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July 9, 2012

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Ann Cole, Director
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Tallahassee, FL 32399

Re: In re: Nuclear Cost Recovery Clause
Docket No. 120009

Dear Ms. Cole:

Enclosed for filing on behalf of Progress Energy Florida, Inc. is the Rebuttal Testimony of Jon Franke (original and 15 copies). Please do not hesitate to contact us with any questions.

Sincerely,



Blaise N. Gamba

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IDM 1 Enclosures
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FPSC-COMMISSION CLERK

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

**In re: Nuclear Cost Recovery
Clause**

DOCKET NO. 120009-EI
Submitted for filing:
July 9, 2012

REBUTTAL TESTIMONY OF JON FRANKE

**ON BEHALF OF
PROGRESS ENERGY FLORIDA**

DOCUMENT NUMBER DATE
04549 JUL-9 2012
FPSC-COMMISSION CLERK

IN RE: NUCLEAR COST RECOVERY CLAUSE

BY PROGRESS ENERGY FLORIDA

FPSC DOCKET NO. 120009-EI

REBUTTAL TESTIMONY OF JON FRANKE

1 **I. INTRODUCTION.**

2 **Q. Please state your name and business address.**

3 A. My name is Jon Franke. My business address is Crystal River Nuclear Plant, 15760 W.
4 Powerline St., Crystal River, FL 34442.

5

6 **Q. By whom are you employed and in what capacity?**

7 A. I am employed by Progress Energy Florida, Inc. ("PEF" or the "Company") in the
8 Nuclear Generation Group and serve as Vice President – Crystal River Nuclear Plant
9 ("CR3").

10

11 **Q. Have you previously filed direct testimony in this docket?**

12 A. Yes, I filed direct testimony on March 1, 2012 and April 30, 2012.

13

14 **Q. Have you reviewed the intervenor testimony filed in this docket?**

15 A. Yes, I have reviewed the testimony of William R. Jacobs, Jr., Ph.D. ("Jacobs") regarding
16 the CR3 Extended Power Uprate ("EPU") project ("CR3 Uprate") filed on behalf of the
17 Office of Public Counsel ("OPC"). I also reviewed the direct joint testimony of Mr.
18 William Coston and Mr. Jerry Hallenstein ("Audit Staff" witnesses), filed on behalf of

1 the Florida Public Service Commission (“FPSC” or the “Commission”), including
2 portions of the June 2012 Review of Progress Energy Florida, Inc.’s Project Management
3 Internal Controls for Nuclear Plant Uprate and Construction Projects, PA-11-11-004,
4 identified as Exhibit No. ___ (CH-1) to the Audit Staff witnesses’ testimony (“Audit
5 Report”), with respect to the CR3 Uprate project.
6

7 **II. PURPOSE AND SUMMARY OF REBUTTAL TESTIMONY.**

8 **Q. What is the purpose of your rebuttal testimony?**

9 A. The purpose of my rebuttal testimony is to respond to the recommendations in OPC
10 witness Jacobs’ testimony concerning the CR3 Uprate project. Audit Staff includes no
11 findings with respect to the CR3 Uprate project in their Audit Report.
12

13 **Q. Please provide a brief summary of your rebuttal testimony.**

14 A. I will first address the issues to be decided by the Commission in this proceeding and
15 explain the Company’s testimony and exhibits addressing these issues that are
16 uncontested by any witness in this proceeding. In particular, no witness has filed
17 testimony in this proceeding disputing the prudence of any specific cost incurred by PEF
18 on the CR3 Uprate project in 2011 or the reasonableness of any specific actual/estimated
19 or projected cost that PEF has incurred or expects to incur on the CR3 Uprate project in
20 2012 and 2013. Further, no witness has filed testimony in this proceeding contesting
21 PEF’s analysis of the long-term feasibility of completing the CR3 Uprate project.
22 Finally, no witness has filed testimony in this proceeding disputing the prudence of PEF’s
23 CR3 Uprate project management, contracting, accounting, and cost oversight controls.

1 Jacobs recommends that PEF continue the CR3 Uprate project on a different
2 schedule, in his view, to minimize CR3 Uprate project costs until the CR3 containment
3 repair is nearing completion and licensing approval. Jacobs' recommendation will
4 increase, not decrease, the total cost of the project and increase the risk that
5 implementation of the EPU work will delay the return of CR3 to commercial service. As
6 a result, Jacobs' recommendation increases the costs and reduces the benefits of the
7 project to PEF and its customers and should be rejected.

8
9 **Q. Do you have any exhibits to your rebuttal testimony?**

10 **A.** Yes. I am sponsoring the following exhibits to my rebuttal testimony:

- 11 ● Exhibit No. ____ (JF-6), a chart summarizing the PEF projected 2013 CR3 Uprate project
12 costs for the following EPU work: (i) license application; (ii) Long Lead Equipment
13 ("LLE") procurement, contractual progress payments and related vendor contract
14 management and quality control; and (iii) design engineering and related project
15 management work; and
- 16 ● Exhibit No. ____ (JF-7), the Company's CR3 Uprate project schedule for completion of
17 the EPU work.

18 These exhibits were prepared by the Company at my direction and under my control and
19 they are true and correct.

1 **III. PEF EVIDENCE UNCONTESTED BY TESTIMONY IN THIS PROCEEDING.**

2 **Q. What issues will the Commission decide in this 2012 proceeding?**

3 A. My understanding is that the Commission will determine, pursuant to Section 366.93,
4 Florida Statutes, and Rule 25-6.0423, F.A.C., (1) the prudence of PEF's actual 2011 costs
5 for the CR3 Uprate project; (2) the prudence of PEF's project management, contracting,
6 accounting, and cost oversight controls for 2011 for the CR3 Uprate project; (3) the
7 reasonableness of PEF's actual/estimated 2012 costs for the CR3 Uprate project; (4) the
8 reasonableness of PEF's projected 2013 costs for the CR3 Uprate project; and (5)
9 approval of PEF's analysis of the feasibility of completing the CR3 Uprate project
10 pursuant to Rule 25-6.0423(5)(c)5, F.A.C.

11 I further understand that the parties have agreed that the Commission should
12 address additional issues related to the prudence of our CR3 Uprate project management
13 decisions in 2011, and the reasonableness of our decisions in 2012, as a result of the
14 evaluation by the Company of the repair of the CR3 Containment Building leading up to
15 a final decision by the Company with respect to that repair. These additional issues
16 further address the prudence of our CR3 Uprate 2011 actual costs and the reasonableness
17 of our CR3 Uprate actual/estimated 2012 and projected 2013 costs.

18
19 **Q. Have any witnesses asserted in testimony that PEF's actual CR3 Uprate project
20 costs for 2011 are not prudent?**

21 A. No, they have not. Intervenor OPC witness Jacobs specifically says in his testimony that
22 he was asked by OPC to conduct a review and evaluation of PEF's requests for authority
23 to collect historical costs associated with the CR3 Uprate project. (Jacobs Test., P. 3, L.

17-21). Nowhere in his testimony, however, does Jacobs identify any historical 2011 CR3 Uprate project cost that PEF seeks to collect that he finds was imprudently incurred. Audit Staff witnesses reviewed the adequacy of the internal controls and management oversight of the CR3 Uprate project to assist the Commission in its assessment of the Company's cost recovery requests for the CR3 Uprate project. See Audit Staff Test., Exhibit No. ___ (CH-1) at page 1 of 44. Audit Staff witnesses include no findings with respect to the CR3 Uprate project in their Audit Report. No other intervenors presented testimony in this docket regarding the CR3 Uprate project.

