UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alex S. Karlin, Chairman
Dr. Anthony J. Baratta
Dr. William M. Murphy

In the Matter of PROGRESS ENERGY FLORIDA, INC. (Combined License Application for Levy County Nuclear Power Plant, Units 1 and 2)	Docket No. 52-029-COL, 52-030-COL September 27, 2010

MOTION FOR ORDER COMPELLING DISCOVERY OF PEF GROUNDWATER MODEL DIGITAL FILES

Nuclear Information and Resource Service, The Ecology Party of Florida and the Green Party of Florida (Interveners), pursuant to 10 C.F.R. § 2.336 and/or 10 C.F.R. § 2.705 move this ASLB (Board) to enter an order requiring Progress Energy Florida (PEF), to produce the revised groundwater model described below and any other water-related models referred to in the DEIS and/or relied upon by the NRC in drawing their conclusions regarding groundwater use. Production should include, but is not limited to, all water-related computer models, input files and reports, parameters, input data, boundary conditions, assumptions, and all iterations and results, in a model-ready digital format. In short, Interveners request everything necessary for evaluation of any water model PEF has devised and upon which NRC has relied.

Factual Background

In the Initial Scheduling order put out by the Board notes that the duty to update mandatory disclosures only terminates at the close of the evidentiary hearing (LBP-09-22, p.6) and that

“ordinarily” a motion must be filed within ten (10) days of the service of the privilege log where that document was first added (LBP- 09-22, p.7). Interveners contend that ours are “extraordinary” circumstances and petition the Board for its assistance to ensure a fair evaluation of the environmental impacts of the Levy Nuclear Plant by compelling ongoing disclosure.

Interveners beg the Board’s indulgence with a lengthy narration explaining why the Motion to Compel was not brought earlier. Until this point we believed we could eventually find the information we needed publicly and that 10 C.F.R. § 2.336 2 (iii) obligated us to do so. Interveners believe it important the Board understand the labyrinthine process we have navigated to get to this point.

Interveners have asked PEF several times by e-mail for groundwater models revised by their agents. On Thursday, July 8, 2010, then again on September 16, 2010, PEF refused to produce the models, pointing us to responses to RAIs both times and on July 8 indicated the information was available from Southwest Florida Water Management District (SWFWMD) (Exhibit A). Consequently, taking PEF at their word, and because of 10 C.F.R. § 2.336 2 (iii) Interveners, in good faith, attempted to secure the model files from SWFWMD on or about Friday, July 9, 2010, believing that the programs alone would allow us to assess the relevance of the documents. On Tuesday July 13th SWFWMD gave us a URL for a download (Exhibit B) but told us we would need to buy a specialized program to run the DWRM2, or else use generic inputs (Exhibit C). In any case, this was not the revised model we needed. In a parallel effort, one of Interveners’ constituents in the vicinity of Levy attempted to get the files in person. The disc in the possession of SWFWMD was not readable even by the SWFWMD reviewer who attempted to help.

Interveners also called NRC Staff on August 12, 2010, to see if they could provide the files and were pointed to discovery documents but, again, not digital files (Exhibit D).

Thinking that perhaps the Levy Water Use Permit (WUP) from the State application might have the information we needed, we contacted SWFWMD by phone on or about August 18, 2010, and received an e-mail reply giving us a URL where all the documents pertaining to the Levy WUP were accessible. The URL provided was inoperative which we reported immediately by phone and were told the URL was accessible only internally but that he would check with his supervisors and get back to us. After waiting, we contacted him on August 29th and were told he had referred the request to the public records department (Exhibit E). On August 29th we were told our request should be completed that day, then told later that day the process was a lengthy one and that we could look, in the meantime, at a link to the Conditions of Certification (Exhibit F). This again was a document, and we really sought digital files. E-mail requests to SWFWMD have not produced the revised computer model and it is unclear to Interveners whether or not the revised model is under the control of SWFWMD, much less reviewed by them.

