought (b)(7)(C) had been removed from watch. (b)(7)(C) said that to him it was a message "to get on board or we will get you out of the way". (b)(7)(C) blamed (b)(7)(C) (b)(7)(C) said nobody in Operations will stand up to (b)(7)(C) The message to Operations is to get on the team or else (Exhibit T-71).

SRO (b)(7)(C) stated he has heard that a Unit Supervisor was taken off watch by the (b)(7)(C) for raising a concern, but it was said it was for something (a lifted valve) that had happened three weeks before. (b)(7)(C) feels that what happened to this operator is "total bullshit" and "they sent a message to the entire operations department – cross me." (b)(7)(C) stated that he has never seen anyone disqualified weeks after an event. Rather, an operator would be taken off the day of or the day after the event. They would then be promptly remediated and returned. According to (b)(7)(C) once the operator was allowed to assume watch the next week he had already made too many operational decisions to take him off watch. He stated "it is a crock of shit" if management comes back and says what happened to the operator that was disqualified was considered coaching and is covered under the CR (Exhibit T-69).

SRO (b)(7)(C) said that after (b)(7)(C) was removed from watch (b)(7)(C) told (b)(7)(C) that the (b)(7)(C) thing sent the wrong public relations message to the troops. (b)(7)(C) agreed. (b)(7)(C) does not think (b)(7)(C) style of leadership works at WBN. (b)(7)(C) is a bully. He tries to use his physical size and loud voice to get what he wants (Exhibit T-13b).

RO (b)(7)(C) was asked why (b)(7)(C) was removed from watch weeks later rather than the same day as (b)(7)(C) was removed from watch. (b)(7)(C) said that was obvious. The perception from people in the control room is that (b)(7)(C) pushed back and was magically disqualified (Exhibit T-72).

SM (b)(7)(C) asked if he was going to be removed from watch. (b)(7)(C) said to (b)(7)(C) nothing at this time. (b)(7)(C) also asked the same question to (b)(7)(C) about (b)(7)(C) He was told basically the same thing (nothing at this time). (b)(7)(C) was asked why people would be intimidated. (b)(7)(C) replied that the (b)(7)(C) incident is just one example (Exhibit T-34a).

US (b)(7)(C) explained that (b)(7)(C) explained to a group of operators that (b)(7)(C) was supposed to have been removed from watch weeks earlier than he was but was not due to a communications error. (b)(7)(C) stated he was caught by surprise when he called the Shift Manager to tell him good job for stopping the evolution. The Shift Manager told (b)(7)(C) that it was not him but it was (b)(7)(C). (b)(7)(C) then stated wait a minute I thought he was removed from watch standing. (b)(7)(C) confirmed to the agents that (b)(7)(C) said it was a conversation between him and the Shift Manager when (b)(7)(C) first became aware of (b)(7)(C) involvement and that he (b)(7)(C) was still watch standing. (b)(7)(C) then said that he contacted (b)(7)(C) and (b)(7)(C) to have them remove (b)(7)(C) from watch. (b)(7)(C) told the SROs that he realized they had a communication error once he realized that (b)(7)(C) was still watch standing. (b)(7)(C) told the group of SRO's that (b)(7)(C) was surprised that (b)(7)(C) was watch standing that night. The agents asked (b)(7)(C) what his impressions were of the story given to the SRO's by (b)(7)(C) said that he knew that (b)(7)(C) was telling the SRO's what the "story is going to be" about that particular incident. (b)(7)(C) knew that it did not add up because how on earth would (b)(7)(C) not have known (b)(7)(C) had been watch standing for three weeks? (b)(7)(C) is the Plant Manager and that is his job (Exhibit T-68).

(b)(7)(C) *FAILURE TO FOLLOW CONFIRMATORY ORDER*

Review of EA-17-022 CONFIRMATORY ORDER (ML17208A647) was in line with the actions examined during the OI investigation. This was issued to TVA (Jul 21, 2017) based on the failure of WBN to implement actions designed to protect employees that raise safety issues and ensure an environment conducive to raising concerns is maintained. The motivating violation which resulted in the ORDER documented that from November 2014 to August 2016, (b)(7)(C) (b)(7)(C) disregarded the requirements of NRC Confirmatory Order Modifying License, (EA-09-009,203) dated December 22, 2009, (ML093510993) by not fully implementing TVA's Adverse Employment Action Procedure. Specifically, program requirements including those designated as the specific responsibility of (b)(7)(C) were not carried out. This procedure was put in place to ensure adverse employment actions comport to employee protection regulations and actions are taken to prevent any potentially chilling effect they might have on the workforce (Exhibit A1-E8)(Exhibit A1-E9)(Exhibit A1-E10, p. 8, pp. 22-29).

(b)(7)(C) *INTIMIDATION OF SRO* (b)(7)(C)

To give the agents an example of management pressure in the Control Room, SM (b)(7)(C) told of an incident that happened after the re-fueling outage when they had work that had to be done on equipment that was located in containment. The personnel felt like the Work Orders had not been reviewed. The work could not be done until we reviewed the Work Orders (Exhibit T-34a).

(b)(7)(C) told (b)(7)(C) that they (Control Room) were going to review the Work Orders before doing the work. (b)(7)(C) wanted (b)(7)(C) to "keep moving." They were not going to

keep moving until the Work Orders were reviewed. It was done for plant safety. (b)(7)(C) gave the Work Orders to (b)(7)(C) a licensed SRO. She was working in the Control Room at the time. (b)(7)(C) (b)(7)(C) placed (b)(7)(C) out of the way in the Control Room, so she could do the Work Order review. (b)(7)(C) kept calling the Control Room asking if she was done yet. (b)(7)(C) wanted to know how much longer (Exhibit T-34a).

Finally, (b)(7)(C) came into the Control Room and sat in a chair. (b)(7)(C) knew exactly what he was doing. He was pressuring (b)(7)(C) to finish the Work Order review. (b)(7)(C) made sure that he moved his position so that he was between (b)(7)(C) and (b)(7)(C) (b)(7)(C) told the agents that management pressure has completely stopped since the [TVA OIG]agents showed up on site. According to (b)(7)(C) management now gives them all the time they need (Exhibit T-34a).

MCR OPERATORS LOGGING "BY OCC DIRECTION"

On (b)(7)(C) sent an email to (b)(7)(C) (b)(7)(C) and (b)(7)(C) discussing a recent MCR and OCC observation. (b)(7)(C) noted that the observation says, "(b)(7)(C)" He also pointed out that they were still getting comments that Ops feels like the OCC gets to tell them what to do. He included that while reading the logs Monday that the SRO logged - "(b)(7)(C)" (b)(7)(C) subsequently sent an email to the SMs requesting them to have a discussion with their SROs to address the logging issue. He wanted them to discuss that Operations operates the plant. He included the role of the OCC as "(b)(7)(C)
(b)(7)(C)
(b)(7)(C)." (b)(7)(C) later replied to (b)(7)(C) informing him "(b)(7)(C) (b)(7)(C)" (Exhibit A1-E11) (Exhibit A1-E12) (Exhibit A1-E13)(Exhibit A1-E14).

(b)(7)(C) was a former licensed SRO and (b)(7)(C) held an SRO certification establishing they understood the role and responsibilities of the SRO. OI determined that (b)(7)(C) and (b)(7)(C) took actions, gave directions, and espoused beliefs that indicated they wanted plant managers to take actions that undermined the independent authority and decision making of the licensed operators in the main control room.

In making this determination, OI examined the licensee's actions and the resulting effects. The multiple events described above demonstrated senior management wanted more control over the decisions made by licensed operators and there were multiple events where licensed operators received a message that there would be potential consequences for not executing management's decisions/plans. On multiple occasions WBN management influenced the decisions of licensed operators to operate the plant in a manner which the operators initially

voiced valid concerns about. The following questions were examined to establish the applicability of the events:

Would the responsible licensed operators have made a different decision without OCC/Management interference?

In each instance OI determined that without the influence of management the licensed operators would have made a different decision concerning the operation of the plant.

Why did licensed operators proceed in the face of their concerns?

It became an expectation that if an operator could not prove the operation was prohibited or unsafe then they were expected to proceed. A fear of retaliation was an additional motivating factor.

What were potential motivating factors for management?

Meeting schedule and saving time were clear motivators in the actions of management.

As described in detail above, OI determined that (b)(7)(C) and (b)(7)(C) deliberately established a mechanism for non-licensed managers to effectively perform the function of a senior operator to direct the licensed activities of licensed operators. Overt acts furthering this objective were: intimidation of operators during the September 2015 offsite leadership meeting; (b)(7)(C) directing the removal of RPT (b)(7)(C) from site by security; removal of US (b)(7)(C) from watch during the October 2015 Unit 1 outage; requesting OCC management to verify they were in control as reflected in the use of the SOD/SOM checklist; removal of US (b)(7)(C) from watch in January 2016; (b)(7)(C) failure to use the Adverse Employee Action Program; and (b)(7)(C) intimidation of SRO (b)(7)(C) by pressuring (b)(7)(C) to finish a Work Order review.

OI identified events that indicated the environment was clearly having an effect on the actions of operations personnel to include licensed operators. Events include: the use of the standby main feed-water pump during startup; improperly changing of the Unit 1 startup procedure 1-GO-1 to expedite startup; and licensed operators logging that the OCC was directing activities of the MCR operators in December 2015.

As defined in 10 CFR 55.4, a senior operator is any individual licensed under Part 55 to manipulate the controls of a facility and to direct the licensed activities of licensed operators. OI concludes that the actions of (b)(7)(C) and (b)(7)(C) deliberately circumvented the requirements of 10 CFR 55.3 which requires that a person must be authorized by a license issued by the Commission to perform the function of an operator or a senior operator. Additionally, the deliberate actions of (b)(7)(C) and (b)(7)(C) directly impacted the ability of licensed operators and senior operators to carry out their legal duties to operate the plant in

accordance with their licenses. By extension, the deliberate actions of (b)(7)(C) and (b)(7)(C) contributed, in part, to additional NRC violations associated with operations of the plant. This was specifically demonstrated by the events and violations that occurred on November 11, 2015.

Conclusion

Based on the evidence developed during this investigation, including additional substantiated allegations in this report, OI concluded that (b)(7)(C) and (b)(7)(C) deliberately took actions which placed Watts Bar senior managers either directly or through the OCC, as the de facto directors of the licensed activities of the control room operators. This represents a violation of 10 CFR 55.3 which requires that a person must be authorized by a license issued by the Commission to perform the function of an operator or a senior operator which includes directing the licensed activities of licensed operators.

Allegation No. 2

During the Unit 1 start-up from 1RFO13 on October 20,2015, the Standby Main Feed-water Pump was used to feed the S/Gs in order to perform a valve PMT in parallel with unit start-up even after the plant was taken into Mode 2.

Applicable regulations

10 CFR 50: Appendix B, CR V, Instructions, Procedures, and Drawings
10 CFR 50.59: Changes, tests and experiments
10 CFR 50.5: Deliberate misconduct

Documentary Evidence

WBN Plant Operating Logs from October 21, 2015 (Exhibit A2-E1)

WBN Plant Dataware from October 21, 2015 (Exhibit A2-E2)

Official record copy of 1-GO-2 Revision 6 used during start-up in October 2015 (Exhibit A2-E3)

3-OT-STG-003A, Revision 12, Main Feed-water System December 21, 2012 (Student Training Guide) (Exhibit A2-E4)

Analysis of the Use of the Standby Main Feed Water Pump during start-up (Exhibit A2-E5)

Draft Apparent Violation for Use of SBMFP during Unit Startup (Exhibit A2-E6)

Testimony

Interviews of (b)(7)(C) Reactor Operator

(b)(7)(C) RO at WBN, was interviewed on March 07, 2016 and April 16, 2019, by OI and TVA OIG wherein he provided the following information in substance.

At the end of the re-fueling outage in the Fall of 2015, (b)(7)(C) was working the same night as the Source Range Bypass issue where they went critical (October 20, 2015). That night, (b)(7)(C) stated they ran the Unit 1 Standby Main Feed-water Pump (SBMFP) during the reactor startup from Mode 3 to Mode 2. By procedure they should have been using the Aux Feed-water to control steam generator level rather than the Main Feed-water pump. (b)(7)(C) stated he was “ok” with the Tech Specs aspect of it but when you do a reactor startup you have to maintain stable temperature (RCS) (Exhibit T-15a)(Exhibit T-15b, pp. 6-8).

The Main Feed-water pump is not designed to control steam generator water level during a reactor startup (in the source range). According to (b)(7)(C) this situation was not done the right way because there was a PMT (Post Maintenance Test) on feed-water check valves that was supposed to be done in Mode 4 or Mode 5. It kept getting pushed back to be done

later. (b)(7)(C) stated that they could not use the Aux Feed-water because of the PMT. He stated it could have been done in Mode 4 or 5 with ultra sonics, but they had already taken out scaffolding. (b)(7)(C) stated that (b)(7)(C) was there along with Shift Manager (b)(7)(C) and (b)(7)(C). Around midshift, (b)(7)(C) told (b)(7)(C) and (b)(7)(C) that the PMT needed to be done now. The PMT could not be done later due to radiation amounts and the PMT had to be done. (b)(7)(C) told (b)(7)(C) that they could not do this during the reactor startup and (b)(7)(C) said we must. (b)(7)(C) asked why but did not receive a good answer. At this point, (b)(7)(C) told (b)(7)(C) that he did not feel safe and that this was not a safe thing to do. (b)(7)(C) said they needed to delay the startup and then do the PMT. According to (b)(7)(C) (b)(7)(C) refused saying "Ops will not be the hold-up of this outage" and "we will not delay the startup of this outage." When asked about how (b)(7)(C) handled the issue regarding safety, (b)(7)(C) stated that (b)(7)(C) said, "we're going to be careful." (b)(7)(C) stated that (b)(7)(C) also said they did not need to do it and heard (b)(7)(C) comments as well (Exhibit T-15a)(Exhibit T-15b, pp. 9-11, pp. 22-24).

In regard to this situation, (b)(7)(C) stated he pushed back as hard as he ever pushed back on anything he had ever done. In response to his push back he was challenged to "show me somewhere where it says that we cannot do this procedurally." (b)(7)(C) has been licensed for years. (b)(7)(C) believes this happened due to pressure from the OCC. He stated that core nuclear fundamentals were then disregarded by (b)(7)(C) He stated that the OCC is in control of the control room when it should be the Shift Manager. (b)(7)(C) stated the calls should be made on the operators' knowledge, skill, and experience but it is not like that now. (b)(7)(C) was told by (b)(7)(C) that it was their call (b)(7)(C) and (b)(7)(C) Reportedly (b)(7)(C) then told (b)(7)(C) that if it went bad then they (b)(7)(C) and (b)(7)(C) would take the blame. (b)(7)(C) stated that he could not believe (b)(7)(C) comment because he (b)(7)(C) did not care who took the fall or who would be the scapegoat if it did not work (Exhibit T-15a)(Exhibit T-15b, p. 12, p. 14, p. 15, pp. 24-25).

(b)(7)(C) ended up doing it because he received a direct order from (b)(7)(C) to proceed. He believes any operator would have agreed with (b)(7)(C) that they should have delayed the startup. (b)(7)(C) stated that he was (b)(7)(C) not the OAC. He stated that if he had said he was not doing it then he would have been removed and they would have gotten someone else. In addition, (b)(7)(C) stated that he would have been labeled as not being a team player. (b)(7)(C) stated that even now if questioned about this incident management would spin it in a way that will say it was "ok." Because he is part of the union, (b)(7)(C) is not afraid of management firing him. He stated that the SROs are afraid for their jobs. (b)(7)(C) stated that the management in place now does not want to hear bad news (Exhibit T-15a)(Exhibit T-15b, pp. 21-30).

(b)(7)(C) advised that the evolution went forward using the SBMFP and the operators did a good job and were able to control it even though it was not designed that way. He stated that he did not believe they were breaking any rules or commitments to the NRC. When asked what could have happened had they not been able to control it, (b)(7)(C) stated that the risk

was in over-cooling the RCS and causing a reactivity transient. (b)(7)(C) stated that not everything they do is black and white and at times they operate in the gray area. He further stated that there are not procedures for everything. According to (b)(7)(C) the operators are tasked with making judgment calls and are trained to operate the plant safely. That is their number one job (Exhibit T-15a)(Exhibit T-15b, pp. 20-29).

Interview of (b)(7)(C)

(b)(7)(C) at WBN, was interviewed on July 13, 2017, by TVA OIG wherein he provided the following information in substance.

(b)(7)(C) has been working in the nuclear industry since (b)(7)(C) and has worked the majority of career at WBN. He was working as a (b)(7)(C) in the fall of 2015 at WBN. Around 0200 hours, he took a phone call from the OCC. The caller was (b)(7)(C) a RP employee who was assigned to the OCC to cover the (b)(7)(C) during the outage. (b)(7)(C) told (b)(7)(C) that the OCC needed RP (along with engineering) to make a power entry to inspect piping. The OCC wanted the piping checked for leaks. It was auxiliary feed water piping. (b)(7)(C) group was needed to provide coverage for the engineers. The engineers check for leaks and RP handles the RP issues associated with making a power entry. During the telephone call, (b)(7)(C) questioned (b)(7)(C) as to why the OCC wanted the "leak" checked while they were in Mode 1. He told (b)(7)(C) that the OCC should have inspected the piping in Mode 3. When he asked (b)(7)(C) what difference it made to check the pipes in Mode 1 versus Mode 3, (b)(7)(C) said that it is much safer to check the piping in Mode 3 rather than Mode 1 (Exhibit T-24).

(b)(7)(C) added that in Mode 1 the control rods are pulled. Exposure to additional and unnecessary dose is greater in Mode 1 than in Mode 3. (b)(7)(C) told the agents that it was obvious what was going on. The OCC wanted to save 4-6 hours on the schedule. The OCC put schedule over safety. That is why the OCC wanted power entry made in Mode 1 to check the pipe for leaks rather than Mode 3. (b)(7)(C) was not satisfied with his telephone conversation with (b)(7)(C) The two spoke to one another professionally. Neither yelled or used profanity during the call. When the call ended, (b)(7)(C) decided to go to the OCC. He wanted to voice his concern (Exhibit T-24).

Upon arriving in the OCC, (b)(7)(C) walked to the main table. He went there because that is where (b)(7)(C) was located. (b)(7)(C) and (b)(7)(C) were beside (b)(7)(C) (b)(7)(C) said that others were in the OCC at various desk and just standing around. (b)(7)(C) believes they all probably overheard the conversation. (b)(7)(C) told (b)(7)(C) "Are you wanting to make a power entry to inspect the piping in Mode 1?" (b)(7)(C) replied back, "yes." (b)(7)(C) then said, "Well that is just stupid and why are we doing this?" (b)(7)(C) told (b)(7)(C) that the OCC should have done this in Mode 3. (b)(7)(C) then told (b)(7)(C) to leave the OCC and go outside to take a smoke break for a few minutes. (b)(7)(C) did just that. He left the OCC and went outside for ten or so minutes. He then came back to the OCC where he and (b)(7)(C) continued their conversation (Exhibit T-24).

(b)(7)(C) continued the talk right where he left off. (b)(7)(C) told (b)(7)(C) that they should not be doing this in Mode 1 and should have done it in Mode 3. (b)(7)(C) then hollered out, "call security." A few minutes later, WBN security came into the OCC and escorted (b)(7)(C) out of the protected area and to his vehicle. Somewhere along the way, Security took his badge. Just as he was getting in his vehicle, he heard over the security guards radio that someone wanted to know if he was still on site. The security guard replied that (b)(7)(C) was in his vehicle and then (b)(7)(C) heard the same person direct the security guard to "have him come back in if he wants" (Exhibit T-24).

(b)(7)(C) then was given his badge back and he reentered the protected area. As he was walking back into the building he was met by (b)(7)(C) She took him into a room where she apologized. He thought that someone else was with her. It was not (b)(7)(C) She said that the OCC should have done a better job of explaining their plan. She said they should have done a better job communicating why they were having to do it this way. He apologized for his outburst. At this point in the interview, the agents asked (b)(7)(C) if he used profanity or threatened anyone in the OCC. He said he did not and did not holler or yell, but admitted he was not happy that the OCC wanted to check for the leak in Mode 1 rather than Mode 3. He said that his displeasure was obvious to everyone in the OCC (Exhibit T-24).

(b)(7)(C) noted to the agents that it is his job to "protect" the workers and figured that (b)(7)(C) just got sick of him and called security. After he and (b)(7)(C) talked, (b)(7)(C) walked with (b)(7)(C) back to the OCC where he met with (b)(7)(C) (b)(7)(C) basically said the same thing to him as (b)(7)(C) did. (b)(7)(C) then walked with (b)(7)(C) back to his department where she explained to those around what the OCC's plan was as it relates to checking for the leak. (b)(7)(C) said that the power entry was made later in the shift and the piping was inspected that shift. When asked what happened next, (b)(7)(C) said that nothing happened and that was the end of the story. According to (b)(7)(C) he and (b)(7)(C) are social with one another and as far as he knows nothing ever came of the incident. The agents asked (b)(7)(C) if the incident has caused him to not speak up or not be as vocal, (b)(7)(C) responded, "No because he has over (b)(7)(C) in the nuclear industry and is (b)(7)(C) (b)(7)(C) " He could easily see how others may have seen or heard what happened to him (escorted off the site) and these people may be somewhat unwilling to raise issues (Exhibit T-24).

Interviews of (b)(7)(C) Unit Supervisor

(b)(7)(C) US at WBN was interviewed on October 16, 2017, and April 26, 2019, by OI and TVA OIG wherein he provided the following information in substance.

(b)(7)(C) stated that he worked the fall 2015 re-fueling outage at WBN. (b)(7)(C) said he remembered a standby feed water pump issue during this outage. (b)(7)(C) could not recall all the specifics of the issue but remembered the issue and that there was a lot of heartache over it. (b)(7)(C) recalled being talked to about it and remembered that (b)(7)(C was also asked about it. (b)(7)(C) recollection was that both he and (b)(7)(C let it be known that doing what they wanted to do was not the right thing to do. (b)(7)(C) was also involved in the discussion in the MCR about the feed water pump. He also recalled (b)(7)(C) being

involved. According to (b)(7)(C) (b)(7)(C) was not happy about what the MCR was being asked to do (Exhibit T-38a).

(b)(7)(C) also said that (b)(7)(C) Engineering, ended up having to go inside containment to do a local observation. (b)(7)(C) said that there was also a "dose issue" involved. (b)(7)(C) stated that the reactor was critical, and they do not put people into the critical area. (b)(7)(C) testified that he was not surprised in the least that TVA received a chilled letter from the NRC. He said the OCC got too caught up in making megawatts and money instead of electricity being a by-product of running a safe plant. He said this came into conflict with the number one goal of those in the MCR. The MCR's first goal is to protect the core (Exhibit T-38a).

(b)(7)(C) discussed that there was pressure to complete the test to be able to continue with the reactor start-up. (b)(7)(C) was directing the operations and assigned (b)(7)(C) to help supervise (b)(7)(C) (b)(7)(C) discussed that (b)(7)(C) was voicing his concerns with performing the test but could not recall the exact dialog between (b)(7)(C) and (b)(7)(C) (b)(7)(C) discussed that even though he is cognizant of the change in requirements associated with use of the SBMFP during start-up he did not believe they were in violation using it on October 20-21, 2015 (Exhibit T-38b, pp. 5-18).

Interviews of (b)(7)(C) and (b)(7)(C)

(b)(7)(C), Shift Manager; (b)(7)(C), Unit Supervisor; (b)(7)(C), Reactor Operator; and (b)(7)(C), Reactor Operator; were interviewed between April 12 and April 26, 2019 by OI and TVA OIG. The interviews did not provide any additional relevant information outside the interviewee's inability to remember significant details of the issue in question (Exhibit T-27e)(Exhibit T-46c)(Exhibit T-75)(Exhibit T-76).

Agent's Analysis

In summary, the evidence obtained by OI during this investigation indicates that on October 21, 2015, WBN1 intentionally used the Standby Main Feed-water Pump (SBMFP) to supply feed-water during a reactor startup into Mode 2 contrary to the unit operating license and operating procedures. This was done to facilitate the performance of plant testing and continue unit start-up. On October 20, 2015, WBN1 was performing a plant startup IAW 1-GO-2, Reactor Startup, following a re-fueling outage. At 2345, while in Mode 3, the SBMFP was started IAW 1-SOI-2&3.01 section 5.9. This was performed in preparation to enable engineering to perform testing and inspection of feed-water valves in containment. While this testing and inspection was taking place WBN 1 commenced a reactor startup (Exhibit A2-E1, pp. 76-83)(Exhibit A2-E2)(Exhibit A2-E3, p. 19).

Based on log entries and plant data, the following activities/events took place on October 21, 2015 (Exhibit A2-E11, pp. 78-83)(Exhibit A2-E12)(Exhibit A2-E3, p. 19):

- 0100 - IAW 1-SOI-2&3.01 section 5.5 feed pump pressure up stream of check valves 1-CKV-3-669 AND 1-CKV-3-678 was established to allow SYS ENG walkdown activities
- 0101, all shutdown banks were withdrawn IAW 1-GO-2, Reactor Startup
- 0320 - Withdrew all control banks IAW 1-GO-2, Reactor Startup, and 1-PET-201, Initial Criticality and Low Power Physics Testing
- 0346 - Unit 1 in Mode 2
- 0357 – Operators commenced dilution of U1 RCS to critical
- 0510 - The SBMFP was secured and secondary side returned to modified long cycle

Use of the SBMFP during the 1-GO-2 startup of WBN1 was performed over the objection of MCR operator (b)(7)(C) The operator initially refused and stated it was not safe to perform the reactor startup using the SBMFP but was eventually given direction to proceed with the plant operation by the Shift Manager (b)(7)(C) . During this investigation, OI determined that 1-GO-2 has no allowance or procedural guidance for use of the SBMFP during reactor startup. 1-GO-2 prerequisites specifically require the Auxiliary Feed-water Pumps be used to maintain SG levels. No procedure changes were processed, or special procedures approved to facilitate the use of the SBMFP while performing a reactor start-up. OI established that specific changes were made in years prior to GO-2, Reactor Startup, to prevent the SBMFP from being used during normal plant start-up and shutdown. Additionally, system design documents were correspondingly changed to identify that the SBMFP was not to be used during normal startup and shutdown (Exhibit A2-E5, pp. 1-5)(Exhibit T-15).

All licensed operators receive training on these 1-GO-2 requirements and procedures. Senior Reactor Operators are also charged with knowing the basis behind such procedures and actions. Operator training identifies that the SBMFP was not to be used during normal startup and shutdown (Exhibit A2-E4, p. 167).

The evidence obtained throughout this investigation indicates that the use of the SBMFP represented a violation of NRC requirements. 10 CFR Appendix B, CR V, Instructions, Procedures, and Drawings states, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. 1-GO-2, Section 4, Prerequisites, [8] states “MAINTAIN SG levels on program with AFW pumps.” 1-GO-2 purposefully does not have any allowances for use of the Standby Main Feed Pump (SBMFP) to feed steam generators during reactor startup. Use of the SBMFP on October 21, 2015, to feed SG’s while performing a normal reactor startup was not consistent with the requirements of 1-GO-2 for Reactor Startup (Exhibit A2-E6).

Based on the interviews and totality of the evidence, OI found insufficient evidence to conclude that any of the individuals involved engaged in deliberate misconduct.

Conclusion

Based on the evidence developed during this investigation, OI substantiated that the motor driven Standby Main Feed-water Pump was used to feed the S/Gs in order to perform a valve PMT in parallel with unit startup even after the plant was taken into Mode 2. Further, OI determined that this action represented potential violations of NRC requirements but OI did not substantiate any willful act associated with this allegation.

Allegation No. 3

Failure to follow the NPG-SPP-1.2, Administration of Site Technical Procedures when making a change to WBN1, 1-GO-1 Start-Up from Cold Shutdown to Hot Standby (drawing the bubble) by the (b)(7)(C) on November 9, 2015.

Applicable regulations

10 CFR 50: Appendix B, CR V, Instructions, Procedures, and Drawings
10 CFR 50: Appendix B, CR VI, Document Control
10 CFR 50.59: Changes, tests and experiments
10 CFR 50.5: Deliberate misconduct

Documentary Evidence

Email (b)(7)(C) Outage Update Sent by (b)(7)(C) (A3-E1)

Email Outage Update Sent by (A3-E2)

1-GO-1, Unit Startup from Cold Shutdown To Hot Standby, Revision 3 05222015 (A3-E3)

1-GO-1, Unit Startup from Cold Shutdown To Hot Standby, Revision 4 11092015 (A3-E4)

Copy of 1-GO-1 from 11/9/2015 (A3-E5) Email (b)(7)(C) 1-GO-1 Sent by (b)(7)(C) on (b)(7)(C) (A3-E7)

Email (b)(7)(C) 1-GO-1 Revision 4, Sent by (b)(7)(C) on (b)(7)(C) (A3-E8)

NPG-SPP-1.2, Administration of Site Technical Procedures, Revision 12 09112015 (A3-E9)

Analysis of change to 1-GO-1 (A3-E10)

Draft Apparent Violation (A3-E11)

Testimony

Interviews of (b)(7)(C), Shift Manager, (b)(7)(C) and OCC Operations Representative

(b)(7)(C) Shift Manager, (b)(7)(C) and OCC Operations Representative at WBN was interviewed on October 16, 2016, and March 29, 2017, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance on this issue.

> Agent's Note: As identified in the excerpts below, and further detailed in the documentation of the interviews, (b)(7)(C) failed to provide the same level of detail and specifics in all the interviews at times appearing contradictory in nature.

(b)(7)(C) discussed that he could not recall any procedure changes during the November 2015 outage or the fall re-fueling outage. He added that they cannot change procedure outside of the plant's design. (b)(7)(C) said that editorial changes do not require a 50.59. (b)(7)(C) said that he could not think of a time where they skirted a 50.59 by calling it an editorial change. (b)(7)(C) was asked about procedure changes. He stated that they sometimes do procedure changes to cut time like when they look to see if they can do a surveillance in another Mode. He said that 50.59 evaluations get screened out. He added that they have missed some though on Unit 2. He said they got a violation from the NRC for it too (Exhibit T-17d).

During subsequent discussion about the November 9, 2015, procedure change to 1-GO-1 for drawing the bubble in the pressurizer (b)(7)(C) was asked if he recalled changing a procedure during the November 2015 outage. (b)(7)(C) said that he could not remember such a change, but added it was over one year ago. After prompting, (b)(7)(C) said he did recall something about the change to 1-GO-1 to allow drawing the bubble in the pressurizer. AUSA (b)(7)(C) told (b)(7)(C) that in October 2016, (b)(7)(C) asked (b)(7)(C) that exact same question and (b)(7)(C) testified that he had not been involved in any type of procedure change. (b)(7)(C) commented that he had just forgotten. (b)(7)(C) recalled that he was looking ahead in the schedule and noticed a sticking point with the temperature and the procedure for drawing the bubble. (b)(7)(C) stated that he got System Engineering involved and talked to Operations to reach a resolution to make sure it was not a hold-up to the schedule by re-defining or re-classifying a portion of the procedure. (b)(7)(C) stated that it still ended up causing a delay in the schedule (Exhibit T-17e).

(b)(7)(C) stated that after the problem was identified, (b)(7)(C) WBN, asked what was happening and (b)(7)(C) explained the situation, and told (b)(7)(C) that the procedure had been defined too narrowly and relayed that he was working with Engineering to get it corrected. (b)(7)(C) said that (b)(7)(C) was displeased based on a statement he made that (b)(7)(C) was not able to recall. (b)(7)(C) stated that shortly after his conversation with (b)(7)(C) (b)(7)(C) at WBN, came in and was belittling (b)(7)(C) (b)(7)(C) explained that the procedure does not have to be written the way it is written and told him that they were working through it with Operations and Engineering. (b)(7)(C) stated that (b)(7)(C) pitched a fit and threw the procedure paperwork down and basically had a temper tantrum. (b)(7)(C) stated that (b)(7)(C) then asked (b)(7)(C) a question that (b)(7)(C) could not recall, but he does remember that at the time he thought the question was intended to humiliate (b)(7)(C) (b)(7)(C) stated that a little while later he was called by someone either from the Control Room or Work Control and was told that the Control Room was okay with moving forward after speaking with Engineering (Exhibit T-17e).

During the interview (b)(7)(C) stated that he did not believe that the procedure change was an intent change and argued that it was a minor editorial change based on delta T. (b)(7)(C) stated that the change to the procedure occurred prior to his conversation with (b)(7)(C) (b)(7)(C) stated that (b)(7)(C) fit was thrown shortly before they moved ahead in the schedule which was hours after (b)(7)(C) initially identified the issue and changed the procedure. (b)(7)(C) stated that after his unpleasant public interaction with (b)(7)(C) some

people (NFI) thought that (b)(7)(C) was being directed by (b)(7)(C) to violate the procedure. (b)(7)(C) stated that is not how he viewed the interaction because he had been looking at it for hours before the conversation with (b)(7)(C) and (b)(7)(C) (b)(7)(C) stated that (b)(7)(C) and (b)(7)(C) had zero influence on (b)(7)(C) changing the procedure, (b)(7)(C) was waiting on the Control Room and Engineering to agree to move forward. According to (b)(7)(C) no one directed his efforts for the procedure change. (b)(7)(C) stated that during the previous two years they became a prove to me why it cannot be done organization and got pushed all the way against what can be done safely. (b)(7)(C) believes that the events of November 9 and November 11, 2015, are probably examples of that mindset (Exhibit T-17e).

Interviews of (b)(7)(C), Senior Reactor Operator

(b)(7)(C) SRO at WBN was interviewed on January 16, 2016, and September 19, 2016, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) said that on November 9, 2015, (b)(7)(C) WBN1 Unit Supervisor (REDINGER) and the unit was working toward moving out of an outage. (b)(7)(C) recalls the OCC requested the MCR to draw a bubble in the pressurizer without the temperature being achieved as required by approved plant operating procedures. He described that there was a caution in the procedure (1-GO-1) that said do not move forward drawing a bubble in the pressurizer while you are cold and to wait until a certain temperature. According to (b)(7)(C) the operators did not want to heat-up but drawing a bubble is a milestone and a big step to moving forward so the OCC said to do it. (b)(7)(C) then showed the procedure to (b)(7)(C) (b)(7)(C) Shift Manager. (b)(7)(C) agreed with (b)(7)(C) that they should not do it and communicated it back to the OCC. The decision was made to revise the procedure, so they could move forward. According to (b)(7)(C) this is not a common thing, but the OCC must have felt they found a safe alternative. (b)(7)(C) did not believe that and told (b)(7)(C) that "I just want to communicate to you verbally that I am disagreeing with this procedure" and "I said who with an NRC license is saying this is ok" (Exhibit T-05a)(Exhibit T-05b).

At this point, (b)(7)(C) said "the people who fire people with licenses said to do this." (b)(7)(C) stated that (b)(7)(C) did not name anyone but there are not many people above the shift manager. (b)(7)(C) believes he was talking about (b)(7)(C) and (b)(7)(C) (b)(7)(C) stated, "He was pissed off" after this comment because he is proud of his NRC license. (b)(7)(C) stressed that the license is an agreement between him and the NRC not TVA. (b)(7)(C) stated that is was not right to have decision making, which overrides the license holders, made by the other non-licensed people in the organization who have milestones to meet to get out of an outage. Soon after this conversation with (b)(7)(C) REDINGER returned to the control room and took back the watch from (b)(7)(C) At that point, the operators moved forward and did as instructed even though "the whole team was against it" (Exhibit T-05a)(Exhibit T-05b).

Interviews of (b)(7)(C)

(b)(7)(C) at WBN, was interviewed on June 9, 2017, and January 25, 2019, by TVA OIG wherein he provided the following information in substance.

(b)(7)(C) was asked about one specific procedure change that he was a part of which occurred on November 9, 2015. The investigator told (b)(7)(C) that the procedure had to do with drawing a bubble. The investigator also told (b)(7)(C) that the procedure was processed with (b)(7)(C) and the procedure change was listed as a minor editorial change. (b)(7)(C) said that he did not have to remember that particular procedure changes to be able to tell the investigator that nobody pressured or made (b)(7)(C) do something that he thought was not right. (b)(7)(C) said that neither (b)(7)(C) nor (b)(7)(C) would ever try to pressure (b)(7)(C) He did say that he takes into account the data and the information that people give to him as well as the data points he collects himself when he makes procedure changes (Exhibit T-42a).

(b)(7)(C) was asked if he was qualified, as specified in TPD-PWG, to be a (b)(7)(C) (b)(7)(in November 2015. (b)(7)(C) said that he was pretty sure he was. He was then asked what his responsibilities were when reviewing a procedure change to a quality related operating procedure like 1-GO-1. He replied that he verified if the changes were technically correct. He said he would go through the Independent Quality Review (IQR) checklist. He added that there were a lot of things that he goes through when reviewing a procedure change. (b)(7)(C) was then shown the procedure change from November 9, 2015. (b)(7)(C) was then asked why the 1-GO-1 procedure change was being performed. He discussed that he thought it was a semantics issue with the word “raise.” He was then asked what effect did the change to the 1-GO-1, 5.2.1 step 8 on November 9, 2015 have on the implementation of the procedure. He replied that he did not think it had any effect. He was then asked if the procedure change on November 9, 2015, met the definition of a minor editorial change. He said that it probably did not. Although he is unsure, he did not think it impacted the intent of the procedure, which was to warm up the RCS between 135 degrees and 160 degrees (Exhibit T-42b).

Interview of (b)(7)(C), Reactor Operator

(b)(7)(C) RO at WBN, was interviewed on September 29, 2016, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney’s Office for the Eastern District of Tennessee, wherein he provided the following information in substance. (b)(7)(C) stated that when he came into work on November 9, 2015, the plant was still in Mode 5. He believed the plant would be farther along when he came in and MCR and the OCC wanted to draw a bubble on the pressurizer but not heat-up. According to (b)(7)(C) OCC had directed another operator ((b)(7)(C)), with less experience to draw the bubble. To that end, (b)(7)(C) and (b)(7)(C) decided to go to WBN2 and ask another operator (NFI) to see if it was even possible (Exhibit T-01c).

(b)(7)(C) stated this was a unique forced outage and this was the only time he had ever seen a forced outage that went all the way up to Mode 5 because most forced outages are in

Mode 3. To recover the plant with a single crew was rare and not his crew's specialty so when he heard about drawing the bubble he did not think it made sense. As (b)(7)(C) was talking to the WBN2 operator (NFI), he was cut off by (b)(7)(C) and told the decision had already been made. (b)(7)(C) believes (b)(7)(C) thought he was arguing. At that point, (b)(7)(C) stated they were in Mode 5 and holding (Exhibit T-01c).

According to (b)(7)(C) they had gone through the procedure and were doing something like changing heat-up to initiate which would let them go ahead before it reached the required heat-up. (b)(7)(C) stated that he asked (b)(7)(C) about drawing the bubble procedure and that is when he ((b)(7)(C)) realized the procedure had been changed. (b)(7)(C) believes the procedure was changed on November 9, 2015, and the nightshift drew the bubble that night (Exhibit T-01c).

> Agent's Note: (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) are mentioned during testimony but not directly implicated in allegation no. 3. Available testimony does not provide any relevant information concerning this allegation.

Agent's Analysis

In summary, the evidence obtained during the investigation leads OI to conclude that on November 9, 2015, (b)(7)(C) deliberately failed to implement the procedure change requirements of NPG-SPP-1.2, Administration of Site Technical Procedures, Revision 12 when he approved an unauthorized change to plant operating procedure 1-GO-1 Revision 3.

On November 9, 2015, WBN1 was heating up following an unplanned outage to fix a reactor coolant system (RCS) leak on the top of a rod drive mechanism. Work was ongoing on the reactor head and RCS temperature was being controlled to approximately 110°F. The control room operators reached step 5.2.1 [8] in 1-GO-1, Unit Startup from Cold Shutdown to Hot Standby, Revision 3, which required that RCS temperature be raised to between 135°F and 160°F before proceeding in the procedure to draw a steam bubble in the pressurizer. (b)(7)(C) testified that control room operators were requested to continue with the procedure with reactor temperature below 135°F but the MCR did not continue (Exhibit T-05a)(Exhibit T-05b)(Exhibit A3-E1)(Exhibit A3-E2)(Exhibit A3-E3, p. 27).

In response, (b)(7)(C) using his subordinate (b)(7)(C) implemented a change to 1-GO-1, Unit Startup from Cold Shutdown to Hot Standby, Revision 3. 1-GO-1 which is an operating procedure that fell under the scope of NPG-SPP-1.2, Administration of Site Technical Procedures, Revision 12. (b)(7)(C) change allowed the continuation with 1-GO-1 to draw a steam bubble in the pressurizer without reactor coolant temperature being raised to at least 135°F. This was done to compel WBN1 operators to continue with the scheduled plant start-up activities after the operators identified doing so would be a violation of 1-GO-1. The intent of making the procedure change was to avoid raising temperature as evinced by plant operators not initiating a plant heat-up and actually reducing plant temperature after drawing a bubble in the pressurizer in an attempt to keep reactor coolant system temperature kept near 100°F.

(b)(7)(C) classified and processed this as a "minor editorial change" as defined in NPG-SPP-1.2, Section 3.2.11 Minor/Editorial Changes. NPG-SPP-1.2, Administration of Site Technical Procedures, Revision 12, Section 3.2.11 Minor/Editorial Changes, states: *Minor changes shall not change the intent of the procedure or alter the technical content or sequence of procedural steps.* The procedure revision to allow drawing a bubble below 135°F changed the intent of the procedure, technical content and altered the sequence of steps of the procedure (Exhibit T-17d)(Exhibit T-17e)(Exhibit A3-E4, p. 27)(Exhibit A3-E5)(Exhibit A3-E6)(Exhibit A3-E7)(Exhibit A3-E8)(Exhibit A3-E9, pp. 23-24)(Exhibit A3-E10).

As described in detail in Exhibit A3-E10 and A3-E11, OI finds that the evidence supports that this procedure revision was made without meeting the required procedure change/review requirements of NPG-SPP-01.2 for this type of change which would have required a significantly more detailed review and approval including: Engineering/technical reviews; 50.59 reviews; Operating Experience reviews; licensing compliance reviews; Plant Operating Review Committee reviews; and training reviews. The deliberate failure by (b)(7)(C) to follow NPG-SPP-1.2, Administration of Site Technical Procedures, Revision 12, for implementing document control requirements when he approved the change to 1-GO-1 constituted a violation of multiple NRC requirements including: Title 10 CFR Part 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings: Criterion VI, Document Control; and Technical Specifications, Section 5.7.1 Procedures (Exhibit A3-E10)(Exhibit A3-E11).

(b)(7)(C) was an off-shift Shift Manager licensed as a Senior Reactor Operator and, in his position as the (b)(7)(C) he is responsible for implementing and enforcing the requirements of NPG-SPP-01.2. Considering his position, experience, and information obtained during interviews, OI determined it was not implausible that he did not understand the requirements of NPG-SPP-01.2 and the obvious implications of the change he requested and approved. Therefore, OI concludes that (b)(7)(C) deliberately approved an improperly made change to the Unit 1 operating procedure 1-GO-1, which incorporated a change to step 5.2.1[8] which required operators to only initiate raising temperature to between 135°°F and 160F before proceeding with drawing a pressurizer bubble.

Conclusion

Based on the evidence developed during this investigation, OI substantiated that (b)(7)(C) (b)(7)(C) deliberately failed to implement the procedure change requirements of NPG-SPP-1.2, Administration of Site Technical Procedures, Revision 12. Specifically, on November 9, 2015, (b)(7)(C) used his subordinate, (b)(7)(C) to initiate a change to a plant operating procedure 1-GO-1 Start-Up from Cold Shutdown to Hot Standby in a manner which intentionally subverted the required review and approval process for such a change. (b)(7)(C) subsequently approved the changed procedure for use in operation of the plant.

Allegation No. 4

Watts Bar failed to follow Plant Operating Procedure 1-GO-1 when Unit 1 was transitioned from Mode 5 to Mode 4 without normal let-down in service and continued with 1-GO-1 start-up activities on November 11, 2015.

Applicable regulations

10 CFR 50: Appendix B, CR V, Instructions, Procedures, and Drawings
10 CFR 50.59: Changes, Tests and Experiments
10 CFR 50.5: Deliberate Misconduct

Documentary Evidence

1-GO-1 from November 11, 2015 pages 27-60 (A4-E1)

Clearance Tagout 1-TO-2015-0046 – Clearance 1-62-0584-FO (A4-E2)

1-GO-1, Unit Startup From Cold Shutdown To Hot Standby Revision 0004, Effective Date November 09, 2015 (A4-E3)

CVCS Charging and Let-down Valve Checklist 1-62.01-1V (A4-E4)

WBN Plant Logs from November 11, 2015 (A4-E5)

Email (b)(7)(C) Sent by (b)(7)(C) (A4-E6)

Email (b)(7)(C) Sent by (b)(7)(C) (A4-E7)

Email (b)(7)(C) Dennis REDINGER Sent by (b)(7)(C) (A4-E8)

Email (b)(7)(C) PDF Interview Notes Sent by (b)(7)(C) (A4-E9)

Email Email exchange between (b)(7)(C) and (b)(7)(C) (A4-E10)

Draft Apparent Violation Failure to Follow 1-GO-1 (A4-E11)

Conduct of Operations OPDP-1 Rev. 0029 (A4-E12)

CVCS Charging and Let-down Power Checklist 1-62.01-1P (A4-E13)

NPG-SPP-01.2 Rev. 0012 - Administration of Site Technical Procedures (A4-E14)
WO117339526 P/T limits from November 11, 2015 (A4-E15)

Email (b)(7)(C) Sent by (b)(7)(C) (A4-E16)

Testimony

Interviews of (b)(7)(C) Reactor Operator

(b)(7)(C) RO at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) has worked as a RO, at WBN since (b)(7)(C). On November 11, 2015, (b)(7)(C) was working on WBN2 and had walked over to the WBN1 side of the MCR to offer assistance as WBN1 was working through a maintenance (forced) outage. According to (b)(7)(C) when he arrived at the WBN1 side of the MCR, the RO (NFI) was in the process of using the RHR let-down as the method of controlling the RCS level. That condition, lead (b)(7)(C) to begin asking questions of the RO and proceed to walk the board in an effort to understand the situation. (b)(7)(C) said that he soon realized the RHR temperatures were higher than normal which caused him concern. At that point, (b)(7)(C) raised his concerns to the SRO's. (b)(7)(C) observed there were alarms and temperatures that were abnormal as he discussed his observations and expressed his concerns on what he thought needed to be done. According to (b)(7)(C) the RO's had agreed with (b)(7)(C) observation and indicated to (b)(7)(C) that they had voiced similar concerns but were overruled by "those above them." (b)(7)(C) explained that the RO's discussed how could they get out of the situation and utilize RCS cooling (Exhibit T-02a, pp. 4-12).

(b)(7)(C) stated that as he walked into the MCR, they were starting to align RHR let-down and the suction valves from RCS were already opened which lead him to ask questions. (b)(7)(C) recalled that (b)(7)(C) on duty and the US, REDINGER, was running the procedures. (b)(7)(C) testified that he clearly voiced his concerns related to the reason the suction valves from RCS were opened and the high-pressure alarm. According to (b)(7)(C) he told SM (b)(7)(C) "I ((b)(7)(C)) said this is not the right thing to do he (b)(7)(C) would not really answer me." (b)(7)(C) acknowledged that he was full of suggestions to (b)(7)(C) which were more than (b)(7)(C) cared to hear. Eventually, (b)(7)(C) directed the heat-up to stop as the temperature approached 235F (Exhibit T-02a, pp. 11-19).

Additionally, (b)(7)(C) stated the let-down system was in service with RHR pumps on RCS cooling Mode while normal let down was tagged for maintenance. (b)(7)(C) testified that he was not part of the decision-making process to secure normal let-down on WBN1 and was not present inside the OCC during the period in question. Likewise, (b)(7)(C) stated that he was not assigned to WBN1 on November 11, 2015, but on his own accord decided to walk over from WBN2 to offer his assistance with the evolution. (b)(7)(C) described the MCR as "hectic." In particular, the operators were uncomfortable relative to the RHR temperatures and the rise in the pressurizer. When asked if there was "command and control" from the shift manager and the SRO's regarding the activities, (b)(7)(C) said, "There were some disagreements as to should we be doing this that the SROs expressed." (b)(7)(C) stated that it was not a proactive environment but rather a reactive one as operators were simply trying to get a handle on what was going on with the plant. When asked how did the let-down system impact (challenge) the

operators, (b)(7)(C) responded, "The biggest challenge was not being able to control the pressurizer level on the heat-up." Specifically, the pressurizer level rose from 40 percent to nearly 80 percent before any action was taken. (b)(7)(C) suggested that the excess let-down is limited relative to its design and only suitable in certain plant conditions. Also, the secondary side had nothing to offer to cool the plant down and when the heat-up was stopped all the steam generator atmospheric dumps were opened and the steam was dumped. (b)(7)(C) stressed the pressurizer level was in a dangerous place without the ability of normal let-down. (b)(7)(C) said, "Had they stayed within the bounds of the GO procedure they would not have had any concerns with the (heat-up)" (Exhibit T-02b, pp. 9-15, pp. 17-23).

(b)(7)(C) stated that at the end of the shift, (b)(7)(C) verbally thanked (b)(7)(C) for getting "loud." Although (b)(7)(C) never articulated that he was confused or did not understand the procedure, (b)(7)(C) questioned (b)(7)(C) about the capacity of the excess let-down system and emphasized he should have waited for the normal let-down to return to service. According to (b)(7)(C) (b)(7)(C) told (b)(7)(C) "That he was doing what he was told to do." (b)(7)(C) said that under the current management at WBN the main concern was reaching the next milestone. (b)(7)(C) suggested that bonuses and promotions are all tied to milestones which causes some risk. (b)(7)(C) added that the OCC placed WBN at risk on November 11, 2015, as MCR did what the OCC wanted. It was the MCR that recovered and stabilized the plant. When asked what could have happened, (b)(7)(C) stated they could have released radioactive water outside of the reactor coolant piping (the reactor coolant system boundary). Furthermore, (b)(7)(C) implied a component could have failed given the higher water temperatures and pressures. Additionally, there was potential environmental damage as the plant would have been less safe because one less barrier was available. He stated that this is probably the second worst thing that could happen next to releasing the radioactive materials into the environment (Exhibit T-02b, pp. 25-28) (T-02c).

Interviews of (b)(7)(C) Shift Manager

(b)(7)(C) SM at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

Agent's Note: In his initial interview with OI on December 18, 2015, (b)(7)(C) failed to provide the same level of detail and specifics as he provided in subsequent interviews. On December 18, 2015 (b)(7)(C) was interviewed by OI concerning the events of November 11, 2015, and provided the following information. (b)(7)(C) was in the (b)(7)(C) (b)(7)(C) in many different nuclear power plants, DOE facilities, engineering firms. (b)(7)(C) has been licensed since (b)(7)(C) and a Shift Manager since (b)(7)(C) explained the plant had removed normal let-down from service the night previous to the shift that he took over on the (b)(7)(C) of November 11, 2015. At (b)(7)(C) we had heated up to enter Mode 4 which is 200 degrees. At (b)(7)(C) we secured both trains of RHR to allow the RCS to continue heating up. The plan for November 11, 2015 was to heat-up and pressurize RCS and enter Mode 3 at some point during that day or that night. The normal let-down system for CVCS was out of service for repair to a leaking valve and they had

placed the alternate let-down system, excess let-down, in service for let-down capabilities. Other than that, all the other plant conditions were normal as to be expected for Mode 5 and Mode 4 (Exhibit T-22a, pp. 4-11).