10 **Q. Does Jacobs assert that the 2011 CR3 Uprate project management, contracting,**
11 **accounting, and cost oversight controls are unreasonable or imprudent?**

12 A. No he does not. Jacobs states that he was not asked to focus his efforts in that area in this
13 docket. (Jacobs Test., P. 5, L. 1-5). He therefore offers no opinion regarding the
14 prudence of PEF's 2011 CR3 Uprate project management, contracting, accounting, and
15 cost oversight controls.

17 **Q. Do the Audit Staff witnesses assert that the 2011 CR3 Uprate project management,**
18 **contracting, accounting, and cost oversight controls are unreasonable or**
19 **imprudent?**

20 A. No they do not. Audit Staff witnesses state that they "monitored and evaluated the [PEF]
21 project controls in the areas of contract administration, process management and
22 oversight, risk assessment, and organization structure." (Audit Staff Test., Exhibit No.
23 ___ (CH-1) at page 13 of 44). They further state that they "reviewed [PEF's]

1 management reports and negotiated contracts to confirm [PEF's] compliance with its
2 internal procedures." Id. They confirmed "[PEF] continues to monitor and update its
3 project management process and procedures throughout this project." Id. They
4 concluded that there were "[n]o variances in [PEF's] compliance to its EPU procedures []
5 identified during this review period." Id. There were no findings related to PEF's 2011
6 CR3 Uprate project management, contracting, accounting, and cost oversight controls in
7 the Audit Report.

8
9 **Q. Does Jacobs assert in his testimony that PEF's actual/estimated 2012 and projected**
10 **2013 costs for the CR3 Uprate project are unreasonable?**

11 A. No. Jacobs does not identify any specific actual/estimated 2012 or projected 2013 CR3
12 Uprate project cost that he thinks is unreasonable. Again, OPC witness Jacobs says he
13 was asked by OPC to conduct a review and evaluation of PEF's requests for authority to
14 collect projected costs associated with the CR3 Uprate project. (Jacobs Test., P. 3, L. 17-
15 21). Jacobs, however, nowhere identifies any specific actual/estimated 2012 or projected
16 2013 CR3 Uprate project cost that he claims is unreasonable either because it is not
17 necessary for the CR3 Uprate project or because it is unreasonable in the amount
18 estimated based on the work and/or material involved for the CR3 Uprate project.

19
20 **Q. Do any witnesses assert that PEF has not demonstrated the long-term feasibility of**
21 **completing the CR3 Uprate project pursuant to Rule 25-6.0423(5)(c)(5), F.A.C.?**

22 A. No they do not. Audit Staff witnesses conclude that, "[PEF's] current feasibility analysis
23 supports the economic viability of the project." (Audit Staff Test., Exhibit No. ____ (CH-

1) , page 42 of 44). And, as I explained above, there are no Audit Staff findings with respect to the CR3 Uprate project. Id. Jacobs does not specifically address the feasibility of the CR3 Uprate project in his testimony. Jacobs, however, nowhere asserts in his testimony that PEF should have cancelled the CR3 Uprate project in 2011 or that PEF should cancel the project now. He agrees that, for the EPU project to continue, “engineering and licensing work must continue and long-lead equipment items must be procured” and presumably paid for (Jacobs Test., P. 12, L. 5-7), and he only argues for the deferral or avoidance of “EPU construction work” until the “success of the repair and NRC acceptance of that repair is assured.” (Jacobs Test., P. 12, L. 10-13). Based on these statements and his recommendation, Jacobs apparently believes the CR3 Uprate project is feasible and should be completed, albeit on a different schedule than currently planned by the Company.

14 **IV. OPC WITNESS JACOBS’ RECOMMENDATIONS SHOULD BE REJECTED**
15 **BECAUSE THEY ARE NOT BASED ON ANY EVIDENCE THAT PEF’S**
16 **PROJECTED COSTS ARE UNREASONABLE AND THEY WOULD INCREASE,**
17 **NOT DECREASE, THE TOTAL PROJECT COST TO PEF’S CUSTOMERS.**

19 **Q. Can you explain what OPC witness Jacobs recommends in his testimony?**

20 A. Yes. My understanding of his testimony is that Jacobs generally claims PEF should not
21 recover “avoidable or deferrable” EPU costs that have not already been incurred or
22 committed to for the project. Rather, he claims these costs should be avoided or deferred
23 “until late in the containment repair process when the success of the repair and NRC
24 acceptance of that repair is assured.” (Jacobs Test., P. 12, L. 10-13). In his view, these
25 avoidable or deferrable costs are construction contract costs that can be performed during
26 an “outage lasting a few months” and, accordingly, he necessarily proposes that PEF

1 revise its current schedule for the completion of the EPU work during the current CR3
2 R16 outage to place the EPU construction work at the end of the current outage. (Jacobs
3 Test., P. 12, L. 10-17). He claims that, as a result of his recommendation,
4 “approximately \$186,000,000 of planned expenditures of the customers’ money will not
5 be spent,” according to him, “more than two years early.” (Jacobs Test., P. 12, L. 13-20).
6 Based on this recommendation, Jacobs claims that, if PEF “decides to incur avoidable or
7 deferrable [EPU] expenditures,” the Commission should withhold any determination of
8 reasonableness and put PEF on notice “that any EPU money spent in 2013 will be held
9 subject to refund until PEF makes an official decision to repair the building and to begin
10 that repair in earnest.” (Jacobs Test., P. 13, L. 1-6).

11
12 **Q. What is the reason Jacobs provides for his recommendations?**

13 **A.** Jacobs’ reason for his recommendations is that PEF should “minimize all expenditures
14 related to the CR3 EPU project.” (Jacobs Test., P. 5, L. 10-11). Jacobs does not testify
15 that the CR3 Uprate project should be cancelled or that EPU work should stop. Indeed,
16 Jacobs agrees that engineering and licensing work, and LLE procurement, must move
17 ahead to continue the EPU project. (Jacobs Test., P. 12, L. 5-6). He argues that “[o]nly
18 absolutely necessary expenditures should be incurred” prior to the decision to repair or
19 retire CR3. (Jacobs Test., P. 11, L. 17-20). Jacobs allows, then, for the recovery by PEF
20 of necessary expenditures in 2012 and 2013 for the EPU work on the CR3 Uprate project.
21
22
23

1 **Q. Do you agree with Jacobs' recommendations?**

2 A. No. First, Jacobs is simply incorrect that the Company will spend \$186 million on the
3 CR3 Uprate project at this time and that this entire projected amount represents avoidable
4 or deferrable construction work. Second, Jacobs' recommendations are not based on any
5 evidence that PEF's actual/estimated 2012 or projected 2013 costs are unreasonable
6 because they are unnecessary for the EPU work or inaccurate or incorrect in amount
7 because of something PEF did or did not do that it should have done. Finally, Jacobs'
8 recommendations, if accepted by the Commission, will actually increase, not minimize,
9 the cost of the EPU work to PEF's customers and may further delay implementation of
10 the EPU phase of the CR3 Uprate project, thereby delaying receipt of fuel savings
11 benefits to PEF's customers.