Interveners also tried to obtain the files from NRC Staff when the DEIS was issued (even accessing the DEIS immediately was impossible for one Intervener and expert witness because the NRC's policy is not to support the Mac platform on line). Upon receiving the hard copy and concluding the revised model was vital to the DEIS's own conclusions, on September 8th, Interveners met with NRC Staff to obtain the digital files of the model. We learned definitively that the Staff did not have the model and had not reviewed it in order to verify its results (Exhibit G).

Because we were dealing with multiple governmental organizations and waiting to receive replies or data, it would have been impossible to have met a ten-day filing deadline. Whether or not we asked for the documents as soon as they were disclosed we would still have had to attempt to procure the data through other measures which would have taken us outside the ten-day window.

Most recently in our on-going discussions with PEF over settlement, we have put forth our reasons for needing the model and on September 23rd, 2010, have been given the final answer that they do not have it, and in any case are not obligated to give it to us. As is evident, this entire process has taken some months to get to where we are today.

Legal Argument

10CFR § 2.336 notes that parties must provide:

> A copy, or a description by category and location, of all documents and data compilations in the possession, custody, or control of the party that are relevant to the contentions, provided that if only a description is provided of a document or data compilation, a party shall have the right to request copies of that document and/or data compilation… CFR § 2.336(2(i)

This duty to provide disclosure is ongoing.

Draft NUREG-1941, Section 2.3.1.2, page 2-25, line 27-31 provides:

> PEF constructed a local-scale groundwater model as a requirement of the facility's Site Certification Application to the State of Florida. This model, which was a submodel of the Southwest Florida Water Management District's (SWFWMD's) District-Wide Regulation Model, Version 2 (DWRM2) regional groundwater flow model, was used to simulate both LNP and cumulative groundwater-use impacts…(PEF2009e).

Because the data submitted to the State of Florida was considered a "poor fit" with the LNP site, a corrected model was deemed necessary by Staff:

> … to simulate predevelopment, current, and future potentiometric surfaces for the LNP site and vicinity (PEF2009e)…Because this DWRM2 model was recalibrated to the USGS regional interpretation of the Upper Floridan aquifer potentiometric surface,

> which incorporated only limited information in the vicinity of the LNP site, a poor fit between simulated and observed heads in the vicinity of the LNP site was obtained…To improve the goodness of fit over this portion of the model domain, which encompasses the proposed LNP well-field and thus is important to the assessment of groundwater impacts, the model was recalibrated by PEF using both site-specific and regional head data. A detailed description of this model and the recalibration process is provided by PEF (2009d).

Draft NUREG-1941, Section 2.3.1.2, page 2-28, lines 32-37, page 2-29, lines 1-6.

The next paragraph describes the calibration targets and concludes, "The resulting goodness of fit metrics indicate that the model is reasonably well calibrated to existing site conditions. This recalibrated model was used to assess the impacts of groundwater use at the LNP site." Draft NUREG-1941, Section 2.3.1.2, page 2-29, lines 17-19.

Interveners believe we have a right to determine for ourselves just how "reasonably well-calibrated" this or any model relied on for support is. NRC's acceptance of and reliance upon PEF's model in preparing the DEIS makes it imperative Interveners be permitted independent examination of the model and attendant data in order to prepare our case. Interveners should not be forced to rely upon the opinion of PEF and Staff that the model is acceptable. NRC may believe that the model was recalibrated to be relevant enough, but Interveners need not.

Without the actual model, Interveners' efforts to defend Contention 4 have been stymied. RAIs and responses may *describe* what PEF alleges was done, as NRC calls it, " to improve goodness of fit" (Draft NUREG-1941 p. 2-29 line 3) with water conditions at Levy, diagrams may show the *results* of modeling runs, but in no way is any result verifiable without access to the digital model files of the various iterations of model runs.

