

Attachment 1

Supplemental Information for Decommissioning Impact on Public Health and Safety
Dresden Nuclear Power Station, Unit 1

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Dresden Nuclear Power Station, Unit 1 (Dresden, Unit 1), consists of a General Electric (GE) dual-cycle boiling water reactor (BWR) and GE dual-admission turbine. Dresden, Unit 1, had a gross output of 210 MWe and produced power commercially from July 1960 to October 1978. Dresden, Unit 1, is currently being maintained in a SAFSTOR condition. Dresden, Units 2 and 3, were constructed on a common site within the same Protected Area (PA) as Dresden, Unit 1, with Dresden, Unit 2, physically joined to Dresden, Unit 1. Dresden Units 1, 2, and 3, operated concurrently as a combined site until Dresden, Unit 1, permanently ceased operations in October 1978. Dresden, Units 2 and 3, remain in operation with various systems from Dresden, Unit 1, continuing to support operation of Dresden, Units 2 and 3. Dresden, Unit 1, auxiliary buildings have been expanded over time and remain in use to support operation of Dresden, Units 2 and 3. The Physical Security Plan is inclusive of all three units and the adjacent Independent Spent Fuel Storage Installation (ISFSI) pads due to physical configuration of the multi-unit site. Refer to Figure 1-1.

Dresden, Unit 2, Turbine Building (common turbine building for Dresden, Units 2 and 3) is physically connected to the Dresden, Unit 1 Turbine Building. This physical connection has resulted in structures, systems, and components (SSCs) in the interface region of the Dresden, Unit 1, and Dresden, Unit 2, Turbine Buildings that support operation of Dresden, Units 2 and 3. Decommissioning of Dresden, Unit 1, would require significant modification to these systems, which as described below can directly impact safe operation of Dresden, Units 2 and 3. Decommissioning of the Dresden, Unit 1, Turbine Building with a Main Control Room and associated systems supporting two operating units within the structure presents an increased risk to public health and safety due to structural complications as well as relocation or modification of the support systems within the proximity of the control room. The following items further describe those additional support systems within the Dresden, Unit 1, Turbine Building which support operation of Dresden, Units 2 and 3.

The Main Control Room for Dresden, Units 2 and 3, were combined with the existing Dresden, Unit 1, Main Control Room. The current Main Control Room configuration has Dresden, Units 2 and 3 portions residing in the Dresden, Unit 2, Turbine Building with the Main Control Room envelope across the dividing wall extending into the Dresden, Unit 1, Turbine Building. The remaining portions of the Dresden, Unit 1, Main Control Room contain controls for in-service Dresden, Unit 1, systems supporting operation of Dresden, Units 2 and 3.

Dresden, Unit 1, 4kV and 480V distribution is supplied from the Dresden, Unit 1, Reserve Auxiliary Transformer (TR-12). There is a backup transformer (TR-13) which provides an alternate power source for Dresden, Unit 1, AC distribution. The 4kV and 480V buses are located in the Dresden, Unit 1, Turbine Building and distribute power to the remaining Dresden, Unit 1, systems, which support operation of Dresden, Units 2 and 3. Some Dresden, Units 2 and 3, systems located in retrofitted areas of Dresden, Unit 1, are powered from the Dresden, Unit 1, AC distribution system. In addition, the

Dresden, Unit 1, AC distribution system supports a significant portion of the site industrial functions, including:

- Standby building and control power to Dresden, Units 2 and 3, Station Blackout (SBO) buildings and buses;
- Dresden, Unit 2 and 3, emergency SBO 4kV power and Main Control Room interface is routed through SBO electrical ducts to Dresden, Units 2 and 3, 4kV buses adjacent to Dresden, Unit 1; and
- Dresden, Unit 1, 480V Buses 14, 15, 16, and 17 supply industrial power to a large portion of the site.

The Dresden, Units 2 and 3, Prime Computer Room, Prime Computer Uninterrupted Power Supply (UPS), and associated battery are in the Dresden, Unit 1, Turbine Building directly adjacent to the Dresden, Unit 2, Turbine Building and Dresden, Units 2 and 3, Main Control Room. The location of this equipment is similar to the Main Control Room configuration where they originally supported Dresden, Unit 1, operation and remained in place to support operation of Dresden, Units 1, 2 and 3.

The Dresden, Unit 1, 125VDC system including chargers, distribution panels, and batteries provide control power to the AC distribution system as described above. These components are located in the Dresden, Unit 1, Turbine Building adjacent to the Dresden, Unit 2, Turbine Building and under the Main Control Room.

Dresden, Units 2 and 3, Reactor Recirculation Pump Adjustable Speed Drive Input/Output Cabinets and control cabling to the Main Control Room are located in the Dresden, Unit 1, Turbine Building adjacent to the Dresden, Unit 1, 4kV buses. These components are required to support operation of the Dresden, Units 2 and 3, reactor recirculation pumps.

