

1 **Historic and Cultural Resources**

2 **Historic and Cultural Resources Affected Environment**

3 The National Historic Preservation Act of 1966, as amended (NHPA), requires federal agencies
4 to consider the effects of their undertakings on historic properties; the remaining license
5 termination and decommissioning activities at Crystal River Unit 3 (CR3) are an undertaking that
6 could potentially affect historic properties, should such properties be present. The NHPA defines
7 historic properties as any prehistoric or historic district, site, building, structure, or object
8 included in, or eligible for, inclusion in the National Register of Historic Places (NRHP). Historic
9 properties are a subset of cultural resources that are considered during the National
10 Environmental Policy Act (NEPA), as amended, process. Cultural resources include, but are not
11 limited to, properties that may not be NRHP-eligible or listed; places or landscapes of traditional
12 cultural importance; and sacred, ceremonial, and religious sites.

13 Construction of CR3 was started in 1968 and completed in 1976, beginning commercial
14 operation in March 1977. Construction of CR3 involved excavation to a depth of approximately
15 18.3 m [60 ft] below grade and then constructing the nuclear power station, backfilling around
16 the deeper structures to form a berm (i.e., elevated area) constructed of crushed limestone
17 placing CR3 approximately 6.4 m [21 ft] above the surrounding structures (ADP 2023). CR3
18 stopped producing power in 2009 and was officially retired in 2013 (ADP 2023). At present, CR3
19 occupies approximately 11 ha [27 ac] of previously disturbed land within the approximately 358
20 ha [884 ac] licensed boundary (i.e., the controlled area) (ADP 2023).

21 Decommissioning activities within the current CR3 license boundary and areas previously
22 disturbed by the original construction in 1968 would include the removal of all above grade
23 structures and some paved surfaces, decontaminating, backfilling deep basements, and
24 removing all buried structures to a depth of 1 m [3 ft] below ground surface from the elevated
25 berm. There would be no disturbance to native soil nor any tree clearing. In addition, there
26 would be limited disturbances associated with settling pond 1 and the former shooting range
27 where remedial activities have already been completed under Florida Department of
28 Environmental Protection oversight (ADP 2024). Furthermore, the independent spent fuel
29 storage installation (ISFSI) would remain undisturbed and under an NRC license.

30 The NRC staff has determined the direct area of potential effects (APE) to be the same as the
31 11-ha [27-acre] disturbance area. The APE for indirect effects would be the remaining
32 approximately 347 ha [857 acres] within the 358-ha [884-acre] NRC-licensed area, or controlled
33 area.

34 The NRC staff reviewed the current and historic land use within and immediately adjacent to the
35 CR3 site. In addition, the NRC staff reviewed numerous previously conducted cultural resources
36 surveys that cover the direct and indirect APE and surrounding vicinity (ADP 2024); and
37 conducted independent research with the Florida Master Site File. From this research, one
38 previously recorded cultural resources site, the Seaboard Coast Line Railroad, (CI01455), was
39 identified within the direct and indirect APE.

40 Information provided in the previous survey coverage and site recordation indicate that the rail
41 line was constructed in approximately 1966 associated with the development of the Crystal
42 River Nuclear Plant (Arbuthnot, et al 2014). The east-west spur rail line connects the nuclear

DRAFT

1 plant with the main rail line to the east and runs along the south side of West Powerline Street.
2 The rail corridor consists of a single-track, standard-gauge rail with wooden cross ties and metal
3 tie plates set on a bed of crushed-stone ballast. At the western end of the rail line there is a loop
4 that circles to the south and a branch that arcs to the north. Originally a straight branch to the
5 south side of the plant, the line was altered to form a continuous loop by 1980, likely to allow
6 trains to exit more efficiently as there appeared to be no other turnaround within the plant. The
7 original straight branch was removed, likely at the time that the line was reconfigured. To be
8 considered NRHP-eligible, a Florida railroad must have served a historic transportation function
9 and have been constructed during one of Florida's historic railroad periods. NRHP eligibility
10 must also be supported by association with an important local historical event or person.
11 Additionally, the railroad must retain its original appearance to a high degree (Johnston and
12 Mattick 2001). The Seaboard Coast Line Railroad (CI01455) was built as a spur line solely to
13 provide access to the Crystal River Nuclear Plant, never functioned as a major transportation
14 corridor, and was constructed during the mid-twentieth century, which is not considered a
15 historic Florida railroad period (Johnston and Mattick 2001). Furthermore, the railroad lacks
16 association with any local historical event or individual. The section of the rail line in the direct
17 and indirect APEs has been altered since it was originally constructed, including the removal of
18 the original rails and cross ties and the reconfiguration of the line to form a loop. Therefore, the
19 NRC staff has determined that CI01455 is not eligible for listing on the NRHP.