12
13 **Q. Will PEF spend \$186 million on the EPU work in 2012 and 2013?**

14 A. No. PEF is not requesting \$186 million for the CR3 Uprate project in this docket. Jacobs
15 obtains the \$186 million number from Schedule TOR-6 of Exhibit No. __ (TGF-6) to Mr.
16 Thomas G. Foster's testimony in this docket. (Jacobs Test., P. 8, L. 1-4, n. 1). This \$186
17 million represents the projected future spend on the EPU phase of the CR3 Uprate project
18 in 2013, 2014, and 2015. PEF is not seeking recovery of carrying costs and other,
19 recoverable costs under the nuclear cost recovery statute and rule for the projected 2014
20 and 2015 EPU costs in this docket. These 2014 and 2015 projected EPU costs will be the
21 subject of requests for cost recovery in subsequent dockets, and subject to subsequent
22 Commission reviews to determine if these costs are first reasonable, and then prudent, for
23 the CR3 Uprate project. Accordingly, there is no reason for the Commission to review

1 the projected CR3 Uprate 2014 and 2015 costs (an estimated \$75.8 million) at this time
2 because PEF is not requesting recovery for these costs in this docket. Only \$110 million
3 of the \$186 million is at issue in this docket because this is the projected 2013 costs for
4 the EPU work on the CR3 Uprate project.
5

6 **Q. Are the projected \$110 million costs for the CR3 Uprate project in 2013 reasonable?**

7 A. Yes. As I explained, in my direct testimony filed in this docket on April 30, 2012, these
8 costs are necessary for the EPU scope of work required to implement the power uprate.
9 This work includes continued engineering and licensing support for the EPU LAR that
10 was submitted to the NRC in June 2011 and accepted for review by the NRC in
11 November 2011. I explain the general scope of this licensing work in my April 30, 2012
12 direct testimony. This work will continue through 2013 when NRC approval of the EPU
13 LAR is expected. Further EPU work in 2013 includes design engineering finalization of
14 the engineering change ("EC") packages for the EPU, continued payments and vendor
15 oversight for LLE for the EPU, and the commencement of construction activities
16 including starting mobilization of construction resources, the performance of
17 constructability reviews, the receipt, storage, and organization of equipment and
18 materials, the commencement of pre-fabrication activities, and continued vendor
19 oversight. This work is also explained in my April 30, 2012 testimony. This EPU work
20 is necessary in 2013 to perform the EPU construction work from June 2013 to June 2014
21 to install, test, and implement the power uprate when CR3 is currently expected to return
22 to service.

1 The projected 2013 EPU costs include (1) an estimated \$2.4 million in license
2 application costs to obtain NRC approval of the EPU LAR in 2013; (2) \$14.2 million for
3 LLE procurement and contractual progress payments in 2013, and related vendor quality
4 assessment, contract management, oversight, and LLE handling and storage; and (3) \$7.8
5 million for design engineering work and related project management in 2013. See
6 Exhibit No. ___ (JF-6) to my rebuttal testimony. Jacobs agrees that all of these projected
7 2013 EPU costs must be incurred to continue the CR3 Uprate project. (Jacobs Test., P.
8 12, L. 5-6). In addition to these 2013 EPU costs, related project management costs in the
9 amount of \$5.7 million are projected in 2013. These costs represent \$30.1 million of the
10 projected \$110 million 2013 EPU costs.

11 Of the remaining \$79 million in projected 2013 EPU costs, Jacobs does not
12 identify any specific CR3 Uprate project cost that he claims PEF can avoid in 2013 or
13 defer beyond 2013 and still implement the power uprate during the current CR3 outage.
14 Jacobs nowhere testifies that any of the work that is encompassed by the remaining \$79
15 million in projected 2013 costs is unnecessary in 2013. Jacobs simply assumes that these
16 remaining 2013 EPU costs represent “construction costs” that can be avoided or deferred
17 in 2013. In other words, Jacobs assumes that, because EPU installation work could be
18 performed in an “outage lasting a few months,” PEF should defer EPU construction
19 activities and costs to “late” in the containment building repair process. (Jacobs Test., P.
20 12, L. 9-13). Jacobs fails to address in his testimony the impact his recommended
21 “schedule” would have on the CR3 Uprate project in terms of the effect on the total
22 project cost and the Company’s ability to complete the power uprate during the current
23 outage.

1 **Q. Has PEF taken steps to minimize the CR3 Uprate project costs?**

2 A. Yes, PEF has done exactly what Jacobs says PEF should do and minimized the CR3
3 Uprate costs to ensure that only those costs necessary for the EPU work on the CR3
4 Uprate project have been and will be incurred until a final decision to repair CR3 is
5 made. In 2011, prior to the March 14, 2011 delamination, PEF was proceeding with a
6 project plan and CR3 Uprate project schedule to complete the EPU work in a then-
7 planned 2013 CR3 re-fueling outage. PEF obviously, then, had incurred and committed
8 to incur EPU costs in the first quarter of 2011, prior to and immediately after the mid-
9 March 2011 delamination, that were not amenable to revision as a result of this event.
10 Subsequent to this delamination event, however, PEF evaluated the EPU phase work and
11 determined that the reasonable course of action was to take steps to preserve the option of
12 completing the CR3 Uprate work in the current CR3 outage without unnecessarily
13 incurring costs for the CR3 Uprate project. This decision is confirmed by the Company's
14 current evaluation of the feasibility of the CR3 Uprate project described at pages 29-36 of
15 my April 30, 2012 direct testimony. Jacobs apparently agrees with PEF that this was a
16 reasonable approach because he does not dispute the Company's determination that the
17 CR3 Uprate project is feasible and he also proposes continuation of the CR3 Uprate
18 project to complete the EPU phase work during the current CR3 outage, albeit on a more
19 compressed time frame than the Company's current CR3 Uprate project schedule.

20 To develop the current CR3 Uprate project schedule, PEF evaluated the EPU
21 phase work to identify what work was critical to proceed with to maintain a schedule to
22 complete the EPU during the current CR3 outage and what work was not on this critical
23 path. Based on this evaluation, PEF slowed down and postponed work on the EPU phase

1 in 2011 and 2012 to minimize the CR3 Uprate project costs while preserving the
2 Company's ability to complete the EPU work during the current CR3 outage and
3 implement the power uprate when CR3 returns to service.

4 For example, no EPU phase work has been or is being accelerated, all overtime
5 work has been postponed, and only regular work hours are permitted on EPU work that
6 PEF has determined needs to be done to maintain the current CR3 Uprate project
7 schedule. PEF also delayed the selection of a construction contractor for the EPU phase.
8 PEF individually evaluated each contract and change order for the EPU phase work
9 before execution. For contracts or change orders below \$100,000, the EPU phase project
10 manager performed this evaluation; for contracts or change orders at or above \$100,000,
11 the project manager conducted this evaluation and made recommendations with respect
12 to execution of the contract or change order that were reviewed by the manager of
13 nuclear projects and senior management. No contract or change order at or above
14 \$100,000 for the EPU phase work was executed without senior management approval.
15 That approval was not granted unless there was a demonstration that the work under the
16 contract or change order was reasonable and necessary to preserve the Company's ability
17 to complete the EPU work on the current CR3 Uprate project schedule. This type of
18 evaluation was conducted for each item of work for the EPU phase of the CR3 Uprate
19 project.
20
21
22

1 **Q. Have the Company's efforts to minimize the CR3 uprate costs in 2011 and 2012**
2 **actually resulted in the avoidance or deferral of costs to a later time period?**

3 A. Yes. As I explain in my March 1, 2012 direct testimony, PEF was able to reallocate
4 project management resources and reduce project management expenditures for the CR3
5 Uprate project by \$4.7 million in 2011. PEF's 2011 Power Block Engineering,
6 Procurement, and related construction costs were reduced by \$34.2 million. (See Direct
7 Test. of Jon Franke, dated March 1, 2012, pp. 12-13). Likewise, PEF's efforts to
8 minimize CR3 Uprate project costs in 2012 resulted in reductions of \$4.4 million in
9 project management costs, and \$14.8 million in Power Block Engineering, Procurement,
10 and related construction costs, compared to the estimate for these 2012 costs in 2011.
11 (See Exhibit No. ____ (TGF-4), p. 16 of 50, to the April 30, 2012 Direct Testimony of
12 Thomas G. Foster). PEF has reasonably minimized CR3 Uprate project costs in 2011 and
13 2012 while preserving its ability to complete the EPU phase of the CR3 Uprate project
14 during the current outage.

