

PMLevyCOLPEm Resource

From: Hambrick, Gordon A SAJ [Gordon.A.Hambrick@usace.army.mil]
Sent: Monday, January 23, 2012 12:24 PM
To: Snead, Paul
Cc: Collazo, Osvaldo SAJ; Kemp, Susan K SAJ; Weeks, Russell SAJ; Dierolf, Amy C.; Kitchen, Robert; Bruner, Douglas; David A Pritchett; Gagliano.Paul@epamail.epa.gov
Subject: RE: LNP Groundwater Withdrawals - Explanation in regard to proposed pumping rates for groundwater withdrawals for plant operations (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Paul:

Thanks for providing the explanation below. It satisfies my request to you.
I am copying EPA and NRC for their information.

Don

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-----Original Message-----

From: Snead, Paul [mailto:paul.snead@pgnmail.com]
Sent: Monday, January 23, 2012 11:50 AM
To: Hambrick, Gordon A SAJ
Cc: Collazo, Osvaldo SAJ; Kemp, Susan K SAJ; Weeks, Russell SAJ; Dierolf, Amy C.; Kitchen, Robert
Subject: RE: LNP Groundwater Withdrawals - Explanation in regard to proposed pumping rates for groundwater withdrawals for plant operations (UNCLASSIFIED)

Don,

In response to your request, please see the following:

During our meeting with the Corps on 01/19/12, PEF pointed out that there is an apparent misunderstanding regarding the maximum design water demands of the proposed groundwater supply wells.

On page 1 of the RECOVER document "Levy Nuclear Plant Monitoring Plan Recommendations," it is noted that "PEF proposes to have four water supply wells constructed (Figure 1) that will withdraw on average 1.5 million gallons per day (mgd) and up to 5.8 mgd during peak periods of energy use." Also, on page 2 of this document, it notes "As peak energy use occurs during the summer, there is an increased draw on the groundwater in excess of the 1.58 mgd average and approaching the 5.8 mgd maximum."

The groundwater use for operation of the Levy plant is tied to operating plant systems that require freshwater; the potable water system, the service water system, the demineralized

water system, and the fire protection system. The only time that the demand on the supply wells is expected to exceed the 1.58 mgd average is during maintenance outages when these systems are assumed to need filling or operation simultaneously. These maintenance activities are conservatively assumed for design purposes to demand up to 5.8 mgd of water to accommodate maintenance or use of these systems simultaneously over a period of not more than one week per year. This demand is not based on peak periods of energy use, but on infrequent maintenance activities.

The following references describe the basis of the proposed maximum week withdrawal:

Tech Memo-074, Rev 1, Revised Conceptual Wellfield Layout and Evaluation of Simulated Drawdown Impacts, Levy Nuclear Plant, October 27, 2008, notes in section 4.4, Maximum Week Impacts, that "The most conservative maximum pumping rate for the LNP facility is 5.8 mgd. This projection is the summary of the four main processes that utilize the freshwater supply. Those include potable, service water, demineralized water, and fire protection systems. The facility design capacities for each water system were used to calculate the maximum pumping rate capacity for the wellfield. While it is highly unlikely that all four processes would be pumping at their maximum design capacity at the same time, the wellfield must be designed to meet this improbable scenario. The most likely scenario that could result in the maximum pumping rate would be during facility maintenance that occurs annually for one week. A second model simulation was conducted to evaluate incremental drawdown impacts associated with 1 week of pumpage at a rate of 5.8 mgd. It was assumed that all four wells would be operating simultaneously, each at a rate of 1.45 mgd. Exhibit 12 depicts the simulated maximum week incremental drawdown impact in the SAS and UFA at the end of the simulation."

The Draft Environmental Impact Statement notes in Section 5.2.2.2 that "Groundwater from onsite water supply wells completed in the Upper Floridan aquifer will be used to supply general plant operations, including service-water cooling, potable-water supply, raw water to the demineralizer, fire protection, and media filter backwash (PEF 2009a). PEF has estimated that plant operations would require an average total withdrawal of 1.58 Mgd of groundwater from the Floridan aquifer and a potential maximum daily withdrawal of 5.8 Mgd (PEF 2009c). . Under maximum daily usage conditions (5.8 Mgd) for a duration of 1 week, the model predicts that increased drawdown will not extend to the closest Upper Floridan aquifer well (i.e., permitted user). Because LNP operational groundwater usage is minor relative to the overall model water balance, the staff concludes that operational groundwater-use impacts would be SMALL, and mitigation beyond the FDEP conditions of certification would not be warranted."

I hope this clarifies this misunderstanding. Please let me know if you have further questions.

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From: Hambrick, Gordon A SAJ [mailto:Gordon.A.Hambrick@usace.army.mil]
Sent: Friday, January 20, 2012 10:58 AM
To: Snead, Paul
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Subject: LNP Groundwater Withdrawals - Explanation in regard to proposed pumping rates for groundwater withdrawals for plant operations (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE
Good Morning Paul:

Just tried calling you, but got your message that you are out until Monday, so I'll make this request via email.

As part of our discussion yesterday, as Sue Kemp and Andy Loschiavo presented RECOVER Branch's monitoring recommendations for groundwater withdrawals, you explained that assumptions the Corps had made in regard to timing and duration of peak demands for groundwater withdrawals were not related to seasonally variable demands for electricity, but to other factors. The Corps wants to clarify the record in this regard. Therefore, the Corps requests that PEF provide to us a written explanation, as was given verbally yesterday. Please give me a call if you want to discuss. I plan to be in the office all next week.

Thanks, Don

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Hearing Identifier: Levy_County_COL_Public
Email Number: 962

Mail Envelope Properties (1FB790893E639745BAAAB98FB538B84315838A)

Subject: RE: LNP Groundwater Withdrawals - Explanation in regard to proposed pumping rates for groundwater withdrawals for plant operations (UNCLASSIFIED)
Sent Date: 1/23/2012 12:23:37 PM
Received Date: 1/23/2012 12:23:42 PM
From: Hambrick, Gordon A SAJ

Created By: Gordon.A.Hambrick@usace.army.mil

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Files	Size	Date & Time
MESSAGE	6539	1/23/2012 12:23:42 PM

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