(b)(7)(C) discussed that nobody raised any concerns nor did any of the crew have any questions or concerns about trying to do a heat-up on excess let-down. (b)(7)(C) explained that the crew discussed the fact that they had not done it before and were willing to start it and see how it went. (b)(7)(C) stated he thought they had enough excess let-down flow to be able to control pressurizer level on excess let-down. When asked about the crew's reaction to planned events of the day, (b)(7)(C) stated he did not remember any big push back from the crew. However, (b)(7)(C) remembered being a little bit anxious continuing the start-up activities with only excess let-down because he had never done it like that before and was not 100 percent sure that it was going to go the way that he anticipated it to. (b)(7)(C) reasoned that he did not challenge the path to move forward because he had no basis for saying it would not work. When asked about influences on his decision concerning schedule pressure or any information coming from outside the control room that might have unduly influenced him in his decision he stated he did not remember any specific undo pressure
(Exhibit T-22a, pp. 15-19, pp. 21-40, pp. 43-56).

On January 19, 2016, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) explained that on the (b)(7)(C) of November 11, 2015, WBN1 was at Mode 5. WBN1 had just reassembled the reactor and the temperature was less than 200 degrees. OCC directed the MCR to move to Mode 4 which would have kept the site on schedule. The operating crew moved to Mode 4 as planned and as instructed. (b)(7)(C) further explained that around 0940 hours, all pre-requisites to move to Mode 4 had been handled. (b)(7)(C) instructed the MCR to go to 210 degrees and maintain that temperature which placed the plant into Mode 4. According to (b)(7)(C) the OCC told William (b)(7)(C) OPS OCC representative, to inform (b)(7)(C) to go to Mode 3 and take the temperature up to 350 degrees. (b)(7)(C) further explained that around (b)(7)(the OCC directed (b)(7)(C) to take RHR out of service, and then move to Mode 3. (b)(7)(C) testified that he informed (b)(7)(C) that he was uncomfortable moving to Mode 3 and that they needed to stay where they were and wait for the let-down system to come back into service in a few hours. (b)(7)(C) said he mentioned to (b)(7)(C) that the OCC was pushing too hard. According to (b)(7)(C) (b)(7)(C) was also uncomfortable with the decision. (b)(7)(C) explained that the OCC was pushing too hard and wanted to stay on schedule (Exhibit T-22b).

(b)(7)(C) said that (b)(7)(C) raised (b)(7)(C) concerns to the OCC and recalled that (b)(7)(C) gathered everyone around a table and told them of (b)(7)(C) concern. (b)(7)(C) stated that (b)(7)(C) also told them that they were pushing the operators too hard and he wanted it to stop. According to (b)(7)(C) the OCC dismissed the concern and instructed (b)(7)(C) to move to Mode 3. (b)(7)(C) said that he would have pushed back harder on November 11, 2015, but he was worried that he would be somehow reprimanded for not getting on board with the decision to move to Mode 3. His actions in the MCR were heavily influenced by his fear of losing his job (Exhibit T-22b).

On July 20, 2016, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) advised that there was no discussion on November 11, 2015, that it might be possible to get 70gpm using the excess let-down. (b)(7)(C) stated, "I do not think you could ever get 70gpm out of excess let-down." If someone had said 70gpm was possible, (b)(7)(C) stated that the conditions would have to be "absolutely perfect" at full pressure to ever get close to that and even then, it would be a "slim chance." Regardless, (b)(7)(C) stated in the MCR that (b)(7)(C) 'no one had the number 70gpm on our brain anywhere." (b)(7)(C) stated that no one said that night that they knew the heat-up using excess let-down could be done. Rather, everyone said that they did not know how it would react and they (licensed operators) knew they had "stuff" they could do if it went wrong. (b)(7)(C) stated that the "big guys" were saying "go" and the operators had actions in their back pocket to use if it failed. (b)(7)(C) stated that no one in the MCR wanted to move forward. (b)(7)(C) is not aware of whether any of the other guys talked to (b)(7)(C) About a month later when the NRC brought up the issue, (b)(7)(C) was in (b)(7)(C) office with (b)(7)(C) and (b)(7)(C) At which time, (b)(7)(C) asked (b)(7)(C) if (b)(7)(C) should be removed from watch until they found out the answers to the questions. (b)(7)(C) said "Yes." (b)(7)(C) stated that he was glad he had been in the meeting and heard the conversation because he realized it was not a punitive thing but rather just a conservative measure until the NRC was comfortable. (b)(7)(C) also believes it was to position themselves to look better to the NRC. (b)(7)(C) said this was normal and he would have done the same thing. (b)(7)(C) went back to his regular work control job and was able to fill in the next time he was asked for help in watch standing. (b)(7)(C) said he was never remediated. (b)(7)(C) never heard (b)(7)(C) or (b)(7)(C) talk about taking anyone else off watch because "the buck stops with me (b)(7)(C) (Exhibit T-22c).

On September 6, 2016, (b)(7)(C) was interviewed by AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, TVA OIG and OI wherein he provided the following information. Although (b)(7)(C) asserted that he was not worried about raising issues to the OCC, (b)(7)(C) was certainly not comfortable about challenging the (b)(7)(C) (b)(7)(C) about plant decisions. (b)(7)(C) emphasized that once the first engineering test was over, he called (b)(7)(C) to inquire how much longer before the valve (normal let-down) was in-service. According to (b)(7)(C) (b)(7)(C) told him the valve would be ready soon. (b)(7)(C) said the schedule called for WBN1 to proceed to Mode 3. (b)(7)(C) stated there were no procedures in place about what to do or not to do when heating up using excess let-down, (b)(7)(C) said there was nothing in writing saying it cannot be done. (b)(7)(C) disclosed that he was uneasy about proceeding partly due to the fact that he had no experience heating up using excess let-down. (b)(7)(C) stressed that WBN1 was not at full pressure, but (b)(7)(C) admitted he had no idea how using the excess let-down would affect the pressurizer level. Likewise, (b)(7)(C) was unable to estimate how much inventory (water) they expected to get out using excess let-down, no numbers were discussed (Exhibit T-22d).

(b)(7)(C) stated that he knew there were ways to control the plant if excess let-down did not work and if the plant did what he was "afraid" it would do. (b)(7)(C) explained that the procedures are not written for every step (scenario). (b)(7)(C) stated that he knew how to

recover the plant if excess let-down did not work and understood that the pressurizer level will go up during heat-up. (b)(7)(C) stated that the first step for heat-up was to remove the RHR. Once the RHR was removed, the temperature in the RCS would increase. (b)(7)(C) stated that prior to removing the RHR, (b)(7)(C) set some trigger values to ensure they took action. At this point, nobody could put their finger on why they should not heat-up. According to (b)(7)(C) if he did not have contingencies then he would have been more concerned. (b)(7)(C) stated that the licensed operators were not overly experienced and once it was discussed none of them had an opinion one way or the other except (b)(7)(C) (b)(7)(C) stated that no one else said it was not a good idea which caused (b)(7)(C) to start doubting himself because he seemed to be the only one that was uneasy. In regard to (b)(7)(C) (b)(7)(C) testified that (b)(7)(C) basically said something to the effect that, "He (b)(7)(C) felt (b)(7)(C) pain but we have a schedule." (b)(7)(C) confirmed that he set a trigger value of 80 percent pressurizer level where they were to open the PORV to control the rate of heat-up. They then took the RHR out of service and the pressure quickly got to 79 percent which was faster than they anticipated. (b)(7)(C) said the rate of heat-up is what "killed" us because it out-ran the excess let-down system which is what (b)(7)(C) suspected was going to happen. At this point, REDINGER opened the RHR inlet valves and the pressure level went down (Exhibit T-22d).

> Agent's Note: Testimony from the other control room operators (REDINGER, (b)(7)(C), (b)(7)(C) and (b)(7)(C) on shift during the November 11, 2015 events contradicts (b)(7)(C) statement that none of the other operators had an opinion on removing RHR from service.

Once the normal let-down got fixed they reconfigured everything and moved on. (b)(7)(C) said that they should have just waited until the normal let-down was fixed. About ten minutes after they opened the relief valve and recovered, (b)(7)(C) came in the MCR and thanked everyone for not letting the plant get out of control. (b)(7)(C) said it was clear that (b)(7)(C) had been in the OCC watching the event on the monitors and knew what had just happened. (b)(7)(C) said the event was not logged and no CRs were written. (b)(7)(C) admitted that he did not check the logs and acknowledged that they made mistakes. (b)(7)(C) could not recall who the Unit Supervisor was on the day of the event, but confirmed that later that afternoon, he sent an email to the other Shift Managers telling them, "(b)(7)(C) (b)(7)(C)." The comment on the email about not letting anyone talk you into it was made because it was not his idea to proceed with the heat-up without normal let-down in service. (b)(7)(C) does not believe anyone in the OCC would have put the plant at risk on purpose. However, the lack of experience, knowledge, and schedule pressure all happened because they were trying to see how fast they can get back to making money. (b)(7)(C) expressed that everyone knew what he was doing, why he was doing it and what he had to do to recover the plant. (b)(7)(C) stated that at the time all these "smart people" were saying it is "ok" to do it and he (b)(7)(C) was the only one saying "no" so he talked himself into thinking it was alright because everyone else felt it was alright (Exhibit T-22d).

On April 3, 2017, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) said that he recalled (b)(7)(C)

(b)(7)(C) or (b)(7)(C) telling him to do it on November 11, 2015. He said that he could not remember which one it was, but he did recall it was the person in the (b)(7)(C) position. (b)(7)(C) also said that during the same conversation he was informed that (b)(7)(C) and (b)(7)(C) wanted it done or were for it. (b)(7)(C) said that he let others in the OCC know that he was not in favor of doing it and did not want to do it. (b)(7)(C) said that the OCC knew how he felt. (b)(7)(C) told the agents that he could not remember exactly who all he told in the OCC, but he did know it was more than just (b)(7)(C) (b)(7)(C) added that he has a family to feed (Exhibit T-22e).

Interviews of Dennis REDINGER, Unit Supervisor

REDINGER, US at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

On November 18, 2015, REDINGER was interviewed by OI and discussed that he spent six years in the Navy and worked at multiple licensees including sixteen years at Comanche Peake where he was an STA and SRO. He came to TVA in 2009 and was licensed in 2011. REDINGER discussed that the MCR operators did not know what the capabilities of the excess let-down system would be at the temperature and pressure they were operating at on November 11, 2015. REDINGER expressed there was a lack of knowledge among the operators and discussed that the response to their concerns from the OCC was the OCC understood the concern, but they were okay with proceeding forward. REDINGER stated that he wished he pushed back harder but at the time he felt like they did not have enough basis to say they were not going to continue. He expressed that at the time he felt that (b)(7)(C) was not totally committed to the idea either, but he tried to convey to us that the OCC wanted us to move forward with it and (b)(7)(C) was willing to try it (Exhibit T-40a, pp. 7-8, 17-38).

On January 19, 2016, REDINGER was interviewed by TVA OIG and explained that he was the WBN1 Unit Supervisor on November 11, 2015 and reported to (b)(7)(C) REDINGER stated that since it was scheduled, the OCC decided to use the Excess Let-down System instead of waiting on the normal let-down system. He discussed use of the Excess Let-down System rather than waiting on the normal one with licensed operators ((b)(7)(C) (b)(7)(C)) and no one was comfortable with doing it due to concerns regarding the ability to maintain inventory control and the pressurizer. While they did not have enough information that day to tell the OCC that it absolutely would not work, no one felt like it was worth the risk. They discussed it with (b)(7)(C) who also agreed that he did not think it was a good idea. (b)(7)(C) told them that he was going to tell the OCC that he was not comfortable with the plan to use the excess let-down system. (b)(7)(C) later came back and told the control room that it had been decided to go ahead and move forward so they did. They took out the RHR system and began monitoring the heat-up while trying to maintain temperature and inventory control (Exhibit T-40b).

On February 10, 2016, REDINGER was interviewed by TVA OIG. When discussing the Shift Order, REDINGER was asked to comment on each of the answers to the questions contained

on the Question and Answer page of the shift order. Regarding the answer given to question number three, REDINGER said that generally that was the information that he provided, but he does not think the he provided the 50-60gpm number. REDINGER said he was not sure where the 50-60gpm number came from and recalls he gave his answers to the questions to (b)(7)(C) He added that the entire answer (the whole paragraph) was what he told (b)(7)(C) except for the 50-60gpm part. REDINGER said that he did not give that number to (b)(7)(C) He does not know who did or where it came from (Exhibit T-40c).

On March 07, 2016, REDINGER was interviewed by TVA OIG REDINGER stated the shift order was written by (b)(7)(C) and (b)(7)(C) He (REDINGER) was initially briefed about the shift order by Shift Manager (b)(7)(C) which is the first time that he saw the 50-60gpm number and thought something did not look right. He still does not know where the number 50-60gpm came from. At the time, REDINGER thought the shift order was written to give the operators OE (operating experience) but now he believes it could have been to get everyone on the same page. REDINGER still has no knowledge of where the 50-60gpm in the shift order came from. He was interviewed by Employee Concerns Program (ECP) line by line about the shift order when he realized the statement looked like the information he had written except for the 50-60gpm number. After the interview with ECP, REDINGER ran into (b)(7)(C) and asked him where the 50- 60gpm came from and (b)(7)(C) did not reply. Discussing the December 15, 2015, email chain between REDINGER and (b)(7)(C) REDINGER reviewed the email and confirmed that the actions they took to recover the plant were the operator's actions but how they got there in the first place was not the operators' decision. He stated that they were under schedule pressure to move forward. REDINGER confirmed there was a disconnect in what was said in the email versus what was said in the shift order. Specifically, REDINGER stated that the shift order makes it look like the control room made the decision to move forward where the email shows that that was not the case at all (Exhibit T-40d, pp. 1-10).

On September 06, 2016, REDINGER was interviewed by TVA OIG, OI, and AUSA. REDINGER advised that using excess let-down had not been done very often. In the situation on November 11, 2015, neither REDINGER nor the other operators had done it before. He stated the excess let-down flow design says 40gpm. He also had heard during training that they had gotten 70gpm using excess let-down. This information came from older guys who had experience in the plant. However, all of these numbers were at full pressure. According to REDINGER, he and the other operators knew they would not get 70gpm and were pretty sure they would not get 40gpm given the temperature and pressure at which they were operating at that time. They were concerned that what they actually got would not be enough to heat-up. REDINGER stated that they could not say it would not work but he and the other operators had an uneasy feeling. REDINGER and the three reactor operators on crew discussed their concerns as a group. REDINGER then talked with the (b)(7)(C) (b)(7)(C) who also did not feel good about heating up using the excess let-down. Everyone was in agreement so REDINGER and (b)(7)(C) met with (b)(7)(C) and expressed the crew's concerns. During the discussion with REDINGER and (b)(7)(C) (b)(7)(C) did not challenge them and appeared to be taking information from them. REDINGER does not think (b)(7)(C) said one way or another whether he agreed with them. REDINGER was asked if he or the crew thought at the time they could get 50-60gpm from excess let down. REDINGER

said that he did not think they could get 50-60gpm from excess let down. He said that nobody on the crew thought they could get 50-60gpm from excess let down. He stated that while 40gpm design and 70gpm pre-op testing was discussed at some point, the operators all knew not to expect those numbers because it was at 340lbs of pressure rather than the normal pressure of 2,225lbs. He stated that 40gpm and 70gpm would have only been at normal pressure and were not numbers for that day. The operators did not know what the actual numbers would be with the plant conditions at that time (Exhibit T-40e).

Interviews of (b)(7)(C), Reactor Operator

(b)(7)(C) RO at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA Slabbekorn, US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) had been licensed for five years at Watts Bar. He was the operator at the controls on dayshift of November 11, 2015. (b)(7)(C) stated "…I think there were different theories about whether excess let-down would be enough with RHR let-down out of service. And some people thought it would. We did not think it would, but it did not." When asked to clarify who thought it would work he continued, "OCC. The people directing us to go ahead and start the heat-up for let-down of the line. They believed against us that excess let-down would be sufficient to counter the heat-up and most of our -- not all of the excess let-down is supposed to be" (Exhibit T-01b, p. 8, pp. 13-14).

(b)(7)(C) was against moving forward without the let-down system and took his concern to (b)(7)(C). According to (b)(7)(C), everyone in the MCR with a license was against moving ahead. (b)(7)(C) conveyed the concern to the OCC. OCC said to move ahead. At some point while all this was going on, a comment was made to the effect that "everyone who has a license says no but the people who can fire the licensed people say do it." The license holders are being pushed to do more than they can. If the pushing does not work out, then the license holders get blamed. The OCC's push to get closer to Mode 3 that day did not work out. The excess let-down system could not do the job. The temperature rose and those in the MCR could not get the inventory out. (b)(7)(C) told TVA OIG that he did not tell the OI the whole story during the interview. He did not tell the NRC about TVA management pressure. (b)(7)(C) was told by the TVA lawyer prior to the interview not to expand on his answers. felt pressure from the TVA lawyer not to tell the NRC about the front-end issues. (b)(7)(C) did not want TVA to think that he was not a team player. He said that around the same time that he was interviewed by the NRC, TVA issued a shift order which explained what happened on November 11, 2015. (b)(7)(C) read the shift order and found it to be factually incorrect. He said that the shift order really did not describe the facts which took place on November 11, 2015. It is his opinion that TVA generated the shift order, so the NRC could read it (Exhibit T-01a pp. 1-3).

In an interview follow-up email on January 27, 2016, (b)(7)(C) provided clarification on information provided in the shift order. Commenting on the answer to the question "Did the crew expect the condition that occurred." (b)(7)(C) responded, "This is backwards. The

crew did expect level to rise because we did not expect 50-60gpm from excess let-down at that pressure. That was a main argument we used against the plan." When commenting on the listed actions taken, specifically, “Oversight watches have been established in the MCR.” (b)(7)(C) commented “The people who pushed us into it [November 11,2015 event] were in the MCR around the clock for about a month [afterwards] to make sure we did not decide to go and do anything that foolish again” (Exhibit T-01a, pp. 14-15).

(b)(7)(C) did not think the crew could get enough water out because excess let-down is designed for 20gpm but could not prove it and he felt the OCC had been looking at it closely and crunching the numbers based on (b)(7)(C) statements concerning capabilities of excess let-down. (b)(7)(C) stated that he and the crew knew they would not get 50gpm out of it. However, since (b)(7)(C) could not research it at the moment, he felt the people outside the control room were helping the crew research it. Where it [shift order] said the crew thought they should be able to get 50 to 60gpm on excess let-down but in reality, the operators were arguing against it because they did not think it was possible. No one talked to (b)(7)(C) for information on the shift order. However, (b)(7)(C) does not recall anyone in the control room talking about how they could get 50 to 60gpm out of it if they were not at full pressure. They all felt like excess let-down would not work but they did not know the severity or how fast it would all happen (Exhibit T-01c).

Interviews of (b)(7)(C) Reactor Operator

(b)(7)(C) RO at WBN was interviewed on January 27, 2016, and September 19, 2016, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney’s Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) was licensed in (b)(7)(C) and worked on in the MCR on November 11, 2015. (b)(7)(C) explained that he was (b)(7)(C) and did not have a lot of experience. (b)(7)(C) did recall that after the rod dropped (days prior to November 11, 2015); (b)(7)(C) got the crew together and chewed the crew out for not doing enough to get them back online. So, when November 11, 2015, rolled around (b)(7)(C) did as he was instructed. He took RHR out of service. He said they had no blueprint to go off of since it was such an unusual alignment. (b)(7)(C) stated that the excess let-down was in place when the RHR was taken out and he was under the impression that it would take water out to keep the plant from going solid. (b)(7)(C) does not know why the decision was made not to wait for the normal let-down system but stated the operators did not wait because “we were being pushed by the OCC (Outage Control Center).” (b)(7)(C) stated that this was his first time dealing with an OCC as an Operator. His understanding of the OCC was that they were the people who understood what was happening and it was their job to come up with a plan. He now believes they are there to push and get the work done. (b)(7)(C) stated that he should have never taken the RHR out with that situation, but it was his first outage and the shift manager that day had a lot of experience and he said to do it (Exhibit T-23a)(Exhibit T-23b).

Interviews of (b)(7)(C) Reactor Operator

(b)(7)(C) RO at WBN was interviewed on January 28, 2016, and September 29, 2016, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) had been a Reactor Operator for (b)(7)(C) years at Watts Bar and worked on November 11, 2015, in the MCR. (b)(7)(C) was serving as a RO that day on the (b)(7)(C) (b)(7)(C) REDINGER was the Unit Supervisor and Todd (b)(7)(C) was the Operator at Control (OAC). (b)(7)(C) discussed the events that happened on November 11, 2015, were only one example where the MCR operators expressed concerns but were told to proceed regardless. On November 11, 2015, there was pressure being felt in the MCR from the OCC to move from Mode 5 to Mode 4. (b)(7)(C) stated that (b)(7)(C) appeared to be under pressure to move the unit. Since the normal let-down system was out of service, the plant had to rely on the excess let-down system. Licensed Operators voiced their concerns with the plan to move ahead using the excess let-down system. (b)(7)(C) was not for the idea. (b)(7)(C) communicated the concerns the MCR personnel had with the plan, but the OCC decided on a plan to proceed with the heat-up. (b)(7)(C) stated, "I felt like it was a very bad idea to proceed on." The agents asked (b)(7)(C) why he did not voice his concern stronger and louder. He said that he was afraid of being relieved. He said he was afraid of not being viewed as a team player. (b)(7)(C) explained to the agents that neither he nor his colleagues in the MCR that day could point to a rule or a procedure to support their position not to proceed using the excess let-down system. They all just knew it was a bad idea based off their training and experience. (b)(7)(C) said that all the OCC had to do was wait a few hours and the normal let-down system would be available. According to (b)(7)(C) the work had already been done and they were just waiting on the paperwork and clearances to put the normal let-down back in service. (b)(7)(C) suggested that the OCC would not wait and wanted to stay on schedule no matter what. (b)(7)(C) recalled saying out loud "this is stupid" when (b)(7)(C) told them that the OCC said to proceed (Exhibit T-16a).

Interviews of (b)(7)(C), Senior Reactor Operator

(b)(7)(C) SRO at WBN was interviewed on January 16, 2016, and September 19, 2016, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) had been a SRO for (b)(7)(C) years at Watts Bar, and on November 11, 2015, he was working as the (b)(7)(C) and in the control room for (b)(7)(C) (b)(7)(C) focus on the plant as it was coming out of the maintenance outage. At one point, REDINGER had to leave so (b)(7)(C) relieved him for a couple of hours. (b)(7)(C) told the interviewers about another incident that happened around November 11, 2015. He said that after turnover one (b)(7)(C) called for a meeting with control room personnel. At this meeting, (b)(7)(C) berated the crew saying that we were not pushing hard enough on this outage to move the plant forward and were weak. (b)(7)(C) said that (b)(7)(C) had just gotten chewed out by someone, so

(b)(7)(C) decided to chew out the crew after he got chewed out. (b)(7)(C) told the interviewers that after that butt chewing session (b)(7)(C) learned that (b)(7)(C) had been scolded by the plant manager for not moving the plant fast enough, hence the reason for (b)(7)(C) chewing out the crew (Exhibit T-05b).

(b)(7)(C) said that he talked to everyone on the Unit 1 side in the main control room that day about heating up without normal let-down being available. None of them thought it was a good idea. REDINGER was part of that conversation. (b)(7)(C) could not recall if (b)(7)(C) was a part of that specific conversation but he does know that (b)(7)(C) recognized that the operators were uncomfortable about heating up. According to (b)(7)(C) in this instance standing down waiting for normal let-down would have been textbook but would not have gotten them out of the outage fast enough. (b)(7)(C) said that when he saw the "50gpm" answer given in the statement put together by (b)(7)(C) (b)(7)(C) and (b)(7)(C) he could not figure out where that number came from. When he read the number "50" on the document he told his peers that the number "50" was just silly. He added to the interviewers that he did not tell anyone on November 11, 2015, that he thought they could get that out of excess let-down. The number was totally unrealistic. Speaking of the plant manager, (b)(7)(C) said on November 11, 2015, after the control room personnel stabilized the plant (b)(7)(C) came into the control room and congratulated everyone. (b)(7)(C) recalled (b)(7)(C) saying, "We put you guys in a bad place today." (b)(7)(C) gave (b)(7)(C) a bear hug (Exhibit T-05a) (Exhibit T-05b).

Interview of (b)(7)(C), Senior Reactor Operator

(b)(7)(C) SRO at WBN was interviewed on January 27, 2016, by TVA OIG wherein he provided the following information in substance.

On November 11, 2015, (b)(7)(C) was working in the WBN1 as a (b)(7)(C) (b)(7)(C) did not realize there was a problem with the unit that day until they were fully involved in the problem. (b)(7)(C) stated that he became aware of the issue during the recovery phase. (b)(7)(C) said in the past Management did not challenge the more conservative path if in fact that path was deemed by the MCR to be the best path to take. Nowadays, management questions the Shift Managers when the Shift Managers state that they are going to take the conservative path. In the past, WBN's default position was the conservative position because that is the safest position. (b)(7)(C) credits the change to (b)(7)(C) and (b)(7)(C) (Exhibit T-41).

Interview of (b)(7)(C)

(b)(7)(C) at WBN was interviewed on February 09, 2016, by TVA OIG wherein he provided the following information in substance.

(b)(7)(C) discussed that he was in the Control Room waiting on a briefing about a job he was going to do (taking the RHR out of service), but it was not 100% certain that they were going to do the job. While he was waiting, someone from the OCC came into the Control Room to talk

with (b)(7)(C) (b)(7)(C) said this person was (b)(7)(C) or (b)(7)(C) Although he cannot say for certain, (b)(7)(C) feels strongly that it was more likely (b)(7)(C) than (b)(7)(C) This OCC person spoke to (b)(7)(C) in close proximity to (b)(7)(C) (b)(7)(C) could hear what the person was saying. The person wanted (b)(7)(C) to speed up the heat up rate. (b)(7)(C) did not want to do it. (b)(7)(C) said it was a bad idea. (b)(7)(C) brought up the fact that the Normal Let Down was tagged out. (b)(7)(C) told the agents that it was clear to (b)(7)(C) that (b)(7)(C) was "adamant" about the fact that he did not want to do it. (b)(7)(C) thought Redinger may have been in the conversation as well. (b)(7)(C) then had to leave the location for his briefing. (b)(7)(C) did his briefing with (b)(7)(C) said to (b)(7)(C) that the work probably wasn't going to happen but they would go ahead and brief for it just in case. After the pre-job briefing, (b)(7)(C) hovered around the AUO area in the Control Room. Then an hour or so later, (b)(7)(C) was told to take the actions necessary to take the RHR out of service (Exhibit T-20).

Interviews of (b)(7)(C)

(b)(7)(C) at WBN, was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) was interviewed by TVA OIG on February 2, 2016, and discussed that on November 11, 2015, he was working. (b)(7)(C) stated that he remembers that day fairly well because the normal let-down system was not in service. He was in the OCC working with the OCC team but cannot recall who else was present with him and remembers they were trying to determine what the plan was moving forward. (b)(7)(C) does remembers having several conversations with (b)(7)(C) stated there were basically three options: (1) stay in Mode 5 and wait until the normal let-down was back in service or (2) heat-up to Mode 4 and stay on RHR or (3) do option 2 and then take RHR out of service and the cooling mechanism would be the main steam dumps. The decision was made to go with option #3. (b)(7)(C) stated that he attended all of the OCC meetings that (b)(7)(C) where they discussed the options. He does not remember any real push back on moving forward. (b)(7)(C) advised that it is important to stay on schedule because the unit is important to the fleet. He stated that there is a balance between schedule and safety and any delay on getting the unit back online meant TVA must purchase power. He stated this is no different than all other utilities. (b)(7)(C) stated that they were originally supposed to move to Mode 4 around 6 a.m. or 7a.m. but the OCC wanted to analyze it some more. According to (b)(7)(C) we all had concerns because of not having the let-down available. (b)(7)(C) stated that they had to convince (b)(7)(C) in OCC because all delays or changes in schedule had to be approved by (b)(7)(C) (b)(7)(C) stated that they were already delayed so the OCC team came up with a plan for (b)(7)(C) approval that decided what to do after the delay (Exhibit T-21a).

(b)(7)(C) was interviewed by TVA OIG on February 10, 2016, and did not recall anyone in particular being concerned with moving forward with heating up the plant on November 11, 2015. While he did not specifically recall either (b)(7)(C) or REDINGER telling him they were uncomfortable or that they did not want to take the RHR out of service, he did admit there was some pushback with operators asking questions about the effect of doing this without normal

let-down. In addition, (b)(7)(C) said "he did have some healthy challenges with (b)(7)(C) in the control room" about this issue. However, (b)(7)(C) stated "I did not get off [sic from] these conversations that they were uncomfortable with this." He further clarified that they did not tell him at any time of the day that they did not want to do it. (b)(7)(C) was asked about pushing (pressure) which he stated that pushing is common and "I have had much worse." In (b)(7)(C) opinion, operations are not doing well because there are some fundamental areas with operators' performance and they have failed to correct the low-level behaviors. Some examples of these include communications, responses, and board monitoring. (b)(7)(C) believes the only recent event that could even remotely be associated with pushing would be the RHR event because the whole OCC team was pushing to move forward. Other issues like the source range instrument bypass and the PORV lift are only due to operator error and level of knowledge issues. According to (b)(7)(C) Operations knows the knowledge level is lower than it should be, and that management needs to be in an oversight role to make sure the people who do the actions understand what they need to do. While these oversight managers may not have an active license or be a license holder, they have the required knowledge from past experience to make decisions and assist in what happens in Operations. (b)(7)(C) believes it is inappropriate for someone to say that (b)(7)(C) should not be involved in the control room decisions since he is the (b)(7)(C) and is very knowledgeable (Exhibit T-21b).

(b)(7)(C) was interviewed by TVA OIG on June 30, 2016 and recalled having a conversation with (b)(7)(C) in the control room and that (b)(7)(C) challenged him but was "okay with moving forward after our conversation." This conversation happened at the horseshoe by the unit supervisor's desk while there were other people around. (b)(7)(C) also believes the unit supervisor (REDINGER) was there as well. (b)(7)(C) stated that their concern was about the effect moving forward and heating up would have on the plant with the normal let-down out of service. He stated that at no time did either (b)(7)(C) or REDINGER say they did not want to do it nor did anyone seem adamant about anything. If they had, (b)(7)(C) would have stopped and tried to understand why. He does not recall any other conversations with (b)(7)(C) and knew there were challenges from the crew about what did the effect of the temperature rise on pressure level. (b)(7)(C) testified he did not feel anyone was uncomfortable but rather more concerned about whether they were technically doing the right thing. (b)(7)(C) had been talking to (b)(7)(C) on a regular basis that day about what was happening. In addition, (b)(7)(C) would have been in the OCC frequently that day. (b)(7)(C) stated that (b)(7)(C) was for moving forward that day, but the decision was made by (b)(7)(C) (b)(7)(C) stated that he and (b)(7)(C) were good with moving forward that day because they thought they could do it safely. He stated that everyone was good with moving forward in the beginning but now say how bad the decision was. There have been "a lot of Monday morning quarterbacks" about this issue. (b)(7)(C) does feel like there was a lot of miscommunication. (b)(7)(C) suggested that the decision was made by (b)(7)(C) who was the shift manager (Exhibit T-21c).

(b)(7)(C) was interviewed by TVA OIG, OI and an AUSA on January 19, 2017, and said that during outages (b)(7)(C) wanted to know minute by minute what was going on. In the OCC, (b)(7)(C) and (b)(7)(C) were part of the Senior Leadership Team. (b)(7)(C) stated that

information to (b)(7)(C) would go through him (b)(7)(C) while decisions went from (b)(7)(C) to (b)(7)(C) (b)(7)(C) would then go to the Shift Manager with the decision. (b)(7)(C) said that there was discussion in the OCC to remove RHR and allow the heat-up to begin. (b)(7)(C) said that they had many discussions about that in the OCC and in the main control room with the Shift Manager. (b)(7)(C) questioned (b)(7)(C) about what was going to happen to the pressurizer level if they took the action. (b)(7)(C) had multiple conversations with a few people about that and these conversations took place over the course of a few hours. (b)(7)(C) said that the Shift Manger's crew also asked that same question. (b)(7)(C) recalled interacting with the Shift Manager and the Unit Supervisor that day. (b)(7)(C) could not recall who else he spoke with in the control room about heating up. (b)(7)(C) estimated 30 percent that day was spent in the main control room and 70 percent of his time was in the OCC (Exhibit T-21d).

(b)(7)(C) said that they had a lot of conversations in the OCC that day about removing RHR and whether there were any tech specs or restrictions. (b)(7)(C) said that in the end they could not find any restrictions against doing it, (b)(7)(C) said that engineering was consulted too. (b)(7)(C) said engineering told (b)(7)(C) and the others that excess let-down could handle it. (b)(7)(C) was asked who from engineering gave him that bit of information. (b)(7)(C) said he could not remember who it was that told him that. When asked if there was a gallon per minute (gpm) figure that engineering said could handle it, (b)(7)(C) replied that 20gpm is what he recalled from the system description. (b)(7)(C) added that no restrictions were located so they decided to do it. (b)(7)(C) said that there was discussion in the OCC to remove RHR and allow the heat-up to begin. (b)(7)(C) said that they had many discussions about that in the OCC and in the MCR with (b)(7)(C) (b)(7)(C) said he did remember talking with (b)(7)(C) in the main control room and the OCC about removing RHR. (b)(7)(C) did speak with (b)(7)(C) too about the issue, but (b)(7)(C) could not recall exactly what each other said. (b)(7)(C) said that (b)(7)(C) and (b)(7)(C) both were involved in the decision and both knew exactly what was going on. (b)(7)(C) stated that both (b)(7)(C) and (b)(7)(C) were in favor of removing the RHR. (b)(7)(C) said that he spoke to (b)(7)(C) about it and his crew, but the idea was not (b)(7)(C) idea. (b)(7)(C) was asked by the interviewers if (b)(7)(C) told (b)(7)(C) to instruct (b)(7)(C) to take the action. (b)(7)(C) said that (b)(7)(C) did not tell (b)(7)(C) to tell (b)(7)(C) to do it. (b)(7)(C) said it came about after the conversations in the OCC after which the OCC came to the conclusion do it and (b)(7)(C) communicated that to (b)(7)(C) (b)(7)(C) stated that he (b)(7)(C) went to the control room and told (b)(7)(C) that "this is the path that we would like to go down because we feel it is appropriate". The interviewers asked (b)(7)(C) to define "we". (b)(7)(C) said, "we" were the OCC. (b)(7)(C) was asked by the interviewers if using excess let down was the safest plan. (b)(7)(C) said using excess let down was not the safest plan and it would have been safer to wait for normal let down to come back in service. (b)(7)(C) said that they concluded that (b)(7)(C) that they could get 20gpm out of excess let-down (Exhibit T-21d).

Interviews of (b)(7)(C)

(b)(7)(C) at WBN was interviewed on multiple occasions by OI and TVA OIG wherein he provided the following information in substance.

He described that at 06:00 a.m., on November 11, 2015, it was identified that the repair of the normal let-down valve had not yet been completed. (b)(7)(C) briefed the OCC that this would significantly hinder the heat-up rate and they would not be performing a normal heat-up per the schedule. He stated it would take Operations a much longer time to slowly heat-up because we did not have the let-down capacity. (b)(7)(C) figured that they could heat-up the plant at a rate of 75 degrees per hour using the normal let-down system, but the excess let-down system was limited. (b)(7)(C) figured that by using the excess let-down system, they could heat-up the plant at a rate of 10 degrees per hour. (b)(7)(C) stated that (b)(7)(C) (b)(7)(C) at WBN and he made the decision to keep going with the schedule and start heating up with what we had in place and not wait for the next one [normal let-down] knowing there would be a schedule delay to critical path (Exhibit T-18, pp. 8-12, p. 15)(T-31).

Interview of (b)(7)(C)

(b)(7)(C) at WBN was interviewed by TVA OIG on January 27, 2016, wherein he provided the following information in substance.

(b)(7)(C) stated the decision to forge ahead that (b)(7)(C) using the excess let-down system was a team decision. (b)(7)(C) thinks that if he did not think the plan of using the excess let-down system would work then they would not have tried it. He stated that going to the excess let-down system is not a normal thing and not the preferred method. According to (b)(7)(C) there was a good amount of discussion about whether or not it could be done. (b)(7)(C) continued by explaining that sometimes decisions are made outside of the OCC. He stated that it could have been either the (b)(7)(C) or (b)(7)(C) because the OCC sometimes relies on them. (b)(7)(C) said that he did not make the decision and he does not believe that (b)(7)(C) or (b)(7)(C) would have made the decision either (Exhibit T-19).

Interviews of (b)(7)(C) Shift Manager

(b)(7)(C) Shift Manager and SRO at WBN, was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) was licensed in (b)(7)(C) and has been a Shift Manager since (b)(7)(C). When (b)(7)(C) arrived at work on November 10, 2015, for the (b)(7)(C) there were two major things that were on the schedule for the (b)(7)(C) to get done: 1) Work to do on the Let-Down System so the night crew needed to take the Let-Down flow path out of service; and 2) Heat-up the plant (move from Mode 5 to Mode 4). (b)(7)(C) decided to do only the first thing. He told the agents that in his mind the let-down system was out of service, so he did not want to heat-up the plant without it being in service. (b)(7)(C) explained that the concern in heating up had to do with water

management. He explained that water expanded a lot when it heats up, so you must either drain water or not heat-up. (b)(7)(C) did not think it was a good idea to heat-up with the let-down system out of service and recalled (b)(7)(C) suggested they could just wait. (b)(7)(C) could not recall who he talked to in the OCC about his decision not to heat-up the plant, but he did talk to someone. He recalled talking to the OCC about the let-down system being out of service. They had a good discussion about it and that was it. (b)(7)(C) recalled telling the OCC that he wanted to stay in Mode 5 because they only had excess let-down. According to (b)(7)(C) with low pressure and low temperature the expectation was to only get around 15 to 30gpm using the excess let-down. Specifically, he remembers discussing this with the OCC that night and telling them that the reason they had to stay in Mode 5 was because of the inability of excess let-down to do more than 15 to 30gpm (Exhibit T-46a)(Exhibit T-46b).

Interviews of (b)(7)(C) OCC Operations Representative

(b)(7)(C) Shift Manager, (b)(7)(C) and OCC Operations Representative at WBN, was interviewed on December 18, 2015, January 19, 2016, February 4, 2016, and October 3, 2017, by OI, TVA OIG and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) was interviewed by OI on December 18, 2015. (b)(7)(C) joined TVA in (b)(7)(C) (b)(7)(C) (b)(7)(C) On November 11, 2015, (b)(7)(C) worked as the (b)(7)(C) OCC Operations Representative whereby he coordinated with several entities associated with the operation department to ensure there was the proper support for the outage. (b)(7)(C) said that he clearly remembers that on November 11, 2015, the maintenance work was not finished when it was decided to transition into Mode 4. (b)(7)(C) testified that he remembered looking into whether the transition without let-down would affect the procedure. (b)(7)(C) stated that he asked himself and others (NFI) in the MCR, "Is it some type of violation, is it something we are forbidden from doing and there had been quite a bit of talk in operations about that very fact." (b)(7)(C) admitted that he cannot remember if he talked face-to-face with (b)(7)(C) or whether it was by email about moving forward. Also, (b)(7)(C) admitted that he spoke quite a bit with (b)(7)(C) Shift Manager of WBN1 about not only heating up without normal let down, but the other things that were going on that day (Exhibit T-17a, pp. 2-9, pp. 11-17).

When asked if (b)(7)(C) had conversations with (b)(7)(C) throughout the day, (b)(7)(C) responded, "Yes, I would say, on average, probably -- and this is not just that day, it would be any day you could call the shift manager anywhere from ten to thirty times, depending on what was going on." (b)(7)(C) stated that he had no prior experience in a start up without normal let-down being available. In fact, reflecting over his career he could not recall anytime where he remembers taking an action with only excess let-down. (b)(7)(C) suggested that (b)(7)(C) was also inexperienced with this condition, so they had some conversations about whether this was "okay" and (b)(7)(C) indicated that he shared with him what he had found. (b)(7)(C)

testified that they discussed their understanding of the system and the opinions from operators that had joined their conversation. (b)(7)(C) admitted that, “We did make what I think we will all agree in hindsight, was a poor decision that should be determined that it was not illegal.” (b)(7)(C) stressed that they made a decision that they believed might have to move slow, but that it would be controllable. (b)(7)(C) argued that they believed that they could safely transition into Mode four for excess let-down. (b)(7)(C) stated that his clearest memory of the day was making sure the rest of the OCC (perhaps not the entire OCC but the critical members of the staff, the two managers and then (b)(7)(C) were explained the plan of how to proceed forward (Exhibit T-17a, pp. 19-24).

(b)(7)(C) testified that he told (b)(7)(C) that he wanted (b)(7)(C) to understand that this was not a normal heat-up activity that they were would go in slow and cautious. (b)(7)(C) acknowledged that a lot of people had access to the plant data and they knew the heat-up limits, and he wanted to make sure that this was not going to be a standard evolution. Additionally, (b)(7)(C) reportedly told the OCC and (b)(7)(C) that it is not going to be the normal heat-up they were accustomed too, and they may have to stall out at some point and just sit. According to (b)(7)(C) no one appeared to have any problem with the plan and there were not any additional challenges regarding the decision to proceed forward. Ultimately, (b)(7)(C) stated that they ended up transitioning into Mode four and at a certain point noticed the pressure riser level was coming up but the MCR got it stabilized. (b)(7)(C) testified that his initial assumption at that time of recovery was that the MCR just turned off the RHR, so it probably took them a while to get a little bit of heat to be able to control the level. (b)(7)(C) recalled a conversation with (b)(7)(C) whereby (b)(7)(C) told (b)(7)(C) "Hey, it looks like you all are managing this okay," and (b)(7)(C) responded to (b)(7)(C) “Here is what friggin' happened” which lead to a discussion detailing how the MCR actions had to put RHR let-down in service. (b)(7)(C) stated that he shared information with key OCC people but cannot remember if he did that in the update format or once again during an informal discussion around the table. Regardless, (b)(7)(C) acknowledged that he spread the information with a wide audience as to what had happened. (b)(7)(C) suggests that before the end of shift the normal let-down system was back in service or were just about to come back in service (Exhibit T-17a, pp. 25-32, pp. 34-45).

(b)(7)(C) was interviewed by TVA OIG on January 19, 2016. On November 11, 2015, (b)(7)(C) role was to serve as the liaison between the MCR and the OCC. The issue that they all faced that day was whether it was acceptable to enter into Mode 4 without the availability of the normal let-down system. (b)(7)(C) said that both he and (b)(7)(C) were not comfortable with doing it. (b)(7)(C) said that doing what the OCC wanted done that day resulted in WBN1 moving into unfamiliar territory. What ended up happening was that the excess let-down system did not have the capacity to do the job. When asked who made up the OCC core team on November 11, 2015, (b)(7)(C) said that (b)(7)(C) and (b)(7)(C) were there. (b)(7)(C) said he could be mistaken but he thought (b)(7)(C) was seated in the engineer’s chair at the OCC that day. (b)(7)(C) also thought that (b)(7)(C) was in the OCC. (b)(7)(C) added that they made a poor decision that day. (b)(7)(C) said that he and (b)(7)(C) had telephone conversations that day about the decision. (b)(7)(C) was fully aware that (b)(7)(C) was not for the decision. According to (b)(7)(C) the decision placed

the operators in a position where they had to take actions in an area where there were no established procedures. (b)(7)(C) said that he sat the OCC staff down in the OCC and told them that "we are uncomfortable." (b)(7)(C) told the OCC staff that "we need to proceed with caution." He also said he told them that they do not need to put any undue pressure on the operators. (b)(7)(C) could not recall who was sitting there in the OCC when he made these statements. (b)(7)(C) was asked why the OCC did not wait a few more hours for the normal let-down system to return to service. (b)(7)(C) said that waiting a few hours would have jeopardized meeting the next milestone. (b)(7)(C) said the bottom line that day was that the OCC made a decision based on a business need. In this case, according to (b)(7)(C) "we" got out of balance. That balance being between running a business (money) and safety (Exhibit T-17b).

(b)(7)(C) was asked what happened when the site realized that their plan was not working, (b)(7)(C) said that he updated the OCC, and then (b)(7)(C) was forced to do something to counter the mistake. There was no procedure in place for the actions (b)(7)(C) took. (b)(7)(C) did not think that there was log kept that day in the OCC or the MCR. He added that "we just whiffed on this one". (b)(7)(C) said that they just forgot to make the log entries. He said it was not a cover up, a month or so after the incident, the NRC came onsite and interviewed numerous people concerning the incident. (b)(7)(C) advised that the NRC focused a lot of their questions on finding out if the operators acted correctly. There were also a lot of questions about the logs (Exhibit T-17b).

The agents asked (b)(7)(C) what is going on at WBN that has resulted in the OIG and the NRC showing up, (b)(7)(C) responded that the current desire of WBN management to meet the milestone and to "go, go, go, go." The OCC cared more about reaching the next milestone than they did about safety. (b)(7)(C) said that the reactor operators are getting pushed "too hard" by the management team. (b)(7)(C) does not think that his colleagues feel comfortable expressing an opinion different than that of management. (b)(7)(C) concluded the interview by saying that it bothers him a lot that the current WBN management team could not wait a few hours for the let-down system to come back into service (Exhibit T-17b).

(b)(7)(C) was interviewed by TVA OIG on February 4, 2016. (b)(7)(C) advised that he had learned a lot more since his original interview and is currently on the Root Cause team looking into the November 11, 2015 incident. The additional things (b)(7)(C) has learned is the result of him talking to others at the site. On the (b)(7)(C) of November 11, 2015, (b)(7)(C) did go into the OCC and meet with the OCC staff. He stated that (b)(7)(C) was at the table as was (b)(7)(C) who was sitting where the engineering person usually sat. He added that he is just about sure (b)(7)(C) was there. He was mistaken that (b)(7)(C) as it was (b)(7)(C) At this meeting in the OCC, (b)(7)(C) did not specifically tell the OCC staff that he was uncomfortable with heating up using the excess let down nor did he tell them that (b)(7)(C) was uncomfortable. (b)(7)(C) implied that he and (b)(7)(C) shared the same level of comfort, that while it was not something they preferred that they thought it would be "ok" to start in Mode 4 as long as they proceed slow and stayed in control. (b)(7)(C) testified that does not recall telling the OCC staff not to push the operators. In hindsight, (b)(7)(C) wishes he had done a better job expressing his and (b)(7)(C) concerns. (b)(7)(C) now realizes

that he did not recognize (b)(7)(C) concern. Likewise, the interviews conducted for the root cause have shown that he underestimated the crew's level of concern that day. (b)(7)(C) stated that an A(b)(7)(C) has given a statement that he was up in the MCR on November 11, 2015, when he observed an interaction between (b)(7)(C) and a senior manager in which (b)(7)(C) told the senior manager that they were uncomfortable. According to (b)(7)(C) (b)(7)(C) did not recognize the senior manager, so (b)(7)(C) and his team pulled the control room access records. To the end, (b)(7)(C) believes the senior manager was either (b)(7)(C) or (b)(7)(C) who were both in the control room at different times that day. (b)(7)(C) stated, "My gut tells me that this was management pressure outside the OCC." In addition to the managers being in the control room, (b)(7)(C) stated there were constant phones calls to the control room about what they were going to do (Exhibit T-17c).

Agent's Analysis

In summary, the OI investigation found evidence to conclude that while WBN1 was in the process of starting up the plant in November 2015, SM (b)(7)(C) deliberately failed to follow Unit Start-up procedure 1-GO-1 when he authorized WBN1 to transition from Mode 5 to Mode 4 without normal let-down in service and subsequently continue with start-up activities.

On November 10, 2015, WBN1 was in Mode 5 and making preparation to transition to Mode 4 in accordance with 1-GO-1, Unit Startup from Cold Shutdown To Hot Standby, when a previously identified leak on 1-FCV-62-70, Normal Let-down Flow Control Valve was determined to need a more extensive repair than originally anticipated. This required the normal let-down system to be removed from service for repairs and the excess let-down system was placed in service. Clearance 1-62-0584-FO was put in place establishing an isolation boundary for the valve repairs. Tags were placed ~0000 on November 11, 2015 and were not restored to normal until ~1600 on November 11, 2015 (Exhibit A4-E1, pp. 13, 14) (A4-E2).

Procedure 1-GO-1 - Unit Startup From Cold Shutdown To Hot Standby Revision 0004, step 5.3 [22] requires 1-GO-1, Appendix B, Mode 5 to Mode 4 Review and Approval be completed before progressing on to Mode 4. Appendix B Mode 5-To-Mode 4 Review and Approval step [3] requires to ENSURE Checklist 1 COMPLETE for entry into Mode 4. Checklist 1– System Alignment Verification Step B requires 1-SOI-62.01 CVCS-CHARGING AND LET-DOWN ATT-1P & ATT-1V be performed (Exhibit A4-E3, p. 48, p. 93, and p. 113).

Clearance 1-62-0584-FO invalidated the previously performed Checklist 1 for SOI-62 in that (Exhibit A4-E2)(Exhibit A4-E4, p. 9, p. 16).

- Valve 62-70 was required to be OPERABLE but was out of service
- Valve 62-1235 was tagged OPEN when its required position was CLOSED
- Valve 62-718 was tagged CLOSED when its position was required to be OPEN

The investigation identified that (b)(7)(C) was aware the planned repairs scheduled overnight from November 10, 2015 to November 11, 2015, were not completed and Normal Let-down was not available as expected to continue with the plant startup. The OCC made the decision to continue with 1-GO-1 and transition the plant to Mode 4 without normal let-down in service. On November 11, 2015, at 09:38 a.m., (b)(7)(C) Shift Manager granted permission for WBN1 to proceed with transition from Mode 5 to Mode 4. 1-GO-1 Section 5.3 Step [22] was initialed by (b)(7)(C) as complete without comment or exception when the system alignment requirements were not met. At 09:54 a.m., WBN1 entered Mode 4. Following entry into Mode 4 the site made plans to continue with additional start-up activities IAW 1-GO-1. As reported by (b)(7)(C) he sent an email at (b)(7)(C)., with subject (b)(7)(C) (b)(7)(C) to the (b)(7)(C) (b)(7)(C) and others which included details of plant operational schedule for the day. Included in this schedule were activities to continue with the steps in 1-GO-1 and perform plant testing. Specifically, operators were to remove the RHR system from service to perform testing in conjunction with a continued plant heat-up. These were scheduled to be performed before normal let-down was returned to service (Exhibit T-42b)(Exhibit T-21a)(Exhibit A4-E1, pp. 13-14) (Exhibit A4-E5, p. 5)(Exhibit A4-E6).

As indicated in the testimonial evidence, none of the licensed operators watch standing for WBN1 indicated they voiced support for the decision to continue with 1-GO-1 and remove the RHR system from service before having Normal Let-down returned to service. To the contrary, most indicated they voiced concerns with the plan.

(b)(5)

(b)(5), (b)(7)(C)

(b)(7)(C)

Based on testimonial evidence, OI finds that (b)(7)(C) compelled (b)(7)(C) to direct the RHR system be removed from service against the judgement and concerns of the licensed

control room operators. The RHR system was providing both inventory and temperature control for the RCS when it was removed from service. Due to charging and increases in RCS temperature, pressurizer (PZR) level began to rise uncontrollably. Operator attempts to control temperature and level were unsuccessful which resulted in the PZR level rising to 80 percent. In response, the MCR licensed operators placed RHR let-down back into service to regain control of PZR level. These actions were performed outside of the requirements of plant operating procedures resulting in a previously documented NRC violation 05000390/2016001-05 (Exhibit T-21d, pp. 6-7)(Exhibit T-22d, pp 3-4).