15
16 **Q. Can PEF minimize CR3 Uprate project costs further by adopting Jacobs'**
17 **recommendation to defer all EPU construction work to the end of the current CR3**
18 **outage?**

19 A. No. In fact, Jacob's recommendation that PEF defer all construction work until the end
20 of the current CR3 outage would increase, not minimize, the cost to perform the EPU
21 work. PEF currently plans to complete the EPU phase work during the current CR3
22 outage between June 2013 and June 2014. Jacobs recommends performing all of this
23 work in an unspecified "few months" late in the CR3 containment building repair

1 process. (Jacobs Test., P. 12, L. 10-13). Deferring EPU construction work until the end
2 of the current CR3 outage and anticipated CR3 repair work requires PEF to completely
3 re-order the current EPU phase work schedule. All efficiencies that PEF gained by
4 carefully planning to perform this work over the one-year construction period in the
5 current EPU work schedule will be lost. Additional contractor labor will be needed,
6 additional on-site facilities will be required to house these additional contractors,
7 extended shifts and overtime will be necessary for current employees and contractor
8 employees, and additional project management and quality assessment will be needed to
9 manage the additional contractors and shifts working around-the-clock to perform the
10 work in a "few months" rather than a year. Coordination efforts will increase and added
11 internal and contractor project management will be required. All of these factors, among
12 others that necessarily flow from taking work planned for one year and performing it in a
13 compressed time period, will increase the cost of the EPU work and, thus, increase the
14 total CR3 Uprate project cost.

15 In addition, PEF has a detailed work schedule in place to perform this work under
16 the current plan. I have attached as Exhibit No. ____ (JF-7) to my testimony a copy of the
17 current EPU Level II schedule. This schedule includes the careful order of the
18 installation of the EC work necessary for the EPU from the current date through June
19 2014 to implement the power uprate by the anticipated return of CR3 to service from the
20 current outage. Behind each milestone entry for each EC that makes up the EPU work is
21 a detailed work scope and time frame for that work scope ensuring the timely completion
22 of the milestone under this current EPU work schedule. This detailed work scope and
23 time frame for ECs involving contractor resources and material is premised on

1 established contractual obligations and timelines. To move away from this detailed work
2 schedule and implement another one in a much shorter time frame, as Jacobs suggests,
3 will require PEF to invest substantial manpower and time to re-baseline the EC work and
4 re-build the EPU construction and implementation schedule in a compressed time frame.
5 This work alone will increase the costs of the project.

6 To re-baseline the EC work and re-build the EPU work schedule PEF also will
7 have to re-negotiate existing contracts for this work at an additional cost to PEF. The
8 cost of the work will escalate upon deferral and compression of the time frame to perform
9 the work and PEF will likely incur cancellation costs and other damages under the
10 existing contracts. Additionally, it may not be possible for PEF to re-negotiate some
11 contracts to implement the EPU work schedule Jacobs recommends. For example, the
12 current contracts with Siemens for installation of the low and high pressure turbines are
13 based on the limited availability of Siemens resources for this work. Siemens resources
14 may not be available for the installation of the low and high pressure turbines in the time
15 frame Jacobs recommends for completion of the EPU work. PEF will also place itself in
16 a position of weakness in negotiations with potential construction contractors because
17 these contractors will know that the EPU phase work must be performed in a limited
18 time-frame in order to implement the power uprate upon the anticipated return of CR3 to
19 service. For all of these reasons, Jacobs' recommendation will increase, not decrease, the
20 total cost of the project for PEF's customers.
21

1 **Q. Are there other drawbacks to Jacobs' recommendation to defer the EPU**
2 **construction work to a "few months" at the end of the anticipated repair schedule**
3 **for CR3?**

4 A. Yes. Deferral of all EPU construction work until the end of the current CR3 outage and
5 anticipated CR3 repair work further places the EPU work on the critical path to return
6 CR3 to service and impairs the Company's ability to timely complete the EPU work in
7 order to implement the power uprate when CR3 does return to service. This increases the
8 risk that unexpected delays in the EPU work or increases in the time necessary to perform
9 the work will extend the current outage and delay the return of CR3 to commercial
10 service. For example, risks inherent in compressing a construction schedule include
11 industrial safety, quality control, and the time available to appropriately address unknown
12 changes that are part of any construction project. The current implementation schedule
13 also provides PEF additional time to perform post-modification testing prior to start-up
14 testing for the power uprate. This schedule enables PEF to identify any equipment or
15 performance issues in time to correct them before the anticipated return of CR3 to
16 commercial service. That time would not be available to PEF under the EPU
17 construction schedule that Jacobs recommends. As a result, implementation of the EPU
18 phase work in a "few months" at the end of the anticipated CR3 repair schedule increases
19 the risks that the EPU implementation may delay the return of CR3 to commercial service
20 and, therefore, delay the fuel savings benefits from the return of CR3 to commercial
21 service, and at the power uprate, to PEF and its customers.

22 Implementation during the extended CR3 16R outage provides PEF the
23 opportunity to gain schedule and costs efficiencies and reduce risk because the EPU

1 phase work no longer has to be completed during the limited timeframe of a typical re-
2 fueling outage, but instead can be implemented over the course of the year. The current
3 EPU phase work schedule and costs reflect these efficiencies. If Jacobs'
4 recommendation to defer construction activities and costs was implemented, PEF and its
5 customers would lose the time and cost efficiencies gained under the current
6 implementation schedule, the total project cost would increase, and there would be an
7 increased risk that the return of CR3 to commercial service and the receipt of the
8 resulting fuel-savings benefits would be delayed to the added detriment to PEF and its
9 customers.
10

11 **V. JACOBS' OTHER "CONCERNS" REGARDING THE EPU ARE**
12 **UNSUPPORTED BY ANY EVIDENCE AND IRRELEVANT TO THE ISSUES**
13 **BEFORE THE COMMISSION.**
14

15 **Q. Jacobs states his "concern" that the CR3 Uprate total project costs have increased**
16 **since the original estimate, and that they may continue to increase, do you agree that**
17 **this is an appropriate "concern" for the project?**

18 **A.** No. First, the reasons for these total project cost increases were explained in my
19 testimony in prior dockets and in my current April 30, 2012 direct testimony in this
20 docket. As I explain, these cost increases are the result of additional engineering
21 changes, additional project scope, and licensing expenses necessary to implement the full
22 power uprate. Jacobs nowhere disputes these reasons for the increases in the CR3 Uprate
23 total project costs. Additionally, the mere fact that the total project cost has changed,
24 with both increases and decreases in project scope, was addressed by the Commission in
25 the 2010 nuclear cost recovery clause docket. The Commission concluded that the mere

1 fact that the total project cost increased (and may continue to increase) is relevant to the
2 utility's detailed feasibility analysis for the project, stating that "we believe that concerns
3 regarding changes in estimated total project costs are best addressed in the project
4 feasibility analysis issue where changes can be reviewed on an annual basis." See Order
5 PSC-11-0095-FOF-EI, Docket No. 10000-09, p. 14. Jacobs does not challenge the long-
6 term feasibility of the CR3 Uprate project. Accordingly, while Jacobs may be concerned
7 simply because the total project cost has increased, regardless of the reasons for the
8 increase or the continuing feasibility of the project, there is no reason based on the
9 uncontradicted evidence explaining the cost increases and the continuing feasibility of the
10 CR3 Uprate project for the Commission to be concerned about the mere increase in total
11 project cost.

