


| United States Nuclear Regulatory Commission Official Hearing Exhibit | |
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| In the Matter of: Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2) | |
|  | ASLBP #: 09-879-04-COL-BD01 |
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Cumulative Impacts

1 consisting of wetlands and uplands, would be mined. A 900-ac area would be set aside for
2 wetlands and 4500 ac would be donated to the State of Florida for preservation. This limestone
3 mine is expected to use less than 1 Mgd of water (PEF 2009a), which is comparable to LNP
4 operational usage. Currently, the USACE is preparing a DEIS for the Tarmac Mine that would
5 evaluate the impacts of water use associated with the Tarmac Mine project. Although no
6 specific evaluation of the impacts of water use at the Tarmac mine on groundwater levels and
7 wetlands was performed for the LNP Units 1 and 2 DEIS, the review team determined that the
8 effects of water use at the Tarmac Mine site on the groundwater resource would be of the same
9 order of magnitude as those predicted for the LNP wellfield located on the LNP site because
10 both projects would withdrawal a comparable amount of groundwater. As discussed in Section
11 5.2.2.2, a modeling evaluation indicated that average LNP operational groundwater use (1.58
12 Mgd) represents only a small percentage (0.8 percent) of the total water flux (208 Mgd) moving
13 through the groundwater model domain. Assuming similar geohydrologic conditions at the
14 Tarmac site, the review team determined that the proposed water use would also be a relatively
15 small amount of the flux moving through the groundwater system.

16 The projected groundwater usage associated with normal LNP operation and temporary
17 increases in withdrawal rate associated with maximum daily operation are small relative to the
18 groundwater resource. Since no other past, present, or reasonably foreseeable actions with
19 significant impacts were identified, the review team concludes that cumulative impacts on the
20 groundwater resource from preconstruction, construction, and operation of the proposed LNP
21 units, and other past, present, and reasonably foreseeable projects, including the potential of
22 decreased precipitation and increased temperatures due to global climate change, would be
23 SMALL, and mitigation beyond the conditions imposed for certification by the State of Florida
24 discussed in Chapters 4 and 5 would not be warranted. Global climate change could result in
25 alteration of the groundwater resource in the geographic area of interest by varying the recharge
26 to the aquifers, changing the use of agricultural chemicals, and affecting land use patterns.
27 While the changes in groundwater resource that are indirectly attributable to climate change
28 may not be insignificant, the review team did not identify climate change related effects at the
29 local and regional scale under the currently unknown adaptations to water-management policies
30 that would alter its conclusion regarding groundwater use.

31 **7.2.2 Water-Quality Impacts**

32 This section describes cumulative water-quality impacts from construction, preconstruction, and
33 operations of proposed LNP Units 1 and 2, and other past, present, and reasonably foreseeable
34 projects.

35 **7.2.2.1 Surface-Water-Quality Impacts**

36 The description of the affected environment in Section 2.3 of this document serves as a
37 baseline for the cumulative impacts assessments in this resource area. As described in