On December 18, 2015, OI conducted interviews of WBN employees associated with the events of November 11, 2015. Later that (b)(7)(C) and (b)(7)(C) exchanged emails discussing their OI interviews which included details on information that was either withheld or failed to be honestly represented to OI and NRC Inspectors. Specifically, (b)(7)(C) wrote, "What they [NRC] will not know is it was not a site decision it was really a senior management decision and the fact that we have now been conditioned to not challenge current site management poor decisions for fear of retaliation. I am seriously considering re-interviewing and expressing my actual feelings about the current culture and daring them to retaliate against me" (Exhibit A4-E10).

OI identified throughout the investigation that Watts Bar had been operating in an environment with a wide spread, eroded understanding and application of the requirements of procedural compliance. Furthermore, although it is understood that (b)(7)(C) actions were influenced by his fear of retaliation from Watts Bar management, the totality of evidence shows OI that while performing the duties as Shift Manager, (b)(7)(C) deliberately failed to follow Plant Operating Procedure 1-GO-1 when he authorized WBN1 to transition from Mode 5 to Mode 4 without normal let-down in service and subsequently continue with 1-GO-1 start-up activities. These actions represented deliberate violations of multiple NRC requirements including 10 CFR Appendix B, CR V, Instructions, Procedures, and Drawings and Technical Specification for Watts Bar Unit 1 (Exhibit A4-E11, pp. 1-8).

(b)(7)(C) was a licensed Senior Reactor Operator with direct responsibility for proper plant operation. Based on his training and experience, (b)(7)(C) had the requisite background and expectation to have understood the requirements of procedural compliance and as a licensed Senior Reactor Operator he was responsible for understanding/mitigating the potential consequences of not adhering to them. Additionally, as the Shift Manager, (b)(7)(C) had the authority and responsibility to ensure plant operating procedures were followed.

Conclusion

Based on the evidence developed during this investigation, OI substantiated that (b)(7)(C) (b)(7)(C) Shift Manager deliberately failed to follow Plant Operating Procedure 1-GO-1 when he authorized WBN1 to transition from Mode 5 to Mode 4 without normal let-down in service and subsequently continued with 1-GO-1 start-up activities.

Allegation No. 5:

Submission of incomplete and inaccurate information by TVA Managers on December 14, 2015, to the (b)(7)(C) regarding the details surrounding the WBN1 start-up on November 11, 2015.

Applicable regulations

10 CFR 50.5: Deliberate misconduct
10 CFR 50.9: Completeness and accuracy of information

Documentary Evidence

Email (b)(7)(C) NRC Question Email from (b)(7)(C) to (b)(7)(C) (A5-E1)
Email Attachments: (b)(7)(C) From (b)(7)(C) (A5-E2)
Email (b)(7)(C) RHR question from (b)(7)(C) (A5-E3)
CR 1114975 (A5-E4)
Email (b)(7)(C) from (b)(7)(C) (A5-E5)
Email (b)(7)(C) Email chain from (b)(7)(C) (A5-E6)
Email (b)(7)(C) with (b)(7)(C) notes from (b)(7)(C) (A5-E7)
TVA initial response to NRC (b)(7)(C) questions (A5-E8)
Analysis of response to NRC Questions (A5-E9)
WBN Plant Logs from November 11, 2015 (A5-E10)
Email (b)(7)(C) (b)(7)(C) email to SROs (A5-E11)
Email Read while poo'ing from (b)(7)(C) (A5-E12)
50.9 Info to (b)(7)(C) DRAFT AV Information (A5-E13)

Testimony

Interview of (b)(7)(C)

(b)(7)(C) was interviewed on August 22, 2016, by Assistant United States Attorney (AUSA) Bart (b)(7)(C) U.S Attorney's Office for the Eastern District of Tennessee and TVA OIG wherein he provided the following information in substance.

(b)(7)(C) was (b)(7)(C) the initial concern associated with the events of November 11, 2015, from (b)(7)(C) WB Reactor Operator. (b)(7)(C) explained that he put the information into the NRC allegation program for agency action. (b)(7)(C) testified that NRC Region II management instructed him to obtain more information by a "soft pull." (b)(7)(C) elaborated that he wanted to be discreet and inspected the allegation while he continued to interact with (b)(7)(C) in an attempt to obtain more information about what happened on November 11, 2015. On December 11, 2015, the NRC decided to stop trying to gather information through the "soft pull" which lead (b)(7)(C) to directly ask questions to WBN management ((b)(7)(C) and (b)(7)(C)). Specifically, on December 11, 2015, (b)(7)(C) who was at his home when NRC RII instructed him to directly ask site management about the events of November 11, 2015, drove back to WBN in an attempt to locate (b)(7)(C) or (b)(7)(C) When (b)(7)(C) got to the site, he could not find them and recalled that he stayed at WBN waiting to hear (callback) from either (b)(7)(C) or (b)(7)(C) After waiting for a while (b)(7)(C) approached (b)(7)(C) Shift Manager on duty and asked (b)(7)(C) questions about the November 11, 2015, event. Shortly after having the conversation with (b)(7)(C) (b)(7)(C) called (b)(7)(C) wherein (b)(7)(C) disclosed the questions he had asked (b)(7)(C) Approximately 15 minutes after ending the call with (b)(7)(C) (b)(7)(C) received a call from (b)(7)(C) (b)(7)(C) told (b)(7)(C) that he had spoken with (b)(7)(C) and that (b)(7)(C) was going to get the answers to (b)(7)(C) questions. The next day, (b)(7)(C) called (b)(7)(C) to inform him that they (TVA) were running down the answers. On December 14, 2015, (b)(7)(C) provided (b)(7)(C) with a two-page document (response) to the questions (Exhibit A5-E8).

Also, (b)(7)(C) learned that day that a Condition Report (CR) had just been written about the event. (b)(7)(C) said that (b)(7)(C) was not on site the entire day on November 11, 2015, and probably had to consult with others in order to come up with the response as well as the CR (Exhibit T-03, pp. 6-9).

Interviews of (b)(7)(C) Shift Manager

(b)(7)(C) SM at WBN was interviewed on February 10, 2016 by TVA OIG and by OI and TVA OIG on February 23, 2017, wherein he provided the following information in substance.

(b)(7)(C) first heard of the November 11, 2015, incident when (b)(7)(C) asked (b)(7)(C) questions about the event. (b)(7)(C) was not working that day, so he had no firsthand knowledge of the event. After (b)(7)(C) spoke to (b)(7)(C) (b)(7)(C) contacted (b)(7)(C) Shift Manager, and (b)(7)(C) to let them know about (b)(7)(C) questions. (b)(7)(C) did some

research, so he could get (b)(7)(C) the answers. (b)(7)(C) looked at the logs from that day. According to (b)(7)(C) the logs are a running history of what happens with the units. When (b)(7)(C) finished his research, he reported his work by email (Exhibit A5-E3) and orally to (b)(7)(C) (b)(7)(C) told the agents that when he was doing his research he realized that there was going to be a problem because there was not a lot of information in the logs. The events that transpired were not documented in the logs (Exhibit T-34a, pp.1-11).

(b)(7)(C) testified that he was working the (b)(7) shift on December 11, 2015, when (b)(7)(C) asked about the RHR and its operability. (b)(7)(C) recalled examining graphs from the computer monitoring system whereby it showed the isolation valves for RHR had been cycled several times after RHR was secured. (b)(7)(C) was asked the reason for cycling the valve to which (b)(7)(C) told (b)(7)(C) "I do not have any idea." (b)(7)(C) expressed to (b)(7)(C) that he would be glad to "look into it." After finishing his shift turnover, (b)(7)(C) began investigating the event and described his first step was to review the graph (data) related to the pressure and temperature. Additionally, (b)(7)(C) reviewed the procedures regarding RHR and heating up. (b)(7)(C) purposely did not consult with anyone from the crew. (b)(7)(C) said, "I do not really see why these were cycled." Likewise, there was no reference of the evolution in the logs. After several hours, (b)(7)(C) concluded that he must be missing something in the procedure and asked himself, "What is going on?" (b)(7)(C) established who was working in MCR on November 11, 2015, and notified (b)(7)(C) was also working overtime on Unit 2 on the night (b)(7)(C) was investigating the event. To that end, (b)(7)(C) called (b)(7)(C) over and asked him for insight. According to (b)(7)(C) (b)(7)(C) revealed that excess let-down was in service not normal let-down. Until (b)(7)(C) disclosed what was going on, (b)(7)(C) did not realize that excess let-down was in service. (b)(7)(C) disclosed that the reactor heating up in low temperature was going to outrun excess let-down because it is not designed for that. Based on his review, (b)(7)(C) determined that the unit was heating up just fine and at around 220 degrees and reached the point where they would've taken RHR out of service and allowed system heat-up using normal let-down to maintain volume of the RCS. However, because excess let-down could not keep up, the pressurizer level had increased requiring them to open the isolation valves for the RHR system to allow them to use RHR let-down as an alternative to the normal let-down system (Exhibit T-34b, pp. 2-14).

(b)(7)(C) explained that after determining the action to lower pressurizer level, he examined what was done to the RHR pump. (b)(7)(C) determined they never exceeded anything that would have affected operability. In fact, (b)(7)(C) stated the highest temperature was around 235 degrees or right around there and gained control. (b)(7)(C) stated that he reviewed the logs which did not have any entries of this activity. (b)(7)(C) articulated that excess let-down is designed to maintain level but not to heat-up, however, there is nothing in the procedure which specifically prohibits the action. (b)(7)(C) testified that the system is designed between 20gpm and 30gpm, and just enough to maintain water balance but not designed to heat-up. After several hours of trying to figure out what was going on, (b)(7)(C) emailed (b)(7)(C) what he had discovered. (b)(7)(C) reported that he never reviewed any of the information that was provided to the NRC by (b)(7)(C) (b)(7)(C) stated that he spoke (telephonically) with (b)(7)(C) during their normal (b)(7)(C) telephone call. (b)(7)(C) stated that during the (b)(7)(C) call he disclosed what he had found and asked what was going on. (b)(7)(C) testified

that he provided (b)(7)(C) the information he disclosed and suggested that (b)(7)(C) needed to talk to the "guys, who are [sic] here and go talk to the NRC and see what we (TVA) need to do." (b)(7)(C) stated after this point he did not have any further involvement with the situation (Exhibit T-34b, pp. 16-24).

Interviews of (b)(7)(C)

(b)(7)(C) at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District Tennessee, wherein he provided the following information in substance.

When discussing the events of November 11, 2015, (b)(7)(C) made the following statements:

> *"That very night we came in and I remember the crew saying, yes, we got up to near 80 percent and we had to put RHR let-down. That was the words. I had to put RHR let-down in. I said that was a great, great, great thought. Put RHR let-down in, reduce level, and then we came in and finished the startup or wherever we were going that night* (Exhibit T-07a, p. 49)*."*

> *"I'm remembering back so, I mean, from what I remember it was simply -- This discussion would not have even been brought up again unless somebody had asked a question because when we came in that night what was relayed to me is 80 percent. We put in RHR let-down. We reduced pressurizer level* (Exhibit T-07a, p. 49)*."*

(b)(7)(C) said that to his recollection when he left work on the (b)(7)(C) of November 11, 2015, things were still "ok". When he returned on the afternoon of November 11, 2015, things were no longer "ok" and he was told they had to put the RHR let-down back in service. He stated that he did not ask if they used a procedure. When (b)(7)(C) found out, it did not seem to be a problem because when it was over it was portrayed in a positive light with everyone happy and high-fiving that everything was stable. According to (b)(7)(C) on December 11, 2015, a Friday night, (b)(7)(C) called (b)(7)(C) and told him that (b)(7)(C) had talked to (b)(7)(C) about some questions (b)(7)(C) had about the RHR event. (b)(7)(C) told (b)(7)(C) that (b)(7)(C) had the questions. The next thing (b)(7)(C) did was contact (b)(7)(C) to get the questions. According to (b)(7)(C) (b)(7)(C) had already started to track down some of the answers. (b)(7)(C) said he went to WBN on Saturday December 12, 2015, and took the work already started by (b)(7)(C) to continued trying to get the answers for (b)(7)(C) (b)(7)(C) stated at that time he wrote CR's as well (Exhibit T-07b)(Exhibit T-07d).

Interviews of (b)(7)(C)

(b)(7)(C) at WBN, was interviewed on February 09, 2016, and June 21, 2018, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) stated that on (b)(7)(C) (b)(7)(C) contacted (b)(7)(C) and asked (b)(7)(C) about the events of November 11, 2015. That phone call led to (b)(7)(C) and (b)(7)(C) getting together the next day to have a conversation with (b)(7)(C) (b)(7)(C) asked (b)(7)(C) to explain the questions (b)(7)(C) had surrounding the November 11, 2015. (b)(7)(C) explained his questions and based off that conversation, (b)(7)(C) wrote a Condition Report (CR) (Exhibit T-43a).

According to (b)(7)(C) during a conference call on (b)(7)(C), (b)(7)(C) told him that he already knew that the valves were opened to reduce pressurizer level. (b)(7)(C) indicated that (b)(7)(C) already knew information prior to notifying TVA, and it was only when (b)(7)(C) informed (b)(7)(C) on (b)(7)(C), that TVA became aware of the concern(s) surrounding the events of November 11, 2015. When asked if (b)(7)(C) already knew the purpose of the cycling of valves, then why did the response not include the reasons for opening the valves, (b)(7)(C) responded, "He (b)(7)(C) did not write this…and perhaps the answers in question number three were for additional information associated with different conditions of the valves." Conversely, (b)(7)(C) suggested that (b)(7)(C) had about a month to evaluate the event and had the necessary information. Again, when challenged during the interview, if (b)(7)(C) already had the information, then what was the reason it was not included in the written response, (b)(7)(C) said, "We were trying to gather our initial thoughts in preparation of corrective actions and the subsequent condition report (CR)(Exhibit T-43b)."

(b)(7)(C) stated that he did not challenge the context of the response given that (b)(7)(C) had about a month to examine the event and he understood the system. According to (b)(7)(C) (b)(7)(C) did not disclose how he knew the reason the valves were opened but offered that perhaps (b)(7)(C) obtained the information by interviewing the operators and by doing his own research. (b)(7)(C) claimed that the written response was not discussed or presented to the NRC in any manner other than when it was presented to (b)(7)(C) in the NRC resident office. Also, the written response (Exhibit A5-E8) was simply internal discussions which happen to be shared with the NRC (b)(7)(C) during their meeting. (b)(7)(C) stressed that the statements were not discussed in subsequent assessments (Apparent Cause, Root Cause Analysis, and CAP) because it was not material as to the concern about the increase of the pressurizer level. (b)(7)(C) claimed that he personally did not provide the response to (b)(7)(C) but stipulates that he was present and suggests that the answers were generated by (b)(7)(C) (Exhibit T-43b).

Agent's Analysis

In summary, the evidence obtained during this investigation proves that (b)(7)(C) and (b)(7)(C) deliberately provided false information on December 14, 2015, to the NRC. The false information was supplied subsequent to an official request from (b)(7)(C) regarding information from TVA surrounding WBN1 plant start-up on November 11, 2015.

On December 11, 2015, (b)(7)(C) asked WBN's Operations on-duty Shift Manager (b)(7)(C) questions concerning plant operation including, "Why were the RHR inlet valves cycled?" in reference to the activities on November 11, 2015. The OI investigation confirmed that the

request from (b)(7)(C) was communicated throughout WBN management to include (b)(7)(C), (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) The evidence established that on (b)(7)(C) (b)(7)(C) e-mailed accurate information to (b)(7)(C) regarding the reason for the cycling of the RHR inlet valves that had occurred on November 11, 2015. (b)(7)(C) e-mail expressed a level of surprise on the part of (b)(7)(C) whereby (b)(7)(C) disclosed to (b)(7)(C) "(b)(7)(C) " (b)(7)(C) email continued documenting that pressurizer level increased and it became necessary to place RHR let-down back in service to lower pressurizer level. "(b)(7)(C) (b)(7)(C) (b)(7)(C) " Condition Report 1114975 was subsequently initiated to document (b)(7)(C) concerns and TVA's responses. Information concerning the loss of control of pressurizer level was not included in the CR and was not entered into the Corrective Action Program as required (Exhibit T-34a)(Exhibit A5-E1) (Exhibit A5-E2)(Exhibit A5-E3)(Exhibit A5-E4).

On (b)(7)(C), (b)(7)(C) sent an email to himself containing a drafted response to questions raised by (b)(7)(C) concerning the operation of the RHR system during the November 2015 maintenance outage titled '(b)(7)(C) '. The drafted response did not contain information concerning the loss of control of pressurizer level. (b)(7)(C) subsequently sent an email to (b)(7)(C) containing an altered version of "(b)(7)(C) (b)(7)(C) ' which not only failed to include the loss of control of pressurizer level as the accurate reason the RHR valves were cycled, but now contained false information about the reason the RHR inlet valves were cycled on November 11, 2015. (b)(7)(C) also sent an email to (b)(7)(C) with "(b)(7)(C) ' attached which contained the false information about the reason the RHR inlet valves were cycled on November 11, 2015. (b)(7)(C) sent an email to (b)(7)(C) which contained the accurate (truthful) information indicating the RHR inlet valves were cycled to manage pressurizer level but also included the false information about the reason the RHR inlet valves were cycled, that was received from (b)(7)(C) (b)(7)(C) noted that the inaccurate information was to be included in response to (b)(7)(C) questions. It was intended for (b)(7)(C) to present this information to NRC executives (Exhibit A5-E1) (Exhibit A5-E2)(Exhibit A5-E3)(Exhibit A5-E4)(Exhibit A5-E5)(Exhibit A5-E6)(Exhibit A5-E7).

On December 14, 2015, in response to (b)(7)(C) inspection activities and follow-up questions, (b)(7)(C) and (b)(7)(C) met (b)(7)(C) in the NRC (b)(7)(C) office and provided a written response. This response did not contain information about the loss of control of pressurizer level but rather provided an alternate reason for opening the RHR inlet valves on November 11, 2015. The response stated the reason the valves were opened as "This was done to allow the repair of a valve inside containment on the normal let-down line (1-FCV-62-70)." On December 14, 2015, (b)(7)(C) sent a copy of the email sent to (b)(7)(C) to (b)(7)(C) and his supervisor ((b)(7)(C)). This email also included a request to hold a meeting with the (b)(7)(C) to plan the delivery of this information to (b)(7)(C) (Exhibit T-43b, p. 3)(Exhibit A5-E6)(Exhibit A5-E8, p. 2).

During the investigation, OI conducted a detailed review of the written answers provided on December 14, 2015 to (b)(7)(C) in response to the questions. This analysis highlighted

significant disparities in how the various questions were answered providing clear examples of how the responses were incomplete and inaccurate. Using control room logs and plant data records, OI developed evidence that confirmed the cycling of the RHR inlet valves was not to allow for the repair of 1-FCV-62-70. The repairs of 1-FCV-62-70 had been ongoing prior to the specified valve cycling and field work was completed (1147) on the valve prior to opening the RHR inlet valves (1419). The valves were verified to have been opened to arrest a rising pressurizer level (Exhibit A5-E9)(A5-E10).

Following the meeting with (b)(7)(C) sent an email to WBN Senior Reactor Operators demonstrating that he understood the truth of the events of November 11, 2015 (Exhibit A5-E11):

(b)(7)(C)

Additionally, on (b)(7)(C) sent (b)(7)(C) (b)(7)(C) an email which included many reasons why (b)(7)(C) believed he was failing TVA and would understand being fired. One such example was his actions surrounding the investigation into the events of November 11, 2015. He included the excerpt below seemingly indicating his actions following November 11, 2015, were a "cover-up" (Exhibit A5-E12):

(b)(7)(C)

In totality, the evidence establishes to OI that (b)(7)(C) and (b)(7)(C) deliberately provided incomplete and inaccurate information to NRC (b)(7)(C) about the reason the RHR inlet valves were cycled. This information was material because had TVA senior managers conveyed complete and accurate information to the NRC during the December 14, 2015, meeting with (b)(7)((b)(7)(the NRC would have conducted additional and/or more timely reviews into the November 11, 2015 heat-up event. It would have also affected NRC reviews into TVA's cause analysis and corrective actions (Exhibit A5-E13).

Conclusion

Based on the evidence developed during this investigation, OI substantiated that TVA managers, (b)(7)(C) and (b)(7)(C) deliberately submitted incomplete and inaccurate information to the NRC. Specifically, on December 14, 2015, (b)(7)(C) and (b)(7)(C) deliberately provided a written response to (b)(7)(C) which did not contain information about the loss of control of pressurizer level as the reason for opening the RHR valves during the start-up of Unit 1, but rather reported that the reason the valves were opened was to allow for the repair of a valve associated with normal let down.

Allegation No. 6:

Submission of incomplete and inaccurate information by TVA Managers to the NRC in response to NRC questions concerning the November 11, 2015, RHR event as documented in Shift Order 15-50 and presented to the NRC during a site visit in January 6, 2016.

Applicable Regulations

10 CFR 50.5: Deliberate Misconduct
10 CFR 50.9: Completeness and Accuracy of Information

Documentary Evidence

Email (b)(7)(C) REDINGER interview notes sent by (b)(7)(C) (A6-E1)
Email Updated questions sent by (b)(7)(C) (A6-E2)
Email (b)(7)(C) sent by (b)(7)(C) (A6-E3)
Email sent by (b)(7)(C) (A6-E4)
Email "(b)(7)(C)", exchange between (b)(7)(C) and (b)(7)(C) (A6-E5)
Shift Order 15-50 (A6-E6)
Analysis of Procedures and Training with attachments (A6-E7)
Email (b)(7)(C) (b)(7)(C) WBN U1 1100 Maint Outage in (b)(7)(C) and (b)(7)(C) (A6-E8)
Email (b)(7)(C) Outage Update Reply (b)(7)(C) (A6-E9)
Email (b)(7)(C) sent Outage Lesson Learned (A6-E10)
Email (b)(7)(C) to (b)(7)(C) RHR statement (A6-E11)
Email (b)(7)(C) REDINGER statement to (b)(7)(C) (A6-E12)
Email (b)(7)(Level 2 interview notes given to management (A6-E13)
Email (b)(7)(C) email on shift order (A6-E14)
Allegation 2015-A-0214 Attachment 4 (A6-E15)
Email (b)(7)(C)
sent By (b)(7)(C (A6-E16)
(b)(7)(C) Slides 1/6/16(A6-E17)
Draft Apparent Violation for 010616 meeting (A6-E18)

Testimony

Interviews of (b)(7)(C) Reactor Operator

(b)(7)(C) RO at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) has worked as a RO, at WBN since (b)(7)(C). On November 11, 2015, (b)(7)(C) was working on WBN2 and had walked over to the WBN1 side of the MCR to offer assistance as WBN1 was working through a maintenance (forced) outage. According to (b)(7)(C) when he arrived at the WBN1 side of the MCR, the RO (NFI) was in the process of using the RHR let-down as the method of controlling the RCS level. That condition, lead (b)(7)(C) to begin asking questions of the RO and proceed to walk the board in an effort to understand the situation. (b)(7)(C) said that he soon realized the RHR temperatures were higher than normal which caused him concern. At that point, (b)(7)(C) raised his concerns to the SRO's. (b)(7)(C) observed there were alarms and temperatures that were abnormal as he discussed his observations and expressed his concerns on what he thought needed to be done. According to (b)(7)(C) the RO's had agreed with (b)(7)(C) observation and indicated to (b)(7)(C) that they had voiced similar concerns but were overruled by "those above them." (b)(7)(C) explained that the RO's discussed how could they get out of the situation and utilize RCS cooling (Exhibit T-02a, pp. 4-12).

(b)(7)(C) stated that as he walked into the MCR, they were starting to align RHR let-down and the suction valves from RCS were already opened which lead him to ask questions. (b)(7)(C) recalled that (b)(7)(C) on duty and the US, REDINGER, was running the procedures. (b)(7)(C) testified that he clearly voiced his concerns related to the reason the suction valves from RCS were opened and the high-pressure alarm. According to (b)(7)(C) he told SM (b)(7)(C) "I (b)(7)(C) said this is not the right thing to do he (b)(7)(C) would not really answer me." (b)(7)(C) acknowledged that he was full of suggestions to (b)(7)(C) which were more than (b)(7)(C) cared to hear. Eventually, (b)(7)(C) directed the heat-up to stop as the temperature approached 235F (Exhibit T-02a, pp. 11-19).

Additionally, (b)(7)(C) stated the let-down system was in service with RHR pumps on RCS cooling Mode while normal let down was tagged for maintenance. (b)(7)(C) testified that he was not part of the decision-making process to secure normal let-down on WBN1 and was not present inside the OCC during the period in question. Likewise, (b)(7)(C) stated that he was not assigned to WBN1 on November 11, 2015, but on his own accord decided to walk over from WBN2 to offer his assistance with the evolution. (b)(7)(C) described the MCR as "hectic." In particular, the operators were uncomfortable relative to the RHR temperatures and the rise in the pressurizer. When asked if there was "command and control" from the shift manager and the SRO's regarding the activities, (b)(7)(C) said there were some disagreements as to should we be doing this that the SROs expressed. (b)(7)(C) stated that it was not a proactive environment but rather a reactive one as operators were simply trying to get a handle on what was going on with the plant. When asked how did the let-down system impact (challenge) the

operators, (b)(7)(C) responded, "The biggest challenge was not being able to control the pressurizer level on the heat-up." Specifically, the pressurizer level rose from 40 percent to nearly 80 percent before any action was taken. (b)(7)(C) suggested that the excess let-down is limited relative to its design and only suitable in certain plant conditions. Also, the secondary side had nothing to offer to cool the plant down and when the heat-up was stopped all the steam generator atmospheric dumps were opened and the steam was dumped. (b)(7)(C) stressed the pressurizer level was in a dangerous place without the ability of normal let-down. (b)(7)(C) said, "Had they stayed within the bounds of the GO procedure they would not have had any concerns with the (heat-up)" (Exhibit T-02b,
pp. 9-15, pp. 17-23).

(b)(7)(C) stated that at the end of the shift, (b)(7)(C) verbally thanked (b)(7)(C) for getting "loud." Although (b)(7)(C) never articulated that he was confused or did not understand the procedure, (b)(7)(C) questioned (b)(7)(C) about the capacity of the excess let-down system and emphasized he should have waited for the normal let-down to return to service. According to (b)(7)(C) (b)(7)(C) told (b)(7)(C) "That he was doing what he was told to do." (b)(7)(C) said that under the current management at WBN the main concern was reaching the next milestone. (b)(7)(C) suggested that bonuses and promotions are all tied to milestones which causes some risk. (b)(7)(C) added that the OCC placed WBN at risk on November 11, 2015, as MCR did what the OCC wanted. It was the MCR that recovered and stabilized the plant. When asked what could have happened, (b)(7)(C) stated they could have released radioactive water outside of the reactor coolant piping (the reactor coolant system boundary). Furthermore, (b)(7)(C) implied a component could have failed given the higher water temperatures and pressures. Additionally, there were potential environmental damage as the plant would have been less safe because one less barrier was available. He stated that this is probably the second worst thing that could happen next to releasing the radioactive materials into the environment (Exhibit T-02b, pp. 25-28) (Exhibit T-02c).

Interviews of (b)(7)(C), Shift Manager

(b)(7)(C) SM at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

> Agent's Note: In his initial interview with OI on December 18, 2015, (b)(7)(C) failed to provide the same level of detail and specifics as he provided in subsequent interviews.

On December 18, 2015, (b)(7)(C) was interviewed by OI concerning the events of November 11, 2015, and provided the following information. (b)(7)(C) (b)(7)(C) in many different nuclear power plants, DOE facilities, engineering firms. (b)(7)(C) has been licensed since (b)(7)(C) and a Shift Manager since (b)(7)(C) explained the plant had removed normal let-down from service the night previous to the shift that he took over on the (b)(7)(C) of November 11, 2015. At (b)(7)(C) we had heated up to enter Mode 4 which is 200 degrees. At (b)(7)(C) we secured both trains of RHR to allow the RCS to continue heating up. The plan for November 11, 2015 was to

heat-up and pressurize RCS and enter Mode 3 at some point during that day or that night. The normal let-down system for CVCS was out of service for repair to a leaking valve and they had placed the alternate let-down system, excess let-down, in service for let-down capabilities. Other than that, all the other plant conditions were normal as to be expected for Mode 5 and Mode 4 (Exhibit T-22a, pp. 4-11).

(b)(7)(C) discussed that nobody raised any concerns nor did any of the crew have any questions or concerns about trying to do a heat-up on excess let-down. (b)(7)(C) explained that the crew discussed the fact that they had not done it before and were willing to start it and see how it went. (b)(7)(C) stated he thought they had enough excess let-down flow to be able to control pressurizer level on excess let-down. When asked about the crew's reaction to planned events of the day, (b)(7)(C) stated he did not remember any big push back from the crew. However, (b)(7)(C) remembered being a little bit anxious continuing the start-up activities with only excess let-down because he had never done it like that before and was not one hundred percent sure that it was going to go the way that he anticipated it to. (b)(7)(C) reasoned that he did not challenge the path to move forward because he had no basis for saying it would not work. When asked about influences on his decision concerning schedule pressure or any information coming from outside the control room that might have unduly influenced him in his decision he stated he did not remember any specific undo pressure (Exhibit T-22a, pp. 15-19, pp. 21-40, pp. 43-56).

On January 19, 2016, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) explained that on the (b)(7)(C) of November 11, 2015, WBN1 was at Mode 5. WBN1 had just reassembled the reactor and the temperature was less than 200 degrees. OCC directed the MCR to move to Mode 4 which would have kept the site on schedule. The operating crew moved to Mode 4 as planned and as instructed. (b)(7)(C) further explained that around (b)(7)(C) hours, all prerequisites to move to Mode 4 had been handled. (b)(7)(C) instructed the MCR to go to 210 degrees and maintain that temperature which placed the plant into Mode 4. According to (b)(7)(C) the OCC told (b)(7)(C), OPS OCC representative, to inform (b)(7)(C) to go to Mode 3 and take the temperature up to 350 degrees. (b)(7)(C) further explained that around 1300, the OCC directed (b)(7)(C) to take RHR out of service, and then move to Mode 3. (b)(7)(C) testified that he informed (b)(7)(C) that he was uncomfortable moving to Mode 3 and that they needed to stay where they were and wait for the let-down system to come back into service in a few hours. (b)(7)(C) said he mentioned to (b)(7)(C) that the OCC was pushing too hard. According to (b)(7)(C) (b)(7)(C) was also uncomfortable with the decision. (b)(7)(C) explained that the OCC was pushing too hard and wanted to stay on schedule (Exhibit T-22b).

(b)(7)(C) said that (b)(7)(C) raised (b)(7)(C) concerns to the OCC and recalled that (b)(7)(C) gathered everyone around a table and told them of (b)(7)(C) concern. (b)(7)(C) stated that (b)(7)(C) also told them that they were pushing the operators too hard and he wanted it to stop. According to (b)(7)(C) the OCC dismissed the concern and instructed (b)(7)(C) to move to Mode 3. (b)(7)(C) said that he would have pushed back harder on November 11, 2015, but he was worried that he would be somehow reprimanded for

not getting on board with the decision to move to Mode 3. His actions in the MCR were heavily influenced by his fear of losing his job (Exhibit T-22b).

On July 20, 2016, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) advised that there was no discussion on November 11, 2015, that it might be possible to get 70gpm using the excess let-down. (b)(7)(C) stated, "I do not think you could ever get 70gpm out of excess let-down." If someone had said 70gpm was possible, (b)(7)(C) stated that the conditions would have to be "absolutely perfect" at full pressure to ever get close to that and even then, it would be a "slim chance." Regardless, (b)(7)(C) stated in the MCR that (b)(7)(C) "no one had the number 70gpm on our brain anywhere." (b)(7)(C) stated that no one said that night that they knew the heat-up using excess let-down could be done. Rather, everyone said that they did not know how it would react and they (licensed operators) knew they had "stuff" they could do if it went wrong. (b)(7)(C) stated that the "big guys" were saying "go" and the operators had actions in their back pocket to use if it failed. (b)(7)(C) stated that no one in the MCR wanted to move forward. (b)(7)(C) is not aware of whether any of the other guys talked to (b)(7)(C) About a month later when the NRC brought up the issue, (b)(7)(C) was in (b)(7)(C) office with (b)(7)(C) and (b)(7)(C) At which time, (b)(7)(C) asked (b)(7)(C) if (b)(7)(C) should be removed from watch until they found out the answers to the questions. (b)(7)(C) said "Yes." (b)(7)(C) stated that he was glad he had been in the meeting and heard the conversation because he realized it was not a punitive thing but rather just a conservative measure until the NRC was comfortable. (b)(7)(C) also believes it was to position themselves to look better to the NRC. (b)(7)(C) said this was normal and he would have done the same thing. (b)(7)(C) went back to his regular work control job and was able to fill in the next time he was asked for help in watch standing. (b)(7)(C) said he was never remediated. (b)(7)(C) never heard (b)(7)(C) or (b)(7)(C) talk about taking anyone else off watch because "the buck stops with me (b)(7)(C) (Exhibit T-22c).

On September 6, 2016, (b)(7)(C) was interviewed by AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, TVA OIG and OI wherein he provided the following information. Although (b)(7)(C) asserted that he was not worried about raising issues to the OCC, (b)(7)(C) was certainly not comfortable about challenging the (b)(7)(C) and (b)(7)(C) about plant decisions. (b)(7)(C) emphasized that once the first engineering test was over, he called (b)(7)(C) to inquire how much longer before the valve (normal let-down) was in-service. According to (b)(7)(C) (b)(7)(C) told him the valve would be ready soon. (b)(7)(C) said the schedule called for WBN1 to proceed to Mode 3. (b)(7)(C) stated there were no procedures in place about what to do or not to do when heating up using excess let-down, (b)(7)(C) said there was nothing in writing saying it cannot be done. (b)(7)(C) disclosed that he was uneasy about proceeding partly due to the fact that he had no experience heating up using excess let-down. (b)(7)(C) stressed that WBN1 was not at full pressure, but (b)(7)(C) admitted he had no idea how using the excess let-down would affect the pressurizer level. Likewise, (b)(7)(C) was unable to estimate how much inventory (water) they expected to get out using excess let-down, no numbers were discussed (Exhibit T-22d).

(b)(7)(C) stated that he knew there were ways to control the plant if excess let-down did not work and if the plant did what he was "afraid" it would do. (b)(7)(C) explained that the procedures are not written for every step (scenario). (b)(7)(C) stated that he knew how to recover the plant if excess let-down did not work and understood that the pressurizer level will go up during heat-up. (b)(7)(C) stated that the first step for heat-up was to remove the RHR. Once the RHR was removed, the temperature in the RCS would increase. (b)(7)(C) stated that prior to removing the RHR, (b)(7)(C) set some trigger values to ensure they took action. At this point, nobody could put their finger on why they should not heat-up. According to (b)(7)(C) if he did not have contingencies then he would have been more concerned. (b)(7)(C) stated that the licensed operators were not overly experienced and once it was discussed none of them had an opinion one way or the other except (b)(7)(C) (b)(7)(C) stated that no one else said it was not a good idea which caused (b)(7)(C) to start doubting himself because he seemed to be the only one that was uneasy. In regard to (b)(7)(C) (b)(7)(C) testified that (b)(7)(C) basically said something to the effect that, "He (b)(7)(C) felt (b)(7)(C) pain but we have a schedule." (b)(7)(C) confirmed that he set a trigger value of 80 percent pressurizer level where they were to open the PORV to control the rate of heat-up. They then took the RHR out of service and the pressure quickly got to 79 percent which was faster than they anticipated. (b)(7)(C) said the rate of heat-up is what "killed" us because it out-ran the excess let-down system which is what (b)(7)(C) suspected was going to happen. At this point, REDINGER opened the RHR inlet valves and the pressure level went down (Exhibit T-22d).

> Agent's Note: Testimony from the other control room operators (REDINGER, (b)(7)(C), (b)(7)(C) and (b)(7)(C) on shift during the November 11, 2015, events contradicts (b)(7)(C) statement that none of the other operators had an opinion on removing RHR from service.

Once the normal let-down got fixed they reconfigured everything and moved on. (b)(7)(C) said that they should have just waited until the normal let-down was fixed. About ten minutes after they opened the relief valve and recovered, (b)(7)(C) came in the MCR and thanked everyone for not letting the plant get out of control. (b)(7)(C) said it was clear that (b)(7)(C) had been in the OCC watching the event on the monitors and knew what had just happened. (b)(7)(C) said the event was not logged and no CRs were written. (b)(7)(C) admitted that he did not check the logs and acknowledged that they made mistakes. (b)(7)(C) could not recall who the Unit Supervisor was on the day of the event, but confirmed that later that afternoon, he sent an email to the other Shift Managers telling them, "(b)(7)(C) (b)(7)(C)" The comment on the email about not letting anyone talk you into it was made because it was not his idea to proceed with the heat-up without normal let down in service. (b)(7)(C) does not believe anyone in the OCC would have put the plant at risk on purpose. However, the lack of experience, knowledge, and schedule pressure all happened because they were trying to see how fast they can get back to making money. (b)(7)(C) expressed that everyone knew what he was doing, why he was doing it and what he had to do to recover the plant. (b)(7)(C) stated that at the time all these "smart people" were saying it is "ok" to do it and he (b)(7)(C) was the only one saying "no" so he talked himself into thinking it was alright because everyone else felt it was alright (Exhibit T-22d).

On April 3, 2017, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) said that he recalled (b)(7)(C) (b)(7)(C) or (b)(7)(C), telling him to do it on November 11, 2015. He said that he could not remember which one it was, but he did recall it was the person in the (b)(7)(C) position. (b)(7)(C) also said that during the same conversation he was informed that (b)(7)(C) and (b)(7)(C) wanted it done or were for it. (b)(7)(C) said that he let others in the OCC know that he was not in favor of doing it and did not want to do it. (b)(7)(C) said that the OCC knew how he felt. (b)(7)(C) told the agents that he could not remember exactly who all he told in the OCC, but he did know it was more than just (b)(7)(C) (b)(7)(C) added that he has a family to feed (Exhibit T-22e).

Interview of Dennis REDINGER, Unit Supervisor

REDINGER, US at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

On November 18, 2015, REDINGER was interviewed by OI and discussed that he spent six years in the Navy and worked at multiple licensees including 16 years at Comanche Peake where he was an STA and SRO. He came to TVA in 2009 and was licensed in 2011. REDINGER discussed that the MCR operators did not know what the capabilities of the excess let-down system would be at the temperature and pressure they were operating at on November 11, 2015. REDINGER expressed there was a lack of knowledge among the operators and discussed that the response to their concerns from the OCC was the OCC understood the concern, but they were okay with proceeding forward. REDINGER stated that he wished he pushed back harder but at the time he felt like they did not have enough basis to say they were not going to continue. He expressed that at the time he felt that (b)(7)(C) was not totally committed to the idea either, but he tried to convey to us that the OCC wanted us to move forward with it and (b)(7)(C) was willing to try it (Exhibit T-40a, pp. 7-8, pp. 17-38).

On January 19, 2016, REDINGER was interviewed by TVA OIG and explained that he was the WBN1 Unit Supervisor on November 11, 2015 and reported to (b)(7)(C) REDINGER stated that since it was scheduled, the OCC decided to use the Excess Let-down System instead of waiting on the normal let-down system. He discussed use of the Excess Let-down System rather than waiting on the normal one with licensed operators ((b)(7)(C) (b)(7)(C)) and no one was comfortable with doing it due to concerns regarding the ability to maintain inventory control and the pressurizer. While they did not have enough information that day to tell the OCC that it absolutely would not work, no one felt like it was worth the risk. They discussed it with (b)(7)(C) who also agreed that he did not think it was a good idea. (b)(7)(C) told them that he was going to tell the OCC that he was not comfortable with the plan to use the excess let-down system. (b)(7)(C) later came back and told the control room that it had been decided to go ahead and move forward so they did. They took out the RHR system and began monitoring the heat-up while trying to maintain temperature and inventory control (Exhibit T-40b).

On February 10, 2016, REDINGER was interviewed by TVA OIG. When discussing the Shift Order, REDINGER was asked to comment on each of the answers to the questions contained on the Question and Answer page of the shift order. Regarding the answer given to question number three, REDINGER said that generally that was the information that he provided, but he does not think the he provided the 50-60gpm number. REDINGER said he was not sure where the 50-60gpm number came from and recalls he gave his answers to the questions to (b)(7)(C) He added that the entire answer (the whole paragraph) was what he told (b)(7)(C) except for the 50-60gpm part. REDINGER said that he did not give that number to (b)(7)(C) He does not know who did or where it came from (Exhibit T-40c).

On March 07, 2016, REDINGER was interviewed by TVA OIG REDINGER stated the shift order was written by (b)(7)(C) and (b)(7)(C). He (REDINGER) was initially briefed about the shift order by Shift Manager (b)(7)(C) which is the first time that he saw the 50-60gpm number and thought something did not look right. He still does not know where the number 50-60gpm came from. At the time, REDINGER thought the shift order was written to give the operators OE (operating experience) but now he believes it could have been to get everyone on the same page. REDINGER still has no knowledge of where the 50-60gpm in the shift order came from. He was interviewed by Employee Concerns Program (ECP) line by line about the shift order when he realized the statement looked like the information he had written except for the 50-60gpm number. After the interview with ECP, REDINGER ran into (b)(7)(C) and asked him where the 50- 60gpm came from and (b)(7)(C) did not reply. Discussing the December 15, 2015, email chain between REDINGER and (b)(7)(C) REDINGER reviewed the email and confirmed that the actions they took to recover the plant were the operator's actions but how they got there in the first place was not the operators' decision. He stated that they were under schedule pressure to move forward. REDINGER confirmed there was a disconnect in what was said in the email versus what was said in the shift order. Specifically, REDINGER stated that the shift order makes it look like the control room made the decision to move forward where the email shows that that was not the case at all (Exhibit T-40d, pp. 1-10).

On September 06, 2016, REDINGER was interviewed by TVA OIG, OI, and AUSA. REDINGER advised that using excess let-down had not been done very often. In the situation on November 11, 2015, neither REDINGER nor the other operators had done it before. He stated the excess let-down flow design says 40gpm. He also had heard during training that they had gotten 70gpm using excess let-down. This information came from older guys who had experience in the plant. However, all of these numbers were at full pressure. According to REDINGER, he and the other operators knew they would not get 70gpm and were pretty sure they would not get 40gpm given the temperature and pressure at which they were operating at that time. They were concerned that what they actually got would not be enough to heat-up. REDINGER stated that they could not say it would not work but he and the other operators had an uneasy feeling. REDINGER and the three reactor operators on crew discussed their concerns as a group. REDINGER then talked with the (b)(7)(C) (b)(7)(C), who also did not feel good about heating up using the excess let-down. Everyone was in agreement so REDINGER and (b)(7)(C) met with (b)(7)(C) and expressed the crew's concerns. During the discussion with REDINGER and (b)(7)(C) did not

challenge them and appeared to be taking information from them. REDINGER does not think (b)(7)(C) said one way or another whether he agreed with them. REDINGER was asked if he or the crew thought at the time they could get 50-60gpm from excess let down. REDINGER said that he did not think they could get 50-60gpm from excess let down. He said that nobody on the crew thought they could get 50-60gpm from excess let down. He stated that while 40gpm design and 70gpm pre-op testing was discussed at some point, the operators all knew not to expect those numbers because it was at 340lbs of pressure rather than the normal pressure of 2,225lbs. He stated that 40gpm and 70gpm would have only been at normal pressure and were not numbers for that day. The operators did not know what the actual numbers would be with the plant conditions at that time (Exhibit T-40e).

Interviews of (b)(7)(C), Reactor Operator

(b)(7)(C) RO at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) had been licensed for (b)(7)(C) years at Watts Bar. He was the (b)(7)(C) (b)(7)(C) of November 11, 2015. (b)(7)(C) stated "…I think there were different theories about whether excess let-down would be enough with RHR let-down out of service. And some people thought it would. We did not think it would, but it did not." When asked to clarify who thought it would work he continued, "OCC. The people directing us to go ahead and start the heat-up for let-down of the line. They believed against us that excess let-down would be sufficient to counter the heat-up and most of our -- not all of the excess let-down is supposed to be" (Exhibit T-01b, p. 8, pp. 13-14).

(b)(7)(C) was against moving forward without the let-down system and took his concern to (b)(7)(C) According to (b)(7)(C), everyone in the MCR with a license was against moving ahead. (b)(7)(C) conveyed the concern to the OCC. OCC said to move ahead. At some point while all this was going on, a comment was made to the effect that "everyone who has a license says no but the people who can fire the licensed people say do it." The license holders are being pushed to do more than they can. If the pushing does not work out, then the license holders get blamed. The OCC's push to get closer to Mode 3 that day did not work out. The excess let-down system could not do the job. The temperature rose and those in the MCR could not get the inventory out. (b)(7)(C) told TVA OIG that he did not tell the OI the whole story during the interview. He did not tell the NRC about TVA management pressure. (b)(7)(C) was told by the TVA lawyer prior to the interview not to expand on his answers. felt pressure from the TVA lawyer not to tell the NRC about the front-end issues. (b)(7)(C) did not want TVA to think that he was not a team player. He said that around the same time that he was interviewed by the NRC, TVA issued a shift order which explained what happened on November 11, 2015. (b)(7)(C) read the shift order and found it to be factually incorrect. He said that the shift order really did not describe the facts which took place on November 11, 2015. It is his opinion that TVA generated the shift order, so the NRC could read it (Exhibit T-01a, pp. 1-3).

In an interview follow-up email on January 27, 2016, (b)(7)(C) provided clarification on information provided in the shift order. Commenting on the answer to the question "Did the crew expect the condition that occurred." (b)(7)(C) responded, "This is backwards. The crew did expect level to rise because we did not expect 50-60gpm from excess let-down at that pressure. That was a main argument we used against the plan." When commenting on the listed actions taken, specifically, "Oversight watches have been established in the MCR." (b)(7)(C) commented "The people who pushed us into it [November 11,2015 event] were in the MCR around the clock for about a month [afterwards] to make sure we did not decide to go and do anything that foolish again" (Exhibit T-01a, pp. 14-15).

(b)(7)(C) did not think the crew could get enough water out because excess let-down is designed for 20gpm but could not prove it and he felt the OCC had been looking at it closely and crunching the numbers based on (b)(7)(C) statements concerning capabilities of excess let-down. (b)(7)(C) stated that he and the crew knew they would not get 50gpm out of it. However, since (b)(7)(C) could not research it at the moment, he felt the people outside the control room were helping the crew research it. Where it [shift order] said the crew thought they should be able to get 50 to 60gpm on excess let-down but, the operators were arguing against it because they did not think it was possible. No one talked to (b)(7)(C) for information on the shift order. However, (b)(7)(C) does not recall anyone in the control room talking about how they could get 50 to 60gpm out of it if they were not at full pressure. They all felt like excess let-down would not work but they did not know the severity or how fast it would all happen (Exhibit T-01c).

Interviews of (b)(7)(C), Reactor Operator

(b)(7)(C) RO at WBN was interviewed on January 27, 2016, and September 19, 2016, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance. (b)(7)(C) was licensed in (b)(7)(C) (b)(7)(C) and worked on in the MCR on November 11, 2015. (b)(7)(C) explained that he was (b)(7)(C) (b)(7)(C) and did not have a lot of experience. (b)(7)(C) stated that the excess let-down was in place when the RHR was taken out and he was under the impression that it would take water out to keep the plant from going solid. (b)(7)(C) does not know why the decision was made not to wait for the normal let-down system but stated the operators did not wait because "we were being pushed by the OCC (Outage Control Center)." (b)(7)(C) stated that this was his first time dealing with an OCC as an Operator. His understanding of the OCC was that they were the people who understood what was happening and it was their job to come up with a plan. He now believes they are there to push and get the work done. (b)(7)(C) stated that he should have never taken the RHR out with that situation, but it was his first outage and the shift manager that day had a lot of experience and he said to do it (Exhibit T-23a)(Exhibit T-23b).

Interviews of (b)(7)(C), Reactor Operator

(b)(7)(C) RO at WBN was interviewed on January 28, 2016, and September 29, 2016, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) had been a Reactor Operator for (b)(7)(C) years at Watts Bar and worked on November 11, 2015, in the MCR. (b)(7)(C) was serving as a RO that day on the secondary plant side controlling the steam generator loads, REDINGER was the Unit Supervisor and (b)(7)(C) was the Operator at Control (OAC). (b)(7)(C) discussed the events that happened on November 11, 2015, were only one example where the MCR operators expressed concerns but were told to proceed regardless. On November 11, 2015, there was pressure being felt in the MCR from the OCC to move from Mode 5 to Mode 4. (b)(7)(C) stated that (b)(7)(C) appeared to be under pressure to move the unit. Since the normal let-down system was out of service, the plant had to rely on the excess let-down system. Licensed Operators voiced their concerns with the plan to move ahead using the excess let-down system. (b)(7)(C) was not for the idea. (b)(7)(C) communicated the concerns the MCR personnel had with the plan, but the OCC decided on a plan to proceed with the heat-up. (b)(7)(C) stated, "I felt like it was a very bad idea to proceed on." The agents asked (b)(7)(C) why he did not voice his concern stronger and louder. He said that he was afraid of being relieved. He said he was afraid of not being viewed as a team player. (b)(7)(C) explained to the agents that neither he nor his colleagues in the MCR that day could point to a rule or a procedure to support their position not to proceed using the excess let-down system. They all just knew it was a bad idea based off their training and experience. (b)(7)(C) said that all the OCC had to do was wait a few hours and the normal let-down system would be available. According to (b)(7)(C) the work had already been done and they were just waiting on the paperwork and clearances to put the normal let-down back in service. (b)(7)(C) suggested that the OCC would not wait and wanted to stay on schedule no matter what. (b)(7)(C) recalled saying out loud "this is stupid" when (b)(7)(C) told them that the OCC said to proceed (Exhibit T-16a).

Interviews of (b)(7)(C), Senior Reactor Operator

(b)(7)(C) SRO at WBN was interviewed on January 16, 2016, and September 19, 2016, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) had been a SRO for (b)(7)(C) years at Watts Bar, and on November 11, 2015, he was working as the (b)(7)(C) and in the control room for (b)(7)(C) (b)(7)(C) so the other operators could focus on the plant as it was coming out of the maintenance outage. At one point, REDINGER had to leave so (b)(7)(C) relieved him for a couple of hours. (b)(7)(C) said that he talked to everyone on the Unit 1 side in the main control room that day about heating up without normal let down being available. None of them thought it was a good idea. REDINGER was part of that conversation. (b)(7)(C) could not recall if (b)(7)(C) was a part of that specific conversation but he does know that (b)(7)(C) recognized that the operators were uncomfortable about heating up. According to (b)(7)(C) in this instance standing down waiting for normal let-down would have been textbook but would not have gotten them out of the outage fast enough. (b)(7)(C) said that when he saw the "50gpm" answer given in the statement put together by (b)(7)(C) (b)(7)(C) and (b)(7)(C) he could not figure out where that number came from. When he read the number "50" on the document he told his peers that the number "50" was just silly. He added to the interviewers

that he did not tell anyone on November 11, 2015, that he thought they could get that out of excess let down. The number was totally unrealistic. Speaking of the plant manager, (b)(7)(C) said on November 11, 2015, after the control room personnel stabilized the plant (b)(7)(C) came into the control room and congratulated everyone. (b)(7)(C) recalled (b)(7)(C) saying, "We put you guys in a bad place today." (b)(7)(C) gave (b)(7)(C) a bear hug (Exhibit T-05a) (T-05b).

Interview of (b)(7)(C), Senior Reactor Operator

(b)(7)(C) SRO at WBN was interviewed on January 27, 2016, by TVA OIG wherein he provided the following information in substance.