12
13 **Q. Jacobs is also concerned that there will be "difficulty" in achieving regulatory**
14 **approval by the NRC of the EPU LAR. Do you agree with this concern?**

15 A. No. Jacobs' concern is unsupported by any evidence that it will in fact be "difficult" for
16 PEF to obtain NRC approval of the EPU LAR. Jacobs refers only to the statement in the
17 NRC acceptance letter, Exhibit No. __ (JF-1) to my April 30, 2012 direct testimony,
18 indicating that NRC review of the EPU LAR may take longer than one year and
19 "possibly" up to two years to support his concern that it will be "difficult" to obtain NRC
20 approval of the EPU LAR. The NRC does not say in this letter that it will be "difficult"
21 for PEF to obtain EPU LAR approval, that it will in fact take two years to complete the
22 NRC review, or that the reason it may take up to two years to complete the EPU LAR
23 review is because of any difficulty with the EPU LAR. The NRC letter, therefore, does

1 not mean that there is or will be difficulty in obtaining EPU LAR approval. In fact,
2 feedback from the NRC reviewers during the Request for Additional Information
3 (“RAI”) process to date has been positive and the review has continued without delay.
4 While this is a first-of-its kind EPU LAR application, PEF continues to work closely with
5 the NRC on the EPU LAR, and the NRC has not identified any difficulty in review and
6 approval of PEF’s EPU LAR. PEF fully expects to obtain EPU LAR approval. There is
7 no evidence to date that the NRC will not approve the EPU LAR.
8

9 **VI. CONCLUSION.**

10 **Q. Can you summarize your response to the intervenor testimony with respect to the**
11 **issues before the Commission in this docket regarding the CR3 Uprate project?**

12 A. Yes. PEF has demonstrated that its 2011 CR3 Uprate project costs were prudently
13 incurred and that PEF is entitled to recover them from customers. Jacobs does not
14 dispute this evidence. PEF has demonstrated that its 2012 CR3 Uprate project
15 actual/estimated costs are reasonable. Jacobs does not dispute this evidence. PEF has
16 further demonstrated that the CR3 Uprate project is feasible. Jacobs does not address
17 feasibility and, therefore, does not dispute this evidence. In fact, he must believe the CR3
18 Uprate project remains feasible because he does not opine that PEF should cancel the
19 project and he in fact testifies PEF should continue with the project, albeit on a different
20 schedule than the Company’s current schedule. PEF has also demonstrated that its 2013
21 projected costs are reasonable. Jacobs nowhere testifies that any specific cost that PEF
22 expects to incur in 2013 on the CR3 Uprate project is unreasonable. He recommends
23 only that the Commission defer an unspecified amount of EPU construction-related costs

1 to some period near the end of the CR3 containment building repair. He presents no
2 evidence to dispute PEF's testimony that it has prudently managed the CR3 Uprate
3 project and has minimized all costs it found reasonable to do so while still preserving the
4 benefits of the project for PEF and its customers on an efficient implementation schedule.
5 Indeed, Jacobs' recommendations to defer and then accelerate EPU construction would
6 increase the costs of the project and result in increased risk for the Uprate project. There
7 is, therefore, no basis for the Commission to accept Jacobs' recommendations and the
8 Commission should approve PEF's 2013 projected costs as reasonable.

9
10 **Q. Does this conclude your rebuttal testimony?**

11 **A.** Yes, it does.

**2013 PROJECTED CR3 UPRATE PROJECT COSTS FOR
SELECTED EPU WORK (IN MILLIONS)**

License Application **2.4**

**Long Lead Equipment ("LLE")
procurement, contractual progress
payments and related vendor contract
management and quality control** **14.2**

**Design engineering and related project
management work** **7.8**

Project Management **5.7**




TOTAL **30.1**

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 Project : MP EPU OFF LINE
 Version : 41 : NU 1300 BACKUP
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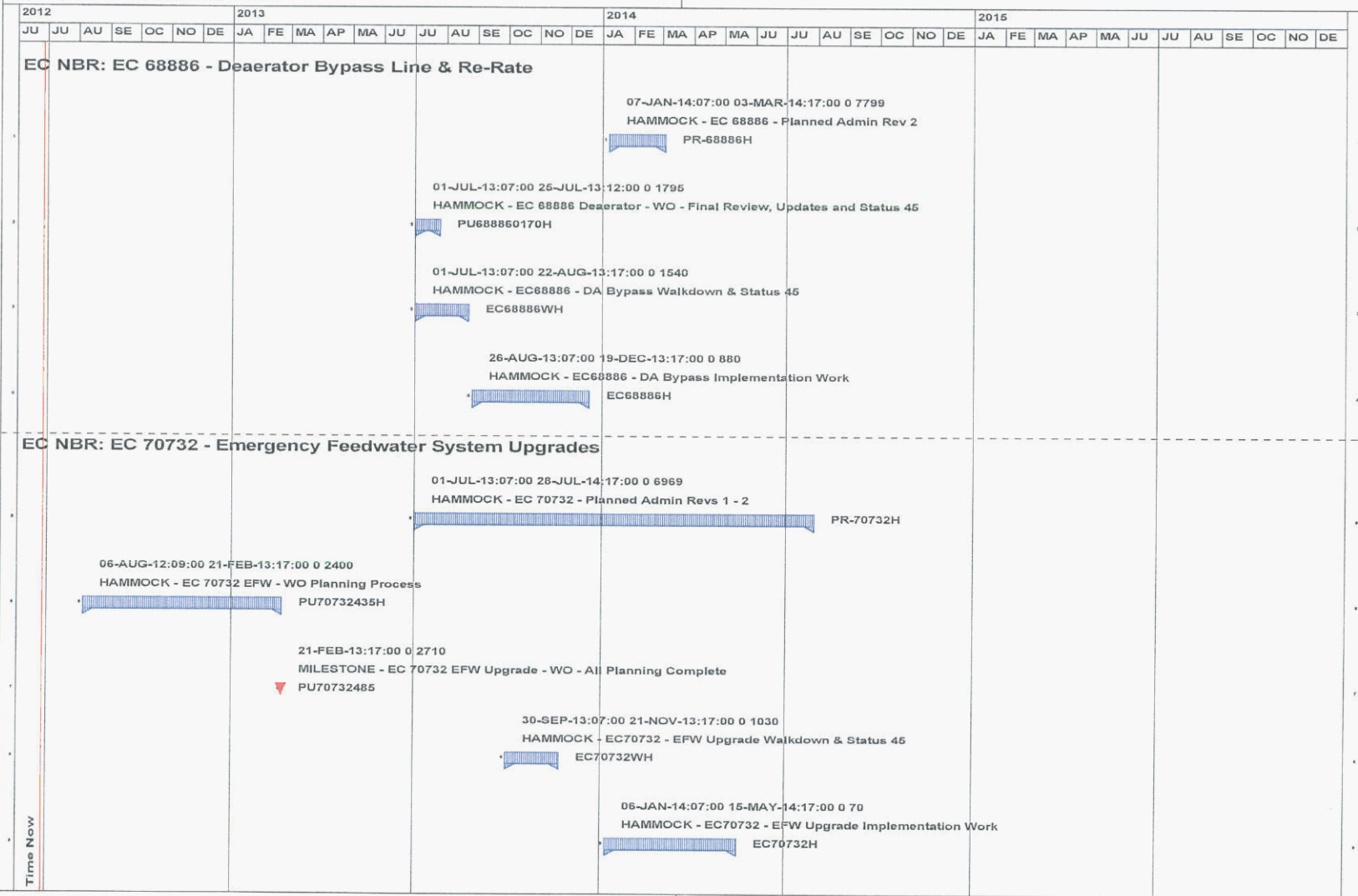
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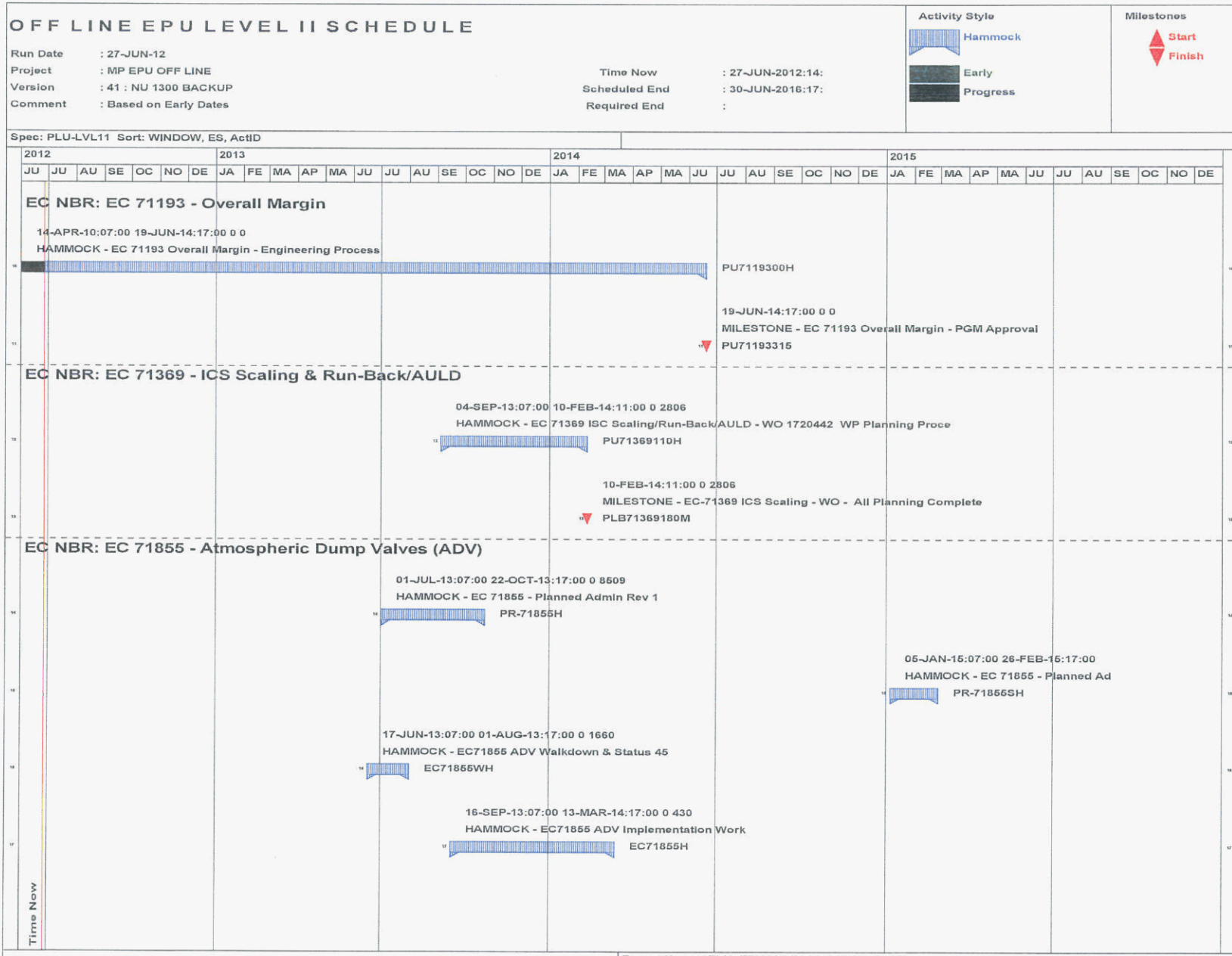
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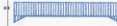