Concerns regarding groundwater run throughout Contention 4, which, as admitted by the ASLB, is reproduced below:

> PEF's Environmental Report fails to comply with 10 CFR Part 51 because it fails to adequately address, and inappropriately characterizes as SMALL, certain direct, indirect, and cumulative impacts, onsite and offsite, of constructing and operating the proposed LNP facility:
>
> A. Impacts to wetlands, floodplains, special aquatic sites, and other waters, associated with dewatering, specifically:
>
> 1. Impacts resulting from active and passive dewatering;
> 2. Impacts resulting from the connection of the site to the underlying Floridan aquifer system;
> 3. Impacts on Outstanding Florida Waters such as the Withlacoochee and Waccasassa Rivers;
> 4. Impacts on water quality and the aquatic environment due to alterations and increases in nutrient concentrations caused by the removal of water; and
> 5. Impacts on water quality and the aquatic environment due to increased nutrients resulting from destructive wildfires resulting from dewatering.
>
> B. Impacts to wetlands, floodplains, special aquatic sites, and other waters, associated with salt drift and salt deposition resulting from cooling towers (that use salt water) being situated in an inland, freshwater wetland area of the LNP site.
>
> C. As a result of the omissions and inadequacies described above, the Environmental Report also failed to adequately identify, and inappropriately characterizes as SMALL, the proposed project's zone of:
>
> 1. Environmental impacts,
> 2. Impact on Federally listed species,
> 3. Irreversible and irretrievable environmental impacts, and
> 4. Appropriate mitigation measures.

If the DEIS's answers to the myriad concerns outlined in Contention 4 are based on assumptions made from relying on the PEF-revised model, how can Interveners possibly prepare a case to support Contention 4 without examining any and all models and iterations thereof on which PEF's and NRC's water-use assumptions are based? Furthermore, PEF is threatening to file for Summary Disposition on several parts of the contention, based on the DEIS, and therefore Interveners have an urgent need to examine any models. We are being forced to battle an invisible enemy and this is an untenable position.

Due to the newness of Part 52 proceedings, there is a dearth of case history so, although we understand that the Federal Rules of Civil Procedure do not apply to the NRC, they are used as guidance, so that is where we turned for support for this motion. In *Hughes Aircraft Co. v. Century Indemnity Co.*, 141F.3d 1176,1998 WL166534 (9th Cir. 1998), which involved destroyed groundwater modeling files, sanctions were imposed because an expert's destruction of the input and output from his experiments denied defendants the opportunity to test his results. In our case, we are also being denied the opportunity to test results, through lack of disclosure. See *Bartley v. Isuzu Motors, Ltd.,* 151 F.R.D. 659, 660-661 (D. Colo.1993) (emphasis in bold):

> When one party seeks to present a computer study, in order to defend against the conclusions that are said to flow from these efforts, the discovering party not only must be given access to the data that represents the computer's work product, but he also must see the data put into the computer, the programs used to manipulate the data and produce the conclusions, and the theory or logic employed by those who planned and executed the experiment. **All of the information used in generating the computer simulations is relevant to Defendants' challenge of this evidence, not merely the information which conforms to Plaintiff's theory of the case.**

Further Federal cases also support Interveners' right to the models, particularly the decision rendered in *City of Cleveland v. Cleveland Electric Illuminating Co.,* 538 F. Supp. 1257 (N.D. Ohio 1981), where the court granted a motion to compel "production of data and calculations underlying the conclusions contained in the reports of certain experts." *Id.* at 1266. The court accepted the argument that because the reports reflected the results of elaborate calculations "presumably premised upon various computer simulations," that the program used and the various inputs and assumptions could not be confidently deduced from the written data presented. *Id.*

In a case where the First Circuit Court of Appeals was specifically concerned with obstacles to effective cross examination, the Court observed that:

> Any use of computerized data presents some obstacles…because of the difficulty of knowing the precise methods employed in programming the computer as well as the inability to determine the effectiveness of the persons responsible for feeding data into the computer.
>
> *United States v. Cepeda Penes*, 577 F.2d 754, 760-61 (1st Cir. 1978), *quoted in City of Cleveland,* 538 F. Supp. at 1266.