On November 11, 2015, (b)(7)(C) was working in the WBN1 as a (b)(7)(C) (b)(7)(C) did not realize there was a problem with the unit that day until they were fully involved in the problem. (b)(7)(C) stated that he became aware of the issue during the recovery phase. (b)(7)(C) said in the past Management did not challenge the more conservative path if in fact that path was deemed by the MCR to be the best path to take. Nowadays, management questions the Shift Managers when the Shift Managers state that they are going to take the conservative path. In the past, WBN's default position was the conservative position because that is the safest position. (b)(7)(C) credits the change to (b)(7)(C) and (b)(7)(C) (Exhibit T-41).

Interviews of (b)(7)(C)

(b)(7)(C) at WBN, was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) was interviewed by TVA OIG on February 2, 2016, and discussed that on November 11, 2015, he was working. (b)(7)(C) stated that he remembers that day fairly well because the normal let down system was not in service. He was in the OCC working with the OCC team but cannot recall who else was present with him and remembers they were trying to determine what the plan was moving forward. (b)(7)(C) does remembers having several conversations with (b)(7)(C) (b)(7)(C) stated there were basically three options: (1) stay in Mode 5 and wait until the normal let-down was back in service or (2) heat-up to Mode 4 and stay on RHR or (3) do option 2 and then take RHR out of service and the cooling mechanism would be the main steam dumps. The decision was made to go with option number three. (b)(7)(C) stated that he attended all of the OCC meetings that (b)(7)(C) where they discussed the options. He does not remember any real push back on moving forward. (b)(7)(C) advised that it is important to stay on schedule because the unit is important to the fleet. He stated that there is a balance between schedule and safety and any delay on getting the unit back online meant TVA must purchase power. He stated this is no different than all other utilities. (b)(7)(C) stated that they were originally supposed to move to Mode 4 around 6 a.m. or 7a.m., but the OCC wanted to analyze it some more. According to (b)(7)(C) we all had concerns because of not having the let-down available. (b)(7)(C) stated that they had to convince

(b)(7)(C) in OCC because all delays or changes in schedule had to be approved by (b)(7)(C) (b)(7)(C) stated that they were already delayed so the OCC team came up with a plan for (b)(7)(C) approval that decided what to do after the delay (Exhibit T-21a).

(b)(7)(C) was interviewed by TVA OIG on February 10, 2016, and did not recall anyone in particular being concerned with moving forward with heating up the plant on November 11, 2015. While he did not specifically recall either (b)(7)(C) or REDINGER telling him they were uncomfortable or that they did not want to take the RHR out of service, he did admit there was some pushback with operators asking questions about the effect of doing this without normal let-down. In addition, (b)(7)(C) said "he did have some healthy challenges with (b)(7)(C) in the control room" about this issue. However, (b)(7)(C) stated "I did not get off [sic from] these conversations that they were uncomfortable with this." He further clarified that they did not tell him at any time of the day that they did not want to do it. (b)(7)(C) was asked about pushing (pressure) which he stated that pushing is common and "I have had much worse." In (b)(7)(C) opinion, operations are not doing well because there are some fundamental areas with operators' performance and they have failed to correct the low-level behaviors. Some examples of these include communications, responses, and board monitoring. (b)(7)(C) believes the only recent event that could even remotely be associated with pushing would be the RHR event because the whole OCC team was pushing to move forward. Other issues like the source range instrument bypass and the PORV lift are only due to operator error and level of knowledge issues. According to (b)(7)(C) Operations knows the knowledge level is lower than it should be, and that management needs to be in an oversight role to make sure the people who do the actions understand what they need to do. While these oversight managers may not have an active license or be a license holder, they have the required knowledge from past experience to make decisions and assist in what happens in Operations. (b)(7)(C) believes it is inappropriate for someone to say that (b)(7)(C) should not be involved in the control room decisions since he is the (b)(7)(C) and is very knowledgeable (Exhibit T-21b).

(b)(7)(C) was interviewed by TVA OIG on June 30, 2016 and recalled having a conversation with (b)(7)(C) in the control room and that (b)(7)(C) challenged him but was "okay with moving forward after our conversation." This conversation happened at the horseshoe by the unit supervisor's desk while there were other people around. (b)(7)(C) also believes the unit supervisor (REDINGER) was there as well. (b)(7)(C) stated that their concern was about the effect moving forward and heating up would have on the plant with the normal let-down out of service. He stated that at no time did either (b)(7)(C) or REDINGER say they did not want to do it nor did anyone seem adamant about anything. If they had, (b)(7)(C) would have stopped and tried to understand why. He does not recall any other conversations with (b)(7)(C) and knew there were challenges from the crew about what did the effect of the temperature rise on pressure level. (b)(7)(C) testified he did not feel anyone was uncomfortable but rather more concerned about whether they were technically doing the right thing. (b)(7)(C) had been talking to (b)(7)(C) on a regular basis that day about what was happening. In addition, (b)(7)(C) would have been in the OCC frequently that day. (b)(7)(C) stated that (b)(7)(C) was for moving forward that day, but the decision was made by (b)(7)(C) (b)(7)(C) stated that he and (b)(7)(C) were good with moving forward that

day because they thought they could do it safely. He stated that everyone was good with moving forward in the beginning but now say how bad the decision was. There have been "a lot of Monday morning quarterbacks" about this issue. (b)(7)(C) does feel like there was a lot of miscommunication. (b)(7)(C) suggested that the decision was made by (b)(7)(C) who was the shift manager (Exhibit T-21c).

(b)(7)(C) was interviewed by TVA OIG, OI and an AUSA on January 19, 2017, and said that during outages (b)(7)(C) wanted to know minute by minute what was going on. In the OCC, (b)(7)(C) and (b)(7)(C) were part of the Senior Leadership Team. (b)(7)(C) stated that information to (b)(7)(C) would go through him (b)(7)(C) while decisions went from (b)(7)(C) to (b)(7)(C) (b)(7)(C) would then go to the Shift Manager with the decision. (b)(7)(C) said that there was discussion in the OCC to remove RHR and allow the heat-up to begin. (b)(7)(C) said that they had many discussions about that in the OCC and in the main control room with the Shift Manager. (b)(7)(C) questioned (b)(7)(C) about what was going to happen to the pressurizer level if they took the action. (b)(7)(C) had multiple conversations with a few people about that and these conversations took place over the course of a few hours. (b)(7)(C) said that the Shift Manger's crew also asked that same question. (b)(7)(C) recalled interacting with the Shift Manager and the Unit Supervisor that day. (b)(7)(C) could not recall who else he spoke with in the control room about heating up. (b)(7)(C) estimated 30 percent that day was spent in the main control room and 70 percent of his time was in the OCC (Exhibit T-21d).

(b)(7)(C) said that they had a lot of conversations in the OCC that day about removing RHR and whether there were any tech specs or restrictions. (b)(7)(C) said that in the end they could not find any restrictions against doing it, (b)(7)(C) said that engineering was consulted too. (b)(7)(C) said engineering told (b)(7)(C) and the others that excess let down could handle it. (b)(7)(C) was asked who from engineering gave him that bit of information. (b)(7)(C) said he could not remember who it was that told him that. When asked if there was a gallon per minute (gpm) figure that engineering said could handle it, (b)(7)(C) replied that 20gpm is what he recalled from the system description. (b)(7)(C) added that no restrictions were located so they decided to do it. (b)(7)(C) said that there was discussion in the OCC to remove RHR and allow the heat-up to begin. (b)(7)(C) said that they had many discussions about that in the OCC and in the MCR with (b)(7)(C) (b)(7)(C) said he did remember talking with (b)(7)(C) in the main control room and the OCC about removing RHR. (b)(7)(C) did speak with (b)(7)(C) too about the issue, but (b)(7)(C) could not recall exactly what each other said. (b)(7)(C) said that (b)(7)(C) and (b)(7)(C) both were involved in the decision and both knew exactly what was going on. (b)(7)(C) stated that both (b)(7)(C) and (b)(7)(C) were in favor of removing the RHR. (b)(7)(C) said that he spoke to (b)(7)(C) about it and his crew, but the idea was not (b)(7)(C) idea. (b)(7)(C) was asked by the interviewers if (b)(7)(C) told (b)(7)(C) to instruct (b)(7)(C) to take the action. (b)(7)(C) said that (b)(7)(C) did not tell (b)(7)(C) to tell (b)(7)(C) to do it. (b)(7)(C) said it came about after the conversations in the OCC after which the OCC came to the conclusion do it and (b)(7)(C) communicated that to (b)(7)(C) (b)(7)(C) stated that he (b)(7)(C) went to the control room and told (b)(7)(C) that "this is the path that we would like to go down because we feel it is appropriate". The interviewers asked (b)(7)(C) to define "we".

(b)(7)(C) said, "we" were the OCC. (b)(7)(C) was asked by the interviewers if using excess let down was the safest plan. (b)(7)(C) said using excess let down was not the safest plan and it would have been safer to wait for normal let down to come back in service. (b)(7)(C) said that they concluded that (b)(7)(C) that they could get 20gpm out of excess let down (Exhibit T-21d).

Interview of (b)(7)(C)

(b)(7)(C) at WBN was interviewed on multiple occasions by OI and TVA OIG wherein he provided the following information in substance.

He described that at 06:00 a.m., on November 11, 2015, it was identified that the repair of the normal let-down valve had not yet been completed. (b)(7)(C) briefed the OCC that this would significantly hinder the heat-up rate and they would not be performing a normal heat-up per the schedule. He stated it would take Operations a much longer time to slowly heat-up because we did not have the let-down capacity. (b)(7)(C) figured that they could heat-up the plant at a rate of 75 degrees per hour using the normal let-down system, but the excess let-down system was limited. (b)(7)(C) figured that by using the excess let-down system, they could heat-up the plant at a rate of 10 degrees per hour. (b)(7)(C) stated that (b)(7)(C) (b)(7)(C) at WBN and he made the decision to keep going with the schedule and start heating up with what we had in place and not wait for the next one [normal let-down] knowing there would be a schedule delay to critical path (Exhibit T-18, pp. 8-12, 15) (Exhibit T-31).

Interview of (b)(7)(C)

(b)(7)(C) at WBN was interviewed by TVA OIG on January 27, 2016, wherein he provided the following information in substance.

(b)(7)(C) stated the decision to forge ahead that (b)(7)(C) using the excess let-down system was a team decision. (b)(7)(C) thinks that if he did not think the plan of using the excess let-down system would work then they would not have tried it. He stated that going to the excess let-down system is not a normal thing and not the preferred method. According to (b)(7)(C) there was a good amount of discussion about whether or not it could be done. (b)(7)(C) continued by explaining that sometimes decisions are made outside of the OCC. He stated that it could have been either the (b)(7)(C) or (b)(7)(C) because the OCC sometimes relies on them. (b)(7)(C) said that he did not make the decision and he does not believe that (b)(7)(C) or (b)(7)(C) would have made the decision either (Exhibit T-19).

Interviews of (b)(7)(C), Shift Manager

(b)(7)(C) SM and SRO at WBN, was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) was licensed in (b)(7)(C) and has been a Shift Manager since (b)(7)(C). When (b)(7)(C) arrived at work on November 10, 2015, for the (b)(7)(C), there were two major things that were on the schedule for the (b)(7)(C) to get done: 1) Work to do on the Let Down System so the night crew needed to take the Let Down flow path out of service: 2) Heat-up the plant (move from Mode 5 to Mode 4). (b)(7)(C) decided to do only the first thing. He told the agents that in his mind the let-down system was out of service, so he did not want to heat-up the plant without it being in service. (b)(7)(C) explained that the concern in heating up had to do with water management. He explained that water expanded a lot when it heats up, so you must either drain water or not heat-up. (b)(7)(C) did not think it was a good idea to heat-up with the let-down system out of service and recalled (b)(7)(C) suggested they could just wait. (b)(7)(C) could not recall who he talked to in the OCC about his decision not to heat-up the plant, but he did talk to someone. He recalled talking to the OCC about the let-down system being out of service. They had a good discussion about it and that was it. (b)(7)(C) recalled telling the OCC that he wanted to stay in Mode 5 because they only had excess let-down. According to (b)(7)(C) with low pressure and low temperature the expectation was to only get around 15 to 30gpm using the excess let-down. Specifically, he remembers discussing this with the OCC that night and telling them that the reason they had to stay in Mode 5 was because of the inability of excess let-down to do more than 15 to 30gpm (Exhibit T-46a)(Exhibit T-46b).

Interviews of (b)(7)(C) Shift Manager, (b)(7)(C) and OCC Operations Representative

(b)(7)(C) Shift Manager, (b)(7)(C), and OCC Operations Representative at WBN, was interviewed on December 18, 2015, January 19, 2016, February 4, 2016, and October 3, 2017, by OI, TVA OIG and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) was interviewed by OI on December 18, 2015. (b)(7)(C) joined TVA in (b)(7)(C) (b)(7)(C) (b)(7)(C). On November 11, 2015, (b)(7)(C) worked as the (b)(7)(C) OCC Operations Representative whereby he coordinated with several entities associated with the operation department to ensure there was the proper support for the outage. (b)(7)(C) said that he clearly remembers that on November 11, 2015, the maintenance work was not finished when it was decided to transition into Mode 4. (b)(7)(C) testified that he remembered looking into whether the transition without let-down would affect the procedure. (b)(7)(C) stated that he asked himself and others (NFI) in the MCR, "Is it some type of violation, is it something we are forbidden from doing and there had been quite a bit of talk in operations about that very fact." (b)(7)(C) admitted that he cannot remember if he talked face-to-face with (b)(7)(C) or whether it was by email about moving forward. Also, (b)(7)(C) admitted that he spoke quite a bit with (b)(7)(C) Shift Manager of WBN1 about not only heating up without normal let down, but the other things that were going on that day (Exhibit T-17a, pp. 2-9, pp. 11-17).

When asked if (b)(7)(C) had conversations with (b)(7)(C) throughout the day, (b)(7)(C) responded, “Yes, I would say, on average, probably -- and this is not just that day, it would be any day you could call the shift manager anywhere from ten to 30 times, depending on what was going on.” (b)(7)(C) stated that he had no prior experience in a start up without normal let-down being available. In fact, reflecting over his career he could not recall anytime where he remembers taking an action with only excess let-down. (b)(7)(C) suggested that (b)(7)(C) was also inexperienced with this condition, so they had some conversations about whether this was “okay” and (b)(7)(C) indicated that he shared with him what he had found. (b)(7)(C) testified that they discussed their understanding of the system and the opinions from operators that had joined their conversation. (b)(7)(C) admitted that, “We did make what I think we will all agree in hindsight, was a poor decision that should be determined that it was not illegal.” (b)(7)(C) stressed that they made a decision that they believed might have to move really slow, but that it would be controllable. (b)(7)(C) argued that they believed that they could safely transition into Mode four for excess let-down. (b)(7)(C) stated that his clearest memory of the day was making sure the rest of the OCC (perhaps not the entire OCC but the critical members of the staff, the two managers and then (b)(7)(C) were explained the plan of how to proceed forward (Exhibit T-17a, pp. 19-24).

(b)(7)(C) testified that he told (b)(7)(C) that he wanted (b)(7)(C) to understand that this was not a normal heat-up activity that they were would go in slow and cautious. (b)(7)(C) acknowledged that a lot of people had access to the plant data and they knew the heat-up limits, and he wanted to make sure that this was not going to be a standard evolution. Additionally, (b)(7)(C) reportedly told the OCC and (b)(7)(C) that it is not going to be the normal heat-up they were accustomed too, and they may have to stall out at some point and just sit. According to (b)(7)(C) no one appeared to have any problem with the plan and there were not any additional challenges regarding the decision to proceed forward. Ultimately, (b)(7)(C) stated that they ended up transitioning into Mode four and at a certain point noticed the pressure riser level was coming up but the MCR got it stabilized. (b)(7)(C) testified that his initial assumption at that time of recovery was that the MCR just turned off the RHR, so it probably took them a while to get a little bit of heat to be able to control the level. (b)(7)(C) recalled a conversation with (b)(7)(C) whereby (b)(7)(C) told (b)(7)(C) "Hey, it looks like you all are managing this okay," and (b)(7)(C) responded to (b)(7)(C) “Here is what friggin' happened” which lead to a discussion detailing how the MCR actions had to put RHR let-down in service. (b)(7)(C) stated that he shared information with key OCC people but cannot remember if he did that in the update format or once again during an informal discussion around the table. Regardless, (b)(7)(C) acknowledged that he spread the information with a wide audience as to what had happened. (b)(7)(C) suggests that before the end of shift the normal let-down system was back in service or were just about to come back in service (Exhibit T-17a, pp. 25-32, pp. 34-45).

(b)(7)(C) was interviewed by TVA OIG on January 19, 2016. On November 11, 2015, (b)(7)(C) role was to serve as the liaison between the MCR and the OCC. The issue that they all faced that day was whether it was acceptable to enter into Mode 4 without the availability of the normal let-down system. (b)(7)(C) said that both he and (b)(7)(C) were

not comfortable with doing it. (b)(7)(C) said that doing what the OCC wanted done that day resulted in WBN1 moving into unfamiliar territory. What ended up happening was that the excess let-down system did not have the capacity to do the job. When asked who made up the OCC core team on November 11, 2015, (b)(7)(C) said that (b)(7)(C) and (b)(7)(C) were there. (b)(7)(C) said he could be mistaken but he thought (b)(7)(C) was seated in the engineer's chair at the OCC that day. (b)(7)(C) also thought that (b)(7)(C) was in the OCC. (b)(7)(C) added that they made a poor decision that day. (b)(7)(C) said that he and (b)(7)(C) had telephone conversations that day about the decision. (b)(7)(C) was fully aware that (b)(7)(C) was not for the decision. According to (b)(7)(C) the decision placed the operators in a position where they had to take actions in an area where there were no established procedures. (b)(7)(C) said that he sat the OCC staff down in the OCC and told them that "we are uncomfortable." (b)(7)(C) told the OCC staff that "we need to proceed with caution." He also said he told them that they do not need to put any undue pressure on the operators. (b)(7)(C) could not recall who was sitting there in the OCC when he made these statements. (b)(7)(C) was asked why the OCC did not wait a few more hours for the normal let-down system to return to service. (b)(7)(C) said that waiting a few hours would have jeopardized meeting the next milestone. (b)(7)(C) said the bottom line that day was that the OCC made a decision based on a business need. In this particular case, according to (b)(7)(C) "we" got out of balance. That balance being between running a business (money) and safety (Exhibit T-17b).

(b)(7)(C) was asked what happened when the site realized that their plan was not working, (b)(7)(C) said that he updated the OCC, and then (b)(7)(C) was forced to do something to counter the mistake. There was no procedure in place for the actions (b)(7)(C) took. (b)(7)(C) did not think that there was log kept that day in the OCC or the MCR. He added that "we just whiffed on this one". (b)(7)(C) said that they just forgot to make the log entries. He said it was not a cover up, a month or so after the incident, the NRC came onsite and interviewed numerous people concerning the incident. (b)(7)(C) advised that the NRC focused a lot of their questions on finding out if the operators acted correctly. There were also a lot of questions about the logs (Exhibit T-17b).

The agents asked (b)(7)(C) what is going on at WBN that has resulted in the OIG and the NRC showing up, (b)(7)(C) responded that the current desire of WBN management to meet the milestone and to "go, go, go, go." The OCC cared more about reaching the next milestone than they did about safety. (b)(7)(C) said that the reactor operators are getting pushed "too hard" by the management team. (b)(7)(C) does not think that his colleagues feel comfortable expressing an opinion different than that of management. (b)(7)(C) concluded the interview by saying that it bothers him a lot that the current WBN management team could not wait a few hours for the let-down system to come back into service (Exhibit T-17b).

(b)(7)(C) was interviewed by TVA OIG on February 4, 2016. (b)(7)(C) advised that he had learned a lot more since his original interview and is currently on the Root Cause team looking into the November 11, 2015 incident. The additional things (b)(7)(C) has learned is the result of him talking to others at the site. On the (b)(7)(C) of November 11, 2015, (b)(7)(C) did go into the OCC and meet with the OCC staff. He stated that (b)(7)(C) was at the table as was

(b)(7)(C) who was sitting where the engineering person usually sat. He added that he is just about sure (b)(7)(C) was there. He was mistaken that (b)(7)(C) was the (b)(7)(C), as it was (b)(7)(C) At this meeting in the OCC, (b)(7)(C) did not specifically tell the OCC staff that he was uncomfortable with heating up using the excess let down nor did he tell them that (b)(7)(C) was uncomfortable. (b)(7)(C) implied that he and (b)(7)(C) shared the same level of comfort, that while it was not something they preferred that they thought it would be "ok" to start in Mode 4 as long as they proceed slow and stayed in control. (b)(7)(C) testified that does not recall telling the OCC staff not to push the operators. In hindsight, (b)(7)(C) wishes he had done a better job expressing his and (b)(7)(C) concerns. (b)(7)(C) now realizes that he did not recognize (b)(7)(C) concern. Likewise, the interviews conducted for the root cause have shown that he underestimated the crew's level of concern that day. (b)(7)(C) stated that an (b)(7)(C) has given a statement that he was up in the MCR on November 11, 2015, when he observed an interaction between (b)(7)(C) and a senior manager in which (b)(7)(C) told the senior manager that they were uncomfortable. According to (b)(7)(C) (b)(7)(C) did not recognize the senior manager, so (b)(7)(C) and his team pulled the control room access records. To the end, (b)(7)(C) believes the senior manager was either (b)(7)(C) or (b)(7)(C) who were both in the control room at different times that day. (b)(7)(C) stated, "My gut tells me that this was management pressure outside the OCC." In addition to the managers being in the control room, (b)(7)(C) stated there were constant phones calls to the control room about what they were going to do (Exhibit T-17c).

Interviews of (b)(7)(C)

(b)(7)(C) at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

When discussing the events of November 11, 2015, (b)(7)(C) made the following statements (Exhibit T-07a, pp. 72-75):

> During questioning about the events of November 11, 2015:
>
> > "Did anybody either, you know, before when you're planning to do this, during, or after this bring any concerns to you concerning about doing this? I do not want to do this or -"
> >
> > MR. (b)(7)(C) No.
> >
> > "Did any operators or anyone come to you to say I was uncomfortable doing this and was told to do this anyway type of stuff?"
> >
> > MR. (b)(7)(C) Oh, oh. No, sir.

Prior to ending the interview (b)(7)(C) added the following when asked if there was anything else he want to add, clarify, add to, or expand on?

> "Nobody brought up anything of I feel uncomfortable at any time, including the discussions of will excess let-down work the way it is supposed to work."
>
> "Nobody brought up anything that I was forced, coerced, or pushed into any kind of corner whatsoever or attempted to hide anything at all."

(b)(7)(C) was asked by the agents what his role was with the Shift Order that was generated concerning the November 11, 2015 event. He said that (b)(7)(C) in the Shift Order. He said (b)(7)(C) The December 18, 2015, Shift Order was written by (b)(7)(C) with some help. He thinks that the narrative on page three was written by (b)(7)(C) The timeline was written by (b)(7)(C) The flow chart was generated by (b)(7)(C) (b)(7)(C) and (b)(7)(C) (b)(7)(C) said he got the information for the timeline off the logs or from the site's Dataware Program. (b)(7)(C) said that when he was interviewed by OI in December of 2015, about the November 11, 2015, incident (b)(7)(C) gave the NRC this Shift Order. (b)(7)(C) was asked by the agents where the answers came from to the Question and Answer portion of the Shift Order. (b)(7)(C) said that they came from (b)(7)(C) (b)(7)(C) and Dennis REDINGER. He added that he was 98 percent sure most came from REDINGER. He is not aware of the other crew members being interviewed. He then said that (b)(7)(C) helped REDINGER. (b)(7)(C) insinuated that (b)(7)(C) and REDINGER worked together to come up with many of the answers (Exhibit T-07b).

(b)(7)(C) said that Shift Orders are used to communicate to departments on lessons learned. He said that Shift Orders were not legal records and were not maintained in the corrective action program. According to (b)(7)(C) Shift Orders were not something that the site handed over to the NRC. He did say that since the site generated Shift Orders then the Shift Orders would all be available for the NRC to review if they wanted to review them. (b)(7)(C) said that he did not think he brought the Shift Order to the OI interview on December 18, 2015. He said he did not recall providing Shift Order 15-50 to the NRC interviewers. (b)(7)(C) was asked to look at the third question in Shift Order 15-50 which asked if the crew expected the condition that occurred. (b)(7)(C) reviewed the question and the answer then stated that the answer provided to the question had to do with what the crew actually thought at the time (November 11, 2015). (b)(7)(C) said that it was his understanding that the crew thought that on November 11, 2015. (b)(7)(C) said that the "50-60" number is what the crew thought that day. (b)(7)(C) said that (b)(7)(C) gave (b)(7)(C) the numbers, but it was (b)(7)(C) understanding that (b)(7)(C) and REDINGER spoke to the NRC and then the number came to (b)(7)(C) (b)(7)(C) stated that (b)(7)(C) got the numbers from REDINGER who was the Unit Supervisor on November 11, 2015. He said that (b)(7)(C) gave him the 50-60 number (Exhibit T-07d).

Interview of (b)(7)(C)

(b)(7)(C) at WBN, was interviewed by TVA OIG on January 4, 2016, wherein he provided the following information in substance.

(b)(7)(C) discussed the origins of shift order 15-50 describing that most of the answers came from REDINGER. The agents asked (b)(7)(C) where he got the answer of about 50-60 gpm from. He said that he got that from REDINGER. He added that the answer of 50-60 gpm is based off normal operating pressure. The agents asked (b)(7)(C) if they were operating at normal operating pressure. He said no, but he added that he wrote that paragraph based on discussions with REDINGER. (b)(7)(C) said that it was his understanding that 50-60 gpm was the capacity for Excess Let Down. He said that the mistake in the answer is that at the time they were not in "normal" (Exhibit T-44).

Interview of (b)(7)(C), Senior Reactor Operator

(b)(7)(C) SRO at WBN, was interviewed by TVA OIG on February 22, 2016, wherein he provided the following information in substance.

(b)(7)(C) was shown a copy of the shift order dated December 18, 2015, which referred to events which occurred on November 11, 2015. He stated that the 50-60gpm number makes no sense and is not even possible with pressure only being 350lbs. He stated that excess let-down is only designed for around 20 to 25gpm at full pressure of around 2200lbs. He does not think people in the control room would think they would be able to get that number, so he does not know why it is written like that. He stated, "I cannot equate my knowledge to this". He stated at full pressure you may be able to get a little more than 20-25gpm but not 50 to 60gpm. (b)(7)(C) stated he has never seen excess let down put in at less than full pressure (Exhibit T-12).

Interview of (b)(7)(C) Unit Supervisor

(b)(7)(C) Unit Supervisor and SRO at WBN, was interviewed by TVA OIG on May 10, 2017, wherein he provided the following information in substance.

(b)(7)(C) stated that he knows that at normal pressure, excess let-down is designed for 20gpm. He assumed that was common knowledge. He said that 40 to 70gpm is not reasonable at all at normal operating pressure that the numbers "did not wash at all" (Exhibit T-45).

Interview of (b)(7)(C) Shift Manager

(b)(7)(C) former Shift Manager and SRO at WBN, was interviewed on February 23, 2017, by OI and TVA OIG wherein he provided the following information in substance.

(b)(7)(C) was asked about the content of Shift Order 15-50 and commented on the statement from the shift order "This is based on trainings the crew thought they should have been able to get 50 to 60gpm of excess let-down which they would have stabilized RCS inventory. However,

since RCS pressure was left in normal operating pressure they were unable to achieve the expected flow." (b)(7)(C) explained that based on his training and experience he would not have expected 50-60gpm from excess let-down or have expected to be able to maintain level in the pressurizer (Exhibit T-34b, pp. 35-37).

Interview of (b)(7)(C) at WBN

(b)(7)(C) at WBN, was interviewed on August 22, 2016, by TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) discussed that on January 6, 2016, the NRC and TVA met at Watts Bar. (b)(7)(C) said the reason for the meeting was that the NRC, to include (b)(7)(C) did not feel like TVA "got it" as it related to the November 11, 2015 event. (b)(7)(C) said that the NRC was not satisfied with the actions taken by TVA. (b)(7)(C) said that the NRC did not think TVA had their hands around the issue. (b)(7)(C) attended the meeting as well as his management from Region II. (b)(7)(C) (b)(7)(C) and others from TVA attended. (b)(7)(C) summarized TVA's version as to what happened on November 11, 2015. (b)(7)(C) said that (b)(7)(C) was still telling the same story about the event as they were in the middle of December 2015. After (b)(7)(C) spoke, (b)(7)(C) challenged (b)(7)(C) that the 50-60gpm number listed in the Shift Order was incorrect. (b)(7)(C) told the group that it was way too high. (b)(7)(C) had looked into the numbers and they were incorrect. Even after (b)(7)(C) spoke up telling the group that the numbers were wrong, neither (b)(7)(C) nor anyone else from TVA at the meeting backed off the number. (b)(7)(C) explained that (b)(7)(C) did "chime" in and tell the NRC that under normal operating pressure and temperature the numbers (50-60gpm) could work. That replied bothered (b)(7)(C) because everyone knew on November 11, 2015 that they were not working anywhere near normal pressure and temperature. The Shift Order which contained 50-60gpm was written almost a month after the event (Exhibit T-03).

Interview of (b)(7)(C) NRC Region II

(b)(7)(C) NRC Region II, was interviewed on December 14, 2016, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

In discussing the January 6, 2016, site visit (b)(7)(C) stated that (b)(7)(C) (b)(7)(C) (b)(7)(C) (b)(7)(C) and several others from TVA attended a meeting with the NRC. (b)(7)(C) recalled that (b)(7)(C) did speak during the meeting and does not recall (b)(7)(C) having an exchange with (b)(7)(C) about the accuracy of the information. (b)(7)(C) suggested what really caused him to doubt TVA's reasons for the event was that TVA did not recognize the level of involvement by the OCC and lack of corrective action. TVA's explanation was contrary to what NRC had established from the allegation, the Assist to Staff, and the inspector's follow-up work, which made it clear to (b)(7)(C) that the NRC had more information about the matter than TVA. Nevertheless, (b)(7)(C) testified

that (b)(7)(C) was extremely adamant that he knew exactly what had occurred and that the (operators) crews are always transparent with him on matters. According to (b)(7)(C) (b)(7)(C) insisted that the cause of the November 11, 2015, event was reflective of the information contained in the presentation given to the NRC. Specifically, the information contained on slide twenty-three is what (b)(7)(C) and TVA said happened (Exhibit T-50).

(b)(7)(C) advised he is not familiar with the shift order document as presented to (b)(7)(C) during his interview, but (b)(7)(C) advised that he is aware that (b)(7)(C) had a copy and there were some discussions surrounding the information contain therein. Additionally, (b)(7)(C) inferred that the discussions dealt with the accuracy of the information. To that end, (b)(7)(C) deferred to (b)(7)(C) for guidance as they are better situated to address questions related to the shift order (Exhibit T-50).

Interview of (b)(7)(C) NRC Region II

(b)(7)(C) NRC Region II, was interviewed on December 14, 2016, by OI, TVA OIG and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein she provided the following information in substance.

(b)(7)(C) stated that (b)(7)(C) had previously expressed to TVA prior the January 6, 2016, meeting and again during the meeting what NRC's concerns where and based on TVA's position, that nobody really understood what had happened. Likewise, (b)(7)(C) recalled that TVA discussed the control room logs, the conduct of the operators and the important of adhering to plant procedures. (b)(7)(C) explained that the NRC had already established information through the allegation and inspection process which served as the baseline of NRC's position. During the meeting, (b)(7)(C) confirmed that TVA reported information to the NRC as outlined in their presentation package (slides). (b)(7)(C) remember that while there were several TVA representatives in attendance it was (b)(7)(C) (b)(7)(C) and (b)(7)(C) who primarily briefed the NRC. When asked if (b)(7)(C) recalled (b)(7)(C) challenging TVA on particular point, she said that (b)(7)(C) "pushed to open the dialogue" but does not recall a specific point of contention. (b)(7)(C) stressed that prior to the meeting, it was her understanding that the NRC had some information that was not setting well and thus the reason for the drop-in meeting. (b)(7)(C) stated that she thought there was a need to go to Watts Bar and have a discussion with TVA which had already conducted an Apparent Cause review. Although the NRC had not fully vetted the allegations at the time of the meeting, (b)(7)(C) explained that she attended the meeting to find out from TVA if TVA understood the factors that led TVA to use excess let-down on November 11, 2015. (b)(7)(C) recalled that TVA officials told the NRC that the November 11, 2105, event did not meet TVA management's expectations relative to conduct of operations, but nobody from TVA mentioned anything about OCC influencing the MCR on November 11, 2015 (Exhibit T-51).

Interview of (b)(7)(C) at WBN

(b)(7)(C) at WBN was interviewed on May 26, 2016, by TVA OIG wherein he provided the following information in substance.

(b)(7)(C) described that he was working on November 11, 2015. He was in the OCC for part of the time. (b)(7)(C) was aware that the normal let-down was out of service and that the excess let down had been placed in service. He also knew that there was some heating up that was going to be done within the boundaries of pressurizer level. It appeared to (b)(7)(C) that the operators underestimated what the excess let-down would let them do. (b)(7)(C) did not know the operators were uncomfortable moving ahead after (b)(7)(C) got the call from the NRC on December 11 saying that they had a concern. It was over the next several days that it was discovered that there were questions over how they (the operators) did not use the procedure. (b)(7)(C) stated that it was after this that he heard that some operators said they were uncomfortable. (b)(7)(C) was aware they placed RHR let-down in service. Likewise, he knew the day of the incident that the control room had to take action to lower pressure when they got to 80 percent pressure level. He does not know how he knew this information but believes he may have read it off a status board somewhere (Exhibit T-33).

Interviews of (b)(7)(C) at WBN

(b)(7)(C) at WBN was interviewed on December 18, 2015, and March 26, 2016, by OI and TVA OIG wherein he provided the following information in substance.

(b)(7)(C) indicated that he was briefed on normal let-down system repairs not being completed as scheduled and continuing plant start-up while normal let-down was not in service on November 11, 2015. (b)(7)(C) described the content of the discussions including the potential heat-up rates and there being no need for just-in-time training for use of the excess let-down system. (b)(7)(C) identified that as of the December 18, 2015, interview, additional oversight had been established for the control room with specific written guidance created by (b)(7)(C) He also noted that they were putting out a standing order to re-emphasize conservative decision making. He had not seen that standing order at the time of the interview but planned to review the shift order that afternoon and check it for its content. He committed to get copies to the SRI (Exhibit T-00a, pp. 12-16, pp. 31-33).

(b)(7)(C) advised that he is not a licensed operator. (b)(7)(C) admitted that he was working at WBN on November 11, 2015, and suggested that he was present at various locations within the plant to include the OCC. (b)(7)(C) remembers that he walked into the OCC around midday on the November 11, 2015, where he learned that there had been a pressurizer level issue which was remedied. (b)(7)(C) could not recall the exact way he learned that there had been a pressurizer level issue but believes that someone [NFI] in the OCC began talking to him about what had happened in the MCR. (b)(7)(C) said that the MCR was able to stabilize things (recover the plant). (b)(7)(C) said that (b)(7)(C) was working that day as well and remembers seeing (b)(7)(C) in the OCC (Exhibit T-00b).

When discussing the telephone call with (b)(7)(C) on December 11, 2015, (b)(7)(C) contends that at the end of the call he still was not sure what event (b)(7)(C) was talking about. (b)(7)(C) did not learn that (b)(7)(C) was talking about the November 11, 2015, event until the

next day. (b)(7)(C) directed (b)(7)(C) and (b)(7)(C) to contact the Shift Managers, and through those conversations (b)(7)(C) learned that (b)(7)(C) questions were about the November 11, 2015 event. (b)(7)(C) admitted that he did go into the MCR that day after the pressurizer level had normalized and spoke with (b)(7)(C) (b)(7)(C) denied that he hugged anyone in the MCR. (b)(7)(C) may have shook hands, but he did not hug anyone. (b)(7)(C) said that (b)(7)(C) informed him what happened but said everything was fine now (Exhibit T-00b).

(b)(7)(C) realized after (b)(7)(C) called that there had been a mistake on November 11, 2015. (b)(7)(C) said that a question came up about whether or not they had followed procedure that day. That, according to (b)(7)(C) was the original discussion point with (b)(7)(C) (b)(7)(C) told the agents that they did not have a procedure to cover the actions that were taken to recover the plant that day. (b)(7)(C) was shown a copy of the Shift Order dated December 18, 2015. (b)(7)(C) said that he had not seen this particular Shift Order before. (b)(7)(C) does not know who wrote the Shift Order and he did not tell (b)(7)(C) to write it. He does not know where the figures concerning excess let-down capacity contained in the Shift Order came from but explained that Shift Orders are supposed to be used to provide guidance to the crews. They are written as guidance tools (Exhibit T-00b).

Agent's Analysis

In summary, based on the evidence developed during this investigation OI finds that (b)(7)(C) deliberately submitted incomplete and inaccurate information in Shift Order 15-50 regarding the events of November 11, 2015. Specifically, information documented in the shift order contained false information to support the fictitious narrative that inadequacies of the control room operators were solely to blame for the events of November 11, 2015. Further, on January 6, 2016, (b)(7)(C) accompanied by a group of NRC officials, conducted a site visit at WBN which was attended by (b)(7)(C) (b)(7)(C) (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) During this meeting, TVA management discussed the contents of Shift Order 15-50 and presented (as described below) additional information that was incomplete and inaccurate reinforcing that the MCR operators bore sole responsibility for the events of November 11, 2015. On December 16, 2015, (b)(7)(C) provided notes from his interview of the REDINGER to (b)(7)(C) which was forwarded to (b)(7)(C) on December 17, 2015. (b)(7)(C) was present for (b)(7)(C) interview of REDINGER on December 16, 2015. During the interview it was documented that REDINGER expressed use of excess let-down to manage pressurizer level made the crew to be uneasy, but Operations tries to get things done to support the plant (Exhibit A6-E1, p. 3).

At (b)(7)(C) on (b)(7)(C) (b)(7)(C) sent an email subject "(b)(7)(C) " to (b)(7)(C) with the attachment "(b)(7)(C) " The attachment contained the following question and answer which placed responsibility and gave reason on how the MCR operators came to perform the operations on November 11, 2015 (Exhibit A6-E2):

"(b)(7)(C)

(b)(7)(C)

(b)(7)(C) ”

On (b)(7)(C) (b)(7)(C) circulated this narrative to TVA management when he sent a document titled “(b)(7)(C) ’ to (b)(7)(C) and (b)(7)(C) The “(b)(7)(C) contained the questions and answers sent by (b)(7)(C) in “(b)(7)(C) ’. (b)(7)(C) furthered this by sending “(b)(7)(C) ” to TVA Senior Management including (b)(7)(C) (b)(7)(C) and (b)(7)(C) (b)(7)(C) also sent “(b)(7)(C) ” on a separate occasion to Watts Bar Management including (b)(7)(C) , (b)(7) (b)(7)(C) (b)(7)(C) and (b)(7)(C) (Exhibit A6-E3)(Exhibit A6-E4).

On December 18, 2015, OI conducted interviews of Watts Bar employees associated with the events of November 11, 2015. (b)(7)(C) and (b)(7)(C) both gave testimony consistent with information contained in the ‘(b)(7)(C) ” that ran counter to information received in previous allegations that alleged the Shift Manager was directed to proceed on November 11, 2015, against the recommendations of the control room operators.

> Agent’s Note: (b)(7)(C) brought a copy of the (b)(7)(C) to his December 18, 2015, OI interview, and referred to it during questioning.

(b)(7)(C) made the following statements during his interview which failed to acknowledge that he was aware of any apprehension of the MCR operators on November 11, 2015 (Exhibit T-07a, pp. 72-75):

> During questioning about the events of November 11, 2015:
>
> > “Did anybody either, you know, before when you're planning to do this, during, or after this bring any concerns to you concerning about doing this. I do not want to do this or –”
> >
> > MR. (b)(7)(C) No.
> >
> > “did any operators or anyone come to you to say I was uncomfortable doing this and was told to do this anyway type of stuff?”
> >
> > MR. (b)(7)(C) Oh, oh. No, sir.
>
> Prior to ending the interview (b)(7)(C) added the following when asked if there was anything else he want to add, clarify, add to, or expand on?

"Nobody brought up anything of I feel uncomfortable at any time, including the discussions of will excess let-down work the way it is supposed to work."

"Nobody brought up anything that I was forced, coerced, or pushed into any kind of corner whatsoever or attempted to hide anything at all."

(b)(7)(C) made the following statements during his OI interview and took responsibility for the decision to remove the RHR system from service and heat-up on excess let-down. He did not discuss other MCR operators objecting to the plan or that anyone else was pressuring him to proceed (Exhibit T-22a, pp. 20-21, pp. 37-40, p. 55):

"We [Crew] discussed the fact that we had not done it before and we were willing to start it and see how it went. I thought we had enough excess let-down flow to be able to control pressurizer level on excess let-down."

"I do not remember any big push back from them [Crew]."

"Our operators are pretty good about forcefully pushing back if they felt strongly."

"I did not [offer alternatives] because I did expect that we would be able to control pressurizer level with excess let-down. I was not correct."

"I have control of the plant and I could have very well said I'm absolutely not heating up without normal let-down in service."

"Well, I did not -- the reason that I did not challenge it more is because I had no basis for saying this will not work." When asked if anyone conveyed any schedule pressure or any information coming from outside the control room that might have unduly influenced him in doing this, (b)(7)(C) replied "I do not remember any specific undo pressure." Following the OI interviews on December 18, 2015, (b)(7)(C) and (b)(7)(C) exchanged emails discussing their interviews which contradicted some of the information (b)(7)(C) provided during his interview (Exhibit A6-E5).

(b)(7)(C) wrote – "Obviously we discussed your crews actions in my interview. I expressed that the actions the on-shift crew took were appropriate, and in no way represented a violation of our PU&A standards. I portrayed that we made a flawed risk informed decision to continue into Mode 4, and that put you on the spot to have to make a decision on how you could stop and place the plant in a safe condition."

"Do not know how this part will turn out, as I used the term "we made a bad decision" - meaning the OCC and management team – but could not remember who was in the OCC with me that day."

"Bottom line, I believe that little can be done to crew personnel by the NRC about the

actions taken in response to the event. On the other hand, I may need you to give me odd jobs for cash if they head-hunt for why the organization put you in this position."

(b)(7)(C) wrote in reply – "I also believe that the overall impression will be that we, as a site, did make a bad decision based on schedule pressure. What they [NRC] will not know is it was not a site decision it was really a SR management decision and the fact that we have now been conditioned to not challenge current site management poor decisions for fear of retaliation. I am seriously considering re-interviewing and expressing my actual feelings about the current culture and daring them to retaliate against me".

During his interview by OI on December 18, 2015, (b)(7)(C) discussed an impending shift order. He noted its purpose was to re-emphasize conservative decision making. Although he had not seen that standing order at the time of the interview he stated that he planned to review the shift order that afternoon and check it for its content. He committed to provide copies to the SRI. During a subsequent interview by TVA OIG a few weeks later, (b)(7)(C) testified he did not recognize Shift Order 15-50 and did not know who wrote it (Exhibit T-00a, pp. 12-16, pp. 31-33) (Exhibit T-00b, pp. 1-2).

On December 18, 2015, (b)(7)(C) Shift Order 15-50. The Shift Order was developed in response to the November 11, 2015, heat-up, with the intent that, "The guidance will be used for making plant decisions during degrading conditions." The Shift Order attached the (b)(7)(C) which indicated that on November 11, 2015, members of the MCR operating crew did not expect the uncontrolled level rise in the pressurizer because they thought they would be able to get 50-60gpm from excess let-down which would stabilize RCS inventory. The Shift Order also attributes these errors in assumption and plant knowledge as the foundation for the events of November 11, 2015. The Shift Order presented the operators as the sole cause for the events of November 11, 2015, and does not include any information or discussion on the involvement of the OCC or Watts Bar management in that decision (Exhibit A6-E6).

OI finds that information contained in operator training and system design documents did not support the statements contained in the Shift Order. Based on a review of operator training and system design, OI concludes that there was no plausible basis identified for the narrative about the operators having a gross "misconception" about the ability of the excess let-down and how the plant operates. All licensed operators are required to have knowledge of the engineering concept of the relationship of valve position to flow rate and back pressure and specifically the relationship between let-down flow and RCS pressure. OI finds it is not plausible that no one on the crew of licensed operators would understand its application as it related to the operation of the Excess Let-down system. The review also established that the operators would have known the system could not operate in the manner described in the Shift Order (Exhibit A6-E7).

The procedure for establishing Excess Let-down, SOI 62.01, provides evidence that the operators would have known they would not have expected 50-60 GPM. The procedure states that the design flowrate is 20GPM and cautions that you could get up to 50GPM depending on plant conditions (Exhibit A6-E7, p. 56).

CAUTION

Excess letdown design flow is 20 gpm. Preop W-2.1 determined that 1-FCV-62-56, CVCS EXCESS LETDOWN FLOW CONTROL, can pass up to 50 gpm (depending on RCS pressure and 1-HIC-62-56A output), which could cause higher than designed excess letdown and CCS temperature.

Operator training specifically indicates that the design excess let-down flow capacity is 20GPM and cautions against the possibility of getting higher than design temperatures (Exhibit A6-E7, p. 125, p. 442).

Although excess letdown design flow is 20 gpm, pre-operational testing determined that 1-FCV-62-56 can pass up to 50 gpm, depending on RCS pressure and controller output.

This could cause higher than designed excess letdown and CCS temperature. Based on this, when placing excess letdown in service, maximum temperature is 206°F.

II. Presentation

Excess Letdown ***Objective 1***

Provides a means of letdown when normal letdown is not available.

- Capacity of excess letdown (20 gpm) is sufficient to compensate for RCP seal water flow into RCS and maintain PZR level.
- Excess letdown flow travels through the seal water return filter and back to the suction of the CCPs.

Information gathered during the investigation provided further evidence that the cause of the plant event was not solely the main control room operators. Schedules of plant operations were sent out by the OCC to Watts Bar managers including; (b)(7)(C) (b)(7)(C) and (b)(7)(C) which detailed the planned removal of the RHR system from service before returning the normal let-down line to service. Updates to the outage schedule following the event indicated the delay and need to wait for normal let-down to return to service (Exhibit A6-E8)(Exhibit A6-E9)

In an e-mail (b)(7)(C) sent to all Shift Managers on (b)(7)(C) he stated he was (b)(7)(C) (Exhibit A6-E10).

Subsequent interviews of the licensed operators listed below, also failed to corroborate the assertions contained in the shift order and provided additional contradictory information. In conflict with the information provided in shift order, interviews and evidence gathered showed that members of the crew did not have a misconception about the capabilities of the excess let-down system and did not think they would be able to get 50-60 GPM from excess let-down. The interviews also established that the operators did not support taking the RHR system out of service. (b)(7)(C) stated during several interviews and included in his written statement about the events of November 11, 2015, that even though he voiced his concerns to the OCC, the OCC directed the control room operators to remove RHR from service and allow RCS to heat-up. (b)(7)(C) stated that no one said that night that they knew the heat up using excess let-down could be done and that no one in the control room wanted to move forward. (Exhibit A6-E11)(Exhibit T-22b)(Exhibit T-22c)(Exhibit T-22d)(ExhibitT-22e).

REDINGER stated during several interviews and included in his written statement about the events of November 11, 2015, that none of the control room operators had a good feel about how much excess let-down flow the crew would get at low pressure and that the crew was not sure what the capabilities of excess let-down would be during the plant conditions on November 11, 2015. He stated that he did not provide the 50-60gpm number to (b)(7)(C) which was included in the shift order. While they did not have enough information that day to tell the OCC that it absolutely would not work, no one felt like it was worth the risk. REDINGER explained that none of the MCR operators were comfortable performing the plant operation and raised their concerns to the SM and to the OCC. After discussions with the OCC, (b)(7)(C) came back and told the control room that it had been decided to go ahead and move forward (Exhibit A6-E12, p. 2)(Exhibit T-40a, pp 17-38)(Exhibit T-40b, pp. 1-2)(Exhibit T-40c, p. 1) (Exhibit T-40d, pp 1-2, pp. 4-10)(Exhibit T-40e, pp.1-3).

(b)(7)(C) described during his interviews that all of the license holders in the control room on November 11, 2015, were against moving ahead. He explained that the OCC directed the removal of the RHR system and was providing reassurance to the MCR operators that use of the excess let-down system would work for the heat-up. In respect to the information in the shift order he identified that the crew did expect PZR level to rise because they did not expect 50-60gpm from excess let-down at that pressure. He explained that this was a main argument used against the plan, but the crew was pushed hard by the OCC. He stated the shift order portrayed the operating crew as deciding to take the actions of November 11, 2015, on their own but they were not willing participants, and, did what they had to do to not damage the plant (Exhibit A6-E13, pp. 9-10)(Exhibit A6-E14)(Exhibit T-01b, pp. 13-14)(Exhibit T-01a, pp. 2-3, pp. 14-15)(Exhibit T-01c).

(b)(7)(C) described during his interviews that there was pressure being felt in the Control Room from the OCC to move from Mode 5 to Mode 4. He discussed that licensed Operators voiced their concerns with the plan to move ahead using the Excess Let-Down System and (b)(7)(C) was not for the idea. Although (b)(7)(C) communicated to the OCC the concerns the Control

Room personnel had with the plan, the OCC decided on a plan to proceed with the heat-up. (b)(7)(C) stated, "I felt like it was a very very bad idea to proceed on." (b)(7)(C) stated the operators all just knew it was a bad idea based off their training and experience. (b)(7)(C) recalled saying out loud "this is stupid" when (b)(7)(C) told them that the OCC said to proceed (Exhibit T-16a). (b)(7)(C) explained the people involved did not provide details of the event for the Shift Order. He stated that it appeared on the Shift Order that the person who wrote it was trying to make the event look like it had been a planned thing that was well thought out and controlled (Exhibit T-02c).

(b)(7)(C) described during his interviews that he talked to everyone on the Unit 1 side in the main control room that day about heating up without normal let-down being available. None of them thought it was a good idea. (b)(7)(C) said that when he saw the "50gpm" answer given in the statement he could not figure out where that number came from. When he read the number "50" on the document he told his peers that the number "50" was just silly. He added to the interviewers that he did not tell anyone on November 11, 2015, that he thought they could get that out of excess let-down. The number was totally unrealistic. Speaking of the plant manager, (b)(7)(C) said on November 11, 2015, after the control room personnel stabilized the plant (b)(7)(C) came into the control room and congratulated everyone. (b)(7)(C) recalled (b)(7)(C) saying, "we put you guys in a bad place today". (b)(7)(C) gave (b)(7)(C) a bear hug (Exhibit T-05a)(Exhibit T-05b).

On the (b)(7)(C) of January 6, 2016, NRC's (b)(7)(C) received supplemental information to allegation 2015-A-214 that was submitted by (b)(7)(C) This information addressed the content of Shift Order 15-50 and the events of November 11, 2015. (b)(7)(C) documented a conversation with (b)(7)(C) where they discussed operator push-back to the OCC and information being promulgated associated with the plant operations that day. He included excerpts from the shift order and made annotations where he believed they were inaccurate. He noted that neither he nor the other three MCR operators he had talked with had been briefed on its content. He highlighted disagreement with the 50-60gpm number and commented that operators were specifically pushing back because they needed all normal let-down orifices open to keep up with pressurizer level increase (Exhibit A6-E15).