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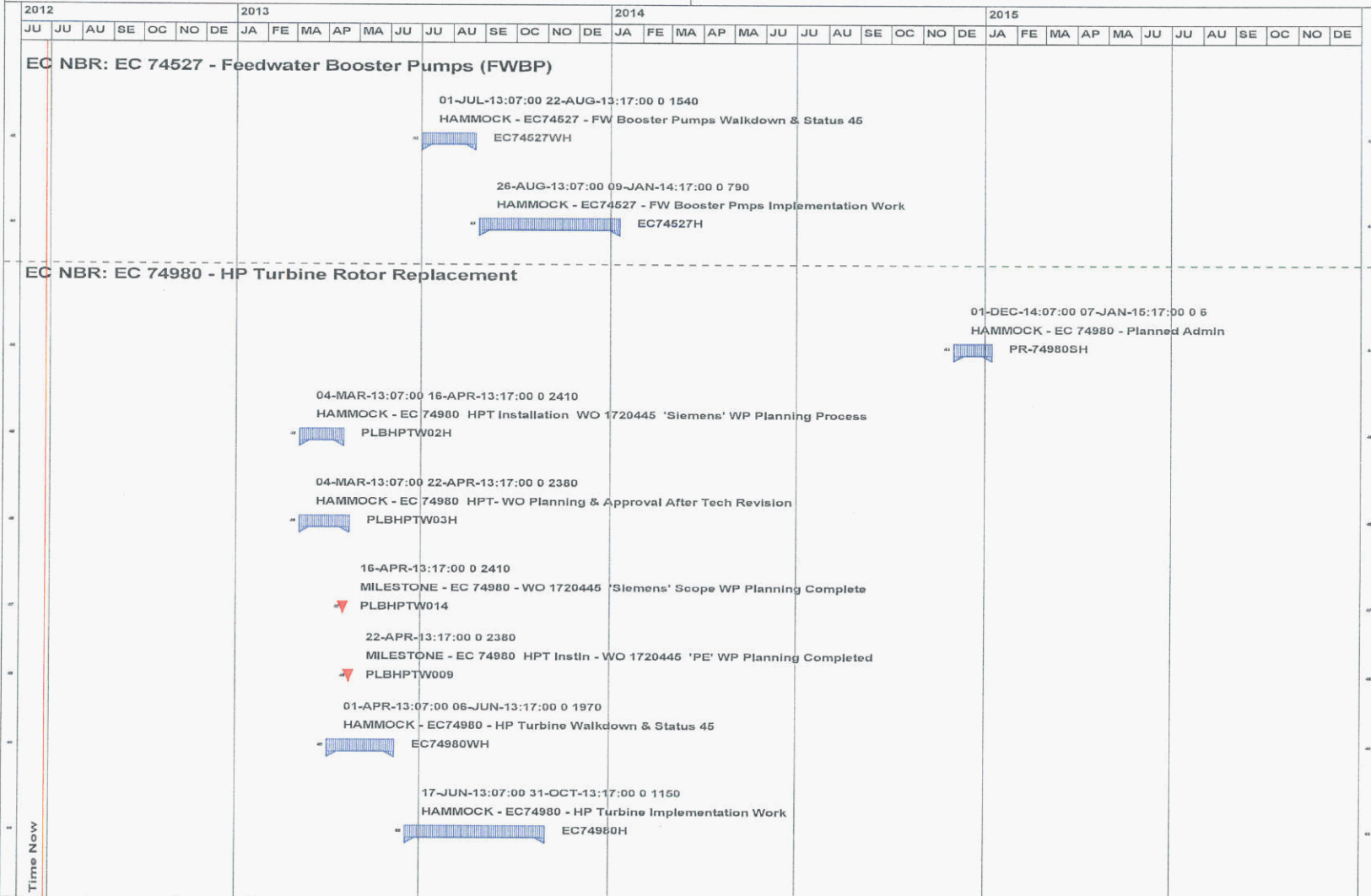
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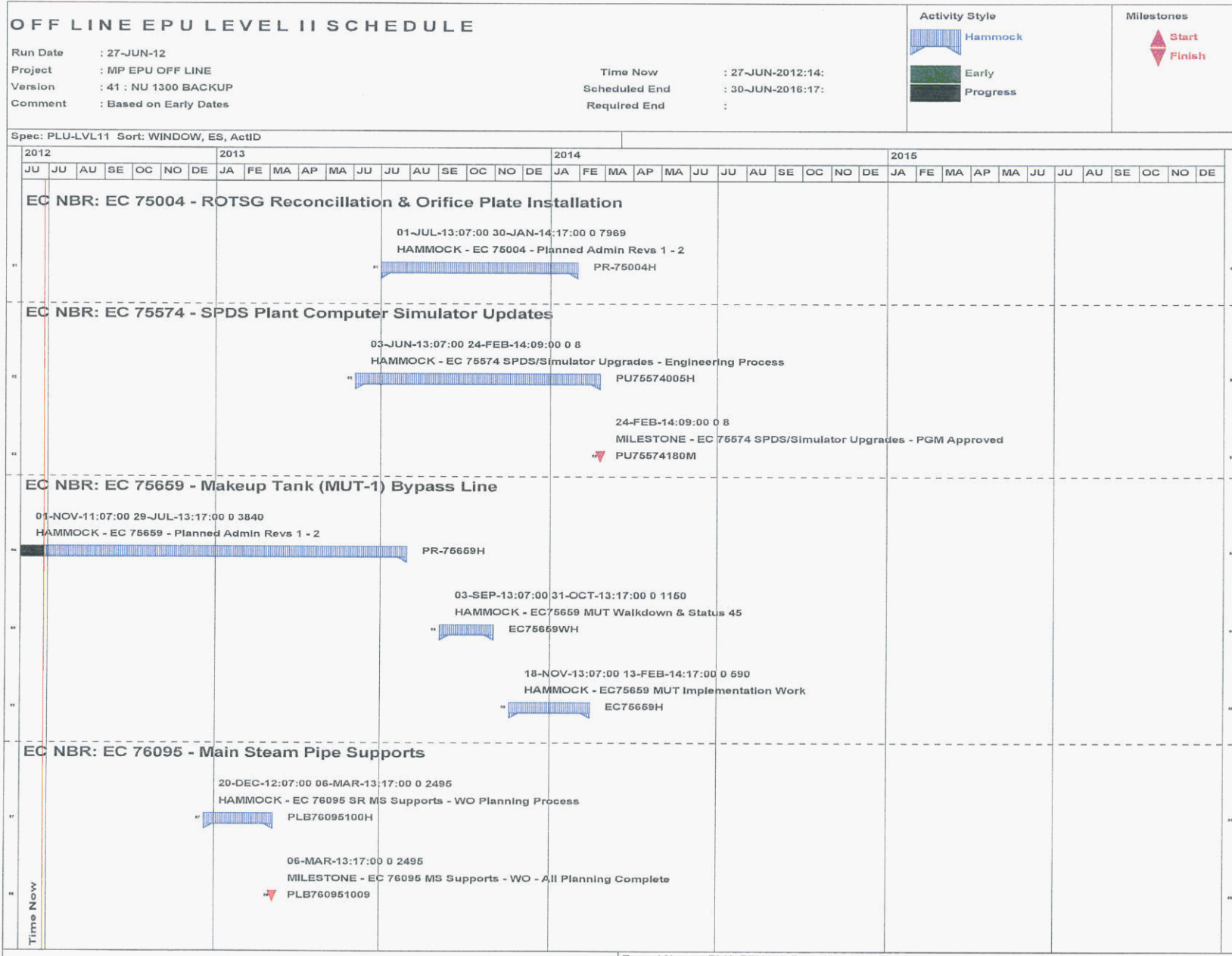