Interveners contend the same reasoning holds in this case although our need is for evaluation.

Wright & Miller give the following example:

> …suppose one party plans to present a computer study of his opponent's pricing structure or a computer simulation of the market in an antitrust case. In order to prepare to defend against the conclusions that are said to flow from these efforts, the discovering party not only must be given access to the data that represents the computer's "work product," but he also must see the data put into the computer, the programs used to manipulate the data and produce the conclusions, and the theory or logic employed by those who planned and executed the experiment.

8 Wright & Miller, *Federal Practice and Procedure*,
s. 2218, *quoted in City of Cleveland,* 538 F. Supp. at 1266-1267.

The *City of Cleveland* judges also found support in the *Manual for Complex and Multidistrict Litigation*:

> It is essential that the underlying data used in the analyses, programs and programing [*sic*] method and all relevant computer inputs and outputs be made available to the opposing party far in advance of trial. This procedure is required in the interest of fairness and should facilitate the introduction of admissible computer evidence. Such procedure provides the adverse party and the court with an opportunity to test and examine the inputs, the program and all outputs prior to trial.

City of Cleveland, 538 F. Supp. at 1267 (quoting *United States v. Russo*, 480 F.2d 1228 (6th Cir. 1973) (quoting the *Manual*)).

City of Cleveland cites more cases in support:

> And, finally, in *United States v. Liebert*, 519 F.2d 542 (3rd Cir. 1975) ... the Third Circuit Court of Appeals explained that "a party seeking to impeach the reliability of computer evidence should have sufficient opportunity to ascertain by pretrial discovery whether both the machine and those who supply it with data input and information have performed their tasks accurately." *Id.* at 547. *See also* 1 *Moore's Federal Practice*, Pt. 2, s 2.71, pp. 131-132 (1979) ("underlying data used to compose the statistical computer input, the methods used to select, categorize and evaluate the data for analysis, and all of the computer outputs normally are proper subjects for discovery.");

> *Perma Research & Development v. The Singer Company*, 542 F.2d 111, 115 (2nd Cir. 1976)...

City of Cleveland, 538 F. Supp. at 1267.

Finally, *City of Cleveland* summarizes the reasoning behind granting the motion to compel:

> Certainly, where, as here, the expert reports are predicated upon complex data, calculations and computer simulations which are neither discernible nor deducible from the written reports themselves, disclosure thereof is essential to the facilitation of "effective and efficient examination of these experts at trial..." (citation omitted).

City of Cleveland, 538 F. Supp. at 1267.

Interveners believe the only defense PEF has against producing these models is to object to the timeliness of this motion on the grounds that it was not filed within ten days of disclosure of the existence of the models. We contend that because of 10 C.F.R. § 2.336 2 (iii), regardless of when we became aware of the models, we believed we had a legal responsibility to pursue the data through all publicly available means and that process would have exceeded the ten day window. Furthermore, the duty to disclose is ongoing, and thus the ten-day clock should rightly begin on September 23, when all avenues were exhausted and PEF gave their final refusal. Should the Board not accept that reasoning, Interveners believe the motion should still be granted due to extraordinary circumstance, our compelling reasons for needing the information, fairness, and the abundance of Federal case law that supports our right for the information. We ask that the Board so order.

Respectfully Submitted

/s/

Mary Olson
NIRS Southeast Regional Coordinator,
Cara Campbell
Ecology Party
on behalf of the Co-Interveners

Certification of Mary Olson:

I certify that I have made a sincere effort to contact the other parties in this proceeding, to explain to them the factual and legal issues raised in this motion, and to resolve those issues, and I certify that my efforts have been unsuccessful. I further report that on September 23, I discussed this filing with representatives of both PEF and NRC Staff. Both expressed the view that the filing would not be timely. Both agreed that there is almost no precedent in the Subpart L experience. I am compelled to represent the Co-Interveners and our members who feel strongly about this matter.