On January 6, 2016, Region II NRC Senior Managers conducted a site visit at Watts Bar, which was attended by Watts Bar senior managers including (b)(7)(C) (b)(7)(C) and (b)(7)(C) During this meeting, the Watts Bar managers jointly made a presentation to NRC officials that included information about the events of November 11, 2015. In addition to the slides provided to the NRC, discussions occurred using additional Back-up Slides TVA had prepared for the meeting. Included was a discussion of the content of Shift Order 15-50 which (b)(7)(C) specifically questioned the TVA assertion that the crew expected 50 – 60 GPM from excess let-down based on their training. Even after (b)(7)(C) spoke up telling the group that the numbers were wrong, neither (b)(7)(C) nor anyone else from TVA at the meeting backed off the number (Exhibit T-03, p. 8)(Exhibit A6-E16, p. 1, p. 24)(Exhibit A6-E17).

The following "insights" were presented by TVA in slide twenty-three to the NRC during the January 6, 2016, meeting associated with the Nov 11, 2015 event (Exhibit A6-E16, p. 1, p. 24):

- Operator fundamentals – Conservative decision making
- Procedures
    - Did not follow our rules
    - Procedures were not in hand
    - Deviate from procedures without proper authorizations

The information Watts Bar managers presented to the NRC placed accountability for the events of November 11, 2015, solely on the lack of conservative decision making by the MCR operators and various procedural issues. Neither slide twenty-three, nor TVA senior managers during the meeting, discussed the roll the OCC and TVA Management had in the decision to remove RHR from service, the questioning attitude demonstrated by the MCR staff to the OCC, and that MRC operators questioned the capability of excess let-down to control pressurizer level. During the meeting TVA presented actions taken in response to the events of November 11, 2015, which comports to the issue being exclusive to the actions of the MCR operators. These actions included the (b)(7)(C) and (b)(7)(C) performing paired observations with Shift Managers and a shift order implemented to reinforce standards and expectations for conduct of evolution briefings. Nevertheless, NRC's (b)(7)(C) testified that (b)(7)(C) was extremely adamant that he knew exactly what had occurred and that the (operators) crews are always transparent with him on matters. According to (b)(7)(C) insisted that the cause of the November 11, 2015, event was reflective of the information contained in the presentation given to the NRC. Specifically, the information contained on slide twenty-three is what (b)(7)(C) and TVA said happened (Exhibit T-50) (Exhibit A6-E16, p. 1, p.24).

Evidence obtained during the investigation identified that (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) all had additional information that was withheld or misrepresented to the NRC during the January 6, 2015 meeting.

(b)(7)(C) was (b)(7)(C) an e-mail sent on (b)(7)(C) between (b)(7)(C) and (b)(7)(C) in which (b)(7)(C) places direct responsibility for the decision to proceed on Nov 11, 2015, on the OCC and management, not the crew. (b)(7)(C) (b)(7)(C) and (b)(7)(C) all had knowledge of and were described as supportive of the decision to remove RHR from service before normal let-down was operational. (b)(7)(C) (b)(7)(C) and (b)(7)(C) were all involved with the start-up activities on November 11, 2015, and were party to an e-mail sent on (b)(7)(C) (b)(7)(C) from the (b)(7)(C) with subject "(b)(7)(C) (b)(7)(C)" to Watts Bar managers. This email contained details of the Unit 1 plant operational schedule for the day, including activities to remove the RHR system from service and perform a plant heat-up before normal let-down was returned to service. (b)(7)(C) reply to this email demonstrates his level of involvement in the activities on November 11, 2015. (b)(7)(C) in his OI interview on December 18, 2015, stated that the OCC had discussions of those activities and he was knowledgeable of the same (Exhibit A6-E5, pp. 1-2) (Exhibit A6-E8, p. 1)(Exhibit A6-E9, p. 1)(Exhibit T-200a,

pp. 12-16).

During an interview, (b)(7)(C) stated that there was discussion in the OCC to remove RHR and allow the heat-up to begin. (b)(7)(C) said that they had many discussions about that in the OCC and in the main control room with the Shift Manager. (b)(7)(C) said that (b)(7)(C) and (b)(7)(C) both were involved in the decision and both knew exactly what was going on. (b)(7)(C) stated that both (b)(7)(C) and (b)(7)(C) were in favor of removing the RHR system (Exhibit T-21d, pp. 6-7).

TVA's information, presented at the January 6, 2016, meeting and as documented in the Shift Order, were determined by OI to be incomplete and inaccurate. Specifically, as previously annotated, the control room operators did not corroborate the assertions in the shift order that the crew did not expect the condition that occurred or based on training the crew thought they should have been able to get 50-60gpm from excess let-down which would have stabilized RCS inventory. No operators indicated this was true and most operators made statements directly contradicting this assertion. Operators indicated they expressed reservations about the risks of proceeding and they were directed by OCC to proceed with the removal of the RHR system from service. MCR Operators expressed that they did not have any misconception about the capabilities of the excess let-down system at low RCS pressure. Therefore, based on the evidence, OI determined that TVA's information, presented at the January 6, 2016, meeting and documented in the Shift Order was deliberately not complete and accurate in all material respects. Specifically: (Exhibit A6-E18)

TVA MCR operators understood, via their experience and training, the capability of excess let-down and raised questions to the OCC.

MCR operators demonstrated an element of conservative decision-making when they raised risk concerns to the OCC regarding the ability to control pressurizer level once RHR let-down was secured.

The OCC was aware of MCR operator's concerns.

TVA management was aware of, and supportive of, the OCC 'plan of the day' to proceed with the plant heat-up, while securing RHR let-down and continuing on excess let-down.

This information was known to some or all TVA management attendees at the on-site January 6, 2016, meeting with Region II NRC Senior Managers. The information conveyed to NRC at the January 6, 2016, site meeting was material because the NRC staff would have conducted additional and/or more timely safety reviews into the November 11, 2015, evolution and the NRC would have conducted additional reviews into TVA's apparent and root cause analyses including reviews of corrective actions, had TVA senior managers conveyed complete and accurate information to the NRC. The information contained in Shift Order 15-50 was material because it was directly addressing the subject of an allegation under review by the NRC. The shift order included the "(b)(7)(C)" which was referred to by (b)(7)(C) during his interview

with OI on December 18, 2015. Additionally, this information directly impacted the disposition of allegations being reviewed by the NRC.

Conclusion

Based on the evidence developed during this investigation, OI substantiated that (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) deliberately presented incomplete and inaccurate information concerning the November 11, 2015 RHR event as documented in Shift Order 15-50 and presented to the NRC during a site visit on January 6, 2016.

Allegation No. 7

Submission of incomplete and inaccurate information by TVA Managers to OI during interviews on December 18, 2015.

Applicable Regulations

10 CFR 50.5: Deliberate Misconduct
10 CFR 50.9: Completeness and Accuracy of Information

Documentary Evidence

Email (b)(7)(C) Dennis REDINGER interview notes sent by (b)(7)(C) (A7-E1)
Email Email exchange between (b)(7)(C) and (b)(7)(C) (A7-E2)

Testimony

Interviews of (b)(7)(C) Shift Manager

(b)(7)(C) SM at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

> Agent's Note: In his initial interview with OI on December 18, 2015, (b)(7)(C) failed to provide the same level of detail and specifics as he provided in subsequent interviews.

On December 18, 2015, (b)(7)(C) was interviewed by OI concerning the events of November 11, 2015, and provided the following information. (b)(7)(C) (b)(7)(C) in many different nuclear power plants, DOE facilities, engineering firms. (b)(7)(C) has been licensed since (b)(7)(C) and a Shift Manager since (b)(7)(C) (b)(7)(C) explained the plant had removed normal let-down from service the night previous to the shift that he took over on the (b)(7)(C) of November 11, 2015. At (b)(7)(C) we had heated up to enter Mode 4 which is 200 degrees. At (b)(7)(C) we secured both trains of RHR to allow the RCS to continue heating up. The plan for November 11, 2015 was to heat-up and pressurize RCS and enter Mode 3 at some point during that day or that night. The normal let-down system for CVCS was out of service for repair to a leaking valve and they had placed the alternate let-down system, excess let-down, in service for let-down capabilities. Other than that, all the other plant conditions were normal as to be expected for Mode 5 and Mode 4 (Exhibit T-22a, pp. 4-11).

(b)(7)(C) discussed that nobody raised any concerns nor did any of the crew have any questions or concerns about trying to do a heat-up on excess let-down. (b)(7)(C) explained that the crew discussed the fact that they had not done it before and were willing to start it and

see how it went. (b)(7)(C) stated he thought they had enough excess let-down flow to be able to control pressurizer level on excess let-down. When asked about the crew's reaction to planned events of the day, (b)(7)(C) stated he did not remember any big push back from the crew. However, (b)(7)(C) remembered being a little bit anxious continuing the start-up activities with only excess let-down because he had never done it like that before and was not one hundred percent sure that it was going to go the way that he anticipated it to. (b)(7)(C) reasoned that he did not challenge the path to move forward because he had no basis for saying it would not work. When asked about influences on his decision concerning schedule pressure or any information coming from outside the control room that might have unduly influenced him in his decision he stated he did not remember any specific undo pressure (Exhibit T-22a, pp. 15-19, pp. 21-40, pp. 43-56).

On January 19, 2016, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) explained that on the (b)(7)(C) of November 11, 2015, WBN1 was at Mode 5. WBN1 had just reassembled the reactor and the temperature was less than 200 degrees. OCC directed the MCR to move to Mode 4 which would have kept the site on schedule. The operating crew moved to Mode 4 as planned and as instructed. (b)(7)(C) further explained that around (b)(7)(C) hours, all prerequisites to move to Mode 4 had been handled. (b)(7)(C) instructed the MCR to go to 210 degrees and maintain that temperature which placed the plant into Mode 4. According to (b)(7)(C) the OCC told (b)(7)(C) OPS OCC representative, to inform (b)(7)(C) to go to Mode 3 and take the temperature up to 350 degrees. (b)(7)(C) further explained that around (b)(7)(C) the OCC directed (b)(7)(C) to take RHR out of service, and then move to Mode 3. (b)(7)(C) testified that he informed (b)(7)(C) that he was uncomfortable moving to Mode 3 and that they needed to stay where they were and wait for the let-down system to come back into service in a few hours. (b)(7)(C) said he mentioned to (b)(7)(C) that the OCC was pushing too hard. According to (b)(7)(C) (b)(7)(C) was also uncomfortable with the decision. (b)(7)(C) explained that the OCC was pushing too hard and wanted to stay on schedule (Exhibit T-22b).

(b)(7)(C) said that (b)(7)(C) raised (b)(7)(C) concerns to the OCC and recalled that (b)(7)(C) gathered everyone around a table and told them of (b)(7)(C) concern. (b)(7)(C) stated that (b)(7)(C) also told them that they were pushing the operators too hard and he wanted it to stop. According to (b)(7)(C) the OCC dismissed the concern and instructed (b)(7)(C) to move to Mode 3. (b)(7)(C) said that he would have pushed back harder on November 11, 2015, but he was worried that he would be somehow reprimanded for not getting on board with the decision to move to Mode 3. His actions in the MCR were heavily influenced by his fear of losing his job (Exhibit T-22b).

On July 20, 2016, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) advised that there was no discussion on November 11, 2015, that it might be possible to get 70gpm using the excess let-down. (b)(7)(C) stated, "I do not think you could ever get 70gpm out of excess let-down." If someone had said 70gpm was possible, (b)(7)(C) stated that the conditions would have to be "absolutely perfect" at full pressure to ever get close to that and even then, it would be a "slim chance." Regardless, (b)(7)(C)

stated in the MCR that (b)(7)(C) "no one had the number 70gpm on our brain anywhere." (b)(7)(C) stated that no one said that night that they knew the heat-up using excess let-down could be done. Rather, everyone said that they did not know how it would react and they (licensed operators) knew they had "stuff" they could do if it went wrong. (b)(7)(C) stated that the "big guys" were saying "go" and the operators had actions in their back pocket to use if it failed. (b)(7)(C) stated that no one in the MCR wanted to move forward. (b)(7)(C) is not aware of whether any of the other guys talked to (b)(7)(C) About a month later when the NRC brought up the issue, (b)(7)(C) was in (b)(7)(C) office with (b)(7)(C) and (b)(7)(C) At which time, (b)(7)(C) asked (b)(7)(C) if (b)(7)(C) should be removed from watch until they found out the answers to the questions. (b)(7)(C) said "Yes." (b)(7)(C) stated that he was glad he had been in the meeting and heard the conversation because he realized it was not a punitive thing but rather just a conservative measure until the NRC was comfortable. (b)(7)(C) also believes it was to position themselves to look better to the NRC. (b)(7)(C) said this was normal and he would have done the same thing. (b)(7)(C) went back to his regular work control job and was able to fill in the next time he was asked for help in watch standing. (b)(7)(C) said he was never remediated. (b)(7)(C) never heard (b)(7)(C) or (b)(7)(C) talk about taking anyone else off watch because "the buck stops with me (b)(7)(C) (Exhibit T-22c).

On September 6, 2016, (b)(7)(C) was interviewed by AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, TVA OIG and OI wherein he provided the following information. Although (b)(7)(C) asserted that he was not worried about raising issues to the OCC, (b)(7)(C) was certainly not comfortable about challenging the (b)(7)(C) , and (b)(7)(C) about plant decisions. (b)(7)(C) emphasized that once the first engineering test was over, he called (b)(7)(C) to inquire how much longer before the valve (normal let-down) was in-service. According to (b)(7)(C) (b)(7)(C) told him the valve would be ready soon. (b)(7)(C) said the schedule called for WBN1 to proceed to Mode 3. (b)(7)(C) stated there were no procedures in place about what to do or not to do when heating up using excess let-down, (b)(7)(C) said there was nothing in writing saying it cannot be done. (b)(7)(C) disclosed that he was uneasy about proceeding partly due to the fact that he had no experience heating up using excess let-down. (b)(7)(C) stressed that WBN1 was not at full pressure, but (b)(7)(C) admitted he had no idea how using the excess let-down would affect the pressurizer level. Likewise, (b)(7)(C) was unable to estimate how much inventory (water) they expected to get out using excess let-down, no numbers were discussed (Exhibit T-22d).

(b)(7)(C) stated that he knew there were ways to control the plant if excess let-down did not work and if the plant did what he was "afraid" it would do. (b)(7)(C) explained that the procedures are not written for every step (scenario). (b)(7)(C) stated that he knew how to recover the plant if excess let-down did not work and understood that the pressurizer level will go up during heat-up. (b)(7)(C) stated that the first step for heat-up was to remove the RHR. Once the RHR was removed, the temperature in the RCS would increase. (b)(7)(C) stated that prior to removing the RHR, (b)(7)(C) set some trigger values to ensure they took action. At this point, nobody could put their finger on why they should not heat-up. According to (b)(7)(C) if he did not have contingencies then he would have been more concerned.

(b)(7)(C) stated that the licensed operators were not overly experienced and once it was discussed none of them had an opinion one way or the other except (b)(7)(C) (b)(7)(C) stated that no one else said it was not a good idea which caused (b)(7)(C) to start doubting himself because he seemed to be the only one that was uneasy. In regard to (b)(7)(C) (b)(7)(C) testified that (b)(7)(C) basically said something to the effect that, "He (b)(7)(C) felt (b)(7)(C) pain but we have a schedule." (b)(7)(C) confirmed that he set a trigger value of 80 percent pressurizer level where they were to open the PORV to control the rate of heat-up. They then took the RHR out of service and the pressure quickly got to 79 percent which was faster than they anticipated. (b)(7)(C) said the rate of heat-up is what "killed" us because it out-ran the excess let-down system which is what (b)(7)(C) suspected was going to happen. At this point, REDINGER opened the RHR inlet valves and the pressure level went down (Exhibit T-22d).

> Agent's Note: Testimony from the other control room operators (REDINGER, (b)(7)(C) (b)(7)(C) and (b)(7)(C) on shift during the November 11, 2015, events contradicts (b)(7)(C) statement that none of the other operators had an opinion on removing RHR from service.

Once the normal let-down got fixed they reconfigured everything and moved on. (b)(7)(C) said that they should have just waited until the normal let-down was fixed. About ten minutes after they opened the relief valve and recovered, (b)(7)(C) came in the MCR and thanked everyone for not letting the plant get out of control. (b)(7)(C) said it was clear that (b)(7)(C) had been in the OCC watching the event on the monitors and knew what had just happened. (b)(7)(C) said the event was not logged and no CRs were written. (b)(7)(C) admitted that he did not check the logs and acknowledged that they made mistakes. (b)(7)(C) could not recall who the Unit Supervisor was on the day of the event, but confirmed that later that afternoon, he sent an email to the other Shift Managers telling them, "Do not try to heat-up the plant using excess let-down." The comment on the email about not letting anyone talk you into it was made because it was not his idea to proceed with the heat-up without normal let down in service. (b)(7)(C) does not believe anyone in the OCC would have put the plant at risk on purpose. However, the lack of experience, knowledge, and schedule pressure all happened because they were trying to see how fast they can get back to making money. (b)(7)(C) expressed that everyone knew what he was doing, why he was doing it and what he had to do to recover the plant. (b)(7)(C) stated that at the time all these "smart people" were saying it is "ok" to do it and he (b)(7)(C) was the only one saying "no" so he talked himself into thinking it was alright because everyone else felt it was alright (Exhibit T-22d).

On April 3, 2017, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) said that he recalled (b)(7)(C) (b)(7)(C) or (b)(7)(C) telling him to do it on November 11, 2015. He said that he could not remember which one it was, but he did recall it was the person in the (b)(7)(C) position. (b)(7)(C) also said that during the same conversation he was informed that (b)(7)(C) and (b)(7)(C) wanted it done or were for it. (b)(7)(C) said that he let others in the OCC know that he was not in favor of doing it and did not want to do it. (b)(7)(C) said that the OCC knew how he felt. (b)(7)(C) told the

agents that he could not remember exactly who all he told in the OCC, but he did know it was more than just (b)(7)(C) (b)(7)(C) added that he has a family to feed (Exhibit T-22e).

Interviews of (b)(7)(C)

(b)(7)(C) at WBN was interviewed on multiple occasions by the NRC, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, where he provided the following information in substance.

During questioning about the events of November 11, 2015, (b)(7)(C) made the following statements (T-07a, pp. 72-75):

> During questioning about the events of November 11, 2015:
>
> "Did anybody either, you know, before when you're planning to do this, during, or after this bring any concerns to you concerning about doing this. I do not want to do this or – "
>
> MR. (b)(7)(C) No.
>
> "Did any operators or anyone come to you to say I was uncomfortable doing this and was told to do this anyway type of stuff?"
>
> MR. (b)(7)(C) Oh, oh. No, sir.
>
> Prior to ending the interview (b)(7)(C) added the following when asked if there was anything else he want to add, clarify, add to, or expand on?
>
> "Nobody brought up anything of I feel uncomfortable at any time, including the discussions of will excess let-down work the way it is supposed to work."
>
> "Nobody brought up anything that I was forced, coerced, or pushed into any kind of corner whatsoever or attempted to hide anything at all."

Agent's Analysis

In summary, based on the evidence developed during this investigation, OI substantiated that (b)(7)(C) and (b)(7)(C) deliberately provided incomplete and inaccurate information during interviews by OI regarding the events of November 11, 2015. On December 16, 2015, (b)(7)(C) (b)(7)(C) provided notes to (b)(7)(C) from his interview of the Control Room Supervisor (Dennis REDINGER) on shift during the events of November 11, 2015, which was forwarded to (b)(7)(C) on December 17, 2015. (b)(7)(C) was present for the interview on December 16. During the interview it was documented that REDINGER expressed that using excess let-down to manage pressurizer level made the crew uneasy, but Ops tries to get things done to support the plant (Exhibit A7-E1).

On December 18, 2015, OI conducted interviews of Watts Bar employees associated with the events of November 11, 2015. (b)(7)(C) and (b)(7)(C) both gave incomplete and inaccurate testimony that ran counter to the information being reviewed through an Assist to Staff (2-2016-015F) by OI and RII inspectors as part of an allegation that alleged the Shift Manager (b)(7)(C) was directed to proceed on November 11, 2015, against the recommendations of the control room operators.

During questioning by OI about the events of November 11, 2015, (b)(7)(C) was asked about his knowledge of any concerns expressed by main control room licensed operators. (b)(7)(C) did not acknowledge having any knowledge that any licensed operator expressed concerns or that any were uncomfortable concerning the plant operations. (b)(7)(C) emphasized at the end of his OI interview "Nobody brought up anything of I feel uncomfortable at any time, including the discussions of will excess let-down work the way it is supposed to work" and "Nobody brought up anything that I was forced, coerced, or pushed into any kind of corner whatsoever or attempted to hide anything at all." (b)(7)(C) failed to provide that during a December 16, 2015, internal licensee interview of REDINGER, that (b)(7)(C) was present for, where REDINGER discussed that using the excess let-down to manage pressurizer level caused the crew to be uneasy (Exhibit T-07a, pp. 72-75)(Exhibit A7-E1).

(b)(7)(C) made the following statements during his OI interview on December 18, 2015, which failed to acknowledge that he was aware of any apprehension of the MCR operators on November 11, 2015 (Exhibit T-07a, pp. 72-75):

> During questioning about the events of November 11, 2015:
>
> > "Did anybody either, you know, before when you're planning to do this, during, or after this bring any concerns to you concerning about doing this. I do not want to do this or – "
> >
> > MR. (b)(7)(C) No.
> >
> > "did any operators or anyone come to you to say I was uncomfortable doing this and was told to do this anyway type of stuff?"
> >
> > MR. (b)(7)(C) Oh, oh. No, sir.
>
> Prior to ending the interview (b)(7)(C) added the following when asked if there was anything else he want to add, clarify, add to, or expand on?
>
> > "Nobody brought up anything of I feel uncomfortable at any time, including the discussions of will excess let-down work the way it is supposed to work."
> >
> > "Nobody brought up anything that I was forced, coerced, or pushed into any kind of corner whatsoever or attempted to hide anything at all."

During his December 18, 2015 OI interview about the events of November 11, 2015, (b)(7)(C) testified under oath about his motivations for proceeding with the start-up activities, crew feeling, and who made the decision to move forward. (b)(7)(C) provided information that in totality made it appear that he was independently exercising his authority as the Shift Manager to make decisions on November 11, 2015, without objection by the other licensed operators on watch in the main control room and without any undue external influence (Exhibit T-22a, pp. 20-21, p. 37, p 40, pp. 55-56):

(b)(7)(C) made the following statements during his OI interview and took responsibility for the decision to remove the RHR system from service and heat-up on excess let-down. He did not discuss other MCR licensed operators objecting to the plan or that anyone else was pressuring him to proceed (Exhibit T-22a, pp. 20-21, pp. 37-40, p.55):

> "We[Crew] discussed the fact that we had not done it before and we were willing to start it and see how it went. I thought we had enough excess let-down flow to be able to control pressurizer level on excess let-down."
>
> "I do not remember any big push back from them [Crew]."
>
> "Our operators are pretty good about forcefully pushing back if they felt strongly."
>
> "I did not [offer alternatives] because I did expect that we would be able to control pressurizer level with excess let-down. I was not correct."
>
> "I have control of the plant and I could have very well said I'm absolutely not heating up without normal let-down in service."
>
> "Well, I did not -- the reason that I did not challenge it more is because I had no basis for saying this will not work."
>
> When asked if anyone conveyed any schedule pressure or any information coming from outside the control room that might have unduly influenced him in doing this, (b)(7)(C) replied "I do not remember any specific undo pressure."

Following the OI interviews of December 18, 2015, (b)(7)(C) and (b)(7)(C) exchanged emails that (b)(7)(C) discussing their testimony which contradicted some of the information (b)(7)(C) provided to OI during his interview. This included details on information that was either withheld or failed to be honestly represented to the NRC. (b)(7)(C) wrote – "What they [NRC] won't know is it was not a site decision it was really a SR management decision. and the fact that we have now been conditioned to not challenge current site management poor decisions for fear of retaliation. I am seriously considering re-interviewing and expressing my actual feelings about the current culture and daring them to retaliate against me" (Exhibit A7-E2).

(b)(7)(C) also contradicted his statements in subsequent internal interviews and interviews with TVA OIG without TVA OGC present. On multiple occasions following his OI interview, (b)(7)(C) provided additional information to TVA which was excluded from and in some examples contradicted his testimony to OI:

> (b)(7)(C) said he mentioned to (b)(7)(C) that the OCC was pushing too hard. (b)(7)(C) stated that (b)(7)(C) also said he was uncomfortable with the decision. (b)(7)(C) explained to the investigators that he thought the OCC was pushing too hard to stay on schedule. The OCC wanted to meet the schedule and not go over the scheduled time for the outage. According to (b)(7)(C) the OCC dismissed the concern and instructed (b)(7)(C) and the Control Room to move to Mode 3. (b)(7)(C) said that he would have pushed back harder on November 11, 2015, but he was worried that he would be somehow reprimanded for not getting on board with the decision to move to Mode 3. His actions in the Control Room were heavily influenced by his fear of losing his job (Exhibit T-22b).
>
> (b)(7)(C) stated that no one in the control room wanted to move forward. He is not aware of whether any of the other "guys" [operators] talked to (b)(7)(C) (Exhibit T-22c).
>
> (b)(7)(C) stressed that Unit 1 was not at full pressure, but (b)(7)(C) admitted he had no idea how using the excess let-down would affect the pressurizer level. Likewise, (b)(7)(C) was unable to estimate how much inventory (water) they expected to get out using excess let-down and no numbers were discussed. (b)(7)(C) expressed that everyone knew what he was doing, why he was doing it and what he had to do to recover the plant. (b)(7)(C) stated that at the time all these "smart people" were saying it is "ok" to do it and he (b)(7)(C) was the only one saying "no" so he talked himself into thinking it was alright because everyone else felt it was alright (Exhibit T-22d).

Based on the evidence developed during this investigation, OI substantiated that both (b)(7)(C) (b)(7)(C) and (b)(7)(C) deliberately provided incomplete and inaccurate information to OI during interviews on December 18, 2015. This information was material because the information provided was used in the disposition of concerns in the allegation process and directly affected the direction of NRC actions associated with an open OI Assist to Staff. Additionally, the NRC would have conducted additional safety reviews and investigations into the November 11, 2015, evolution and additional reviews into TVA's corrective actions, had (b)(7)(C) and (b)(7)(C) provided complete and accurate information regarding the events of November 11, 2015.

Conclusion

Based on the evidence developed during this investigation, OI substantiated that both (b)(7)(C) and (b)(7)(C) deliberately provided incomplete and inaccurate information to investigators during OI interviews on December 18, 2015.

Allegations No. 8 and No. 9

Allegation No. 8:

Submission of incomplete and inaccurate information by TVA Managers in a Level 2 evaluation associated with Condition Report (CR) 1121520 on January 20, 2016.

Allegation No. 9:

Submission of incomplete and inaccurate information by TVA Managers to the NRC during the February 2, 2016, meeting with the NRC.

Applicable Regulations

10 CFR 50.5: Deliberate Misconduct
10 CFR 50.9: Completeness and Accuracy of Information

Documentary Evidence

CR 1121520 Level 2 Rev 0 with attachments 160210984 Final (A8-E1)

Email (b)(7)(C) (b)(7)(C) Level 2 interview notes (A8-E2)
Email (b)(7)(C) to (b)(7)(C) (A8-E3)
Email (b)(7)(C) REDINGER (A8-E4)
Email REDINGER January statement to (b)(7)(C) & (b)(7)(C) (A8-E5)
Email REDINGER statement to (b)(7)(C) (A8-E6)
Email (b)(7)(C) to (b)(7)(C) RHR statement to (b)(7)(C) (A8-E7)
Email (b)(7)(C) (A8-E8)
Email (b)(7)(C) Input to Level 2 (A8-E9)
Email (b)(7)(C) to (b)(7)(C) & (b)(7)(C) Level 2 are we right (A8-E10)
Email (b)(7)(C) to (b)(7)(C) (SCA) (A8-E11)
Email Safety Culture Analysis CR 1121520-1.18.16 (b)(7)(C) to (b)(7)(C) (A8-E12)
Email (b)(7)(C) changes X1 to remove OCC (A8-E13)
Email (b)(7)(C) response it is fixed (A8-E14)
Email (b)(7)(C) to (b)(7)(C) (A8-E15)
Email (b)(7)(C) sends out schedule update reply to (b)(7)(C) (A8-E16)
Email (b)(7)(C) requesting hourly outage updates (A8-E17)

Email (b)(7)(C) (b)(7)(C) outage update reply to (b)(7)(C) (A8-E18)

Email (b)(7)(C) Email chain between (b)(7)(C) and (b)(7)(C) (A8-E19)

CR 1127691 Rev 0 Root Cause Analysis with Attachments 20160219 (A8-E20)

Email (b)(7)(C) Feb 2 TVA meeting summaries (A9-E1)

Email (b)(7)(C) (b)(7)(C) about slides for meeting (A9-E2)

Feb 02 16 Drop in Notes (b)(7)(C) (A9-E3)

Email (b)(7)(C) (b)(7)(C) to (b)(7)(C) (A9-E4)

Testimony

Interviews of (b)(7)(C) Shift Manager

(b)(7)(C) SM at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

> Agent's Note: In his initial interview with OI on December 18, 2015, (b)(7)(C) failed to provide the same level of detail and specifics as he provided in subsequent interviews.

On December 18, 2015, (b)(7)(C) was interviewed by OI concerning the events of November 11, 2015, and provided the following information. (b)(7)(C) (b)(7)(C) in many different nuclear power plants, DOE facilities, engineering firms. (b)(7)(C) has been licensed since (b)(7)(C) and a Shift Manager since (b)(7)(C) explained the plant had removed normal let-down from service the night previous to the shift that he took over on the (b)(7)(C) of November 11, 2015. At (b)(7)(C) we had heated up to enter Mode 4 which is 200 degrees. At (b)(7)(C) we secured both trains of RHR to allow the RCS to continue heating up. The plan for November 11, 2015, was to heat-up and pressurize RCS and enter Mode 3 at some point during that day or that night. The normal let-down system for CVCS was out of service for repair to a leaking valve and they had placed the alternate let-down system, excess let-down, in service for let-down capabilities. Other than that, all the other plant conditions were normal as to be expected for Mode 5 and Mode 4 (Exhibit T-22a, pp. 4-11).

(b)(7)(C) discussed that nobody raised any concerns nor did any of the crew have any questions or concerns about trying to do a heat-up on excess let-down. (b)(7)(C) explained that the crew discussed the fact that they had not done it before and were willing to start it and see how it went. (b)(7)(C) stated he thought they had enough excess let-down flow to be able to control pressurizer level on excess let-down. When asked about the crew's reaction to planned events of the day, (b)(7)(C) stated he did not remember any big push back from the crew. However, (b)(7)(C) remembered being a little bit anxious continuing the start-up activities with only excess let-down because he had never done it like that before and was not

100 percent sure that it was going to go the way that he anticipated it to. (b)(7)(C) reasoned that he did not challenge the path to move forward because he had no basis for saying it would not work. When asked about influences on his decision concerning schedule pressure or any information coming from outside the control room that might have unduly influenced him in his decision he stated he did not remember any specific undo pressure (Exhibit T-22a, pp. 15-19, pp. 21-40, pp. 43-56).

On January 19, 2016, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) explained that on the (b)(7)(C) of November 11, 2015, WBN1 was at Mode 5. WBN1 had just reassembled the reactor and the temperature was less than 200 degrees. OCC directed the MCR to move to Mode 4 which would have kept the site on schedule. The operating crew moved to Mode 4 as planned and as instructed. (b)(7)(C) further explained that around 0940 hours, all prerequisites to move to Mode 4 had been handled. (b)(7)(C) instructed the MCR to go to 210 degrees and maintain that temperature which placed the plant into Mode 4. According to (b)(7)(C) the OCC told (b)(7)(C), OPS OCC representative, to inform (b)(7)(C) to go to Mode 3 and take the temperature up to 350 degrees. (b)(7)(C) further explained that around 1300, the OCC directed (b)(7)(C) to take RHR out of service, and then move to Mode 3. (b)(7)(C) testified that he informed (b)(7)(C) that he was uncomfortable moving to Mode 3 and that they needed to stay where they were and wait for the let-down system to come back into service in a few hours. (b)(7)(C) said he mentioned to (b)(7)(C) that the OCC was pushing too hard. According to (b)(7)(C) (b)(7)(C) was also uncomfortable with the decision. (b)(7)(C) explained that the OCC was pushing too hard and wanted to stay on schedule (Exhibit T-22b).

(b)(7)(C) said that (b)(7)(C) raised (b)(7)(C) concerns to the OCC and recalled that (b)(7)(C) gathered everyone around a table and told them of (b)(7)(C) concern. (b)(7)(C) stated that (b)(7)(C) also told them that they were pushing the operators too hard and he wanted it to stop. According to (b)(7)(C) the OCC dismissed the concern and instructed (b)(7)(C) to move to Mode 3. (b)(7)(C) said that he would have pushed back harder on November 11, 2015, but he was worried that he would be somehow reprimanded for not getting on board with the decision to move to Mode 3. His actions in the MCR were heavily influenced by his fear of losing his job (Exhibit T-22b).

On July 20, 2016, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) advised that there was no discussion on November 11, 2015, that it might be possible to get 70gpm using the excess let-down. (b)(7)(C) stated, “I do not think you could ever get 70gpm out of excess let-down.” If someone had said 70gpm was possible, (b)(7)(C) stated that the conditions would have to be “absolutely perfect” at full pressure to ever get close to that and even then, it would be a “slim chance.” Regardless, (b)(7)(C) stated in the MCR that (b)(7)(C) “no one had the number 70gpm on our brain anywhere.” (b)(7)(C) stated that no one said that night that they knew the heat-up using excess let-down could be done. Rather, everyone said that they did not know how it would react and they (licensed operators) knew they had “stuff” they could do if it went wrong. (b)(7)(C) stated that the “big guys” were saying “go” and the operators had actions in their back pocket to use if it failed. (b)(7)(C) stated that no one in the MCR wanted to move forward.

(b)(7)(C) is not aware of whether any of the other guys talked to (b)(7)(C) About a month later when the NRC brought up the issue, (b)(7)(C) was in (b)(7)(C) office with (b)(7)(C) and (b)(7)(C) At which time, (b)(7)(C) asked (b)(7)(C) if (b)(7)(C) should be removed from watch until they found out the answers to the questions. (b)(7)(C) said "Yes." (b)(7)(C) stated that he was glad he had been in the meeting and heard the conversation because he realized it was not a punitive thing but rather just a conservative measure until the NRC was comfortable. (b)(7)(C) also believes it was to position themselves to look better to the NRC. (b)(7)(C) said this was normal and he would have done the same thing. (b)(7)(C) went back to his regular work control job and was able to fill in the next time he was asked for help in watch standing. (b)(7)(C) said he was never remediated. (b)(7)(C) never heard (b)(7)(C) or (b)(7)(C) talk about taking anyone else off watch because "the buck stops with me (b)(7)(C) (Exhibit T-22c).

On September 6, 2016, (b)(7)(C) was interviewed by AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, TVA OIG and OI wherein he provided the following information. Although (b)(7)(C) asserted that he was not worried about raising issues to the OCC, (b)(7)(C) was certainly not comfortable about challenging the (b)(7)(C) and (b)(7)(C) about plant decisions. (b)(7)(C) emphasized that once the first engineering test was over, he called (b)(7)(C) to inquire how much longer before the valve (normal let-down) was in-service. According to (b)(7)(C) (b)(7)(C) told him the valve would be ready soon. (b)(7)(C) said the schedule called for WBN1 to proceed to Mode 3. (b)(7)(C) stated there were no procedures in place about what to do or not to do when heating up using excess let-down, (b)(7)(C) said there was nothing in writing saying it cannot be done. (b)(7)(C) disclosed that he was uneasy about proceeding partly due to the fact that he had no experience heating up using excess let-down. (b)(7)(C) stressed that WBN1 was not at full pressure, but (b)(7)(C) admitted he had no idea how using the excess let-down would affect the pressurizer level. Likewise, (b)(7)(C) was unable to estimate how much inventory (water) they expected to get out using excess let-down, no numbers were discussed (Exhibit T-22d).

(b)(7)(C) stated that he knew there were ways to control the plant if excess let-down did not work and if the plant did what he was "afraid" it would do. (b)(7)(C) explained that the procedures are not written for every step (scenario). (b)(7)(C) stated that he knew how to recover the plant if excess let-down did not work and understood that the pressurizer level will go up during heat-up. (b)(7)(C) stated that the first step for heat-up was to remove the RHR. Once the RHR was removed, the temperature in the RCS would increase. (b)(7)(C) stated that prior to removing the RHR, (b)(7)(C) set some trigger values to ensure they took action. At this point, nobody could put their finger on why they should not heat-up. According to (b)(7)(C) if he did not have contingencies then he would have been more concerned. (b)(7)(C) stated that the licensed operators were not overly experienced and once it was discussed none of them had an opinion one way or the other except (b)(7)(C) stated that no one else said it was not a good idea which caused (b)(7)(C) to start doubting himself because he seemed to be the only one that was uneasy. In regard to (b)(7)(C) (b)(7)(C) testified that (b)(7)(C) basically said something to the effect that, "He (b)(7)(C) felt (b)(7)(C) pain but we have a schedule." (b)(7)(C) confirmed that he set a trigger value

of 80 percent pressurizer level where they were to open the PORV to control the rate of heat-up. They then took the RHR out of service and the pressure quickly got to 79 percent which was faster than they anticipated. (b)(7)(C) said the rate of heat-up is what "killed" us because it out-ran the excess let-down system which is what (b)(7)(C) suspected was going to happen. At this point, REDINGER opened the RHR inlet valves and the pressure level went down (Exhibit T-22d).

> Agent's Note: Testimony from the other control room operators (REDINGER, (b)(7)(C), (b)(7)(C) and (b)(7)(C) on shift during the November 11, 2015, events contradicts (b)(7)(C) statement that none of the other operators had an opinion on removing RHR from service.

Once the normal let-down got fixed they reconfigured everything and moved on. (b)(7)(C) said that they should have just waited until the normal let-down was fixed. About ten minutes after they opened the relief valve and recovered, (b)(7)(C) came in the MCR and thanked everyone for not letting the plant get out of control. (b)(7)(C) said it was clear that (b)(7)(C) had been in the OCC watching the event on the monitors and knew what had just happened. (b)(7)(C) said the event was not logged and no CRs were written. (b)(7)(C) admitted that he did not check the logs and acknowledged that they made mistakes. (b)(7)(C) could not recall who the Unit Supervisor was on the day of the event, but confirmed that later that afternoon, he sent an email to the other Shift Managers telling them, "Do not try to heat-up the plant using excess let-down." The comment on the email about not letting anyone talk you into it was made because it was not his idea to proceed with the heat-up without normal let down in service. (b)(7)(C) does not believe anyone in the OCC would have put the plant at risk on purpose. However, the lack of experience, knowledge, and schedule pressure all happened because they were trying to see how fast they can get back to making money. (b)(7)(C) expressed that everyone knew what he was doing, why he was doing it and what he had to do to recover the plant. (b)(7)(C) stated that at the time all these "smart people" were saying it is "ok" to do it and he (b)(7)(C) was the only one saying "no" so he talked himself into thinking it was alright because everyone else felt it was alright (Exhibit T-22d).

On April 3, 2017, (b)(7)(C) was interviewed by TVA OIG and provided the following information. (b)(7)(C) said that he recalled (b)(7)(C) (b)(7)(C) or (b)(7)(C), telling him to do it on November 11, 2015. He said that he could not remember which one it was, but he did recall it was the person in the (b)(7)(C) position. (b)(7)(C) also said that during the same conversation he was informed that (b)(7)(C) and (b)(7)(C) wanted it done or were for it. (b)(7)(C) said that he let others in the OCC know that he was not in favor of doing it and did not want to do it. (b)(7)(C) said that the OCC knew how he felt. (b)(7)(C) told the agents that he could not remember exactly who all he told in the OCC, but he did know it was more than just (b)(7)(C) (b)(7)(C) added that he has a family to feed (Exhibit T-22e).

Interviews of Dennis REDINGER, Unit Supervisor

REDINGER, US at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

On November 18, 2015, REDINGER was interviewed by OI and discussed that he spent six years in the Navy and worked at multiple licensees including 16 years at Comanche Peake where he was an STA and SRO. He came to TVA in 2009 and was licensed in 2011. REDINGER discussed that the MCR operators did not know what the capabilities of the excess let-down system would be at the temperature and pressure they were operating at on November 11, 2015. REDINGER expressed there was a lack of knowledge among the operators and discussed that the response to their concerns from the OCC was the OCC understood the concern, but they were okay with proceeding forward. REDINGER stated that he wished he pushed back harder but at the time he felt like they did not have enough basis to say they were not going to continue. He expressed that at the time he felt that (b)(7)(C) was not totally committed to the idea either, but he tried to convey to us that the OCC wanted us to move forward with it and (b)(7)(C) was willing to try it (Exhibit T-40a, pp. 7-8, pp.17-38).

On January 19, 2016, REDINGER was interviewed by TVA OIG and explained that he was the WBN1 Unit Supervisor on November 11, 2015 and reported to (b)(7)(C) REDINGER stated that since it was scheduled, the OCC decided to use the Excess Let-down System instead of waiting on the normal let-down system. He discussed use of the Excess Let-down System rather than waiting on the normal one with licensed operators ((b)(7)(C) (b)(7)(C)) and no one was comfortable with doing it due to concerns regarding the ability to maintain inventory control and the pressurizer. While they did not have enough information that day to tell the OCC that it absolutely would not work, no one felt like it was worth the risk. They discussed it with (b)(7)(C) who also agreed that he did not think it was a good idea. (b)(7)(C) told them that he was going to tell the OCC that he was not comfortable with the plan to use the excess let-down system. (b)(7)(C) later came back and told the control room that it had been decided to go ahead and move forward so they did. They took out the RHR system and began monitoring the heat-up while trying to maintain temperature and inventory control (Exhibit T-40b).

On February 10, 2016, REDINGER was interviewed by TVA OIG. When discussing the Shift Order, REDINGER was asked to comment on each of the answers to the questions contained on the Question and Answer page of the shift order. Regarding the answer given to question number three, REDINGER said that generally that was the information that he provided, but he does not think the he provided the 50-60gpm number. REDINGER said he was not sure where the 50-60gpm number came from and recalls he gave his answers to the questions to (b)(7)(C) . He added that the entire answer (the whole paragraph) was what he told , except for the 50-60gpm part. REDINGER said that he did not give that number to . He does not know who did or where it came from (Exhibit T-40c).

On March 07, 2016, REDINGER was interviewed by TVA OIG REDINGER stated the shift order was written by (b)(7)(C) and (b)(7)(C) He (REDINGER) was initially briefed about the shift order by Shift Manager (b)(7)(C) which is the first time that he saw the 50-60gpm number and thought something did not look right. He still does not know where the number 50-60gpm came from. At the time, REDINGER thought the shift order was written to give the operators OE (operating experience) but now he believes it could have been to get everyone on the same page. REDINGER still has no knowledge of where the 50-60gpm in the shift order came from. He was interviewed by Employee Concerns Program (ECP) line by line about the shift order when he realized the statement looked like the information he had written except for the 50-60gpm number. After the interview with ECP, REDINGER ran into (b)(7)(C) and asked him where the 50- 60gpm came from and (b)(7)(C) did not reply. Discussing the December 15, 2015, email chain between REDINGER and (b)(7)(C) REDINGER reviewed the email and confirmed that the actions they took to recover the plant were the operator's actions but how they got there in the first place was not the operators' decision. He stated that they were under schedule pressure to move forward. REDINGER confirmed there was a disconnect in what was said in the email versus what was said in the shift order. Specifically, REDINGER stated that the shift order makes it look like the control room made the decision to move forward where the email shows that that was not the case at all (Exhibit T-40d, pp. 1-10).

On September 06, 2016, REDINGER was interviewed by TVA OIG, OI, and AUSA. REDINGER advised that using excess let-down had not been done very often. In the situation on November 11, 2015, neither REDINGER nor the other operators had done it before. He stated the excess let-down flow design says 40gpm. He also had heard during training that they had gotten 70gpm using excess let-down. This information came from older guys who had experience in the plant. However, all of these numbers were at full pressure. According to REDINGER, he and the other operators knew they would not get 70gpm and were pretty sure they would not get 40gpm given the temperature and pressure at which they were operating at that time. They were concerned that what they actually got would not be enough to heat-up. REDINGER stated that they could not say it would not work but he and the other operators had an uneasy feeling. REDINGER and the three reactor operators on crew discussed their concerns as a group. REDINGER then talked with the (b)(7)(C) (b)(7)(C), who also did not feel good about heating up using the excess let-down. Everyone was in agreement so REDINGER and (b)(7)(C) met with (b)(7)(C) and expressed the crew's concerns. During the discussion with REDINGER and (b)(7)(C), (b)(7)(C) did not challenge them and appeared to be taking information from them. REDINGER does not think (b)(7)(C) said one way or another whether he agreed with them. REDINGER was asked if he or the crew thought at the time they could get 50-60gpm from excess let down. REDINGER said that he did not think they could get 50-60gpm from excess let down. He said that nobody on the crew thought they could get 50-60gpm from excess let down. He stated that while 40gpm design and 70gpm pre-op testing was discussed at some point, the operators all knew not to expect those numbers because it was at 340lbs of pressure rather than the normal pressure of 2,225lbs. He stated that 40gpm and 70gpm would have only been at normal pressure and were not numbers for that day. The operators did not know what the actual numbers would be with the plant conditions at that time (Exhibit T-40e).

Interviews of (b)(7)(C) Reactor Operator

(b)(7)(C) RO at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) had been licensed for (b)(7)(C) years at Watts Bar. He was the (b)(7)(C) (b)(7)(C) of November 11, 2015. (b)(7)(C) stated "…I think there were different theories about whether excess let-down would be enough with RHR let-down out of service. And some people thought it would. We did not think it would, but it did not." When asked to clarify who thought it would work he continued, "OCC. The people directing us to go ahead and start the heat-up for let-down of the line. They believed against us that excess let-down would be sufficient to counter the heat-up and most of our -- not all of the excess let-down is supposed to be" (Exhibit T-01b, p. 8, pp. 13-14).

(b)(7)(C) was against moving forward without the let-down system and took his concern to (b)(7)(C). According to (b)(7)(C) everyone in the MCR with a license was against moving ahead. (b)(7)(C) conveyed the concern to the OCC. OCC said to move ahead. At some point while all this was going on, a comment was made to the effect that "everyone who has a license says no but the people who can fire the licensed people say do it." The license holders are being pushed to do more than they can. If the pushing does not work out, then the license holders get blamed. The OCC's push to get closer to Mode 3 that day did not work out. The excess let-down system could not do the job. The temperature rose and those in the MCR could not get the inventory out. (b)(7)(C) told TVA OIG that he did not tell the OI the whole story during the interview. He did not tell the NRC about TVA management pressure. (b)(7)(C) was told by the TVA lawyer prior to the interview not to expand on his answers. felt pressure from the TVA lawyer not to tell the NRC about the front-end issues. (b)(7)(C) did not want TVA to think that he was not a team player. He said that around the same time that he was interviewed by the NRC, TVA issued a shift order which explained what happened on November 11, 2015. (b)(7)(C) read the shift order and found it to be factually incorrect. He said that the shift order really did not describe the facts which took place on November 11, 2015. It is his opinion that TVA generated the shift order, so the NRC could read it (Exhibit T-01a, pp. 1-3).

In an interview follow-up email on January 27, 2016, (b)(7)(C) provided clarification on information provided in the shift order. Commenting on the answer to the question "Did the crew expect the condition that occurred." (b)(7)(C) responded, "This is backwards. The crew did expect level to rise because we did not expect 50-60gpm from excess let-down at that pressure. That was a main argument we used against the plan." When commenting on the listed actions taken, specifically, "Oversight watches have been established in the MCR." (b)(7)(C) commented "The people who pushed us into it [November 11, 2015 event] were in the MCR around the clock for about a month [afterwards] to make sure we did not decide to go and do anything that foolish again" (Exhibit T-01a, pp. 14-15).

(b)(7)(C) did not think the crew could get enough water out because excess let-down is designed for 20gpm but could not prove it and he felt the OCC had been looking at it closely and crunching the numbers based on (b)(7)(C) statements concerning capabilities of excess let-down. (b)(7)(C) stated that he and the crew knew they would not get 50gpm out of it. However, since (b)(7)(C) could not research it at the moment, he felt the people outside the control room were helping the crew research it. Where it [shift order] said the crew thought they should be able to get 50 to 60gpm on excess let-down but, the operators were arguing against it because they did not think it was possible. No one talked to (b)(7)(C) for information on the shift order. However, (b)(7)(C) does not recall anyone in the control room talking about how they could get 50 to 60gpm out of it if they were not at full pressure. They all felt like excess let-down would not work but they did not know the severity or how fast it would all happen (Exhibit T-01c).

Interviews of (b)(7)(C), Reactor Operator

(b)(7)(C) RO at WBN was interviewed on January 27, 2016, and September 19, 2016, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) was licensed in (b)(7)(C) and worked on in the MCR on November 11, 2015. (b)(7)(C) explained that he was (b)(7)(C) and did not have a lot of experience. (b)(7)(C) stated that the excess let-down was in place when the RHR was taken out and he was under the impression that it would take water out to keep the plant from going solid. (b)(7)(C) does not know why the decision was made not to wait for the original let-down system but stated the operators did not wait because "we were being pushed by the OCC (Outage Control Center)." (b)(7)(C) stated that this was his first time dealing with an OCC as an Operator. His understanding of the OCC was that they were the people who understood what was happening and it was their job to come up with a plan. He now believes they are there to push and get the work done. (b)(7)(C) stated that he should have never taken the RHR out with that situation, but it was his first outage and the shift manager that day had a lot of experience and he said to do it (Exhibit T-23a)(Exhibit T-23b).

Interviews of (b)(7)(C) Reactor Operator

(b)(7)(C) RO at WBN was interviewed on January 28, 2016, and September 29, 2016, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) had been a Reactor Operator for (b)(7)(C) years at Watts Bar and worked on November 11, 2015, in the MCR. (b)(7)(C) was serving as a RO that day on the (b)(7)(C) (b)(7)(C), REDINGER was the Unit Supervisor and Todd (b)(7)(C) was the (b)(7)(C) (b)(7)(C) discussed the events that happened on November 11, 2015, were only one example where the MCR operators expressed concerns but were told to proceed regardless. On November 11, 2015, there was pressure being felt in the MCR from the OCC to move from Mode 5 to Mode 4. (b)(7)(C) stated that

(b)(7)(C) appeared to be under pressure to move the unit. Since the normal let-down system was out of service, the plant had to rely on the excess let-down system. Licensed Operators voiced their concerns with the plan to move ahead using the excess let-down system. (b)(7)(C) was not for the idea. (b)(7)(C) communicated the concerns the MCR personnel had with the plan, but the OCC decided on a plan to proceed with the heat-up. (b)(7)(C) stated, "I felt like it was a very bad idea to proceed on." The agents asked (b)(7)(C) why he did not voice his concern stronger and louder. He said that he was afraid of being relieved. He said he was afraid of not being viewed as a team player. (b)(7)(C) explained to the agents that neither he nor his colleagues in the MCR that day could point to a rule or a procedure to support their position not to proceed using the excess let-down system. They all just knew it was a bad idea based off their training and experience. (b)(7)(C) said that all the OCC had to do was wait a few hours and the normal let-down system would be available. According to (b)(7)(C) the work had already been done and they were just waiting on the paperwork and clearances to put the normal let-down back in service. (b)(7)(C) suggested that the OCC would not wait and wanted to stay on schedule no matter what. (b)(7)(C) recalled saying out loud "this is stupid" when (b)(7)(C) told them that the OCC said to proceed (Exhibit T-16a).