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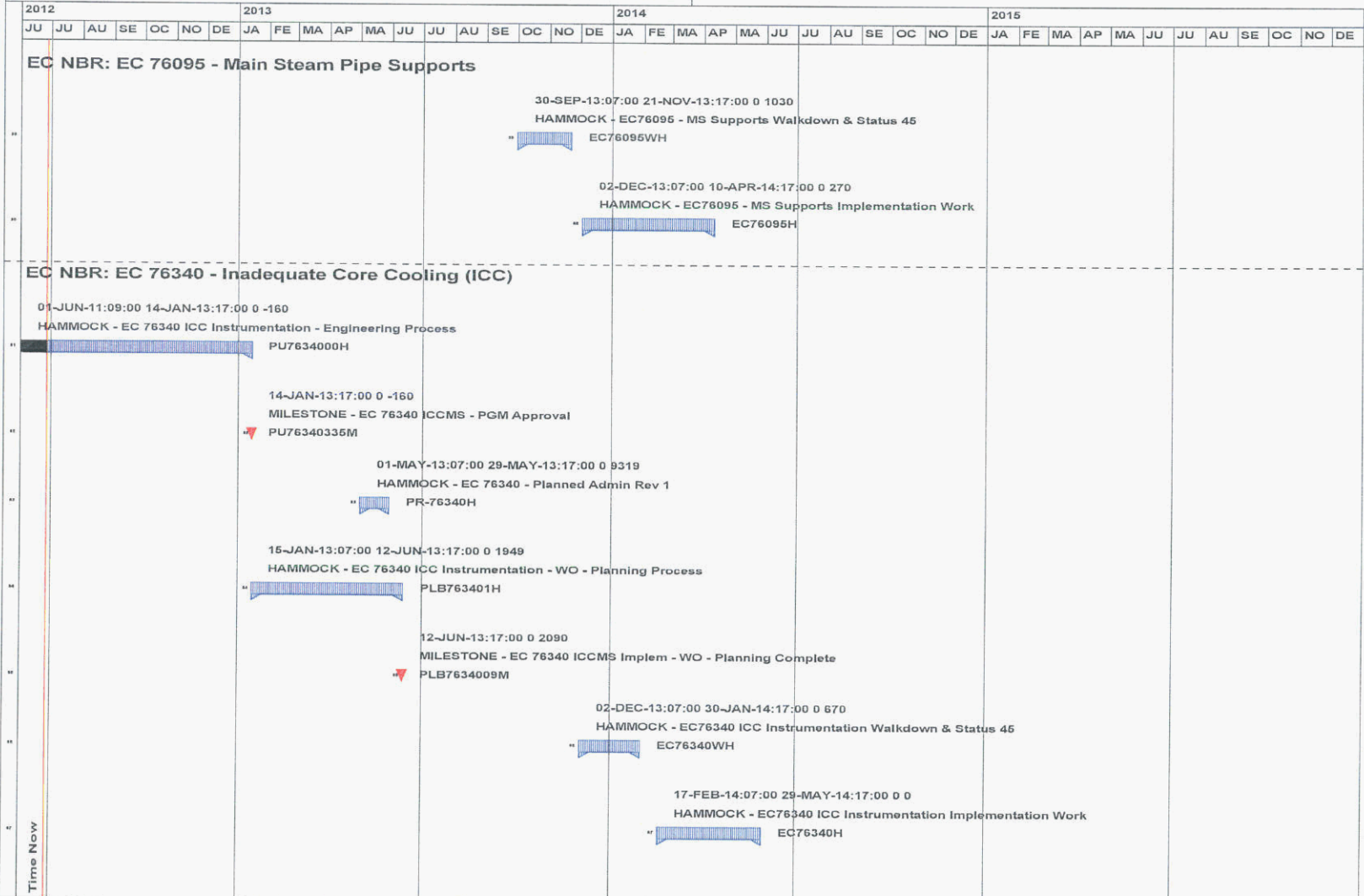
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