20 The NRC staff consulted with four federally recognized Tribes that have historic or current ties
21 to the project area to assist in identifying cultural resources within the direct and indirect APEs.
22 The four tribes included the Seminole Tribe of Florida, the Seminole Nation of Oklahoma, the
23 Muscogee Nation, and the Miccosukee Tribe of Florida.

24 **Historic and Cultural Resources Direct and Indirect Impacts**

25 *Decommissioning GEIS Determination*

26 As discussed in the Decommissioning GEIS (NRC 2002), in most cases, the amount of land
27 required to support the decommissioning process is relatively small and is a small portion of the
28 overall plant site. Usually, the areas disturbed, or used to support decommissioning are within
29 the operational areas of the site and typically are within the protected area. For plants where the
30 disturbance of lands beyond the operational areas is not anticipated, the impacts on cultural,
31 historic, and archaeological resources are not considered to be detectable or destabilizing. The
32 GEIS concluded the impacts of decommissioning on historic and cultural resources within the
33 operational area are SMALL. The staff does not anticipate any impacts beyond those discussed
34 in the GEIS because all planned disturbances are within the CR3 operational area.

35 *Site-Specific Activities*

36 Although the Decommissioning GEIS concluded a site-specific inquiry was necessary outside
37 the operational area (NRC 2002), there would be no decommissioning activities outside of the
38 operational area or on previously undisturbed land (ADP 2023). As part of the LTP application
39 and environmental report, ADP CR3 coordinated with the Florida State Historic Preservation
40 Office (SHPO) in September 2022 (ADP 2023). In November 2023, the Florida SHPO
41 responded stating that "It is the opinion of this office that the proposed project will have no effect
42 on historic properties" (ADP 2024). Furthermore, the applicant implements an internal
43 procedure, PRG-RNV-01-015, which provides for cultural resources awareness, archaeological
44 discovery procedures, and compliance with various local, state, and federal regulations (ADP

DRAFT

1 2023, 2024). Based on its cultural resources review, the NRC staff has made a determination of
2 No Historic Properties Affected and is coordinating with SHPO for concurrence on this
3 determination.
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5 **References**

- 6 ADP (ADP, LLC). 2023. Response to Crystal River Unit 3 – Supplemental Information Needed
7 for Acceptance on the Application for a License Amendment Regarding Approval of the License
8 Termination Plan. Revision 1. Crystal River, Florida. ADAMS Accession No. ML23160A296.
- 9 ADP (Accelerated Decommissioning Partners, LLC). 2024. Response to Request for Additional
10 Information for the Environmental Assessment of the License Termination Plan for Crystal River
11 Unit 3 Nuclear Generating Plant. Crystal River, Florida. ADAMS Accession No. ML24086A459.
- 12 Arbuthnot, Michael, Melissa Dye, and Ryan VanDyke. 2014. Cultural Resource Assessment
13 Survey of the Duke Energy 2018 CC Parcel, Citrus County, Florida. SEARCH, Newberry,
14 Florida. (*non-public*)
- 15 Johnston, Sidney, and Barbara Mattick. 2001. Florida’s Historic Railroad Resources. Florida
16 Master Site File Survey No. 6289. MS on file, Tallahassee, Florida: Florida Division of Historical
17 Resources. (*non-public*)
- 18 NRC (U.S. Nuclear Regulatory Commission). 2002. NUREG-0586, Supplement 1, Vol. 1 –
19 “Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities.”
20 Washington, D.C. ADAMS Accession No. ML023470304, ML023470323, ML023500187,
21 ML023500211, ML023500223.