Interviews of (b)(7)(C), Senior Reactor Operator

(b)(7)(C) SRO at WBN was interviewed on January 16, 2016, and September 19, 2016, by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) had been a SRO for (b)(7)(C) years at Watts Bar, and on November 11, 2015, he was working as the (b)(7)(C) and in the control room for (b)(7)(C) (b)(7)(C) focus on the plant as it was coming out of the maintenance outage. At one point, REDINGER had to leave so (b)(7)(C) relieved him for a couple of hours. (b)(7)(C) said that he talked to everyone on the Unit 1 side in the main control room that day about heating up without normal let down being available. None of them thought it was a good idea. REDINGER was part of that conversation. (b)(7)(C) could not recall if (b)(7)(C) was a part of that specific conversation but he does know that (b)(7)(C) recognized that the operators were uncomfortable about heating up. According to (b)(7)(C) in this instance standing down waiting for normal let-down would have been textbook but would not have gotten them out of the outage fast enough. (b)(7)(C) said that when he saw the "50gpm" answer given in the statement put together by (b)(7)(C) (b)(7)(C) and (b)(7)(C) he could not figure out where that number came from. When he read the number "50" on the document he told his peers that the number "50" was just silly. He added to the interviewers that he did not tell anyone on November 11, 2015, that he thought they could get that out of excess let down. The number was totally unrealistic. Speaking of the plant manager, (b)(7)(C) said on November 11, 2015, after the control room personnel stabilized the plant (b)(7)(C) came into the control room and congratulated everyone. (b)(7)(C) recalled (b)(7)(C) saying, "We put you guys in a bad place today." (b)(7)(C) gave (b)(7)(C) a bear hug (Exhibit T-05a)(ExhibitT-05b).

Interviews (b)(7)(C) Reactor Operator

(b)(7)(C) RO at WBN was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) has worked as a RO, at WBN since (b)(7)(C). On November 11, 2015, (b)(7)(C) was working on WBN2 and had walked over to the WBN1 side of the MCR to offer assistance as WBN1 was working through a maintenance (forced) outage. According to (b)(7)(C) when he arrived at the WBN1 side of the MCR, the RO (NFI) was in the process of using the RHR let-down as the method of controlling the RCS level. That condition, lead (b)(7)(C) to begin asking questions of the RO and proceed to walk the board in an effort to understand the situation. (b)(7)(C) said that he soon realized the RHR temperatures were higher than normal which caused him concern. At that point, (b)(7)(C) raised his concerns to the SRO's. (b)(7)(C) observed there were alarms and temperatures that were abnormal as he discussed his observations and expressed his concerns on what he thought needed to be done. According to (b)(7)(C) the RO's had agreed with (b)(7)(C) observation and indicated to (b)(7)(C) that they had voiced similar concerns but were overruled by "those above them." (b)(7)(C) explained that the RO's discussed how could they get out of the situation and utilize RCS cooling (Exhibit T-02a, pp. 4-12).

(b)(7)(C) stated that as he walked into the MCR, they were starting to align RHR let-down and the suction valves from RCS were already opened which lead him to ask questions. (b)(7)(C) recalled that (b)(7)(C) on duty and the US, REDINGER, was running the procedures. (b)(7)(C) testified that he clearly voiced his concerns related to the reason the suction valves from RCS were opened and the high-pressure alarm. According to (b)(7)(C) he told SM (b)(7)(C) "I ((b)(7)(C)) said this is not the right thing to do he (b)(7)(C) would not really answer me." (b)(7)(C) acknowledged that he was full of suggestions to (b)(7)(C) which were more than (b)(7)(C) cared to hear. Eventually, (b)(7)(C) directed the heat-up to stop as the temperature approached 235F (Exhibit T-02a, pp. 11-19).

Additionally, (b)(7)(C) stated the let-down system was in service with RHR pumps on RCS cooling Mode while normal let down was tagged for maintenance. (b)(7)(C) testified that he was not part of the decision-making process to secure normal let-down on WBN1 and was not present inside the OCC during the period in question. Likewise, (b)(7)(C) stated that he was not assigned to WBN1 on November 11, 2015, but on his own accord decided to walk over from WBN2 to offer his assistance with the evolution. (b)(7)(C) described the MCR as "hectic." In particular, the operators were uncomfortable relative to the RHR temperatures and the rise in the pressurizer. When asked if there was "command and control" from the shift manager and the SRO's regarding the activities, (b)(7)(C) said there were some disagreements as to should we be doing this that the SROs expressed. (b)(7)(C) stated that it was not a proactive environment but rather a reactive one as operators were simply trying to get a handle on what was going on with the plant. When asked how did the let-down system impact (challenge) the operators, (b)(7)(C) responded, "The biggest challenge was not being able to control the pressurizer level on the heat-up." Specifically, the pressurizer level rose from 40 percent to

nearly 80 percent before any action was taken. (b)(7)(C) suggested that the excess let-down is limited relative to its design and only suitable in certain plant conditions. Also, the secondary side had nothing to offer to cool the plant down and when the heat-up was stopped all the steam generator atmospheric dumps were opened and the steam was dumped. (b)(7)(C) stressed the pressurizer level was in a dangerous place without the ability of normal let-down. (b)(7)(C) said, "Had they stayed within the bounds of the GO procedure they would not have had any concerns with the (heat-up)" (Exhibit T-02b, pp. 9-15, pp. 17-23).

(b)(7)(C) stated that at the end of the shift, (b)(7)(C), verbally thanked (b)(7)(C) for getting "loud." Although (b)(7)(C) never articulated that he was confused or did not understand the procedure, (b)(7)(C) questioned (b)(7)(C) about the capacity of the excess let-down system and emphasized he should've waited for the normal let-down to return to service. According to (b)(7)(C) (b)(7)(C) told (b)(7)(C) "That he was doing what he was told to do." (b)(7)(C) said that under the current management at WBN the main concern was reaching the next milestone. (b)(7)(C) suggested that bonuses and promotions are all tied to milestones which causes some risk. (b)(7)(C) added that the OCC placed WBN at risk on November 11, 2015, as MCR did what the OCC wanted. It was the MCR that recovered and stabilized the plant. When asked what could have happened, (b)(7)(C) stated they could have released radioactive water outside of the reactor coolant piping (the reactor coolant system boundary). Furthermore, (b)(7)(C) implied a component could've failed given the higher water temperatures and pressures. Additionally, there were potential environmental damage as the plant would have been less safe because one less barrier was available. He stated that this is probably the second worst thing that could happen next to releasing the radioactive materials into the environment (Exhibit T-02b, pp. 25-28) (Exhibit T-02c).

Interview of (b)(7)(C), Senior Reactor Operator

(b)(7)(C), SRO at WBN was interviewed on January 27, 2016, by TVA OIG wherein he provided the following information in substance.

On November 11, 2015, (b)(7)(C) was working in the WBN1 as a (b)(7)(C) (b)(7)(C) did not realize there was a problem with the unit that day until they were fully involved in the problem. (b)(7)(C) stated that he became aware of the issue during the recovery phase. (b)(7)(C) said in the past Management did not challenge the more conservative path if in fact that path was deemed by the MCR to be the best path to take. Nowadays, management questions the Shift Managers when the Shift Managers state that they are going to take the conservative path. In the past, WBN's default position was the conservative position because that is the safest position. (b)(7)(C) credits the change to (b)(7)(C) and (b)(7)(C) (Exhibit T-41).

Interviews of (b)(7)(C)

(b)(7)(C) at WBN, was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) was interviewed by TVA OIG on February 2, 2016, and discussed that on November 11, 2015, he was working. (b)(7)(C) stated that he remembers that day fairly well because the normal let down system was not in service. He was in the OCC working with the OCC team but cannot recall who else was present with him and remembers they were trying to determine what the plan was moving forward. (b)(7)(C) does remembers having several conversations with (b)(7)(C) stated there were basically three options: (1) stay in Mode 5 and wait until the normal let-down was back in service or (2) heat-up to Mode 4 and stay on RHR or (3) do option 2 and then take RHR out of service and the cooling mechanism would be the main steam dumps. The decision was made to go with option number three. (b)(7)(C) stated that he attended all of the OCC meetings that (b)(7)(C) where they discussed the options. He does not remember any real push back on moving forward. (b)(7)(C) advised that it is important to stay on schedule because the unit is important to the fleet. He stated that there is a balance between schedule and safety and any delay on getting the unit back online meant TVA must purchase power. He stated this is no different than all other utilities. (b)(7)(C) stated that they were originally supposed to move to Mode 4 around 6 a.m. or 7a.m., but the OCC wanted to analyze it some more. According to (b)(7)(C) we all had concerns because of not having the let-down available. (b)(7)(C) stated that they had to convince (b)(7)(C) in OCC because all delays or changes in schedule had to be approved by (b)(7)(C) (b)(7)(C) stated that they were already delayed so the OCC team came up with a plan for (b)(7)(C) approval that decided what to do after the delay (Exhibit T-21a).

(b)(7)(C) was interviewed by TVA OIG on February 10, 2016, and did not recall anyone in particular being concerned with moving forward with heating up the plant on November 11, 2015. While he did not specifically recall either (b)(7)(C) or REDINGER telling him they were uncomfortable or that they did not want to take the RHR out of service, he did admit there was some pushback with operators asking questions about the effect of doing this without normal let-down. In addition, (b)(7)(C) said "he did have some healthy challenges with (b)(7)(C) in the control room" about this issue. However, (b)(7)(C) stated "I did not get off [sic from] these conversations that they were uncomfortable with this." He further clarified that they did not tell him at any time of the day that they did not want to do it. (b)(7)(C) was asked about pushing (pressure) which he stated that pushing is common and "I have had much worse." In (b)(7)(C) opinion, operations are not doing well because there are some fundamental areas with operators' performance and they have failed to correct the low-level behaviors. Some examples of these include communications, responses, and board monitoring. (b)(7)(C) believes the only recent event that could even remotely be associated with pushing would be the RHR event because the whole OCC team was pushing to move forward. Other issues like the source range instrument bypass and the PORV lift are only due to operator error and level of knowledge issues. According to (b)(7)(C) Operations knows the knowledge level is lower than it should be, and that management needs to be in an oversight

role to make sure the people who do the actions understand what they need to do. While these oversight managers may not have an active license or be a license holder, they have the required knowledge from past experience to make decisions and assist in what happens in Operations. (b)(7)(C) believes it is inappropriate for someone to say that (b)(7)(C) should not be involved in the control room decisions since he is the Plant Manager and is very knowledgeable (Exhibit T-21b).

(b)(7)(C) was interviewed by TVA OIG on June 30, 2016 and recalled having a conversation with (b)(7)(C) in the control room and that (b)(7)(C) challenged him but was "okay with moving forward after our conversation." This conversation happened at the horseshoe by the unit supervisor's desk while there were other people around. (b)(7)(C) also believes the unit supervisor (REDINGER) was there as well. (b)(7)(C) stated that their concern was about the effect moving forward and heating up would have on the plant with the normal let-down out of service. He stated that at no time did either (b)(7)(C) or REDINGER say they did not want to do it nor did anyone seem adamant about anything. If they had, (b)(7)(C) would have stopped and tried to understand why. He does not recall any other conversations with (b)(7)(C) and knew there were challenges from the crew about what did the effect of the temperature rise on pressure level. (b)(7)(C) testified he did not feel anyone was uncomfortable but rather more concerned about whether they were technically doing the right thing. (b)(7)(C) had been talking to (b)(7)(C) on a regular basis that day about what was happening. In addition, (b)(7)(C) would have been in the OCC frequently that day. (b)(7)(C) stated that (b)(7)(C) was for moving forward that day, but the decision was made by (b)(7)(C) (b)(7)(C) stated that he and (b)(7)(C) were good with moving forward that day because they thought they could do it safely. He stated that everyone was good with moving forward in the beginning but now say how bad the decision was. There have been "a lot of Monday morning quarterbacks" about this issue. (b)(7)(C) does feel like there was a lot of miscommunication. (b)(7)(C) suggested that the decision was made by (b)(7)(C) who was the shift manager (Exhibit T-21c).

(b)(7)(C) was interviewed by TVA OIG, OI and an AUSA on January 19, 2017, and said that during outages (b)(7)(C) wanted to know minute by minute what was going on. In the OCC, (b)(7)(C) and (b)(7)(C) were part of the Senior Leadership Team. (b)(7)(C) stated that information to (b)(7)(C) would go through him (b)(7)(C) while decisions went from (b)(7)(C) to (b)(7)(C) (b)(7)(C) would then go to the Shift Manager with the decision. (b)(7)(C) said that there was discussion in the OCC to remove RHR and allow the heat-up to begin. (b)(7)(C) said that they had many discussions about that in the OCC and in the main control room with the Shift Manager. (b)(7)(C) questioned (b)(7)(C) about what was going to happen to the pressurizer level if they took the action. (b)(7)(C) had multiple conversations with a few people about that and these conversations took place over the course of a few hours. (b)(7)(C) said that the Shift Manger's crew also asked that same question. (b)(7)(C) recalled interacting with the Shift Manager and the Unit Supervisor that day. (b)(7)(C) could not recall who else he spoke with in the control room about heating up. (b)(7)(C) estimated 30 percent that day was spent in the main control room and 70 percent of his time was in the OCC (Exhibit T-21d).

(b)(7)(C) said that they had a lot of conversations in the OCC that day about removing RHR and whether there were any tech specs or restrictions. (b)(7)(C) said that in the end they could not find any restrictions against doing it, (b)(7)(C) said that engineering was consulted too. (b)(7)(C) said engineering told (b)(7)(C) and the others that excess let down could handle it. (b)(7)(C) was asked who from engineering gave him that bit of information. (b)(7)(C) said he could not remember who it was that told him that. When asked if there was a gallon per minute (gpm) figure that engineering said could handle it, (b)(7)(C) replied that 20gpm is what he recalled from the system description. (b)(7)(C) added that no restrictions were located so they decided to do it. (b)(7)(C) said that there was discussion in the OCC to remove RHR and allow the heat-up to begin. (b)(7)(C) said that they had many discussions about that in the OCC and in the MCR with (b)(7)(C) (b)(7)(C) said he did remember talking with (b)(7)(C) in the main control room and the OCC about removing RHR. (b)(7)(C) did speak with (b)(7)(C) too about the issue, but (b)(7)(C) could not recall exactly what each other said. (b)(7)(C) said that (b)(7)(C) and (b)(7)(C) both were involved in the decision and both knew exactly what was going on. (b)(7)(C) stated that both (b)(7)(C) and (b)(7)(C) were in favor of removing the RHR. (b)(7)(C) said that he spoke to (b)(7)(C) about it and his crew, but the idea was not (b)(7)(C) idea. (b)(7)(C) was asked by the interviewers if (b)(7)(C) told (b)(7)(C) to instruct (b)(7)(C) to take the action. (b)(7)(C) said that (b)(7)(C) did not tell (b)(7)(C) to tell (b)(7)(C) to do it. (b)(7)(C) said it came about after the conversations in the OCC after which the OCC came to the conclusion do it and (b)(7)(C) communicated that to (b)(7)(C) (b)(7)(C) stated that he (b)(7)(C) went to the control room and told (b)(7)(C) that "this is the path that we would like to go down because we feel it is appropriate". The interviewers asked (b)(7)(C) to define "we". (b)(7)(C) said, "we" were the OCC. (b)(7)(C) was asked by the interviewers if using excess let down was the safest plan. (b)(7)(C) said using excess let down was not the safest plan and it would have been safer to wait for normal let down to come back in service. (b)(7)(C) said that they concluded that (b)(7)(C) that they could get 20gpm out of excess let down (Exhibit T-21d).

Interview of (b)(7)(C)

(b)(7)(C) at WBN was interviewed on multiple occasions by OI and TVA OIG wherein he provided the following information in substance.

He described that at 06:00 a.m., on November 11, 2015, it was identified that the repair of the normal let-down valve had not yet been completed. (b)(7)(C) briefed the OCC that this would significantly hinder the heat-up rate and they would not be performing a normal heat-up per the schedule. He stated it would take Operations a much longer time to slowly heat-up because we did not have the let-down capacity. (b)(7)(C) figured that they could heat-up the plant at a rate of 75 degrees per hour using the normal let-down system, but the excess let-down system was limited. (b)(7)(C) figured that by using the excess let-down system, they could heat-up the plant at a rate of 10 degrees per hour. (b)(7)(C) stated that (b)(7)(C) (b)(7)(C) at WBN and he made the decision to keep going with the schedule and start heating up with what we had in place and not wait for the next one [normal let-down] knowing there would be a schedule delay to critical path (Exhibit T-18, pp. 8-12, p. 15)(T-31).

Interview of (b)(7)(C)

(b)(7)(C) at WBN was interviewed by TVA OIG on January 27, 2016, wherein he provided the following information in substance.

(b)(7)(C) stated the decision to forge ahead that (b)(7)(C) using the excess let-down system was a team decision. (b)(7)(C) thinks that if he did not think the plan of using the excess let-down system would work then they would not have tried it. He stated that going to the excess let-down system is not a normal thing and not the preferred method. According to (b)(7)(C) there was a good amount of discussion about whether or not it could be done. (b)(7)(C) continued by explaining that sometimes decisions are made outside of the OCC. He stated that it could have been either the (b)(7)(C) or (b)(7)(C) because the OCC sometimes relies on them. (b)(7)(C) said that he did not make the decision and he does not believe that (b)(7)(C) or (b)(7)(C) would have made the decision either (Exhibit T-19).

Interviews of (b)(7)(C) Shift Manager

(b)(7)(C) SM and SRO at WBN, was interviewed on multiple occasions by OI, TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) was licensed in (b)(7)(C) and has been a Shift Manager since (b)(7)(C) When (b)(7)(C) arrived at work on November 10, 2015, for the (b)(7)(C) there were two major things that were on the schedule for the (b)(7)(C) to get done: 1) Work to do on the Let-Down System so the night crew needed to take the Let-Down flow path out of service: 2) Heat-up the plant (move from Mode 5 to Mode 4). (b)(7)(C) decided to do only the first thing. He told the agents that in his mind the let-down system was out of service, so he did not want to heat-up the plant without it being in service. (b)(7)(C) explained that the concern in heating up had to do with water management. He explained that water expanded a lot when it heats up, so you must either drain water or not heat-up. (b)(7)(C) did not think it was a good idea to heat-up with the let-down system out of service and recalled (b)(7)(C) suggested they could just wait. (b)(7)(C) could not recall who he talked to in the OCC about his decision not to heat-up the plant, but he did talk to someone. He recalled talking to the OCC about the let-down system being out of service. They had a good discussion about it and that was it. (b)(7)(C) recalled telling the OCC that he wanted to stay in Mode 5 because they only had excess let-down. According to (b)(7)(C) with low pressure and low temperature the expectation was to only get around 15 to 30gpm using the excess let-down. Specifically, he remembers discussing this with the OCC that night and telling them that the reason they had to stay in Mode 5 was because of the inability of excess let-down to do more than 15 to 30gpm (Exhibit T-46a)(Exhibit T-46b).

Interviews of (b)(7)(C) OCC Operations Representative

(b)(7)(C) Shift Manager, (b)(7)(C) and OCC Operations Representative at WBN, was interviewed on December 18, 2015, January 19, 2016,

February 4, 2016, and October 3, 2017, by OI, TVA OIG and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) was interviewed by OI on December 18, 2015. (b)(7)(C) joined TVA in (b)(7)(C) (b)(7)(C) (b)(7)(C). On November 11, 2015, (b)(7)(C) worked as the (b)(7)(C) OCC Operations Representative whereby he coordinated with several entities associated with the operation department to ensure there was the proper support for the outage. (b)(7)(C) said that he clearly remembers that on November 11, 2015, the maintenance work was not finished when it was decided to transition into Mode 4. (b)(7)(C) testified that he remembered looking into whether the transition without let-down would affect the procedure. (b)(7)(C) stated that he asked himself and others (NFI) in the MCR, "Is it some type of violation, is it something we are forbidden from doing and there had been quite a bit of talk in operations about that very fact." (b)(7)(C) admitted that he cannot remember if he talked face-to-face with (b)(7)(C) or whether it was by email about moving forward. Also, (b)(7)(C) admitted that he spoke quite a bit with (b)(7)(C) Shift Manager of WBN1 about not only heating up without normal let down, but the other things that were going on that day (Exhibit T-17a, pp. 2-9, pp. 11-17).

When asked if (b)(7)(C) had conversations with (b)(7)(C) throughout the day, (b)(7)(C) responded, "Yes, I would say, on average, probably -- and this is not just that day, it would be any day you could call the shift manager anywhere from ten to 30 times, depending on what was going on." (b)(7)(C) stated that he had no prior experience in a start up without normal let-down being available. In fact, reflecting over his career he could not recall anytime where he remembers taking an action with only excess let-down. (b)(7)(C) suggested that (b)(7)(C) was also inexperienced with this condition, so they had some conversations about whether this was "okay" and (b)(7)(C) indicated that he shared with him what he had found. (b)(7)(C) testified that they discussed their understanding of the system and the opinions from operators that had joined their conversation. (b)(7)(C) admitted that, "We did make what I think we will all agree in hindsight, was a poor decision that should be determined that it was not illegal." (b)(7)(C) stressed that they made a decision that they believed might have to move really slow, but that it would be controllable. (b)(7)(C) argued that they believed that they could safely transition into Mode four for excess let-down. (b)(7)(C) stated that his clearest memory of the day was making sure the rest of the OCC (perhaps not the entire OCC but the critical members of the staff, the two managers and then (b)(7)(C) were explained the plan of how to proceed forward (Exhibit T-17a, pp. 19-24).

(b)(7)(C) testified that he told (b)(7)(C) that he wanted (b)(7)(C) to understand that this was not a normal heat-up activity that they were would go in slow and cautious. (b)(7)(C) acknowledged that a lot of people had access to the plant data and they knew the heat-up limits, and he wanted to make sure that this was not going to be a standard evolution. Additionally, (b)(7)(C) reportedly told the OCC and (b)(7)(C) that it is not going to be the normal heat-up they were accustomed too, and they may have to stall out at some point and

just sit. According to (b)(7)(C) no one appeared to have any problem with the plan and there were not any additional challenges regarding the decision to proceed forward. Ultimately, (b)(7)(C) stated that they ended up transitioning into Mode 4 and at a certain point noticed the pressure riser level was coming up but the MCR got it stabilized. (b)(7)(C) testified that his initial assumption at that time of recovery was that the MCR just turned off the RHR, so it probably took them a while to get a little bit of heat to be able to control the level. (b)(7)(C) recalled a conversation with (b)(7)(C) whereby (b)(7)(C) told (b)(7)(C) "Hey, it looks like you all are managing this okay," and (b)(7)(C) responded to (b)(7)(C) "Here is what friggin' happened" which lead to a discussion detailing how the MCR actions had to put RHR let-down in service. (b)(7)(C) stated that he shared information with key OCC people but cannot remember if he did that in the update format or once again during an informal discussion around the table. Regardless, (b)(7)(C) acknowledged that he spread the information with a wide audience as to what had happened. (b)(7)(C) suggests that before the end of shift the normal let-down system was back in service or were just about to come back in service (Exhibit T-17a, pp. 25-32, pp. 34-45).

(b)(7)(C) was interviewed by TVA OIG on January 19, 2016. On November 11, 2015, (b)(7)(C) role was to serve as the liaison between the MCR and the OCC. The issue that they all faced that day was whether it was acceptable to enter into Mode 4 without the availability of the normal let-down system. (b)(7)(C) said that both he and (b)(7)(C) were not comfortable with doing it. (b)(7)(C) said that doing what the OCC wanted done that day resulted in WBN1 moving into unfamiliar territory. What ended up happening was that the excess let-down system did not have the capacity to do the job. When asked who made up the OCC core team on November 11, 2015, (b)(7)(C) said that (b)(7)(C) and (b)(7)(C) were there. (b)(7)(C) said he could be mistaken but he thought (b)(7)(C) was seated in the engineer's chair at the OCC that day. (b)(7)(C) also thought that (b)(7)(C) was in the OCC. (b)(7)(C) added that they made a poor decision that day. (b)(7)(C) said that he and (b)(7)(C) had telephone conversations that day about the decision. (b)(7)(C) was fully aware that (b)(7)(C) was not for the decision. According to (b)(7)(C) the decision placed the operators in a position where they had to take actions in an area where there were no established procedures. (b)(7)(C) said that he sat the OCC staff down in the OCC and told them that "we are uncomfortable." (b)(7)(C) told the OCC staff that "we need to proceed with caution." He also said he told them that they do not need to put any undue pressure on the operators. (b)(7)(C) could not recall who was sitting there in the OCC when he made these statements. (b)(7)(C) was asked why the OCC did not wait a few more hours for the normal let-down system to return to service. (b)(7)(C) said that waiting a few hours would have jeopardized meeting the next milestone. (b)(7)(C) said the bottom line that day was that the OCC made a decision based on a business need. In this particular case, according to (b)(7)(C) "we" got out of balance. That balance being between running a business (money) and safety (Exhibit T-17b).

(b)(7)(C) was asked what happened when the site realized that their plan was not working, (b)(7)(C) said that he updated the OCC, and then (b)(7)(C) was forced to do something to counter the mistake. There was no procedure in place for the actions (b)(7)(C) took. (b)(7)(C) did not think that there was log kept that day in the OCC or the MCR. He added that

"we just whiffed on this one". (b)(7)(C) said that they just forgot to make the log entries. He said it was not a cover up, a month or so after the incident, the NRC came onsite and interviewed numerous people concerning the incident. (b)(7)(C) advised that the NRC focused a lot of their questions on finding out if the operators acted correctly. There were also a lot of questions about the logs (Exhibit T-17b).

The agents asked (b)(7)(C) what is going on at WBN that has resulted in the OIG and the NRC showing up, (b)(7)(C) responded that the current desire of WBN management to meet the milestone and to "go, go, go, go." The OCC cared more about reaching the next milestone than they did about safety. (b)(7)(C) said that the reactor operators are getting pushed "too hard" by the management team. (b)(7)(C) does not think that his colleagues feel comfortable expressing an opinion different than that of management. (b)(7)(C) concluded the interview by saying that it bothers him a lot that the current WBN management team could not wait a few hours for the let-down system to come back into service (Exhibit T-17b).

(b)(7)(C) was interviewed by TVA OIG on February 4, 2016. (b)(7)(C) advised that he had learned a lot more since his original interview and is currently on the Root Cause team looking into the November 11, 2015 incident. The additional things (b)(7)(C) has learned is the result of him talking to others at the site. On the (b)(7)(C) of November 11, 2015, (b)(7)(C) did go into the OCC and meet with the OCC staff. He stated that (b)(7)(C) was at the table as was (b)(7)(C) who was sitting where the engineering person usually sat. He added that he is just about sure (b)(7)(C) was there. He was mistaken that (b)(7)(C) was the (b)(7)(C), as it was (b)(7)(C) At this meeting in the OCC, (b)(7)(C) did not specifically tell the OCC staff that he was uncomfortable with heating up using the excess let down nor did he tell them that (b)(7)(C) was uncomfortable. (b)(7)(C) implied that he and (b)(7)(C) shared the same level of comfort, that while it was not something they preferred that they thought it would be "ok" to start in Mode 4 as long as they proceed slow and stayed in control. (b)(7)(C) testified that does not recall telling the OCC staff not to push the operators. In hindsight, (b)(7)(C) wishes he had done a better job expressing his and (b)(7)(C) concerns. (b)(7)(C) now realizes that he did not recognize (b)(7)(C) concern. Likewise, the interviews conducted for the root cause have shown that he underestimated the crew's level of concern that day. (b)(7)(C) stated that an (b)(7)(C) has given a statement that he was up in the MCR on November 11, 2015, when he observed an interaction between (b)(7)(C) and a senior manager in which (b)(7)(C) told the senior manager that they were uncomfortable. According to (b)(7)(C) (b)(7)(C) did not recognize the senior manager, so (b)(7)(C) and his team pulled the control room access records. To the end, (b)(7)(C) believes the senior manager was either (b)(7)(C) or (b)(7)(C) who were both in the control room at different times that day. (b)(7)(C) stated, "My gut tells me that this was management pressure outside the OCC." In addition to the managers being in the control room, (b)(7)(C) stated there were constant phones calls to the control room about what they were going to do (Exhibit T-17c).

Interviews of (b)(7)(C)

(b)(7)(C) at WBN was interviewed on multiple occasions by OI,

TVA OIG, and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

During questioning about the events of November 11, 2015, (b)(7)(C) made the following statements (Exhibit T-07a, pp. 72-75):

> During questioning about the events of November 11, 2015:
>
> > "Did anybody either, you know, before when you're planning to do this, during, or after this bring any concerns to you concerning about doing this. I do not want to do this or – "
> >
> > MR. (b)(7)(C) No.
> >
> > "did any operators or anyone come to you to say I was uncomfortable doing this and was told to do this anyway type of stuff?"
> >
> > MR. (b)(7)(C) Oh, oh. No, sir.
>
> Prior to ending the interview (b)(7)(C) added the following when asked if there was anything else he want to add, clarify, add to, or expand on?
>
> > "Nobody brought up anything of I feel uncomfortable at any time, including the discussions of will excess let-down work the way it is supposed to work."
> >
> > "Nobody brought up anything that I was forced, coerced, or pushed into any kind of corner whatsoever or attempted to hide anything at all."

(b)(7)(C) was asked by the agents what his role was with the Shift Order that was generated concerning the November 11, 2015 event. He said that (b)(7)(C) in the Shift Order. He said (b)(7)(C) The December 18, 2015, Shift Order was written by (b)(7)(C) with some help. He thinks that the narrative on page 3 was written by (b)(7)(C) The timeline was written by (b)(7)(C) The flow chart was generated by (b)(7)(C) and (b)(7)(C) (b)(7)(C) said he got the information for the timeline off the logs or from the site's Dataware Program. (b)(7)(C) said that when he was interviewed by OI in December 2015 about the November 11, 2015, incident (b)(7)(C) gave the NRC this Shift Order. (b)(7)(C) was asked by the agents where the answers came from to the Question and Answer portion of the Shift Order. (b)(7)(C) said that they came from (b)(7)(C) (b)(7)(C) and Dennis REDINGER. He added that he was 98 percent sure most came from REDINGER. He is not aware of the other crew members being interviewed. He then said that (b)(7)(C) helped REDINGER. (b)(7)(C) insinuated that (b)(7)(C) and REDINGER worked together to come up with many of the answers (Exhibit T-07b).

(b)(7)(C) said that Shift Orders are used to communicate to departments on lessons learned. He said that Shift Orders were not legal records and were not maintained in the corrective

action program. According to (b)(7)(C) Shift Orders were not something that the site handed over to the NRC. He did say that since the site generated Shift Orders then the Shift Orders would all be available for the NRC to review if they wanted to review them. (b)(7)(C) said that he did not think he brought the Shift Order to the OI interview on December 18, 2015. He said he did not recall providing Shift Order 15-50 to the NRC interviewers. (b)(7)(C) was asked to look at the third question in Shift Order 15-50 which asked if the crew expected the condition that occurred. (b)(7)(C) reviewed the question and the answer then stated that the answer provided to the question had to do with what the crew actually thought at the time (November 11, 2015). (b)(7)(C) said that it was his understanding that the crew thought that on November 11, 2015. (b)(7)(C) said that the "50-60" number is what the crew thought that day. (b)(7)(C) said that (b)(7)(C) gave (b)(7)(C) the numbers, but it was (b)(7)(C) understanding that (b)(7)(C) and REDINGER spoke to the NRC and then the number came to (b)(7)(C) (b)(7)(C) stated that (b)(7)(C) got the numbers from REDINGER who was the Unit Supervisor on November 11, 2015. He said that (b)(7)(C) gave him the 50-60 number (Exhibit T-07d).

Interview of (b)(7)(C)

(b)(7)(C) at WBN, was interviewed by TVA OIG on January 4, 2016, wherein he provided the following information in substance.

(b)(7)(C) discussed the origins of shift order 15-50 describing that most of the answers came from REDINGER. The agents asked (b)(7)(C) where he got the answer of about 50-60 gpm from. He said that he got that from REDINGER. He added that the answer of 50-60 gpm is based off normal operating pressure. The agents asked (b)(7)(C) if they were operating at normal operating pressure. He said no, but he added that he wrote that paragraph based on discussions with REDINGER. (b)(7)(C) said that it was his understanding that 50-60 gpm was the capacity for Excess Let-Down. He said that the mistake in the answer is that at the time they were not in "normal" (Exhibit T-44).

Interview of (b)(7)(C), Senior Reactor Operator

(b)(7)(C) SRO at WBN, was interviewed by TVA OIG on February 22, 2016, wherein he provided the following information in substance.

(b)(7)(was shown a copy of the shift order dated December 18, 2015, which referred to events which occurred on November 11, 2015. He stated that the 50-60gpm number makes no sense and is not even possible with pressure only being 350lbs. He stated that excess let-down is only designed for around 20 to 25gpm at full pressure of around 2200lbs. He does not think people in the control room would think they would be able to get that number so he does not know why it is written like that. He stated, "I cannot equate my knowledge to this". He stated at full pressure you may be able to get a little more than 20-25gpm but not 50 to 60gpm. (b)(7)(C) stated he has never seen excess let down put in at less than full pressure (Exhibit T-12).

Interview of (b)(7)(C) Unit Supervisor

(b)(7)(C) Unit Supervisor and SRO at WBN, was interviewed by TVA OIG on May 10, 2017, wherein he provided the following information in substance.

(b)(7)(C) stated that he knows that at normal pressure, excess let-down is designed for 20gpm. He assumed that was common knowledge. He said that 40 to 70gpm is not reasonable at all at normal operating pressure that the numbers "did not wash at all" (Exhibit T-45).

Interview of (b)(7)(C) Shift Manager

(b)(7)(C) former-SM and SRO at WBN, was interviewed on February 23, 2017, by OI and TVA OIG wherein he provided the following information in substance.

(b)(7)(C) was asked about the content of Shift Order 15-50 and commented on the statement from the shift order "This is based on trainings the crew thought they should have been able to get 50 to 60gpm of excess let-down which they would have stabilized RCS inventory. However, since RCS pressure was left in normal operating pressure they were unable to achieve the expected flow." (b)(7)(C) explained that based on his training and experience he would not have expected 50-60gpm from excess let-down or have expected to be able to maintain level in the pressurizer (Exhibit T-34b, pp. 35-37).

Interview of (b)(7)(C)

(b)(7)(C) at WBN, was interviewed on June 6, 2016, by TVA OIG wherein he provided the following information in substance.

(b)(7)(C) stated the Level 2 evaluation had no management sponsor. Both (b)(7)(C) and (b)(7)(C) (b)(7)(C) were on the team doing the Level 2 evaluation. There was some question regarding who the Shift Managers felt were making the decisions. To get to the information, (b)(7)(C) and (b)(7)(C) interviewed the Shift Managers. Some were in person and some by phone. (b)(7)(C) kept the notes. The Shift Managers they interviewed all said they would not hesitate to bring up issues and that no one pressured them. (b)(7)(C) did not think it was unusual to have him and (b)(7)(C) do the interviews because he knew the root cause would dig deeper (Exhibit T-48, p.4).

Interview of (b)(7)(C)

(b)(7)(C) at WBN, was interviewed on February 9, 2016, by TVA OIG and on June 21, 2018, by TVA OIG, OI and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) was asked about the Level 2 evaluation and said the goal of the team was to find out why the events of November 11, 2015 occurred. He added that they wanted to see what caused the operators to get to where they ended up. The team was able to figure out what happened. It is detailed in the team's final report. The agents asked (b)(7)(C) who it was that

made the decision to proceed that day (November 11, 2015). (b)(7)(C) said it was agreed upon by the Operators and the OCC. The agents asked (b)(7)(C) if TVA learned at any time that the Operators were reluctant to take the actions that day. (b)(7)(C) said that (b)(7)(C) during their investigation, was told that operators were reluctant, but the Operators did not have a good reason not to do it. (b)(7)(C) said the Operators should have spoken up. (Exhibit T-43a).

(b)(7)(C) testified about the Level 2 evaluation and revealed some individuals had received the source information (notes). According to (b)(7)(C) there are no restrictions in place on sharing information about Level 2 evaluation information. When asked if he had discussed the information and how to report the matter to their internal or external stakeholders, (b)(7)(C) denied there was any organized effort in their communication. (b)(7)(C) suggested there were about ten (10) people on the email of which six (6) were part of the Level 2 evaluation. (b)(7)(C) admitted he was a "little" surprised to notice that (b)(7)(C) and (b)(7)(C) were on the email. (b)(7)(C) explained that he took the position that they (b)(7)(C) and (b)(7)(C) had access to whatever they wanted without restrictions. (b)(7)(C) suggested that he was not aware of the request (email) from (b)(7)(C) and/or (b)(7)(C) for specific information. (b)(7)(C) said that during the drop-in meetings in January and February 2016, TVA informed the NRC RII officials that the operators did expect the level increase and that at 79 percent the operators took actions. (b)(7)(C) declared during the interview, that the reason the OCC did not recognize the issue was there was nothing indicating that normal let-down needed to be restored before Mode 4. The plant did not need it until Mode 3, with no restrictions and it was not on OCCs emergent items list. When asked if it was not required that RHR system be up and operational, (b)(7)(C) stated that in Mode 4, RCS and RHR can either be used below 235 degrees as cited in the technical specifications. When asked about the statement that the MCR crew did not fully understand the expected plant response and proceeded, (b)(7)(C) suggested that although he was not dismissing the factor of schedule pressure, he denied it was a contributing cause. (b)(7)(C) admitted that after he spoke with (b)(7)(C) on Friday night about the NRC questions and concerns, (b)(7)(C) along with (b)(7)(C) spoke (telephonically) with (b)(7)(C) on Saturday to clarify the concern and to ensure they understood the NRC's questions about the evolution on November 11, 2015. (b)(7)(C) suggested that the valve was not opened by accident. (b)(7)(C) asserted that (b)(7)(C) made the decision on November 11, 2015, as he had discussions with his colleagues and the OCC, and eventually made the final decision despite concerns from the operators about moving forward, as he felt he did not have a good reason not to proceed forward (Exhibit T-43b).

Interviews of (b)(7)(C)

(b)(7)(C) at WBN, was interviewed on February 22, 2016, and April 03, 2017, by TVA OIG wherein he provided the following information in substance.

When discussing the Level 2 evaluation, (b)(7)(C) said that he and his team were given a very short timetable to conduct the Level 2 evaluation. The Level 2 evaluation took place right around the December OI interviews at WBN. It was during the Level 2 evaluation that (b)(7)(C) and his team initially interviewed (b)(7)(C) According to (b)(7)(C) had already been interviewed by the NRC. (b)(7)(C) said that (b)(7)(C) was interviewed by him, (b)(7)(C)

(b)(7)(C) and (b)(7)(C) all at the same time in (b)(7)(C) office. (b)(7)(C) told (b)(7)(C) and others that he was not comfortable pushing back in the control room that day. Reportedly (b)(7)(C) admitted that he did not feel he could push back without concrete evidence. (b)(7)(C) mentioned approximately five events that took place before November 11, 2015, which tended to cause him to feel like he could not push back to management. (b)(7)(C) stated that the interview team did not ask (b)(7)(C) to give them any specifics on which five events he was talking about (Exhibit T-25a).

(b)(7)(C) Level 2 Team took their notes from (b)(7)(C) interview and compared them with notes taken during (b)(7)(C) OI interview. (b)(7)(C) could not recall how or who produced what was said during (b)(7)(C) OI interview. (b)(7) did know that (b)(7)(C) Level 2 Team compared what (b)(7)(C) told the Level 2 Team against what was said to the NRC. (b)(7)(C) told the agents that it was apparent to him that (b)(7)(C) told Level 2 Team much more than what (b)(7)(C) told the NRC. At this point, (b)(7)(C) mentioned that (b)(7)(C) may have provided the notes from the OI interview, but (b)(7)(was not 100 percent sure. Regardless, (b)(7)(C) stated that (b)(7)(C) came and talked to the team to compare notes. Based on this comparison, it was obvious that (b)(7)(C) had not told OI what he had told (b)(7)(C) Rather, (b)(7)(C) had given (b)(7)(C) more information (Exhibit T-25a).

The piece that (b)(7)(C) added when (b)(7)(C) team interviewed him was termed by (b)(7)(C) to the agents as "Safety Culture Issue". To (b)(7)(C) this "Safety Culture Piece" was something new to the Level 2 evaluation so (b)(7)(C) thought that it needed to be explored further. (b)(7)(C) provided this newly acquired information to (b)(7)(C) and (b)(7)(C) said that (b)(7)(C) and (b)(7)(C) interviewed each Shift Manager and asked them about the Safety Culture Piece brought up by (b)(7)(C) thought that (b)(7)(C) and (b)(7)(C) interviewed each Shift Manager alone ((b)(7)(C) and the individual Shift Manager). He is not sure if they were interviewed in person, on the phone or a combination of both. (b)(7)(C) stated that the Shift Managers gave the answers you would expect if a Senior Manager and your direct boss asked you the questions. The Shift Managers said there were no issues. Other than (b)(7)(C) and the Shift Managers, (b)(7)(C) said that no other operators were interviewed concerning the Safety Culture Piece as part of the Level 2 evaluation (Exhibit T-25a).

(b)(7)(C) was interviewed concerning an email between (b)(7)(C) and (b)(7)(C) about the content of the Level 2 evaluation into the events of November 11, 2015. After reading the email, (b)(7)(C) believes (b)(7)(C) was telling (b)(7) to remove that the OCC had directed the operators because the Main Control Room (MCR) is the only one who can make the decisions and this way it looked like the blame was on the MCR. (b)(7)(C) is not sure why (b)(7)(C) would have sent this to (b)(7)(C) stated that (b)(7)(C) was not on the Level 2 or Root Cause team. According to (b)(7)(C), one of the reasons the team exists is to prove or disprove what happened. They would put the information up on a board and then put evidence down in order to narrow down the causes. He does not think (b)(7)(C) should have been able to just change something, but he can see why (b)(7)(C) would have done it because they could not have it written that the OCC stepped out of their role and had equal responsibility with the Shift Manager who has the ultimate say in the control room. (b)(7)(C) is aware that the NRC gets the root cause reports (Exhibit T-25b).

Interviews of (b)(7)(C)

(b)(7)(C) at WBN was interviewed on February 23, 2016, February 25, 2016, and September 26, 2018, by TVA OIG and OI wherein he provided the following information in substance.

(b)(7)(C) said that the group doing the Level 2 evaluation into the RHR had generated a draft report and the draft report had been given to (b)(7)(C) and (b)(7)(C) sometime over the three-day weekend of January 16-18, 2016. (b)(7)(C) said (b)(7 provided the draft report to (b)(7)(C) and (b)(7)(C) (b)(7)(C) said that there was a telephone call that Monday (b)(7)(C) between (b)(7)(C) and (b)(7)(C) The three of them went over the draft report. Based off this call, (b)(7)(C) got off the phone with some action items, one was to interview the other Shift Managers. (b)(7)(C) told the agents that he believes the interviews of the Shift Managers were done on that Monday. The interviews were conducted by (b)(7)(C) and (b)(7)(C) (b)(7)(C) recalled that he let the group know that he thought they should make sure to ask the other Shift Managers the same questions that had been asked of (b)(7)(C) (b)(7)(C) said that a Level 2 evaluation normally has a 30-day timetable. They had a seven-day timetable. He recalled that they began the evaluation on Monday and found out on Wednesday that they had to be done by the following Monday. He does not know who made that decision (Exhibit T-47b).

(b)(7)(C) was asked if (b)(7)(C) significant changes to the Level 2 evaluation report on his own or at the direction of someone else. He stated that he could not recall (b)(7)(C) (b)(7)(C) made any significant changes to the Level 2 evaluation report. He added that if (b)(7)((b)(7)(C) direction of someone else. The agents explained to (b)(7)(C) that the Level 2 Team (b)(7)(C) was a member) worked on the Level 2 evaluation during the Martin Luther King weekend in 2016. The Level 2 Team's conclusion at the end of the weekend was that both the MCR and the OCC shared blame for November 11, 2015, but then someone removed the OCC from blame. (b)(7)(C) stated that he was there that weekend working on the Level 2 evaluation and to the best of his recollection at the conclusion of that weekend the Level 2 Team was in agreement that both the OCC and the MCR were at fault. He stated that the Team, based off what they had found, did not believe it was only the fault of the operators. (b)(7)(C) stated that the Level 2 Team knew that the OCC was at fault as well. As a matter of fact, (b)(7)(C) stated that at no time did the Level 2 Team think that the OCC did not have culpability. (b)(7)(C) stated that on Monday, Martin Luther King Day, there was not a lot of work being done on the report except for some to-do items from a conference call the (b)(7)(C) , had in the (b)(7)(C) One of those actions was to interview the other Shift Managers. He could not remember the other items. (b)(7)(C) stated that at the time of the Level 2 evaluation he was the (b)(7)(C) He stated that he was also a (b)(7)(C) then too. He stated that he received the interview notes conducted by the Level 2 Team, so he knew what the Team was finding. He added again that the Team never thought that the OCC was without fault in the November 11, 2015 event (Exhibit T-47c).

Interviews of (b)(7)(C)

(b)(7)(C) was interviewed on September 26, 2016, and September 27, 2018, by TVA OIG and OI wherein he provided the following information in substance.

(b)(7)(C) was on the team that was put together by TVA to examine issues having to do with the November 11, 2015 event. (b)(7)(C) and (b)(7)(C) all participated. (b)(7)(C) examined the (b)(7)(C) element. (b)(7)(C) and his team worked on the Level 2 evaluation. (b)(7)(C) (b)(7)(C) stated that they interviewed the SROs and Shift Manager. In regard to what happened on November 11, 2015, (b)(7)(C) believes it was common operator error because the people working that day had the knowledge as SROs that it would not work. He does not know why then they would have tried to go ahead with the heat-up on that day. He stated that it could have been schedule pressure, but he does not know. (b)(7)(C) believes the Shift Manager did not want to tell the people that he would not run it [perform the heat up]. He stated that there were several conversations about possible schedule pressure and the safety culture. He discussed several people telling him that they were worried about retaliation, but the team was unable to find any direct evidence that retaliation had occurred. However, the perception from those interviewed was that if I push back it will hurt me. (b)(7)(C) wrote up his portion which related to the (b)(7)(C) aspect which was put into the final report (Exhibit T-60a).

(b)(7)(C) vaguely recalled working on the project over the Martin Luther King weekend in 2016. He stated that he has no recollection of changing anything in the Level 2 evaluation report on Monday [January 18, 2015] (MLK Day). He recalls that the Team had collected data reflecting that the OCC had a role in what happened on November 11, 2015. He does remember the Level 2 Team discussing the OCC's role and culpability. It was clear to (b)(7)(C) that on November 11, 2015, there was "stuff going on between the OCC and the MCC." (b)(7)(C) recalled that he (b)(7)(C) in the Level 2 evaluation. He added that all the Team members had parts to do. (b)(7)(C) does not know who removed the OCC from the final report. He said that (b)(7)(C) because removing the OCC from the final report was a very big deal. (b)(7)(C) did say that the section he handled and wrote up got toned down. He stated what he wrote it up was written "strong." He said "they" (b)(7)(C) so it was not as "strong." (b)(7)(C) was provided with a copy of the Level 2 evaluation report emailed out on (b)(7)(C) This version of the Level 2 evaluation report had the OCC and the MCR blamed equally. (b)(7)(C) read one sentence out loud which stated, "OCC and MCR displayed a lack of conservative decision making". He then stated that "yep, that is what happened." He then discussed that he was really surprised that a high-level change like removing the OCC had been made. He said that this was the first he heard of it because when he was done with the assignment, he went back to Chattanooga. He did say he emailed someone from the Level 2 Team later in the week of January 18, 2016 to see how the Level 2 evaluation had been received. He thought that the email response indicated everything was fine with the reception (Exhibit T-60b).

Interview of (b)(7)(C)

(b)(7)(C) at Watts Bar was interviewed on March 22, 2019, by TVA OIG wherein he provided the following information in substance.

(b)(7)(C) was listed as the (b)(7)(C) for the Level 2 evaluation into the RHR operation on November 11, 2015. The agents showed (b)(7)(C) an email sent on (b)(7)(C) at approximately (b)(7)(C) from (b)(7)(C) to (b)(7)(C) and (b)(7)(C) The agents asked (b)(7)(C) to explain the email. (b)(7)(C) advised that the Level 2 team was working on the Level 2 evaluation report over the Martin Luther King (MLK) holiday weekend. (b)(7)(C) said that he and (b)(7)(C) were not there for the MLK weekend with the Level 2 team. (b)(7)(C) could not recall where he was, but he was not at the site because he went away for MLK weekend. The agents showed (b)(7)(C) an email dated (b)(7)(C) at approximately (b)(7)(C) between (b)(7)(C) and (b)(7)(C) The agents asked (b)(7)(C) to explain the email. (b)(7)(C) said, "it is pretty damning," referring to the email between (b)(7)(C) and (b)(7)(C) (b)(7)(C) continued that (b)(7)(C) and (b)(7)(C) would have been in the OCC on November 11, 2015, and the direction would have been coming from them. (b)(7)(C) said that (b)(7)(C) was the (b)(7)(C) (b)(7)(C) and "it is surprising to me that someone at that level would have been looking at this." also said, "I probably should just shut my mouth" (Exhibit T-49c).

The agents asked (b)(7)(C) what his role on the Level 2 team was. (b)(7)(C) advised that his role was not to validate the facts. He took what was in the Level 2 evaluation report at face value because of the high-level individuals working on it. (b)(7)(C) took what the Level 2 team generated and put it together administratively to meet the constructs of what a Level 2 evaluation is supposed to be. (b)(7)(C) responsibility was to (b)(7)(C) (b)(7)(C) could not recall if (b)(7)(C) in the Level 2 evaluation report. He is not required to be involved in all the Level 2 evaluation interviews, and he did not participate in the all the Level 2 evaluation interviews that took place. (b)(7)(C) advised that "it would upset me if things not true are in the Level 2." (b)(7)(C) said this would upset him because he has integrity. If he knew false information was in the Level 2 evaluation report, he would have said to take his name off of it. The agents asked (b)(7)(C) what (b)(7)(C), and (b)(7)(C) role on the Level 2 team was. (b)(7)(C) said (b)(7)(C) was carrying the ball to have the Level 2 evaluation "hit the street" as soon as possible. (b)(7)(C) was the (b)(7)(C) at the time, and (b)(7)(C) had the "largest breadth of experience." (b)(7)(C) understood the sensitivity to the NRC questions, and he was going to get the Level 2 evaluation report to the NRC, so the NRC's questions could be answered. (b)(7)(C) said that (b)(7)(C) "was on the team." (b)(7)(C) said that he usually does Level 2's, but that (b)(7)(C), and (b)(7)(C) do not usually do Level 2's. (b)(7)(C) expressed to the agents his frustration with the fact that so many high-level people were on the Level 2 evaluation. The agents asked (b)(7)(C) where the words "not recognized" and "did not challenge," in the Level 2 evaluation report came from. (b)(7)(C) said he did not know where these words came from. (Exhibit T-49c).

Interview of (b)(7)(C) NRC Region II

(b)(7)(C) NRC Region II, was interviewed on December 13, 2016, by OI, TVA-OIG and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein she provided the following information in substance.

(b)(7)(C) was present for the February 2, 2016, drop-in meeting in Atlanta, Georgia between NRC and TVA personnel. While she knows that other people were there from TVA, she only recalls (b)(7)(C) (b)(7)(C) and (b)(7)(C) She knew (b)(7) before the meeting because he used to work at NRC. Specifically, (b)(7)(C) (b)(7)(C) The February 2, 2016, meeting was the first time (b)(7)(C) had met (b)(7)(C) or (b)(7)(C) (Exhibit T-52).