_____/s/_____

Mary Olson

Asheville, North Carolina, September 27, 2010

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:
Alex S. Karlin, Chairman
Dr. Anthony J. Baratta
Dr. William M. Murphy

In the Matter of PROGRESS ENERGY FLORIDA, INC. (Combined License Application for Levy County Nuclear Power Plant, Units 1 and 2)	Docket No. 52-029-COL, 52-030-COL ASLBP No. 09-879-04-COL-BD01 September 27, 2010

Certificate of Service

I hereby certify that copies of the MOTION FOR ORDER COMPELLING DISCOVERY OF PEF GROUNDWATER MODEL DIGITAL FILES have been served on the following persons by Electronic Information Exchange on this 27th day of September, 2010:

Administrative Judge Alex S. Karlin, Chair Atomic Safety and Licensing Board Panel Mail Stop: T-3F23 U.S. Nuclear Regulatory Commission Washington, DC 20555-0001 E-mail: Alex.Karlin@nrc.gov	Office of Commission Appellate Adjudication Mail Stop O-16C1 U.S. Nuclear Regulatory Commission Washington, DC 20555-0001 E-mail: OCAAmail@nrc.gov
Administrative Judge Anthony J. Baratta Atomic Safety and Licensing Board Panel Mail Stop: T-3F23 U.S. Nuclear Regulatory Commission Washington, DC 20555-0001 E-mail: Anthony.Baratta@nrc.gov	Office of the Secretary ATTN: Docketing and Service Mail Stop: O-16C1 U.S. Nuclear Regulatory Commission Washington, DC 20555-0001 E-mail: HEARINGDOCKET@nrc.gov
Administrative Judge William M. Murphy Atomic Safety and Licensing Board Panel Mail Stop: T-3F23 U.S. Nuclear Regulatory Commission Washington, DC 20555-0001 E-mail: William.Murphy@nrc.gov	Megan Wright Law Clerk Mail Stop: T-3F23 U.S. Nuclear Regulatory Commission Washington, DC 20555-0001 E-mail: megan.wright@nrc.gov

Mary Olson NIRS Southeast PO Box 7586 Asheville, NC 28802 E-mail: maryo@nirs.org	Michael Mariotte Nuclear Information and Resource Service 6930 Carroll Ave Suite 340 Takoma Park, MD 20912 E-mail: nirsnet@nirs.org
Michael Canney The Green Party of Florida Alachua County Office PO Box 12416 Gainesville, FL 32604 E-mail: alachuagreen@windstream.net	Cara Campbell The Ecology Party of Florida 641 SW 6th Ave Ft. Lauderdale, FL 33315 E-Mail: levynuke@ecologyparty.org
John H. O'Neill, Esq. Michael G. Lepre, Esq. Blake J. Nelson, Esq. Robert B. Haemer, Esq. Jason P. Parker, Esq. Counsel for Progress Energy Florida, Inc. Pillsbury, Winthrop, Shaw, Pittman, LLP 2300 N. Street, NW Washington, DC 20037-1122 E-mail: john.O'Neill@pillsburylaw.com michael.lepre@pillsburylaw.com blake.nelson@pillsburylaw.com robert.haemer@pillsburylaw.com jason.parker@pillsburylaw.com	U.S. Nuclear Regulatory Commission Office of the General Counsel Kathryn L. Winsberg, Esq. Sara Brock Kirkland, Esq. Jody Martin, Esq. Kevin Roach Joseph Gilman, Paralegal Washington, DC 20555-0001 E-mail: Kathryn.winsberg@nrc.gov; seb2@nrc.gov; jcm5@nrc.gov; jsg1@nrc.gov ; Kevin.Roach@nrc.gov

/Signed (electronically) by/

Mary Olson
NIRS Southeast Office
maryo@nirs.org