Licensed and non-licensed operator work areas and Main Control Access is located in the Dresden, Unit 1, Turbine Building within in the remaining Dresden, Unit 1, Control Room area that has since been separated from the current Main Control Room envelope. These areas include safe shutdown response paths required to support Appendix R Safe Shutdown Procedures.

The SBO diesels, an independent system for each Dresden, Units 2 and 3, along with needed support systems, are located in the structure previously designated for installation of a Dresden, Unit 1, High Pressure Coolant Injection system. The previously installed underground electrical ductwork to and from Dresden, Unit 1, AC distribution, Dresden, Units 2 and 3, AC distribution, and the Main Control Room are utilized to support the SBO function. This building is located on the Dresden, Unit 1, operating area which will require characterization surveys, remediation, and final surveys to support decommissioning. Either relocation of this equipment or excavation adjacent to the structures represents an increased risk for Dresden, Units 2 and 3, backup power systems, and increased risk to public health and safety.

The Dresden, Unit 1, Chimney is located in close proximity to the Dresden, Units 2 and 3, underground electrical ductwork supporting the SBO. The required excavation for removal of this foundation, remediation and final survey of the area results in increased risk for the Dresden, Units 2 and 3, backup power systems, and increased risk to public health and safety.

The Dresden, Unit 1, ISFSI storage pad houses fuel removed from the Dresden, Unit 1, spent fuel pool. This pad was located within the Dresden, Unit 1, operating area, which will require characterization surveys, remediation, and final surveys to support decommissioning. Relocation of the ISFSI pad and associated fuel containers to a nonimpacted area presents an increased radiological risk associated with moving spent fuel, and increased risk to public health and safety.

The operating area of Dresden, Unit 1, is located within a common Dresden, Units 1, 2, and 3 PA. The Dresden, Unit 1 and Dresden, Units 2 and 3, operating areas overlap with the utilization of Dresden, Unit 1, systems which remain in service supporting operation of Dresden, Units 2 and 3. The following interfaces, although not directly supporting the operation of Dresden, Units 2 and 3, in aggregate support safe operation of Dresden, Units 2 and 3. Due to the level of integration and proximity between support structures and the original Dresden, Unit 1, power plant, impacts on operation of Dresden, Units 2 and 3, would be unavoidable during decommissioning of Dresden, Unit 1. Relocation of personnel, supporting functions, temporary power and other support systems can introduce unnecessary risk to the safe operation of Dresden, Units 2 and 3. The following are examples of integrated functions that would be impacted during decommissioning of Dresden, Unit 1. In aggregate, this presents a site specific, increased risk to public health and safety.

The Interim Radioactive Storage Facility (IRSF) is utilized to store radioactive liners when immediate shipment is not possible due to logistics or additional decay is desired. This facility was integrated into the Dresden, Unit 1 Chemical Cleaning Building and is located in the Dresden, Unit 1, operating area.

The Dresden, Unit 1, Intake Structure and canal supports the station fire system. The structure houses a diesel fire pump and keep fill pump. The diesel fire pump is required to maintain functionality of the fire suppression system. The keep fill pump is used as a backup fire water supply and is also used during fire system maintenance to prevent fire pump auto starts (e.g., hydrant flushing). The Dresden, Unit 1, fire system has been integrated into the station fire system loop and is routed throughout the Dresden, Unit 1, operating area.

The original Dresden, Unit 1, warehouse, maintenance areas, turbine building, and fuel buildings were connected structures. Through multiple expansions supporting operation of all three units, the Dresden, Unit 1, turbine building, admin building, site support facilities, maintenance areas and fuel building have become an integrated structure. This includes the Technical Support Center (TSC) utilized for site emergency response.

A robust FLEX building is located within the Dresden, Unit 1, operating area.

The containment structure housing the reactor and primary system would require demolition work and excavation for removal of foundations, remediation, and final survey of the area, adjacent to the primary site support facilities previously discussed.

Dresden, Units 1, 2 and 3, are integrated within a common PA. The arrangement of site structures would not permit reconfiguration of the PA boundary in a manner that would support decommissioning of Dresden, Unit 1. Therefore, decommissioning of Dresden, Unit 1, would take place within Dresden, Units 2 and 3 PA, impacting Dresden, Units 2 and 3, security plan.

Based on the above, an alternative schedule for completing decommissioning of Dresden, Unit 1, is necessary to protect public health and safety. Due to the interfaces, shared systems and proximity of Dresden, Unit 1, and Dresden, Units 2 and 3, decommissioning of Dresden, Unit 1, cannot be completed with Dresden, Units 2 and 3, still operating without posing an increased risk to public health and safety. The proposed alternative delays decommissioning of Dresden, Unit 1, to coincide with the decommissioning of Dresden, Units 2 and 3, and therefore ensuring continued safe operation of Dresden, Units 2 and 3.

Figure 1-1