(b)(7)(C) does not recall how the February 2, 2016 meeting came about because she had just (b)(7)(C) (b)(7)(C) She did not ask for the meeting. In the week prior to the meeting, (b)(7)(C) was given a pre-briefing of the November incident by (b)(7)(C) (b)(7)(C). This briefing consisted of her being made aware of the event, concerns the NRC had and how TVA was handling the matter (Exhibit T-52).

(b)(7)(C) was shown copies of a PowerPoint dated February 2, 2016 and prepared by TVA. She reviewed the PowerPoint and stated it "looks familiar" as to the one they were presented with at the February 2, 2016 meeting. She recalled that most of the discussion was given by (b)(7)(C) and (b)(7)(C) (b)(7)(C) does not recall anyone in the room challenging (b)(7)(C) (b)(7)(C) or anyone else about the accuracy of what was in the PowerPoint or what was being discussed. She said that TVA made the presentation as a unified front. She said that no TVA person corrected or amended anything said by (b)(7)(C) or (b)(7)(C) (Exhibit T-52).

(b)(7)(C) reviewed Slide 6 in the December 2, 2016, PowerPoint and stated that it was what was presented at the meeting. She further stated that the TVA presenters stuck to the messages on the slide and while her background is not technical, she may have missed some of the nuances of what was being said, she has no recollection of them talking about anything different than what was on the slides. (b)(7)(C) stated that no one from TVA has ever told her that what the NRC had been told regarding the RHR incident had changed. Likewise, no one at TVA has ever indicated at any time that what happened on November 11, 2015, was anyone's decision except the MCR crews as shown on Slide 6 of the February 2, 2016 presentation. If changes had needed to be made based on information provided at the drop-in meeting, a phone call would have worked but any changes made to something at a public meeting would have needed to be in writing. (b)(7)(C) stated that no one ever said anything was different even though there were numerous opportunities to tell the NRC if anything had changed. (Exhibit T-52).

Interview of (b)(7)(C) NRC Region II

(b)(7)(C) NRC Region II, was interviewed on December 14, 2016,

by OI, TVA OIG and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

During his interview with the AUSA, (b)(7)(C) was allowed to review TVA's February 2, 2016 presentation. When asked if TVA reported the information to the NRC as detailed in the presentation, (b)(7)(C) responded that TVA briefed the NRC directly from the presentation as noted. (b)(7)(C) recalled that TVA cited several factors as the causes of the RHR event. (b)(7)(C) could not recall who all was in attendance from TVA. Specifically, there was an unanticipated pressurizer level increase, the MCR crew displayed a lack of conservative decision making and their decision was not recognized or challenged by the OCC. Upon hearing these factors, (b)(7)(C) expressed that he was surprised to learn that OCC did not challenge the decision. Conversely, (b)(7)(C) explained that TVA was not confronted about OCC's role since the Root Cause Analysis (RCA) was apparently in-progress. According to (b)(7)(C) there were no dissenting voices from TVA about the facts of the presentation and the NRC did not argue back any of the points. (b)(7)(C) testified that TVA has not suggested, nor have they communicated a need to correct earlier statements relative to the factors involved in the November 11, 2015 event. To that end, (b)(7)(C) affirmed that TVA as of the date of this interview has not changed their positioned nor amended information as provided in their presentation to the NRC. (b)(7)(C) said that the NRC inspection report relative to the event, dated April 2016, in part cited that operators may have received undue influence and/or direction from outside the MCR during the event. Likewise, TVA did not formally contest the NRC's results to (b)(7)(C) or to any NRC official, that there was undue influence because of a fear of reprisal. Although (b)(7)(C) impression was that TVA generally addressed the event in their presentations the information centered on multiple evolutions with the primary driver being the removal of RHR (Exhibit T-50).

Interview of (b)(7)(C) NRC Region II

(b)(7)(C) NRC Region II, was interviewed on December 14, 2016, by OI, TVA OIG and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein she provided the following information in substance.

(b)(7)(C) testified that she attended the second drop-in meeting on February 2, 2016. She recalled that TVA generally followed and spoke to the NRC from the prepared presentation slides. Her overall impression was that TVA was owning the concerns. Specifically, (b)(7)(C) said that she felt that there was more sense of ownership than what TVA had expressed during the January meeting. (b)(7)(C) stated that TVA did not communicate any concerns relative to schedule pressure or the undue influence over the operators. (b)(7)(C) explained that TVA proceed to highlight that they had chartered a Root Cause Analysis (RCA), established super crews in the Main Control Room (MCR) and were preparing to conduct a third-party review. (b)(7)(C) admitted that she believed TVA had taken ownership to address the concerns. Although she has not read the final RCA report, she reached that conclusion primarily on TVA's pledge to the NRC that they were committed in correcting the problem(s) (Exhibit T-51).

Interview of (b)(7)(C) at WBN

(b)(7)(C) at WBN was interviewed on May 26, 2016, by TVA OIG wherein he provided the following information in substance.

(b)(7)(C) described that he was working on November 11, 2015. He was in the OCC for part of the time. (b)(7)(C) was aware that the normal let-down was out of service and that the excess let down had been placed in service. He also knew that there was some heating up that was going to be done within the boundaries of pressurizer level. It appeared to (b)(7)(C) that the operators underestimated what the excess let-down would let them do. (b)(7)(C) did not know the operators were uncomfortable moving ahead after (b)(7)(C) got the call from the NRC on December 11, 2015, saying that they had a concern. It was over the next several days that it was discovered that there were questions over how they (the operators) did not use the procedure. (b)(7)(C) stated that it was after this that he heard that some operators said they were uncomfortable. (b)(7)(C) was aware they placed RHR let-down in service. Likewise, he knew the day of the incident that the control room had to take action to lower pressure when they got to 80 percent pressure level. He does not know how he knew this information but believes he may have read it off a status board somewhere (Exhibit T-33).

Interviews of (b)(7)(C) at WBN

(b)(7)(C) at WBN was interviewed on December 18, 2015, and March 26, 2016, by OI and TVA OIG wherein he provided the following information in substance.

(b)(7)(C) indicated that he was briefed on normal let-down system repairs not being completed as scheduled and continuing plant start-up while normal let-down was not in service on November 11, 2015. (b)(7)(C) described the content of the discussions including the potential heat-up rates and there being no need for just-in-time training for use of the excess let-down system. (b)(7)(C) identified that as of the December 18, 2015, interview additional oversight had been established for the control room with specific written guidance created by (b)(7)(C) He also noted that they were putting out a standing order to re-emphasize conservative decision making. He had not seen that standing order at the time of the interview but planned to review the shift order that afternoon and check it for its content. He committed to get copies to the SRI. (Exhibit T-00a, pp. 12-16, pp. 31-33). (b)(7)(C) advised that he is not a licensed operator. (b)(7)(C) admitted that he was working at WBN on November 11, 2015, and suggested that he was present at various locations within the plant to include the OCC. (b)(7)(C) remembers that he walked into the OCC around midday on the November 11, 2015, where he learned that there had been a pressurizer level issue which was remedied. (b)(7)(C) could not recall the exact way he learned that there had been a pressurizer level issue but believes that someone [NFI] in the OCC began talking to him about what had happened in the MCR. (b)(7)(C) said that the MCR was able to stabilize things (recover the plant). (b)(7)(C) said that (b)(7)(C) was working that day as well and remembers seeing (b)(7)(C) in the OCC (Exhibit T-00b).

When discussing the telephone call with (b)(7)(C) on December 11, 2015, (b)(7)(C) contends that at the end of the call he still was not sure what event (b)(7)(C) was talking about. (b)(7)(C) did not learn that (b)(7)(C) was talking about the November 11, 2015, event until the next day. (b)(7)(C) directed (b)(7)(C) and (b)(7)(C) to contact the Shift Managers, and through those conversations (b)(7)(C) learned that (b)(7)(C) questions were about the November 11, 2015 event. (b)(7)(C) admitted that he did go into the MCR that day after the pressurizer level had normalized and spoke with (b)(7)(C) (b)(7)(C) denied that he hugged anyone in the MCR. (b)(7)(C) may have shook hands, but he did not hug anyone. (b)(7)(C) said that (b)(7)(C) informed him what happened but said everything was fine now (Exhibit T-00b).

(b)(7)(C) realized after (b)(7)(C) called that there was a mistake that day. (b)(7)(C) said that a question came up about whether or not they had followed procedure that day. That, according to (b)(7)(C) was the original discussion point with (b)(7)(C) (b)(7)(C) told the agents that they did not have a procedure to cover the actions that were taken to recover the plant that day. (b)(7)(C) was shown a copy of the Shift Order dated December 18, 2015. (b)(7)(C) said that he had not seen this particular Shift Order before. (b)(7)(C) does not know who wrote the Shift Order and he did not tell (b)(7)(C) to write it. He does not know where the figures (gpm) concerning excess let-down capacity contained in the Shift Order came from but explained that Shift Orders are supposed to be used to provide guidance to the crews. They are written as guidance tools (Exhibit T-00b).

Interview of (b)(7)(C)

(b)(7)(C) was interviewed on February 4, 2019, by OI, TVA OIG, and AUSA (b)(7)(C) from the US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

(b)(7)(C) explained the purpose of the February 2016, drop in-meeting was to meet with NRC RII management to discuss performance issues associated with the plant. In addition, it was also a recognition going back to the comments from (b)(7)(C) and (b)(7)(C) on December 18, 2015, that TVA had not demonstrated a thorough understanding of the RHR event. (b)(7)(C) stated that it was important for (b)(7)(C) to discuss the WBN performance in light of the series of events that occurred throughout the fall of 2015. (b)(7)(C) explained that his involvement was similar to the January 6, 2016, drop-in meeting, wherein (b)(7)(C) reviewed the slides and addressed "holes" by conducting a walk through in (b)(7)(C) office. (b)(7)(C) asserted that the site prepared the presentation and they provided (b)(7)(C) a copy for awareness of what was going to be said and to offer any feedback. (b)(7)(C) provided some insight on whether the information was complete and responsive to the issues. (b)(7)(C) testified that he doesn't recall anything in the presentation that stood out as not credible (Exhibit T-62, pp. 59-61).

Agent's Analysis

In summary, the OI investigation revealed that on January 20, 2016, TVA completed a Level 2

evaluation report as part of Condition Report (CR) 1121520 to, in part, review aspects of the November 11, 2015, heat-up and uncontrolled pressurizer water level rise. (b)(7)(C) (b)(7)(C) (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) participated in the generation and finalization of the Level 2 evaluation report which failed to include complete and accurate information concerning the events of November 11, 2015. During the completion of the Level 2 evaluation report (b)(7)(C) and (b)(7)(C) removed information initially concluded by the evaluation team

(b)(5)

On Feb 2, 2016, (b)(7)(C) (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) made a presentation to NRC RII Executives which included the deliberately incomplete and inaccurate information contained in the Level 2 cause evaluation report for CR 1121520.

On January 11, 2016, TVA WBN began a Level 2 evaluation, for condition report (CR) number 1121520 to address the specifics of procedure use and adherence associated with 1-GO-1, SOI-74.01 (RHR) and NPG-SPP-01.2.1, Interim Administration of Site Technical Programs and Procedure for WBN 1 and 2. In part, the team was to review aspects of the November 11, 2015, heat-up and uncontrolled pressurizer water level rise. (b)(7)(C) (b)(7)(C) (b)(7)(C) and the Team Members were indicated as follows (Exhibit A8-E1, p. 1):

(b)(7)(C)

(b)(7)(C) a member of the analysis team, discussed that a Level 2 evaluation normally has a 30-day timetable for completion, but this evaluation had a seven-day timetable. This established a projected completion date of January 18, 2016 (Exhibit T-47b). By Friday, January 15, 2016, the cause evaluation team had compiled conclusions and began drafting their findings.

(b)(5)

On (b)(7)(C) (b)(7)(C) sent (b)(7)(C) a document via email that summarized the work and findings of the team. The attachment documented that the involvement of the OCC and the ability for the licensed operators to make independent decisions were among the issues that required more evaluation. (b)(7)(C) forwarded this email to (b)(7)(C) On (b)(7)(C) emailed (b)(7)(C) (b)(7)(C) (b)(7)(C) (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) notes generated during interviews of operators and managers about the events of November 11, 2015. These notes

(b)(5)

(b)(5), (b)(7)(C)

(b)(7)(C)

On (b)(7)(C), REDINGER sent an email containing his written statement concerning the events of November 11, 2015, to (b)(7)(C) which was forwarded on to (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) REDINGER's statement indicated that the OCC was informed that the MCR staff was concerned about the heat-up and capacity of the excess let-down system at low pressure if the RHR system was taken out of service for testing (Exhibit A8-E4) (Exhibit A8-E5)(Exhibit A8-E6).

On (b)(7)(C), (b)(7)(C) sent an email containing his written statement concerning the events of November 11, 2015, to (b)(7)(C) which was forwarded on to (b)(7)(C) and (b)(7)(C) (b)(7)(C) statement indicated that the OCC direction was to remove RHR from service and allow RCS to heat-up once 1-SI-0-905 was complete. His statement also detailed that he had several conversations with the operations representative in the OCC (b)(7)(C) and informed him of the crew's concerns with taking RHR out of service for testing (Exhibit A8-E7) (Exhibit A8-E8).

On (b)(7)(C), (b)(7)(C) sent an email to (b)(7)(C) and (b)(7)(C) with attachment "(b)(7)(C)" which was his (b)(7)(C) section input into the report. This included a determination that procedures did not exist for the use of excess let-down to control pressurizer level following isolation of the RHR let-down. It also included that the plant simulator verified that excess let-down could not be effectively used for this purpose which was consistent with plant design (Exhibit A8-E9).

On (b)(7)(C) sent a draft Level 2 evaluation report to (b)(7)(C) and (b)(7)(C) which requested them to evaluate for "(b)(7)(C) (b)(7)(C)". (b)(5) (b)(7)(C) described that on the (b)(7)(C) of January 18, 2016, (b)(7)(C) and (b)(7)(C) held a telephone call and discussed the draft Level 2 evaluation report. Based off this call, (b)(7)(C) got off the phone with some action items (Exhibit A8-E10, p. 1, pp. 7-13)(Exhibit T-47b).

On (b)(7)(C) hours, (b)(7)(C) emailed the Safety Culture Analysis (SCA) for the Level 2 evaluation to (b)(7)(C), and (b)(7)(C) emailed this document to (b)(7)(C) on (b)(7)(C) hours, and cc'd (b)(7)(C) on the email. (b)(7)(C) noted "Read new Culture aspects". (b)(5)

(b)(5)

(b)(7)(C) replied to the SCA email a few minutes after receiving it, at (b)(7)(C), with "(b)(7)(C)
(b)(7)(C)
was referring to the X.11 aspect (Challenge Assumptions) in the SCA. (b)(7 responded at
(b)(7)(C)
(b)(7)(C) (Exhibit A8-E13)
(Exhibit A8-E14)(Exhibit A8-E1, p. 24).

- Draft SCA Aspect X.11 (Challenge Assumptions). The SCA (b)(7 emails to (b)(7)(C) and (b)(7)(C) says "(b)(7)(C)
  (b)(7)(C)

(b)(5), (b)(7)(C)

(b)(5)

(b)(5)

- (b)(5)
- (b)(5), (b)(7)(C)

(b)(7)(C) (b)(7)(C) (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) were all identified as having known information that was not consistent with the final report conclusions.

(b)(5)

(b)(5), (b)(7)(C)

Based on interviews conducted during this investigation, the MCR operators on shift on November 11, 2015, indicated (b)(5)

that they were directed by OCC to proceed with the removal of the RHR system from service. The MCR operators expressed that they did not have any misconception about the capabilities of the excess let-down system at low RCS pressure. The interviews also established that the operators did not support taking the RHR system out of service as detailed in the following:

(b)(5), (b)(7)(C)

(b)(7)(C)

(b)(5), (b)(7)(C)

OI determined that the information documented in the final Level 2 evaluation was deliberately not complete and accurate in all material respects. The Level 2 evaluation contained information that was in direct conflict with accounts of the actual events and failed to contain all known relevant information concerning the event. (b)(7)(C) (b)(7)(C) and (b)(7)(C) were all determined to have participated in the generation of the finalized Level 2 evaluation, and at the time the report was generated had knowledge of the true events and information that was not included in the report.

1) (b)(5)

2)

3)

On February 2, 2016, TVA attended a "drop-in" non-public meeting at the Region II regional office to discuss the status of WBN U2, which was attended by Watts Bar senior managers including (b)(7)(C), (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) During this meeting, Watts Bar senior managers jointly made a presentation to NRC officials that included information about the

events of November 11, 2015. Included in this presentation was information from the Level 2 evaluation (Apparent Cause), associated with the November 11, 2015, heat-up and uncontrolled pressurizer water level rise (Exhibit A9-E1, pp. 1-24)(Exhibit A9-E2, p. 1):

(b)(5)

The presentation specifically cites the apparent cause analysis (level 2 evaluation). The presentation includes a lack of conservative decision making and risk review by the MCR crew as a cause while falsely stating that the decision was not recognized or challenged by the OCC. These statements in the apparent cause analysis were investigated in Allegation No. 8 and determined to not be complete and accurate in all material respects. This presentation also included a statement assigning a contributing cause that the MCR crew did not fully understand the expected plant response and proceeded in the face of uncertainty, but no additional information was included to indicate that members of the OCC also did not fully understand the expected response with securing RHR while on excess let-down
(Exhibit A9-E1, p. 10)(Exhibit A9-E3, p. 6).

As previously established (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7 all had prior knowledge that contradicted the information being provided during this brief to the NRC. Based on the information reviewed and interviews conducted OI determined that the information provided to the NRC in the meeting was deliberately not complete and accurate in all material respects.

(b)(7)(C) and (b)(7)(C) were cognizant of the truth of the following:

- (b)(5)
-
-
-

(b)(4) which documented information that was excluded from, or contradicted the information in, the Level 2 evaluation report and February 2, 2016, drop-in presentation. The report specifically identified that the OCC had knowledge of and made the decision to proceed with start-up activities on November 11, 2015. The report clearly demonstrates that the OCC was at least equally culpable in the deficiencies that caused the events as summarized in the report excerpt below and various other locations in the report (Exhibit A8-E20, pp. 12-13, pp. 85–97, pp.101-119):

(b)(5), (b)(7)(C)

Once the need was determined to remove RHR from service to maintain the outage schedule, the shift manager questioned that action and wanted to wait until normal let-down was returned to service prior to removal of RHR. Interviews and statements provided by other MCR staff indicated that the operating crew had communicated concerns to the shift manager with removing RHR from service and heating up with normal CVCS let-down removed from service. Further interviews with dayshift OCC personnel did not indicate that the OCC, as a whole, was cognizant of the MCR staff's concerns related to moving forward with the removal of RHR. The operation's OCC representative had several phone conversations with the shift manager that (b)(7)(C) but did not recall a specific challenge or concern being communicated related to this proposed evolution."

Conclusion

Based on the evidence developed during this investigation, OI substantiated that (b)(7)(C) (b)(7)(C) and (b)(7)(C) deliberately submitted incomplete and inaccurate information in a Level 2 evaluation report associated with Condition Report (CR) 1121520 on January 20, 2016.

Based on the evidence developed during this investigation, OI also substantiated that (b)(7)(C) (b)(7)(C), and (b)(7)(C) deliberately provided incomplete and inaccurate information to the NRC during the February 2, 2016, meeting with the NRC.

Allegation No. 10 and No. 11

Allegation No. 10:

Submission of incomplete and inaccurate information by a Senior TVA Executive to the NRC as documented in the March 23, 2016, Special Review Team Report.

Allegation No. 11:

Submission of incomplete and inaccurate information by Senior TVA Executives to NRC Senior Executives on March 13, and 15, 2016.

Applicable Regulations

10 CFR 50.5: Deliberate Misconduct
10 CFR 50.9: Completeness and Accuracy of Information

Documentary Evidence

Email (b)(7)(C) Initial call with TVA OIG (A10-E1)
Email Initial call with TVA OIG Summary (A10-E2)
Email (b)(7) SRT Purpose (A10-E3)
Email (b)(7)(C) (b)(7) to (b)(7)(C) Meeting discussion points
Email (b)(7)(C) and (b)(7)(C) Meeting prep (A10-E5)
Email (b)(7) to (b)(7)(C) (FW_ preliminary conclusions)(A10-E6)
Email (C) message to SRT on minimizing regulatory engagement (A10-E7)
Email Final Investigation Report ECP(A10-E8)
Email (b)(7)(C) about content of SRT report and ECP report (A10-E9)
Email (b)(7)(C) Difference Reconciliation (A10-E10)
Email (b)(7)(C) Emergency ARB discussion (A10-E11)
Email 03:09 call with TVA OIG (A10-E12)
Email Communication to EDO on WBN Path Forward (A10-E13)
Email Emergency ARB Notes (b)(7)(C) RII EICS (A10-E14)
Email Emergency ARB Summary (A10-E15)
Email Emergency ARB Input Form C3-6 (A10-E16)
Email (b)(7)(C) Changes to SRT report (A10-E17)

Email (b)(7)(C) Changes to SRT report (A10-E18)

Email (b)(7)(C) SRT Report R15 sent out by (b)(7)(C) (A10-E19)

Email (b)(7)(C) Rev 21 SRT report (A10-E20)

OI's Analysis: Review of changes to SRT reports Revisions 21 and 22 (A10-E21)

Copy of the SRT report (A10-E22)

Email (b)(7)(C) to (b)(7)(C) and (b)(7)(C) (A10-E23)

Email (b)(7)(C) (b)(7) (b)(7)(C), (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) (A10-E24)

Email (b)(7)(C) to (b)(7)(C) (A10-E25)

Email (b)(7)(C) to (b)(7)(C) and (b)(7)(C) Final Investigation Report A10-E26)

Email (b)(7)(C) Comments on ECP (A10-E27)

Email (b)(7)(C) ECP report about investigation into SVP causing CWE (A10 E28)

Email (b)(7)(C) SRT report to NRC final approval date (A10-E29)

Email to (b)(7)(C) revised SRT report (A10-E30)

ML16113A228 Response to CEL (A10-E31)

Email (b)(7)(C) Discussion of CWE with (b)(7)(C) (b)(7)(C) and (b)(7)(C (A11-E1)

Email (b)(7)(C) on call with TVA on CEL (A11-E2)

Email (b)(7)(C) on changing SRT in light of CEL (A11-E3)

Copy of the (b)(7)(C) Notes (A11-E4)

Email (b)(7)(C) initial thoughts to (b)(7)(C) on call with (b)(7)(C) (A11-E5)

Email to (b)(7)(C) on message ideas (A11-E6)

Email (b)(7)(C) (b)(7)(C) email about weekend call with (b)(7)(C) (A11-E7)

Email (b)(7)(C) on change in issuance of CEL (A11-E8)

Email SRT draft report Revision 22 (A11-E9)

Copy of (b)(7)(C) Notes regarding the call with (b)(7)(C) on March 15, 2016 (A11-E10)

Testimony

Interview of (b)(7)(C)

(b)(7)(C), was interviewed on February 4, 2019, by OI, TVA OIG and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

Regarding the ECP complaint about the work environment at WBN, (b)(7)(C) suggested that he was familiar that ECP conducted an investigation into a concern (16-00047) that was raised on January 12, 2016. (b)(7) recognized that he met with (b)(7)(C) and other TVA executives to discuss the concern and recalled that he was invited, in part, due to a parallel concern raised to the ECP about a TVA attorney potentially interfering during the OI interviews conducted on December 18, 2015. (b)(7)(C) claimed he was brought in and was briefed on the concerns so that he could provide guidance on the regulatory impact. Additionally, (b)(7)(C) had access to resources that he could ask to help facilitate one or either of these investigations. (b)(7)(C) said he worked to arrange the portion of the investigation related to the chilled work environment issue. (b)(7) relayed that ECP kept him updated by email and by telephone on the status of the investigation associated with ECP concern 16-0047 (Exhibit T-62, pp. 43-48).

(b)(7) testified that the ECP investigation was conducted in a couple of phases, beginning with a review led by TVA contractors (b)(7)(C) and (b)(7)(C) & (b)(7)(C) who commenced the initial set of interviews on February 1, 2016, and then moved forward with a broader set of interviews. According to (b)(7)(C) by February 5, 2016, a briefing brought the issue to the attention of the (b)(7)(C) that there were concerns with the WBN (b)(7)(C) and WBN (b)(7)(C) recalled that there were specific issues about the work environment. Although (b)(7)(C) doesn't recall if there were any specifics related to the operations, he stated there were attributions to (b)(7)(C) and (b)(7)(C) which became apparent during their first week of the two-week investigation. (b)(7)(C) reported that (b)(7)(C) & (b)(7)(C) prepared a series of drafts which were issued on March 1, 2016, after ECP prepared their own executive summary. (b)(7)(C) suggested that while ECP was finalizing their summary, there were some revisions made to the original investigative report. The investigation identified that there was a concern with (b)(7)(C) and (b)(7)(C) relative to the work environment. (b)(7)(C) explained that there were a number of conversations with ECP from the beginning of the investigation, all the way until the ECP report and the SRT report were sent to the NRC on March 24, 2016. (b)(7)(C) recognized that ECP was have difficulty with some characterizations of the issues and that ECP needed to be independent in their conclusions about (b)(7)(C) and (b)(7)(C) and the chilled work environment. In fact, the SRT was pending on the completion of ECP report, and (b)(7)(C) explained that he would periodically inquire when the ECP report was to be completed. (b)(7)(C) stated that he had conversations with ECP and ECP was aware that there was some internal debate about the phrasing of the conclusions (Exhibit T-62, pp. 49-54).

During the interview (b)(7)(C) was presented with an email dated (b)(7)(C) sent to (b)(7)(C) and (b)(7)(C) where (b)(7) wrote, "in reference

to a question the NRC would never ask, did they (NRC) give us (TVA) the Unit 2 license before we were ready to run the second unit." (b)(7)(C) said that throughout the course of the past eight years, TVA has been working on completing WBN2 and during TVA's interactions with NRC regional, headquarters and commissioners it has been communicated that the completion of WBN2 was a "big deal" for TVA to demonstrate that WBN2 could be completed safely and start up. Likewise, it was a "big deal" to the NRC that they could actually complete the licensing in a timely manner. (b)(7) opined that the license was issued on October 22, 2015, and that was the day or day after the source range issue was identified where (b)(7) commented to (b)(7)(C) that he should notify the Region about the discovery of the event (Exhibit T-62, pp.63-66).

(b)(7) stated that the NRC made the decision to issue the operating license and the NRC would not come out and say, "We (NRC) think we shouldn't have given you (TVA) a license." Instead, the NRC will remain in process and if the NRC has concerns about the ability of the MCR or a chilled work environment, then the NRC will use their allegation and/or investigation process. (b)(7)(C) stressed that the NRC has all the "tools" it needs to get at a concern about whether TVA was ready to operate WBN2. (b)(7) acknowledged that he led the SRT and the SRT was chartered during a meeting on February 5, 2016, that discussed emergent concerns at WBN. Subsequently, on February 6, 2016, (b)(7)(C) drafted an action plan on how to address the emergent concerns as noted from the (b)(7)(C) & (b)(7)(C) investigation briefing. According to (b)(7), the purpose was to establish a timeline for completing the ECP investigation report, establish themes from TVA-OIG investigation, evaluate historical results, and establish leadership and organizational focus. (b)(7)(C) confirmed that (b)(7)(C) action plan was formulated on February 6, 2016, and the SRT was chartered on February 26, 2016. (b)(7)(C) claimed that by February 29, 2016, the NRC was aware that the SRT was being put together. Specifically, (b)(7) revealed that during a meeting at WBN, TVA shared with NRC's (b)(7)(C) that a team (SRT) was being assembled (Exhibit T-62, pp. 67-73).

According to (b)(7), he recalled a conversation with (b)(7)(C) and from his notes recalled that (b)(7)(C) expressed his thoughts, "TVA-OIG phone call to talk to NRC staff, OI did not get satisfaction more stuff." Subsequent to that conversation, on February 23, 2016, (b)(7)(spoke with (b)(7)(C) where he shared that TVA-OIG did contact OI and there was a call between TVA-OIG, OI, EICS and OE which appeared to emphasize how did TVA-OIG challenge TVA management with the issues (ECP and potential concerns about work environment). During the discussion (b)(7)(C) disclosed that he was visiting WBN which lead to a sense of significant confusion being introduced and will need some additional focus to sort out. (b)(7) discussed that once TVA took on board the underlying concern, then TVA would figure out how to address the work environment issue. In (b)(7)(C) opinion, TVA was not confused but needed clarification of exactly what the concern was and who at the NRC understood what it was. To that end, on February 25, 2016, (b)(7) stated that he had a conversation with (b)(7)(C) who shared that TVA OIG, and OI had communicated some concerns to the NRC about TVA. (b)(7)(C) said that (b)(7)(C) indicated that there were concerns beyond the normal Reactor Oversight Program (ROP) green and white findings that TVA was going to have to speak too. According to (b)(7)(C) he took from this interaction there were conversations occurring within the NRC on how to manage the concerns within allegation space (Exhibit T-62, pp. 74-76).

Agent's Note: The testimony quoted above is, in part, recalled from personal notes that (b)(7) referenced during questioning. Copies of those notes were not provided to the NRC during the interview.

(b)(7) stated then there was a comment from (b)(7)(C) "you guys (TVA) want to pull rods, how do you get there?" (b)(7) recalled that it referred to the actual start-up of WBN2 which at the time was loaded with fuel but not started up and that (b)(7)(C) had expressed his concern that if TVA had this problem between senior management and shift operators, how was TVA going to get through that so WBN2 can operate safely and reliably. Conversely, on February 25, 2016, during a meeting between (b)(7)(C) (b)(7)(C) and (b)(7)(C) they came to the decision to assemble an "independent team" whose talent could guide and pull TVA together to clear TVA from the issue. According to (b)(7)(C) recognized TVA had a challenge at the site with regards to senior leadership, all the way down to the MCR. Moreover, this was not having the normal NRC oversight, which TVA would be aware of stemming back to OI's interviews in December 2015 which were also getting some traction with the TVA-Board of Directors. Somehow TVA needed additional focus to come up with a plan to address "whatever" the issue were. (b)(7) stated that he had a conversation with (b)(7)(C) about who would lead the Special Review Team (SRT), and to the extent that there were underlying concerns about the senior executives on the site. According to (b)(7)(C) suggested that it sounded like a role for (b)(7)(C) Therefore, on February 26, 2016, the SRT composition was "firmed up" which included (b)(7)(C) (b)(7)(C) and others (NFI). From there, (b)(7)(described how the SRT was organized and how (b)(7)(C) sketched out the team and a problem statement that read, "Do we have a chilled work environment in operations or on the site." (b)(7) testified that from his point of view this would take a series of inputs to draw a conclusion on that problem statement. This included: inputs from ECP; any information obtained from TVA-OIG; work that WBN already had done at that point; RCA of the November 11, 2015 event; information from INPO; and personnel statements obtained at that point (Exhibit T-62, pp. 76-87).

(b)(7) testified that the intention of the SRT was for the review not to be a supplemental investigation, as there were already ones being performed by ECP and TVA OIG. Also, the SRT was not to be an interview-based campaign, but rather a review from a site's perspective. (b)(7)(C) explained that in terms of organizing the activity, on February 26, 2015, TVA had (b)(7)(C) come up and be briefed in (b)(7)(C) office. (b)(7)(C) described that a "bubble" chart illustrated to (b)(7)(C) how the SRT was approaching the issues. Although (b)(7) did not spend a lot of time with (b)(7)(C) going over the chart, the approach was indeed conveyed to (b)(7)(C) After the meeting, (b)(7)(C) stated that he sat down with the SRT members and brought them up to speed on the reason they were there. (b)(7)(C) stated the reason was to review a series of inputs and to draw a conclusion about the chilled work environment. Regarding organizing the work, the SRT report is structured into sections of bins of information. According to (b)(7) the SRT members fed their information directly to (b)(7)(C) agreed that he certainly had a lot of work with those inputs from the standpoint of having different authors. (b)(7) said he was mindful not to have the report look like it was written by different people and to ensure that the report "spoke

with consistency." (b)(7)(C) argued that he would have commented back on issues of consistency of expression, such as "any and all" when it was really "some and a few." This work was being developed up until the week of March 4, 2016 (Exhibit T-62, pp. 87-92).

During the interview, (b)(7)(C) was asked if the SRT members were aware that (b)(7)(C) blamed (b)(7)(C) and (b)(7)(C) and if that information had been conveyed to (b)(7)(C) in their meeting, (b)(7)(C) responded, "I do not know." (b)(7)(C) argued that he likely would not have, so that they could have a degree of independence and come to their own conclusion. (b)(7)(C) said that by March 11, 2016, the NRC had decided to issue the CEL and the conclusions of this team were largely mute. (b)(7)(C) stated the he doesn't know if (b)(7)(C) told (b)(7)(C) that (b)(7)(C) had informed the NRC (b)(7)(C) that (b)(7)(C) was responsible for the situation. Furthermore, (b)(7)(C) stated that he was not aware of any specific changes made to the SRT final conclusions without the members' awareness. (b)(7)(C) suggested that he did not know when the ECP report was finalized, but believed the report was completed in late March 2016. When asked if the SRT members were aware that their work was ultimately going to be provided to the NRC, (b)(7)(C) claimed that until March 6, 2016, he did not know that the SRT report would be provided to the NRC, until the NRC requested a copy of the SRT report. Nevertheless, (b)(7)(C) suggested that the SRT members were experienced enough to understand that the SRT report could be subject to NRC inspections. (b)(7)(C) claimed that despite having the inputs, part of the tasking of the SRT would have been to not only answer the question, "Is there a chilled work environment?" but also propose actions to address whatever was identified. (b)(7)(C) suggested that possible actions could range from communication and training to changing out people and positions. (b)(7)(C) stated that one of the inputs to the SRT was the completed ECP report, which was not completed until March 20, 2016. (b)(7)(C) admitted that he often engaged with (b)(7)(C) about the progress of the ECP report (Exhibit T-62, pp. 94-106).

(b)(7)(C) stressed that keeping ECP independent, such that (b)(7)(C) was not under the direction from the SRT to alter the ECP report, was obviously important to the health of the ECP. When asked if (b)(7)(C) knew of any efforts to link the reports and their findings together as to comparing them in draft form to ensure the reports lined up, (b)(7)(C) responded, "No, there was no effort to make…to get her (ECP) report line up with any conclusion I ((b)(7)(C)) wanted to draw." (b)(7)(C) testified, "That did not occur, when she (b)(7)(C) completed the ECP report and settled on the degraded term there were no indication of changes other than word terminology." (b)(7)(C) stated that on (b)(7)(C) there was a teleconference with (b)(7)(C) at the request of (b)(7)(C) NRC RII and (b)(7)(C) for the purpose of informing (b)(7)(C) (TVA) that the NRC had decided to issue a CEL. According to (b)(7)(C) did not give TVA the date that the CEL was going to issued, but (b)(7)(C) and (b)(7)(C) did reveal in detail the basis for taking action relative to concerns. Likewise, (b)(7)(C) suggested that the CEL was being issued because the NRC had sufficient evidence of a significantly degraded work environment (Exhibit T-62, pp. 108-110).

(b)(7)(C) testified that (b)(7)(C) and (b)(7)(C) had discussed with them that the NRC had "binned" interviews, which caused them to discuss an extensive list of comments attributed to the people who were interviewed. Furthermore, (b)(7)(C) and (b)(7)(C) discussed that the bins dealt with management's direction of operations including comments that the OCC was directing the shift

managers. They also mentioned a concern relative to production over safety and that management was trying to "skim" over the rules. Lastly, there were comments relative to the "willingness to raise concerns" for fear of retaliation. (b)(7)(C) commented that the discussion in essence provided the rationale for issuing the CEL. (b)(7)(C) testified that an issuance date was not disclosed to TVA during this meeting which led to a series of conversations about the CEL. (b)(7)(stated that he and (b)(7)(C) did not challenge the basis of the CEL as described by (b)(7)(C) and (b)(7)(C) Further, (b)(7) testified that on March 12, 2016, he provided (b)(7)(C) information about the framing of a discussion with (b)(7)(C) about the timing of the CEL issuance and advice on possible leadership changes at WBN. (b)(7)(C) recognized that the NRC process acknowledges the degree to which TVA accepts that there is a chilling effect as a factor on whether or not to issue a CEL. (b)(7)(C stated that the NRC has discretion relative to issuance and timing of the matter and TVA is allowed to attempt to persuade the NRC that they actually understand the breadth of the concern. (b)(7)(C) articulated that his input to (b)(7)(C) was about the leadership changes that, if TVA made might suggest to the NRC that TVA actually grasped the concerns (Exhibit T-62, pp. 111-113).

(b)(7)(C) was asked who decided to call (b)(7)(C) on Sunday, March 13, 2016, (b)(7)(C) responded, (b)(7)(C) and I decided together." Conversely, (b)(7)(C was questioned as to the reason for contacting (b)(7)(C) after already having discussed the matter with (b)(7)(C) responded, "It is not out of the role of the CNO to have a relationship with (b)(7)(C) ..it is part of his job scope." Under questioning, (b)(7) stated, "The purpose for the telephone call was to look at the timing of the CEL and to allow TVA to make leadership changes in an orderly fashion which reinforced both underlying issues related to workforce concerns and the chilled work environment." Additionally, (b)(7) indicated that the purpose of the telephone call was also to communicate WBN performance issues, which had shown a series of challenges, so the timing of TVA taking actions did not look like TVA was "firing" people because the NRC told us to and had issued a CEL. (b)(7)(C) stated that was a sensitive point of view for both the industry and the NRC. (b)(7)(C) explained that during a telephone call with the NRC, TVA informed the NRC that they would do all that's required but requested for TVA to take action first. (b)(7) acknowledged that he and (b)(7)(C) had already established that (b)(7)(C) was problematic, but that fact was not communicated to (b)(7)(C) When asked if (b)(7)(C normally gives advice on how to handle the (b)(7)(C) responded, "Normally no, it is in my job scope to do that though." (b)(7)(C asserted that the information he provided (b)(7)(C) to convey to (b)(7)(C) was that (b)(7)(C) was not surprised by NRC's conclusions because two independent TVA internal reports (ECP and SRT) had also reached the same conclusion. Likewise, a similar communication was made to (b)(7)(C) and (b)(7)(C that the TVA reports had reached the same conclusion and it was also communicated to (b)(7)(C) that TVA was not arguing the conclusion whether it was the right regulatory action (Exhibit T-62, pp.114-124).

(b)(7)(C) explained that TVA requested a delay of 30 days from (b)(7)(C) to allow the leadership changes which (b)(7)(C) denied. (b)(7)(C) acknowledged that there were no adverse changes (actions) related to management. (b)(7)(C) recommendation to (b)(7)(C) about (b)(7)(C) was not accepted by (b)(7)(C) Specifically, (b)(7)(C indicated that his advice to (b)(7)(C) on March 12, 2016, and on March 17, 2016, to (b)(7)(C) (b)(7)(C) and (b)(7)(C) was about trying to figure out the right "thing to do" for the site as the site was transitioning from a single to

two units. Although (b)(7) did not argue with (b)(7)(C) about (b)(7)(C) promotion, he now recognizes it was perhaps a missed opportunity to do the right thing versus doing the thing that would have been a bit more to the point of what TVA was communicating to the NRC. (b)(7)(C) provided his input to the TVA executives and asserted that it was their decision to leave (b)(7)(C) in place. (b)(7) was asked if there were any changes made to the SRT report between March 23, 2016, when (b)(7)(C) was told that she would receive a copy of the SRT report and when the SRT report was mailed to (b)(7)(C) on March 24, 2016. (b)(7)(C) responded, "A change to get the clarity relative to the consistent usage of degraded may have occurred after the public meeting, if there were other changes, I do not recall what those were." (b)(7)(C) stressed that when the SRT report was mailed it entered the NRC's process and suggested that when TVA announced at the public meeting that the SRT report was finished, the SRT report was finished to the extent of needing some "clean-ups" (Exhibit T-62, pp. 126-135).

(b)(7) argued that the changes to the SRT report were similar to any other licensing document, if there are changes from one revision to another, you make clear that you archive the revision on a certain date. (b)(7) implied that he had not been managing the SRT report in that manner. Furthermore, (b)(7)(C) stated that at the time of the public meeting, the SRT report was finished and upon returning to TVA's office in Chattanooga, TN, there were some changes which (b)(7)(C) "felt" were appropriate to make. When asked if (b)(7) instructed anyone to archive the changes after the public meeting, (b)(7)(C) responded, "I do not recall with specifics once it is signed… I let the administrative staff manage the entry into BSL (TVA document system)." (b)(7)(C) contends that he had no idea on how the BSL process works relative to archiving revisions to documents. Also, (b)(7)(C) noted that he left that task to his administrative staff to address and for them to make the necessary entries into BSL. (b)(7) was asked if he ever communicated to the SRT team that the purpose of the SRT was to prevent additional regulatory actions, (b)(7)(C) responded, "I do not recall telling them that was the purpose" (Exhibit T-62, pp. 137-140).

(b)(7) testified that during the February 29, 2016, meeting with (b)(7)(C) wanted to know more information about overall plant performance and certainly about the circumstances of November 11, 2015 event. When asked what (b)(7)(did at that point to ensure that the findings were accurately communicated to the NRC, (b)(7) responded, (b)(7)(C discussed in terms of communications, through my SRT report, to my way of looking at it, in the context of how all the other conversations I had with senior leaders, and I make reference I think it is in gaps that there were concerns attributed to the site senior leaders that was a communication that we were acknowledging that there is a problem at the site front office. When challenged during the interview that the reference was "pretty" vague, (b)(7) said, "To an outsider, absolutely." (b)(7)(C) professed that the SRT report was an internal report that would potentially have been reviewed by the NRC and the purpose was not fundamentally a communication vehicle to the NRC." (b)(7)(stressed that when he presented his recommendations to (b)(7)(C) related to (b)(7)(C) and (b)(7)(C) suggested that he had no concerns that he had not been clear to (b)(7)(C) (Exhibit T-62, p. 142).

Although (b)(7) did not recommend termination for (b)(7)(C) he acknowledged the plan was to move (b)(7)(C) to a senior site position. Also, (b)(7) said he recommended that (b)(7)(C) be transferred from the site. (b)(7)(C) explained that the ECP concerns were raised on

January 12, 2016, and the first interviews occurred on February 1, 2016, and the planning for the February 2, 2016, drop-in meeting would have had its "roots" somewhere between January 6, 2016, and February 2, 2016. (b)(7)(C) indicated that the senior executives were aware of the ECP concerns, and it was proper for (b)(7)(C) and (b)(7)(C) to address issues to the NRC about their site. Although TVA concluded from the ECP investigation that there was information that (b)(7)(C) and (b)(7)(C) were the foundation of the chilled work environment, (b)(7) denied that (b)(7)(C) and (b)(7)(C) had provided false information to the NRC. (b)(7)(C) testified that he never had the view that the OCC had a role or that individuals were covering up for anything (Exhibit T-62, pp. 143-147).

(b)(7) explained that (b)(7)(C) had already disclosed the personnel moves he wanted to make regarding (b)(7)(C) (b)(7)(C) and (b)(7)(C), who were the (b)(7)(C) on the site. (b)(7) stated that some of comments to (b)(7)(C) in support of retaining (b)(7)(C) would send a strong message about performance improvement and expressed that accountability remained a priority. Also, having a (b)(7)(C) at WBN with improved people skills would send a strong message that a healthy work environment is a priority. Additionally, (b)(7)(C stated that his comments regarding (b)(7)(C) was for (b)(7)(C) to be reassigned to the corporate office in a general manager position which was probably necessary for coaching with a corporate executive mentor. (b)(7)(C) stressed that the change would also send a strong message to the WBN employees that TVA would not tolerate sub-standard management behaviors. (b)(7)(C) suggested the reassignments of (b)(7)(C) and (b)(7)(C) were not viewed as adverse employment action. When asked if (b)(7)(did anything between February 29, 2016, and March 12, 2016, to determine whether or not the information that (b)(7)(C) and (b)(7)(C) had provided the NRC on February 2, 2016, was false, (b)(7)(C) responded, "I did not, in large part because I was focused on getting the SRT work organized." (b)(7)(C offered that if that question was posed, he (b)(7)(C) would have gone back and reflected on whether the slides communicated what came out of the apparent cause. (b)(7)(C) stated that his involvement on the creation of the apparent cause and root cause were limited, as (b)(7)(C is a consumer of that information. (b)(7)(C) testified that (b)(7)(C) or (b)(7)(C) never acknowledged to (b)(7)(C that they had made a false statement to the NRC on February 2, 2016. Likewise, (b)(7)(C stated that he never asked them if they had provided false information (Exhibit T-62, pp. 149-160).

Interview of (b)(7)(C)

(b)(7)(C), was interviewed on March 8, 2017, by TVA OIG wherein he provided the following information in substance.

(b)(7)(C) was a member of the SRT. When discussing the SRT, (b)(7)(C) described the purpose of the SRT was to "pull" together the facts and deliverables which would be reported out. (b)(7)(C) said he struggled with the outcome but (b)(7) had a vision about what he wanted to see in the SRT report. (b)(7)(C) stated that each team member worked on a "piece" but (b)(7)(C) was the final editor on the SRT report. The SRT report was used more as a feeder into the March meeting with the NRC. It was used to develop a PowerPoint for (b)(7)(C)

to use for the NRC. (b)(7)(C) stated that at this point WBN management knew that WBN would be getting a chilled work environment letter (CWEL)(Exhibit T-63).

(b)(7)(C) believes the ECP report was an addendum to the SRT report. According to (b)(7)(C) the ECP report went through a number of different revisions. (b)(7)(C) stated that he knows the (b)(7)(C) was getting unbelievable pressure from (b)(7)(C) to "word engineer" the report. (b)(7)(C) told (b)(7)(C) that she was getting pressure to make changes, but she did not specify who was pressuring her. However, it was apparent to him that she was getting pushed by (b)(7)(C) as well as others. He knows that she spoke with (b)(7)(C) and (b)(7)(C) as well (Exhibit T-63).

(b)(7)(C) stated that (b)(7)(C) original report placed the blame on (b)(7)(C) but it was changed so that (b)(7)(C) role was downplayed. (b)(7)(C) believes (b)(7)(C) is why (b)(7)(C) has gotten through this because he ((b)(7)(C) really wanted to shield (b)(7)(C) According to (b)(7)(C) (b)(7)(C) never felt like it was an issue with management but rather that this whole issue was because of one guy (Exhibit T-63).

(b)(7)(C) was aware that (b)(7)(C) read the ECP report before it was final. (b)(7)(C) stated (b)(7)(C) was like a "loose cannon" and he (b)(7)(C) kept asking to see the Phase I and Phase II (b)(7)(C) and (b)(7)(C) ECP investigations. (b)(7)(C) believes that (b)(7)(C) may have sent (b)(7)(C) everything, but he is not sure. Regardless, (b)(7)(C) stated that (b)(7)(C) got a copy (Exhibit T-63). (b)(7)(C) was asked about whether there was a difference in the ECP report and the SRT report. He stated the original ECP report was more accurate and contained significantly more information and documentation due to the interviews whereas (b)(7)(C) (SRT) conclusions were "really watered down." However, (b)(7)(C) stated that, although the ECP report was allegedly finalized by the first week of March 2016, there was a lot of "word engineering" on the ECP report in the last two weeks before the March 22, 2016, meeting with the NRC. (b)(7)(C) was concerned all along that they would get to the NRC and the reports would not be aligned (Exhibit T-63).

Interview of (b)(7)(C)

(b)(7)(C) was interviewed on January 11, 2019, by TVA OIG wherein she provided the following information in substance.

According to (b)(7)(C) (b)(7)(C) assigned (b)(7)(C) to the SRT at the last minute. (b)(7)(C) explained that she was asked to be on the SRT due to (b)(7)(C) role. (b)(7)(C) advised that the SRT divided up the work. (b)(7)(C) was told that HR had to be on the team, so (b)(7)(C) was put on the team. (b)(7)(C) role on the SRT was to look for "clues" from 2014 to the present time to determine if there were any trends that indicated when the culture at WBN turned "south." (b)(7)(C) reviewed all available data, including the 2C meetings. (b)(7)(C) advised that Operations did not have any. According to (b)(7)(C) she reviewed the data, and then documented the positives and negatives represented by the data from her reviews (Exhibit T-66).

Agent's note: "2C" meetings (Compliments and Concerns) allow site management to discuss important messages with and receive in-person feedback from employees.

(b)(7)(C) explained that the SRT was only focused on the negatives, which bothered (b)(7)(C) According to (b)(7)(C) the SRT wanted to frame (b)(7)(C) for what was going on. In addition, (b)(7)(C) advised that she felt like the SRT was set up to blame it all on (b)(7)(C) (b)(7)(C) stated, "I did not want to sign the report at the end." In addition, (b)(7)(C) commented "I was pressured to sign it" and believed that the SRT had an agenda. (b)(7)(C) advised that they were only looking to prove (b)(7)(C) did it. She did not want to sign the report because she did not believe in the methodology used to generate the report. According to (b)(7)(C) toward the end of the SRT after the CEL was issued, (b)(7)(C) told (b)(7)(C) that (b)(7)(C) had a plan to promote (b)(7)(C) and this would help save face for (b)(7)(C) (b)(7)(C) advised that (b)(7)(C) told her that the plan to promote (b)(7)(C) was "brilliant." (Exhibit T-66)

(b)(7)(C) explained that she was not prepared at all to be on the SRT. One morning in February 2016 at approximately 7:45 a.m., (b)(7)(C) received a telephone call from (b)(7)(C) (b)(7)(C) advised that (b)(7)(C) told her that (b)(7)(C) was going to be at a meeting at WBN for the SRT committee. (b)(7)(C) advised that (b)(7)(C) told her to drop everything and to get to the SRT meeting at WBN because there needed to be a HR presence. At this SRT meeting, (b)(7)(C) recalled (b)(7)(C) was drawing bubbles on a board. (b)(7)(C) advised that she thought the SRT product was an internal product for TVA. In addition, (b)(7)(C) explained that she thought it was for (b)(7)(C) According to (b)(7)(C) the purpose of the SRT was to see if there was only a CWE in Operations at WBN or if all of WBN had a CWE issue (Exhibit T-66).

(b)(7)(C) commented that she questioned and was bothered by the thought process and methodology of the SRT. (b)(7)(C) advised that the SRT had a hypothesis, and then the SRT would just try to find data to prove its hypothesis. According to (b)(7)(C) the SRT's hypothesis was that (b)(7)(C) was at fault, and he is the one to blame. According to (b)(7)(C) wrote the SRT report and would totally change the meaning of certain things. In addition, (b)(7)(C) explained that (b)(7) would "cherry" pick what to include in the report, and he would "spin stuff." (b)(7)(C) commented that (b)(7) wanted to blame (b)(7)(C) and (b)(7)(C) came to this conclusion based on what (b)(7) was writing in the SRT report (Exhibit T-66).

Interview of (b)(7)(C)

(b)(7)(C) was interviewed on June 28, 2016, by TVA OIG wherein he provided the following information in substance.

(b)(7)(C) stated he has been involved with the nuclear business for almost (b)(7)(C) years. He retired from the NRC (b)(7)(C) (b)(7)(C). They focused on the 2015 timeframe because this is when the precursors/drivers of the chilled work environment began occurring. He also (b)(7)(C)

(b)(7)(C) when they had a lot of work environment issues in Construction. There were also some issues in operations in 2015 which lead to his involvement with the SRT (Exhibit T-64).

According to (b)(7)(C), the SRT was created because there were concerns from ECP and the TVA OIG related to the operations department, and TVA wanted to understand what occurred. (b)(7)(C) said the SRT began the review to avoid receiving a CEL from the NRC, however, within three weeks they realized that the NRC had already obtained the data (about problems in operations). Once TVA realized the NRC was stepping in, they elevated the process to an RCA in order to determine the root cause. (b)(7)(C) said once they started digging, they realized it was not limited to operations but was in other areas as well. (b)(7)(C) stated he did not agree with everything in the SRT report and the RCA. He also stated there were confirmed problems within the operations, but they did not realize how big they were (Exhibit T-64).

Interview of (b)(7)(C)

(b)(7)(C) was interviewed on May 5, 2017, by TVA OIG wherein she provided the following information in substance.

(b)(7)(C) stated that "no one in management pushed her or interfered on the ECP report." She was asked if she knew of any TVA investigation or report that was conducted to determine if any form of retaliation took place at WBN, (b)(7)(C) responded, she knew that (b)(7) and (b)(7)(C) had looked into it because their investigation "bumped into" that issue. (b)(7)(C) stated that the scope of their investigation was not to look into retaliation but to look into one specific allegation that ECP received about a chilled work environment. She added that she knows of no TVA investigation that was done that looked solely into whether or not retaliation had occurred at WBN. (b)(7)(C) told the investigators that her understanding of the purpose of the SRT was that it was to take action based off the findings of the ECP report (Exhibit T-61).

Interview of (b)(7)(C)

(b)(7)(C), was interviewed on May 11, 2016, by TVA OIG wherein he provided the following information in substance.

(b)(7)(C) has been working at TVA for about (b)(7)(C). Although (b)(7)(C) (b)(7)(C) he has pretty much traveled among the different nuclear sites working on various inspection escalations since he started with TVA. Before coming to TVA, (b)(7)(C) worked as an (b)(7)(C). (b)(7)(C) stated that management had interfered with the SRT report. It is his understanding that it was changed a day or two before it was finalized. He stated the change was not 180 degrees but rather around 80 to 90 degrees. He is aware of this due to discussions with people who were on the team who were "pissed" at the changes and managements' interference (Exhibit T-65).

According to (b)(7)(C) TVA management will not change their position about what happened at WBN no matter what evidence the TVA OIG presented. He stated, "do not annoy the pig" and insinuated it is much like a survival Mode. (b)(7)(C) stated that TVA management believes the TVA OIG wants "retribution." In regard to retaliation, (b)(7)(C) recalled being told that the TVA OGC had said that if any part (even one thing out of a hundred) were true then the court could hold them liable for all of it and they would have to pay out money. As a result, (b)(7)(C) believes the TVA OGC was pushing not to have anyone admit anything (Exhibit T-65).

Interview of (b)(7)(C)

(b)(7)(C) was interviewed on January 8, 2019, by OI and TVA OIG wherein he provided the following information in substance.

(b)(7)(C) was provided two e-mail strings concerning the archiving of the SRT report before sending to the NRC. After reading this email string, (b)(7)(C) was asked if it is a common practice in TVA Licensing to "fiddle" with report dates in TVA's document system. (b)(7)(C) stated that it was not common at all. (b)(7)(C) was asked if it was normal in Licensing at TVA to change report revisions to match what TVA tells the NRC. (b)(7)(C) said it was not a common practice. (b)(7)(C) said that he made the change as (b)(7) instructed. He added that he was only doing as he was instructed. (b)(7)(C) said that that was the first and only time he did anything like that. (b)(7)(C) discussed that at the time of this email (b)(7)(C) did not read the email carefully enough. (b)(7)(C) said that he did not think he was the person that did the final archiving of the report (Exhibit T-74).

Interview of (b)(7)(C) Nuclear Regulatory Commission

(b)(7)(C) NRC was interviewed by OIG and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

When (b)(7)(C) was TVA's (b)(7)(C) (b)(7)(C) and replaced (b)(7)(C) Due to Brown's Ferry Nuclear Plant Column IV status, (b)(7)(C) was in the habit of meeting or speaking by telephone with (b)(7)(C) on a monthly basis, if not more frequently, and continued this practice with (b)(7)(C) to discuss Browns Ferry performance (Exhibit T-53).

When questioned if he knew (b)(7)(C) stated that he has known (b)(7)(C) for approximately years. (b)(7)(C) was an NRC employee and (b)(7)(C) worked closely with (b)(7)(C when (b)(7)(C) was at Region II. (b)(7)(C) currently (b)(7)(C) (b)(7)(C) (b)(7)(C) is currently the TVA VP for Licensing and Regulatory Affairs. While working at the NRC, (b)(7)(C) did oversee TVA's restart process at Browns Ferry Unit 1. During (b)(7)(C) final two years with the NRC, (b)(7) was the Director of the Fuel Facility Inspection Division at NRC Region II. (b)(7)(C) does not believe that (b)(7) had interactions/activities with TVA during those last two years at the NRC, and

(b)(7)(C)

(b)(7)(C) does not believe there is any conflict with (b)(7)(C) moving from the NRC to TVA (Exhibit T-53).

When questioned about (b)(7)(C) (b)(7)(C) stated (b)(7)(C) at WBN and came from (b)(7)(C) and before that was the (b)(7)(C) brought (b)(7)(C) to WBN, probably due to his track record/success in previous roles and extensive nuclear experience with other utilities and sites. When asked about (b)(7)(C) (b)(7)(C) related he did not have much interaction with him. (b)(7)(C) knew he was the WBN (b)(7)(C) (b)(7)(C) stated he did not have any discussions with (b)(7)(C) regarding (b)(7)(C) or (b)(7)(C) performance (Exhibit T-53).

(b)(7)(C) was asked about TVA's progress toward implementing the fleet wide Confirmatory Order which had been issued by the NRC to TVA in 2009. (b)(7)(C) was asked specifically about implementation of steps to prevent retaliatory employment actions at WBN circa 2014-2016. (b)(7)(C) stated that he could not recall specific details about TVA's efforts to comply with and implement the Confirmatory Order. (b)(7)(C) stated that targeted NRC inspections during the 2014-2016 timeframe should have checked for problems regarding the Confirmatory Order, and if any problems were spotted, then the NRC should have addressed them. (b)(7)(C) stated that the NRC would not have issued an operating license to WBN2 if the NRC had not felt comfortable that the Confirmatory Order was implemented. It is plausible to have open items and issue the licensee, as long as the licensee is addressing the open matters and there is progress to complete the work. (b)(7)(C) stated that the license was issued for WBN2 which means that the NRC felt that TVA actions met the threshold to operate the plant safely. The standard is "reasonable assurance of adequate protection" to operate the plant safely. (b)(7)(C) conceded that the NRC was aware that WBN needed to improve the overall safety culture, but the NRC felt that TVA met the threshold necessary to issue an operating license for WBN2. (b)(7)(C) stated that the NRC labored with this question and discussed whether to issue the operating license. (b)(7)(C) stated that the NRC does rely on TVA's responses to RFI's (Request for Information) and other statements made by the licensee but that the NRC also conducts its independent analysis and data gathering to make its decisions (Exhibit T-53).

(b)(7)(C) was asked about a telephone conversation between himself and (b)(7)(C) and (b)(7)(C) on (b)(7)(C) Initially, (b)(7)(C) claimed not to recall any conversation around that time. (b)(7)(C) stated that TVA never asked him to intervene and delay the issuance of the CEL. (b)(7)(C) was asked specifically whether he took any actions in regard to the issuance of the CEL and (b)(7)(C) denied taking any such actions. (b)(7)(C) denied asking anyone to delay, refrain, edit or otherwise change their planned course of action. (b)(7)(C) was shown an e-mail from (b)(7)(C) dated (b)(7)(C) which stated that the Region II staff intended to issue the CEL on March 15, 2017. (b)(7)(C) was asked if he knew why the CEL letter was not issued until after the public meeting which was held on March 22, 2017. (b)(7)(C) stated he had no knowledge about any reasons for delay. Later in the interview, (b)(7)(C) did recall one or more unspecified conversations with (b)(7)(C) where the CEL was discussed. (b)(7)(C) then recalled that (b)(7)(C) had intimated that a delay in issuance of the CEL would assist TVA because TVA was planning to make personnel changes in the leadership at WBN and if the

CEL were issued after those changes, then the new leaders would not be seen as imposed by the NRC. (b)(7)(C) stated he told (b)(7)(C) the Region will issue the CEL and that (b)(7)(C) agreed with Region II that there was a solid basis to issue the letter. (b)(7)(C) or SHEA also informed him at some point that TVA would address the chilled work environment by an independent third-party assessment. (b)(7)(C) recalled discussing the results and that the independent assessment differed from the TVA OIG results. (b)(7)(C) later informed (b)(7)(C) that their internal review differed and identified there were conflicts with WBN leaders and team members. (b)(7)(C) did not receive any documents and was unsure what Region II was given. He knew Region II was working the issue. (b)(7)(C) was asked again whether he took any actions with respect to delaying, changing, refraining or otherwise affecting the issuance of the CWEL and (b)(7)(C) stated that he took no such actions (Exhibit T-53).

Interview of (b)(7)(C) Tennessee Valley Authority

(b)(7)(C) TVA, was interviewed by OIG and AUSA (b)(7)(C) US Attorney's Office for the Eastern District of Tennessee, wherein he provided the following information in substance.

During discussion about the content of the (b)(7)(C), call with (b)(7)(C) and (b)(7)(C (b)(7)(C) was referring to his notes taken that day and described that (b)(7)(C primarily was doing the talking, which is why his name is underlined in his notes. (b)(7)(C) stated that (b)(7)(C) and (b)(7)(C) discussed the results of the NRC's review that they had done regarding the November 11, 2015, events, as well as some of their comments about what they believe their actions were going to be in regulatory space including the use of a chilled work environment letter as a regulatory tool. (b)(7)(C) discussed that it was a one-way conversation with the NRC describing what they had found and what they were planning to do, a fairly standard regulatory interaction (Exhibit T-67, pp 1, pp. 18-20).

Agent's Analysis

In summary, on February 24, 2016, Region II Senior Executives communicated to TVA Senior Executives that the NRC had received concerns about the health of the working environment in the Operations department at WBN. TVA empaneled what would be named the Special Review Team (SRT) which created a report with the purpose to influence the NRC in their response to the concerns. TVA (b)(7)(C) deliberately misrepresented the timing, impetus, and motivation for the SRT to the NRC on multiple occasions and provided misleading information concerning the activities of the SRT to NRC Executives with the purpose to influence the NRC management's actions in response to work environment issues at WBN. When TVA was informed a CEL was to be issued, (b)(7)(C) deliberately communicated incomplete and inaccurate information concerning the report status, report content, and misrepresented the independence between SRT and ECP investigations (Report NEC -16-0047 & 00127), to (b)(7)(C) This information was communicated by (b)(7)(C) to the NRC (b)(7)(C) in an attempt to delay and/or prevent issuance of the CEL. (b)(7)(C)

subsequently deliberately manipulated the SRT report to match the information communicated to NRC senior executives.

On February 24, 2016, NRC Region II management and staff received a brief from TVA OIG which described significant information that TVA OIG had gathered during their interviews into work environment concerns at WBN. Following the briefing, NRC's (b)(7)(C) and (b)(7)(C) called (b)(7)(C) and (b)(7)(C) to inform them that the NRC was in communication with TVA OIG and OI was reviewing information that gave the NRC concerns about the health of the work environment in the Operations Department at WBN. As a response to the NRC receiving this information from TVA OIG, on February 26, 2016, (b)(7)(C) assembled a team which would come to be known as the SRT. The team was informed that the NRC had entered concerns into their Allegation Process that may result in a possible CEL, Confirmatory Action Letter (CAL) or other vehicle. One objective of the team was to prepare to communicate TVA actions to the NRC in a manner that convinced the NRC that no further regulatory action was needed above "normal." Furthermore, the "Key Activities" of the team were described in a February 26, 2016 email, which included "Prepare plan for engagement with NRC to head off NRC escalated response." (b)(7)(C) (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) were included (Exhibit A10-E1)(Exhibit A10-E2)(Exhibit A10-E3)(Exhibit T-50)(Exhibit T-52).

During his OI interview on February 4, 2019, (b)(7)(C) presented a different account of the purpose of the SRT that is not corroborated by the evidence obtained during this investigation. (b)(7)(C) described that the SRT was to take a series of inputs to draw a conclusion on whether a chilled work environment existed in operations or on site. These inputs included: information from ECP; any information obtained from TVA-OIG; work that WBN had already done at that point; RCA of the November 11, 2015, event; information from INPO; and personnel statements obtained at that point. (b)(7)(C) explained that the intention of the SRT was not to be a supplemental investigation as there was already one being performed by ECP and TVA OIG. During his OI interview, (b)(7)(C) was asked if he ever communicated to the SRT that the purpose of SRT was to prevent additional regulatory actions, (b)(7)(C) responded, "I do not recall telling them that was its purpose." (b)(7)(C) suggested if it was received as that was the purpose that would not have been his intent. (b)(7)(C) asserted that the SRT report was an internal report that would potentially have been reviewed by the NRC, but its purpose was not fundamentally a communication vehicle to the NRC (Exhibit T-62, pp. 84-87, pp. 137-142).

On (b)(7)(C) sent (b)(7)(C) his thoughts and guidance regarding a meeting (b)(7)(C) was scheduled to have with (b)(7)(C) on (b)(7)(C) provided suggestions to (b)(7)(C) aimed at trying to influence (b)(7)(C) into agreeing to delay the NRC in taking actions against TVA and to first allow TVA to address the work environment concerns. (b)(7)(C) included recommendations to help achieve those ends including: provide a countering message to parts of TVA OIG's message to the NRC; make a case to delink the need for NRC action from specific WBN2 milestones; and offer additional meetings with Region II Management (Exhibit A10-E4)(Exhibit A10-E5).

The SRT preliminary conclusions were sent by (b)(7)(C) to (b)(7)(C) on (b)(7)(C) and to (b)(7)(C) (b)(7)(C) (b)(7)(C), and (b)(7)(C) (b)(7)(C), on (b)(7)(C) Th

(b)(5)

(b)(7)(C) reinforced the purpose for the SRT in a (b)(7)(C), email sent to (b)(7)(C) and the members of the SRT which identified that, in part, the purpose of the project was to minimize additional regulatory engagement. (b)(7)(C) also highlighted that the NRC has requested the ECP and SRT reports (Exhibit A10-E7).

On (b)(7)(C), (b)(7)(C) sent a copy of ECP Report NEC-16-0047 in an e-mail titled "(b)(7)(C)" to (b)(7)(C) and (b)(7)(C) which (b)(7)(C) forwarded to the SRT members and (b)(7)(C) the next day. On (b)(7)(C), (b)(7)(C) sent an email to (b)(7)(C) noting the differences in the ECP Report and SRT initial conclusions as being "(b)(7)(C)". In an email from (b)(7)(C) to (b)(7)(C) (b)(7)(C) (b)(7)(C), and (b)(7)(C) (b)(7)(C) addressed the interaction with the NRC and how the NRC would receive the report. This email demonstrates to OI that the NRC response was a factor in the writing of the report when (b)(7)(C) detailed a strategy to present the differences between the two report conclusions to the NRC (Exhibit A10-E8, pp. 1-46)(Exhibit A10-E9) (Exhibit A10-E10).

On March 8, 2016, NRC RII staff completed a review of TVA OIG interviews provided to the NRC on March 2, 2016. An emergency ARB was convened on March 9, 2016, to discuss the information found in the review designated as concerns three to six of allegation RII-2016-A-0032. The ARB assigned actions to conduct a phone call with TVA to make them aware of NRC's concerns and provide specifics as necessary. Further action was assigned to follow-up with a chilling effect letter to request information on TVA's actions in response to the NRC's concerns. The Watts Bar issues were discussed throughout NRC management up to the EDO's Office (Exhibit A10-E11)(A10-E12)(A10-E13)(A10-E14)(A10-E15)(A10-E16).

On (b)(7)(C), (b)(7)(C) and (b)(7)(C) exchanged emails which coordinated changing content of the SRT report which included the complete removal of some information from the report. Information was removed which identified that several root cause and apparent cause analyses from late 2015 had been reviewed.

(b)(5), (b)(7)(C)

On (b)(7)(C) at (b)(7)(C) hours (b)(7)(C) sent a draft copy of the SRT report Revision 21 to members of the SRT by email.

(b)(5)

(b)(5)

On (b)(7)(C), (b)(7)(C) and (b)(7)(C) held a teleconference with (b)(7)(C) and (b)(7)(C) in which they followed up on their (b)(7)(C) telephone call to convey that the NRC had issues with the safety culture in the Operations department at WBN and that the NRC had decided to issue a CEL the following week (week of March 14, 2016). Afterwards, (b)(7)(C) emailed NRC staff and management informing them of the call and the goal of issuing the CEL NLT Tuesday of the following week. Subsequently at (b)(7)(C) hours (b)(7)(C) sent an email to (b)(7)(C), (b)(7)(C) and (b)(7)(C), with Revision 21 of the SRT report attached and detailed that the SRT report will need to be changed in response to the issuance of the CEL (Exhibit A11-E1)(Exhibit A11-E2)(Exhibit A11-E3)(Exhibit A11-E4, p. 4).

On (b)(7)(C) exchanged emails with (b)(7)(C) on how to approach a personal conversation with the (b)(7)(C) aimed at changing the proposed regulatory response communicated to TVA on March 11, 2016. This included actions aimed to avoid issuance of the CEL in the near term by communicating "a set of moves that could catch (b)(7)(C) attention enough to cause him to pause." (b)(7)(C) outlined talking points for the conversation where (b)(7)(C) was to convey that two independent TVA internal reports (SRT and ECP) had been completed the week prior which reached the same conclusions as the NRC. It was further detailed that the TVA internal reports each included themes of the similar six "bins of issues" (b)(7)(C) used in his discussion with (b)(7)(C) and (b)(7)(C) on (b)(7)(C), and the two TVA internal reports both reached the same conclusion as the NRC regarding chilled environment in the Operations department. (b)(7)(C) was to request from (b)(7)(C) to allow TVA to come to Region II on March 22, 2016 and explain in both open and closed session the details of their conclusions and immediate actions. A review of (b)(7)(C) notes from the discussion between (b)(7)(C) and (b)(7)(C) on (b)(7)(C), indicated these topics were discussed as recommended and (b)(7)(C) highlighted that the SRT report was led by (b)(7)(C) and (b)(7)(C) During the call with (b)(7)(C) (b)(7)(C) specifically requested a short delay in the issuance of the CEL and possibly a different regulatory "footprint" from the NRC (Exhibit A11-E5)(Exhibit A11-E6)(Exhibit A11-E4, pp. 10-19).

On the morning of (b)(7)(C) sent an email to NRC executives and management informing them the timeline for issuance of the CEL may be delayed until after the March 22, 2016, public meeting. (b)(7)(C) sent a revised SRT report (Revision 22) to the SRT at (b)(7) on (b)(7)(C) On (b)(7)(C) (b)(7)(C) (b)(7)(C) and (b)(7)(C) had a teleconference where (b)(7)(C) discussed delaying the CEL. Emails between (b)(7)(C) and (b)(7)(C) on (b)(7)(C) discussed the weekend

call between (b)(7)(C) and (b)(7)(C) the follow-up call on (b)(7)(C) and the resultant delay in issuance of the CEL (Exhibit A11-E7)(Exhibit A11-E81)(Exhibit A11-E4, p. 5) (Exhibit A11-E9)(Exhibit A11-E10).

During his OI interview, (b)(7)(C) testified under oath that the information he provided (b)(7)(C) for his discussion with (b)(7)(C) included that (b)(7)(C) was not surprised by NRC's conclusions because two independent TVA internal reports (ECP and SRT) had reached the same conclusions. Likewise, a similar communication was made to (b)(7)(C) and (b)(7)(C) that the TVA reports had reached the same conclusion and at that point TVA communicated to (b)(7)(C) that TVA was not arguing the conclusion or the right regulatory action (Exhibit T-62, pp. 114-124).

Based on the evidence OI finds that (b)(7)(C) deliberately provided incomplete and inaccurate information to (b)(7)(C) for the purpose of providing to (b)(7)(C) during a conference call on (b)(7)(C). OI found insufficient evidence to prove that (b)(7)(C) was aware the information was incomplete and inaccurate when he spoke to (b)(7)(C) OI determined (b)(7)(C) falsely indicated that the SRT report was completed and reached a conclusion regarding existence of a chilled environment in Operations. This is based on the content and significance of changes made to the SRT report after communicating with the NRC on (b)(7)(C) (b)(7)(C) An analysis by OI of the SRT reports revision 21 from March 11, 2016, and revision 22 from March 14, 2016, revealed significant changes in the report content and conclusions to make it correspond with the information provided by the NRC on March 11, 2016, and the information provided to NRC executives on (b)(7)(C). Information specifically addressing the "6 bins" discussed by (b)(7)(C) during the (b)(7)(C) conversation with TVA, as documented by (b)(7)(C) was initially used to replace existing information in the SRT report. Conclusions and language contradictory to the NRC assessment of the work environment was removed or changed to agree with the NRC conclusion. In one specific instance a differentiating aspect between the SRT and the ECP report was changed to a concurring aspect. The SRT report findings were changed after communicating with (b)(7)(C) The evidence shows that the changes were made to align the SRT content with the information provided to the NRC as well as the information the NRC had provided to TVA on (b)(7)(C) (Exhibit A10-E21, pp. 1-12).

Additionally, OI's investigation concluded that (b)(7)(C) also deliberately provided incomplete and inaccurate information to (b)(7)(C) when he asserted that two independent TVA internal reports had been completed and reached the same conclusion as the NRC. OI's review of the evidence concluded that the ECP report was not completed when it was communicated to the NRC that it was done; additionally, the SRT and the ECP reports were not independent as presented to the NRC. The investigation revealed that (b)(7)(C) shared ECP investigation information with (b)(7)(C) and other TVA senior executives from the start of the ECP Chilled Work Environment investigation. Moreover, OI determined that (b)(7)(C) was the lead of the SRT and the primary author of the SRT report. (b)(7)(C) was included on distribution of information pertaining to the ECP investigation including its planning, approach, and findings as the investigation was performed. (b)(7)(C) was involved in the initiation and performance of both the ECP and SRT investigations. Further, draft ECP reports were sent to the SRT members during its investigation and there were specific actions taken to identify and address

differences in the reports. (b)(7)(C) indicated in her interview that the purpose of the SRT was to take action based off the findings of the ECP report. Review of the SRT report found multiple references to information contained in the ECP report and a section which specifically reviewed and included the ECP report information as part of the SRT report. Multiple other sections of the SRT report include ECP report references and information used in its analysis (Exhibit A10-E3)(Exhibit A10-E6)(Exhibit A10-E8, pp. 1-46)(Exhibit A10-E9) (Exhibit A10-E20)(Exhibit T-61)(Exhibit A10-E22, p. 15, pp. 17-25, p. 35, p. 37, pp. 41-42)(Exhibit A10-E23, pp. 1-12)(Exhibit A10-E24, pp. 1-8)(Exhibit A10-E25, pp. 1-51)(Exhibit A10-E26, pp 1-45).

On (b)(7)(C), (b)(7)(C) (b)(7)(C) and (b)(7)(C) exchanged emails containing NRC Closed Session Talking Points which (b)(7)(C) described as the initial thoughts of (b)(7)(C) on the messages that needed to be conveyed to the NRC during a March 22, 2016 meeting. (b)(7)(C) replied with a concern that the talking points said that the SRT did things that they did not and the tact was risky. He also was questioning the point that (b)(7)(C) was still in the process of revising the ECP report (Exhibit A10-E27).

On (b)(7)(C), (b)(7)(C) replied to an email from (b)(7)(C) addressing a conversation they had concerning the conclusion she was documenting in her report of the work completed in ECP report NEC-16-0047. The ECP report identified (b)(7)(C) and (b)(7)(C) as the source of a chilled work environment in Operations. (b)(7)(C) presented his own wording of what the conclusion should say which absolved him of responsibility and classified the issue as a communication gap which others filled with their own perception (Exhibit A10-E28).

On (b)(7)(C) directed (b)(7)(C) and (b)(7)(C) (b)(7)(C) to archive the previous signed revision (Rev 0) of the SRT report and replace with a revised (Rev 1), fully understanding that the NRC was informed that the report was completed during the public meeting on March 22, 2016, and was not going to be informed of changes made following the meeting. (b)(7)(C) stated, “a Rev 1 from today will be credible that we were done when we talked to them.” (b)(7)(C) also discussed having changes made to the report and having it properly archived with (b)(7)(C) at TVA (Exhibit T-74)(Exhibit A10-E29)(Exhibit A10-E30). During his OI interview, (b)(7)(C) was asked if he instructed anyone to archive changes after the meeting, (b)(7)(C) responded, “I do not recall with specifics once its signed I let the administrative staff manage the entry of the BSL.” (b)(7)(C) contends that he has no idea on how the BSL process works relative to archiving revisions to documents. Furthermore (b)(7)(C) noted that he left that task to administrative staff to address and make the necessary entries into BSL. (Exhibit T-62, pp. 136-138)

On (b)(7)(C) sent the SRT report to the NRC.

(b)(5)

Email evidence obtained by OI clearly identifies that the SRT was not established as

documented in the report but rather established as a direct response to the NRC communicating receipt of information from TVA OIG and entering issues into their Allegation Program on February 24, 2016. This is further supported by the evidence that TVA was also briefed by TVA OIG on the issues shared with the NRC and did not take any additional action until the NRC became involved. The report falsely presents the SRT efforts as self-initiated actions taken by TVA executives to address the work environment issues at WBN that were already ongoing at the time the NRC informed TVA senior management that the NRC was planning to begin looking into it (Exhibit A10-E22, pp. 6-8)(Exhibit A10-E3)(Exhibit A10-E9)(Exhibit A10-E4).

(b)(5)

Review of the report does not point to any actual review that was done to specifically investigate whether any retaliation was associated with the actions of management. Questioning of TVA by TVA OIG confirmed that no investigation of such a type had been performed. Additionally, review of NEC-016-00127 does not support the statement that

(b)(5)

On April 22, 2016, (b)(7)(C) approved and sent TVA's response to the CEL to the NRC which discussed the SRT report and ECP report. It documented that the SRT and ECP investigations were independent investigations initiated in response to the receipt of degraded work environment concerns. It describes that in order to ensure the independence of the teams and their reviews and assessments, team members were selected from outside the WBN organization for the initial assessments. Based on the evidence gathered during this investigation, OI determined that the ECP investigation and SRT were not independent of each other by participants or in report content. The identification of those involved in the two investigations and reports failed to include the activities of (b)(7)(C) NEC-016-00127, which is an executive summary of the investigation NEC-16-047 which she had oversight of and led the editing of the original report. As before, the SRT was being presented as one of two independent investigation teams commissioned by TVA management following TVA's receipt of concerns that a degraded work environment existed within the WBN Operations Department (Exhibit A10-E31, p. 4).

The testimony from (b)(7)(C) and team members indicates that the report was authored by (b)(7)(C) and that team members had difficulties with the outcomes. The evidence established that the SRT had a direction to develop a report with the explicit purpose to influence the NRC and not as an independent investigation as presented to the NRC (Exhibit T-66, pp. 4-5) (Exhibit T-62, pp. 87-92)(Exhibit T-63, p. 2)(Exhibit T-64, pp. 1-2)(Exhibit T-65, p. 1, p. 3).

OI determined that (b)(7)(C) deliberately provided (b)(7)(C) information to be communicated to NRC (b)(7)(C) that was incomplete and inaccurate in an attempt to delay and/or prevent the issuance of a CEL. (b)(7)(C) provided false information that the SRT and ECP reports were

completed and misrepresented the SRT and ECP efforts as independent investigations. (b)(7)(C) falsely indicated that the SRT report had reached the same conclusions as the ECP report and further falsely indicated that both the ECP and SRT reports reached the same conclusions as the NRC review.

The evidence shows OI that (b)(7)(C) deliberately provided the NRC information as part of the SRT report that was incomplete and inaccurate in some respect material to the NRC.

(b)(5)

The contents of the SRT report were deliberately changed to match the information provided by NRC senior executives after communicating to the NRC that the SRT report agreed with the NRC's conclusions.

Agent's Note: The issues of purpose and timing of the SRT report are material for two reasons:

1) The NRC allegations manual specifically calls out licensee actions in these situations to be weighted heavily in the determination of whether to issue a CEL. TVA was communicating to the NRC that they were cognizant of the situation, were responding appropriately, and were taking the correct actions to address the situation. Any acknowledgement that TVA's actions were reactionary to the NRC call would have undermined any possible narrative that they were taking timely and appropriate actions in responding to this issue. Because TVA OIG informed the NRC that TVA OIG had already discussed these issues with TVA, this would have encouraged the NRC to take additional actions (i.e. issue a CEL).

    a. **5.2.j.6(a)(2) Situations That Warrant CEL Issuance**
    Licensee's Remedial Actions in Response to Negative SCWE Trends or an Event.

    The staff should place greater weight on this factor than those articulated above. Of interest is whether the staff views the licensee's remedial actions to be timely and appropriate and to have a likelihood of success in enhancing the SCWE and negating any prior chilling effect.

2) Some of the Key Activities provided at the beginning of the SRT established a predisposition for what the report should accomplish with respect to the NRC which shows it was purposed for influencing the regulator and not as an independent investigation. Also, it shows that the information and conclusion presented should be

met with additional scrutiny and considered in the appropriate context as the team is being directed on what their findings/analysis needed to accomplish.

Conclusion

Based on the evidence developed during this investigation, OI substantiated that (b)(7)(C) (b)(7)(C) TVA, deliberately provided incomplete and inaccurate information to the NRC in the Special Review Team Report.

Based on the evidence developed during this investigation, OI also substantiated that (b)(7)(C) (b)(7)(C) at TVA deliberately provided incomplete and inaccurate information to (b)(7)(C) TVA, with the purpose of being conveyed to the (b)(7)(C) to attempt to influence the NRC's decision in taking a regulatory action.

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SUPPLEMENTAL INFORMATION

On July 5, 2018, OI briefed (b)(7)(C) Assistant Section Chief, Environmental Crimes Section, U.S. Department of Justice (DOJ), 1400 New York Avenue, N.W. Washington, DC 20005, on the status of this investigation.

On February 6, 2019, OI apprised (b)(7)(C) on the investigation. (b)(7)(C) advised that before a decision is made on whether prosecution of these matters is warranted, OI would provide the Report of Investigation to DOJ for review after the compilation and analysis of the evidence was completed.

On May 17, 2019, OI advised (b)(7)(C) the Report of Investigation was completed and available for review. To date, DOJ has not rendered an official decision relative to the prosecutorial merit of this investigation. A decision from DOJ is anticipated in the near future and will be reported under a separate cover.

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LIST OF EXHIBITS

Documentary Evidence

Nos.	Description
A1-E1	Analysis No Pocket Veto W Enclosures (123 pages)
A1-E2	All (b)(7)(C) Email Statements (11 pages)
A1-E3	Email (b)(7)(C) (b)(7)(C) requesting hourly outage updates (2 pages)
A1-E4	Email (b)(7)(C) Sends (b)(7)(C) SOD SOM Checklists (2 pages)
A1-E5	Email (b)(7)(C) sends out Checklist (2 pages)
A1-E6	Email RE U1 Outage - 1930 Dayshift Hourly Update (2 pages)
A1-E7	Email PM MCR Observation (1 page)
A1-E8	EA-17-022 Confirmatory Order ML17208A647 (29 pages)
A1-E9	EA-17-022 Confirmatory Order ML17208A596 (4 pages)
A1-E10	IR 050002016013 ML17069A133 (34 pages)
A1-E11	Email (b)(7)(C) (b)(7)(C) on crew logging By OCC Direction (4 pages)
A1-E12	Email (b)(7)(C) Stop Logging by OCC direction (1 page)
A1-E13	Email (b)(7)(C) - I told shift to stop logging by OCC direction (1 page)
A1-E14	Email (b)(7)(C) email MCR Observation (5 pages)
A2-E1	WBN Plant Operating Logs from October 21, 2015 (140 pages)
A2-E2	WBN Plant Dataware from October 21, 2015 (Electronic Database)
A2-E3	Official record copy of 1-GO-2 Revision 6 used during start-up in October 2015 (86 Pages)
A2-E4	3-OT-STG-003A, Revision 12, Main Feedwater System (Student Training Guide) (242 pages)
A2-E5	ANALYSIS OF THE USE OF THE STANDBY w Attachments (1099 pages)
A2-E6	Draft Apparent Violation SBMFP Use (6 pages)
A3-E1	Email (b)(7)(C) Outage Update Sent by (b)(7)(C) (2 pages)
A3-E2	Email Outage Update Sent by (2 pages)

A3-E3	Copy of 1-GO-1 from 11/9/2015 (34 pages)
A3-E4	1-GO-1, Unit Startup from Cold Shutdown To Hot Standby, Rev 3 (125 pages)
A3-E5	1-GO-1, Unit Startup from Cold Shutdown To Hot Standby, Rev 4 (125 pages)
A3-E6	Procedure Change copy WorkFlow Name: WBN 1-GO-1 Rev. 0004 20151109135818 (5 pages)
A3-E7	Email (b)(7)(C) 1-GO-1 Sent by (b)(7)(C) on (b)(7)(C) (1 page)
A3-E8	Email 1-GO-1 Revision 4, Sent by (b)(7)(C) on (b)(7)(C) (b)(7)(C) (1 page)
A3-E9	NPG-SPP-1.2, Administration of Site Technical Procedures, Revision 12 (56 pages)
A3-E10	Analysis of change to 1-GO-1 (63 pages)
A3-E11	Draft Apparent Violation (6 pages)
A4-E1	1-GO-1 from 11-11-15 pages 27-60 (34 pages)
A4-E2	Clearance Tagout 1-TO-2015-0046 – Clearance 1-62-0584-FO (6 pages)
A4-E3	1-GO-1, Unit Startup From Cold Shutdown To Hot Standby Revision 0004 Effective Date 11/09/15 (125 pages)
A4-E4	CVCS Charging and Letdown Valve Checklist 1-62.01-1V (19 pages)
A4-E5	WBN Plant Logs from November 11, 2015
A4-E6	Email (b)(7)(C) Sent by (b)(7)(C) (2 pages)
A4-E7	Email (b)(7)(C) (b)(7)(C) Sent by (b)(7)(C) (b)(7)(C) (3 pages)
A4-E8	Email (b)(7)(C) Sent by (b)(7)(C) (b)(7)(C) (2 pages)
A4-E9	Email (b)(7)(C) PDF Interview Notes Sent by (b)(7)(C) (10 pages)
A4-E10	Email (b)(7)(C) My interview, email exchange between (b)(7)(C) and (b)(7)(C) (2 pages)
A4-E11	Draft Apparent Violation Failure to Follow 1-GO-1 (8 Pages)
A4-E12	Conduct of Operations OPDP-1 Rev. 0029 (76 pages)
A4-E13	CVCS Charging and Letdown Power Checklist 1-62.01-1P (2 pages)

A4-E14	NPG-SPP-01.2 Rev. 0012 - Administration of Site Technical Procedures (56 pages)
A4-E15	WO117339526 P/T limits from November 11, 2015 (75 pages)
A4-E16	Email (b)(7)(C) Sent by (b)(7)(C) (b)(7)(C) (2 pages)
A5-E1	Email (b)(7)(C) NRC Question Email from (b)(7)(C) to (b)(7)(C) (5 pages)
A5-E2	Email (b)(7)(C) From (b)(7)(C) (5 pages)
A5-E3	Email (b)(7)(C) RHR question from (b)(7)(C) (5 pages)
A5-E4	CR 1114975 (66 pages)
A5-E5	Email (b)(7)(C) from (b)(7)(C) (2 pages)
A5-E6	Email (b)(7)(C) (b)(7)(C) Email chain from (b)(7)(C) (3 pages)
A5-E7	Email (b)(7)(C) (b)(7)(C) from (b)(7)(C) (3 pages)
A5-E8	TVA initial response (b)(7)(C) questions (3 pages)
A5-E9	Analysis of response (b)(7)(C) Questions
A5-E10	WBN Plant Logs from November 11, 2015 (9 pages)
A5-E11	(b)(7)(C) email to SROs (3 pages)
A5-E12	Email (b)(7)(C) Read while poo'ing from (b)(7)(C) (2 pages)
A5-E13	50.9 Info to SRI DRAFT AV Information (5 pages)
A6-E1	Email (b)(7)(C) REDINGER interview notes sent by (b)(7)(C) (3 pages)
A6-E2	Email (b)(7)(C) Updated questions sent by (b)(7)(C) (2 pages)
A6-E3	Email (b)(7)(C) sent by (b)(7)(C) (4 pages)
A6-E4	Email sent by (b)(7)(C) (6 pages)
A6-E5	Email (b)(7)(C) My interview, email exchange between (b)(7)(C) and (b)(7)(C) (2 pages)
A6-E6	Shift Order 15-50 (7 pages)

A6-E7	Analysis of Procedures and Training W Attachments (993 pages)
A6-E8	Email (b)(7)(C) WBN U1 1100 Maint Outage (b)(7)(C) and (b)(7)(C) (2 pages)
A6-E9	Email (b)(7)(C) Outage Update Reply (b)(7)(C) (2 pages)
A6-E10	Email (b)(7)(C) sent Outage Lesson Learned (1 page)
A6-E11	Email (b)(7)(C) to (b)(7)(C) RHR Statement (3 pages)
A6-E12	Email (b)(7)(C) REDINGER Statement to (b)(7)(C) (2 pages)
A6-E13	Email (b)(7)(C) Level 2 interview notes given to management (10 pages)
A6-E14	Email (b)(7)(C) email on shift order (2 pages)
A6-E15	Allegation 2015-A-0214 Attachment 4 (8 pages)
A6-E16	Email (b)(7)(C) (b)(7)(C) Sent By (b)(7)(C) (24 pages)
A6-E17	(b)(7)(C) Slides 1-6-16 (17 pages)
A6-E18	Draft Apparent Violation for 010616 meeting (8 pages)
A7-E1	(b)(7)(C) Dennis REDINGER interview notes sent by (b)(7)(C) (3 pages)
A7-E2	(b)(7)(C) Email exchange between (b)(7)(C) and (b)(7)(C) (2 pages)
A8-E1	CR 1121520 Lvl 2 Rev 0 with attachments 160210984 Final (34 pages)
A8-E2	(b)(7)(C) Level 2 interview notes (10 pages)
A8-E3	(b)(7)(C) (b)(7) to (b)(7)(C) ((b)(7)(C))
A8-E4	20160115 1717 Fwd_ Stement - Dennis REDINGER (1 page)
A8-E5	(b)(7)(C) REDINGER January statement to (b)(7)(C) (2 pages)
A8-E6	REDINGER Statement to (b)(7)(C) (1 page)
A8-E7	(b)(7)(C) to (b)(7)(C) RHR Statement to (b)(7)(C) (3 pages)
A8-E8	(b)(7)(C) (1 page)
A8-E9	(b)(7)(C) Input to Lvl 2 (2 pages)
A8-E10	(b)(7)(C) to (b)(7)(C) Lvl 2 are we right (14 pages)
A8-E11	(b)(7)(C) to (b)(7)(C) (Safety Culture Analysis) (11 pages)

A8-E12 (b)(7)(C) Safety Culture Analysis CR 1121520-1.18.16 (b)(7)(C) to (b)(7)(C) 11 pages)

A8-E13 (b)(7)(C) changes X1 to remove OCC (1 page)

A8-E14 (b)(7)(C) response it is fixed (1 page)

A8-E15 (b)(7)(C) to (b)(7)(C) (CR 1121520 Report)(48 pages)

A8-E16 (b)(7)(C) sends out schedule Update reply (b)(7)(C) (2 pages)

A8-E17 (b)(7)(C) requesting hourly outage updates (2 pages)

A8-E18 (b)(7)(C) Outage Update Reply (b)(7)(C) (2 pages)

A8-E19 (b)(7)(C) Email chain between (b)(7)(C) and (b)(7)(C) (b)(7)(C) (2 pages)

A8-E20 CR1127691 Rev 0 Root Cause Analysis with Attachments 20160219 (212 pages)

A9-E1 (b)(7)(C) Feb 2 TVA meeting summaries (24 pages)

A9-E2 (b)(7)(C) about slides for meeting (1 page)

A9-E3 Feb 02 16 Drop in Notes (b)(7)(C) (14 pages)

A9-E4 (b)(7)(C) to (b)(7)(C) (1 page)

A10-E1 Email (b)(7)(C) Initial call with TVA OIG (2 pages)

A10-E2 Email Initial call with TVA OIG Summary (1 page)

A10-E3 Email (b)(7)(C) SRT Purpose (4 pages)

A10-E4 Email (b)(7)(C) to (b)(7)(C) Meeting discussion points (3 pages)

A10-E5 Email (b)(7)(C) and (b)(7)(C) Meeting prep (2 pages)

A10-E6 Email (b)(7)(C) to (b)(7)(C) (2 pages)

A10-E7 Email (b)(7)(C) message to SRT on minimizing regulatory engagement (2 pages)

A10-E8 Email (b)(7)(C) Final Investigation Report (46 pages)

A10-E9 Email (b)(7)(C) about content of SRT report and ECP report (1 page)

A10-E10	Email (b)(7)(C) Freeman Difference Reconciliation (1 page)
A10-E11	Email (b)(7)(C) Emergency ARB discussion (2 pages)
A10-E12	Email (b)(7)(C) call with TVA OIG (2 pages)
A10-E13	Email (b)(7)(C) Comms to EDO on WB Path Forward (1 page)
A10-E14	Email Emergency ARB Notes (b)(7)(C) (1 page)
A10-E15	Email Emergency ARB Summary (1 page)
A10-E16	Email Emergency ARB ARB Input Form C3-6 (6 pages)
A10-E17	Email (b)(7)(C) Changes to SRT report (2 pages)
A10-E18	Email (b)(7)(C) changes to SRT Report (2 pages)
A10-E19	Email (b)(7)(C) SRT Report R15 sent out by (b)(7) (57 pages)
A10-E20	Email (b)(7)(C) Rev 21 SRT Report (58 pages)
A10-E21	CHANGES FROM REVISION 21 TO REVISION 22 TO FINAL OF SRT REPORT w attachments (244 pages)
A10-E22	Special review Team Report - Blue Report NRC Copy (112 pages)
A10-E23	Email (b)(7)(C) to (b)(7)(C) (12 pages)
A10-E24	Email (b)(7)(C) To (b)(7)(C) (b)(7)(C) (8 pages)
A10-E25	Email (b)(7)(C) to (b)(7)(C) and (b)(7)(C) (51 pages)
A10-E26	Email (b)(7)(C) and (b)(7)(C) (Final Investigation Report)(45 pages)
A10-E27	Email (b)(7)(C) comments on ECP report for meeting talking points (4 pages)
A10-E28	Email (b)(7)(C) wording ECP report about investigation into SVP Causing CWE (2 pages)
A10-E29	Email (b)(7)(C) SRT report to NRC final approval date (1 page)
A10-E30	Email to (b)(7)(C) Revise SRT report (1 page)
A10-E31	ML16113A228 Response to CEL (38 pages)
A11-E1	Email (b)(7)(C) Discussion of CWE with (b)(7)(C) and (b)(7)(C) (4 pages)
A11-E2	Email (b)(7)(C) on Call with TVA on CEL (3 pages)

A11-E3	Email (b)(7)(C) (1 page)
A11-E4	(b)(7)(C) – Notes (19 pages)
A11-E5	Email (b)(7)(C) to (b)(7)(C) on call with (b)(7)(C) (7 pages)
A11-E6	Email (b)(7)(C) to (b)(7)(C) on (b)(7)(C) (3 pages)
A11-E7	Email (b)(7)(C) Email about weekend call with (b)(7)(C) (2 pages)
A11-E8	Email (b)(7)(C) on change in issuance of CEL (1 page)
A11-E9	Email (b)(7)(C) SRT Draft Report Revision 22 - 3-14-2016 (55 pages)
A11-10	(b)(7)(C) Notes on call with (b)(7)(C) March 15 2016 (2 pages)

Testimony

Nos	Description
T-00a	Transcript of interview with (b)(7)(C) dated December 18, 2015 (43 pages)
T-00b	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated April 26, 2016 (8 pages)
T-01a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C), dated January 19, 2016 (15 pages)
T-01b	Transcript of interview with (b)(7)(C), dated December 18, 2015 (47 pages)
T-01c	TVA OIG Report of Investigative Activity of interview with (b)(7)(C), dated September 29, 2016 (5 pages)
T-02a	Transcript of interview with (b)(7)(C) dated December 17, 2015 (75 pages)
T-02b	Transcript of interview with (b)(7)(C) dated December 18, 2015 (40 pages)
T-02c	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated January 20, 2016 (4 pages)
T-02d	Transcript of interview with (b)(7)(C) dated February 1, 2016 (56 pages)
T-03	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated August 22, 2016 (9 pages)

T-05a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated January 16, 2016 (5 pages)
T-05b	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated September 29, 2016 (3 pages)
T-07a	Transcript of interview with (b)(7)(C) dated December 18, 2015 (75 pages)
T-07b	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 01, 2016 (36 pages)
T-07c	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 11, 2016 (41 pages)
T-07d	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated May 1, 2017 (4 pages)
T-09	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 24, 2016 (3 pages)
T-10	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 18, 2016 (3 pages)
T-11	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated April 15, 2016 (4 pages)
T-12	TVA OIG Report of Investigative Activity of interview with (b)(7)(C dated February 22, 2016 (3 pages)
T-13a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 10, 2016 (4 pages)
T-13b	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated September 29, 2016 (3 pages)
T-14	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 17, 2016 (6 pages)
T-15a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated March 7, 2016 (3 pages)
T-15b	Transcript of OI interview of (b)(7)(C) dated April 16, 2019 (39 pages)
T-16a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated January 28, 2016 (4 pages)
T-16b	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated September 29, 2016 (3 pages)

T-17a	Transcript of interview with (b)(7)(C) dated December 18, 2015 (50 pages)
T-17b	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated January 19, 2016 (2 pages)
T-17c	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 4, 2016 (4 pages)
T-17d	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated October 3, 2016 (4 pages)
T-17e	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated March 29, 2017 (5 pages)
T-18	Transcript of interview with (b)(7)(C) dated December 18, 2015 (33 pages)
T-19	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated January 27, 2017 (3 pages)
T-20	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 9, 2016 (2 pages)
T-21a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 2, 2016 (6 pages)
T-21b	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 10, 2016 (6 pages)
T-21c	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated June 30, 2016 (5 pages)
T-21d	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated January 19, 2017 (19 pages)
T-22a	Transcript of interview with (b)(7)(C) dated December 18, 2015 (71 pages)
T-22b	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated January 19, 2016 (3 pages)
T-22c	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated July 20, 2016 (3 pages)
T-22d	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated September 6, 2016 (5 pages)
T-22e	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated April 03, 2017 (2 pages)

T-23a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated January 27, 2016 (2 pages)
T-23b	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated September 29, 2016 (2 pages)
T-24	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated July 13, 2017 (3 pages)
T-25a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 22, 2016 (943 pages)
T-25b	TVA OIG Report of Investigative Activity of interview with dated April 3, 2017 (3 pages)
T-27a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 02, 2016 (8 pages)
T-27b	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 04, 2016 (2 pages)
T-27c	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated July 19, 2016 (1 page)
T-27d	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated January 14, 2019 (1 page)
T-27e	Transcript of OI interview of (b)(7)(C) dated April 16, 2019 (10 pages)
T-28	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 03, 2016 (7 pages)
T-29	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated July 14, 2016 (5 pages)
T-30	Transcript of OI interview of (b)(7)(C) dated May 16, 2017 (26 pages)
T-31	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated January 28, 2017 (3 pages)
T-32	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 17, 2016 (4 pages)
T-33	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated May 26, 2016 (7 pages)

T-34a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 10, 2016 (6 pages)
T-34b	Transcript of interview with (b)(7)(C) dated February 23, 2017 (64 pages)
T-35	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated June 14, 2017 (3 pages)
T-36	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated March 21, 2016 (4 pages)
T-38	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated October 16, 2017 (1 page)
T-38b	Transcript of OI interview of (b)(7)(C) dated April 26, 2019 (30 pages)
T-40a	Transcript of interview with REDDINGER, dated December 18, 2015 (59 pages)
T-40b	TVA OIG Report of Investigative Activity of interview with REDDINGER, dated January 19, 2016 (3 pages)
T-40c	TVA OIG Report of Investigative Activity of interview with REDDINGER, dated February 10, 2016 (2 pages)
T-40d	TVA OIG Report of Investigative Activity of interview with REDDINGER, dated March 07, 2016 (10 pages)
T-40e	TVA OIG Report of Investigative Activity of interview with REDDINGER, dated September 6, 2016 (4 pages)
T-41	TVA OIG Report of Investigative Activity of interview with (b)(7)(C), dated September 27, 2016 (2 pages)
T-42a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated June 09, 2017 (3 pages)
T-42b	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 25, 2019 (4 pages)
T-43a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C), dated February 09, 2016 (38 pages)
T-43b	NRC Interview Report of interview with (b)(7)(C) dated June 21, 2018 (5 pages)
T-44	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 4, 2016 (4 pages)
T-45	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated May 10, 2017 (2 pages)

T-46a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated September 29, 2016 (2 pages)
T-46b	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 3, 2016 (6 pages)
T-46c	Transcript of OI interview of (b)(7)(C) dated April 12, 2019 (22 pages)
T-47a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 23, 2016 (3 pages)
T-47b	TVA OIG Report of Investigative Activity of interview with dated February 23, 2016 (3 pages)
T-48	TVA OIG Report of Investigative Activity of interview with (b)(7)(C), dated June 6, 2016 (5 pages)
T-49a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 10, 2016 (2 pages)
T-49b	TVA OIG Report of Investigative Activity of interview with dated February 10, 2016 (206 pages)
T-49c	TVA OIG Report of Investigative Activity of interview with dated March 22, 2019 (5 pages)
T-50	NRC Interview Report of interview with (b)(7)(C), dated December 14, 2016 (4 pages)
T-51	NRC Interview Report of interview with (b)(7)(C) dated December 14, 2016 (2 pages)
T-52	TVA OIG Report of Investigative Activity of interview with (b)(7)(C), dated December 13, 2016 (3 pages)
T-53	OIG Memorandum of Interview of (b)(7)(C) dated June 22, 2017 (5 pages)
T-60a	TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated September 26, 2016 (2 pages)
T-60b	TVA OIG Report of Investigative Activity of interview with dated September 27, 2018 (2 pages)
T-61	TVA OIG Report of Investigative Activity of interview with (b)(7)(C), dated May 5, 2017 (1 page)
T-62	Transcript of interview with (b)(7)(C) dated February 4, 2019 (165 pages)

T-63 TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated March 8, 2017 (6 pages)

T-64 TVA OIG Interview with (b)(7)(C) dated June 28, 2016 (2 pages)

T-65 TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated May 11, 2016 (4 pages)

T-66 TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated January 11, 2019 (5 pages)

T-67 Transcript of interview with (b)(7)(C) dated August 1, 2018 (97 pages)

T-68 TVA OIG Report of Investigative Activity of interview with (b)(7)(C), dated March 03, 2016 (4 pages)

T-69 TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 08, 2016 (8 pages)

T-70 TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated January 20, 2016 (3 pages)

T-71 TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 08, 2016 (10 pages)

T-72 TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 10, 2016 (3 pages)

T-73 TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated February 29, 2016 (5 pages)

T-74 TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated January 08, 2019 (5 pages)

T-75 Transcript of OI interview of (b)(7)(C) dated April 12, 2019 (8 pages)

T-76 Transcript of OI interview of (b)(7)(C) dated April 12, 2019 (11 pages)

T-77 TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated May 20, 2016 (4 pages)

T-78 TVA OIG Report of Investigative Activity of interview with (b)(7)(C) dated September 04, 2018 (4 pages)