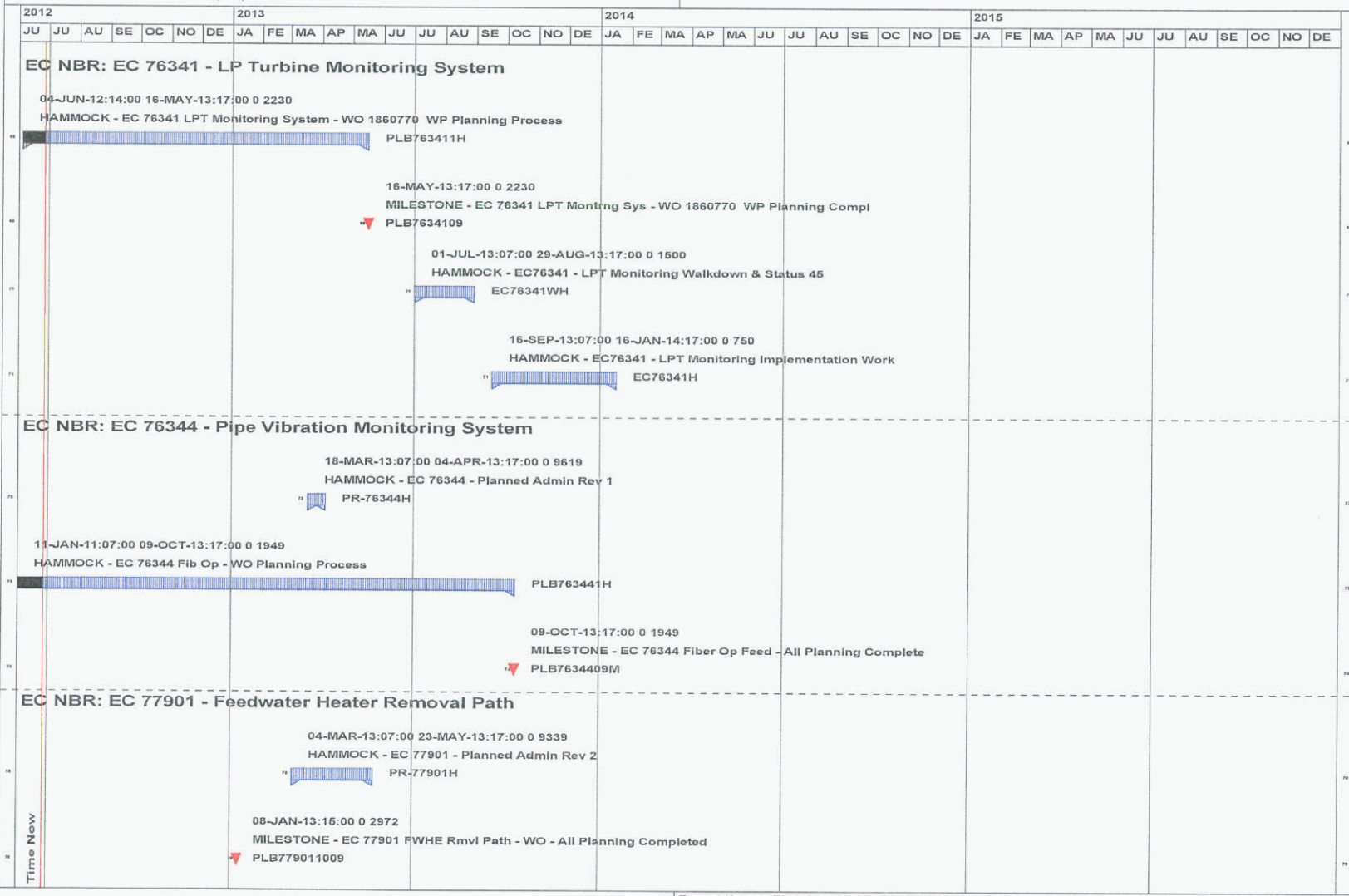
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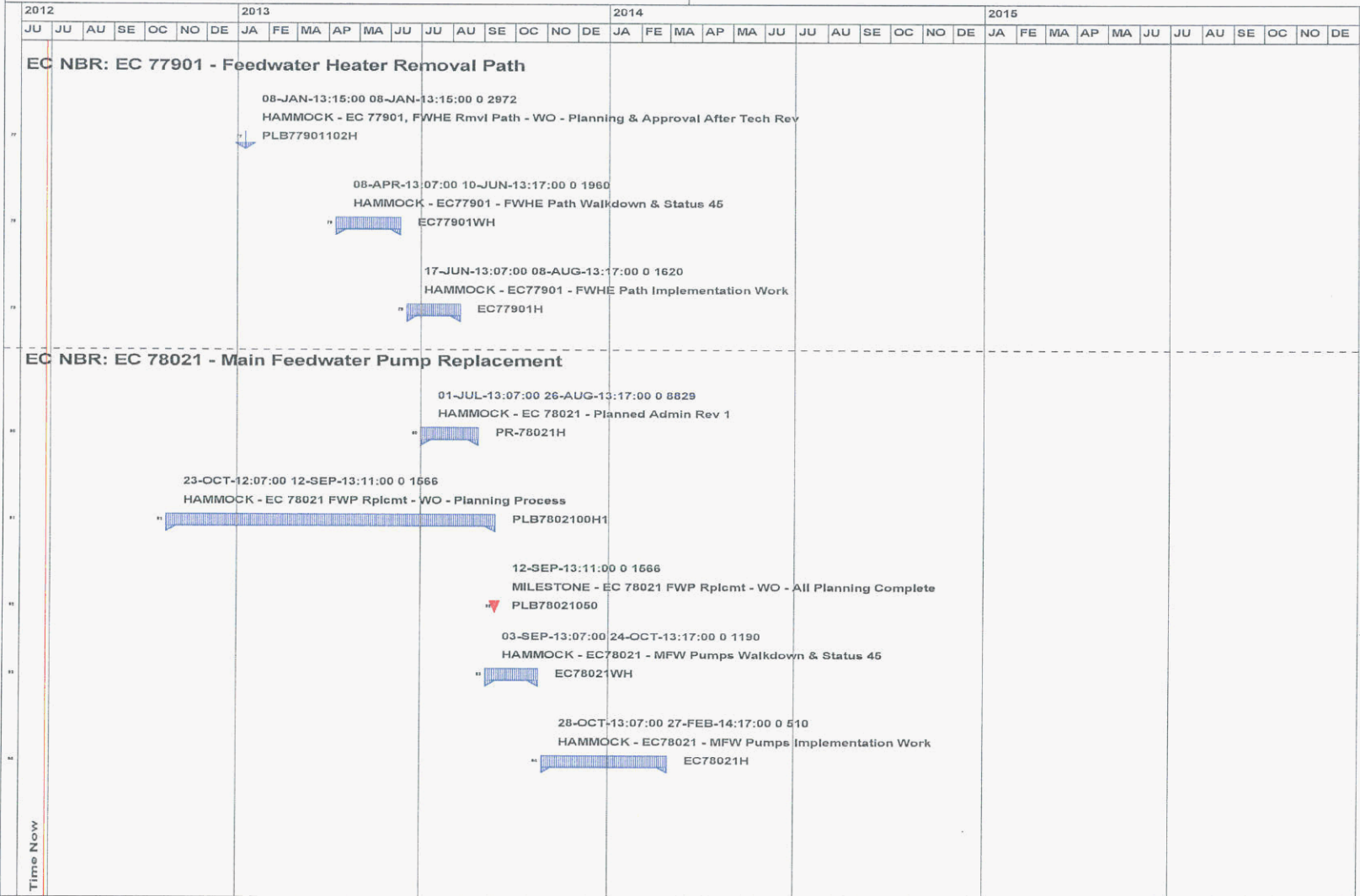
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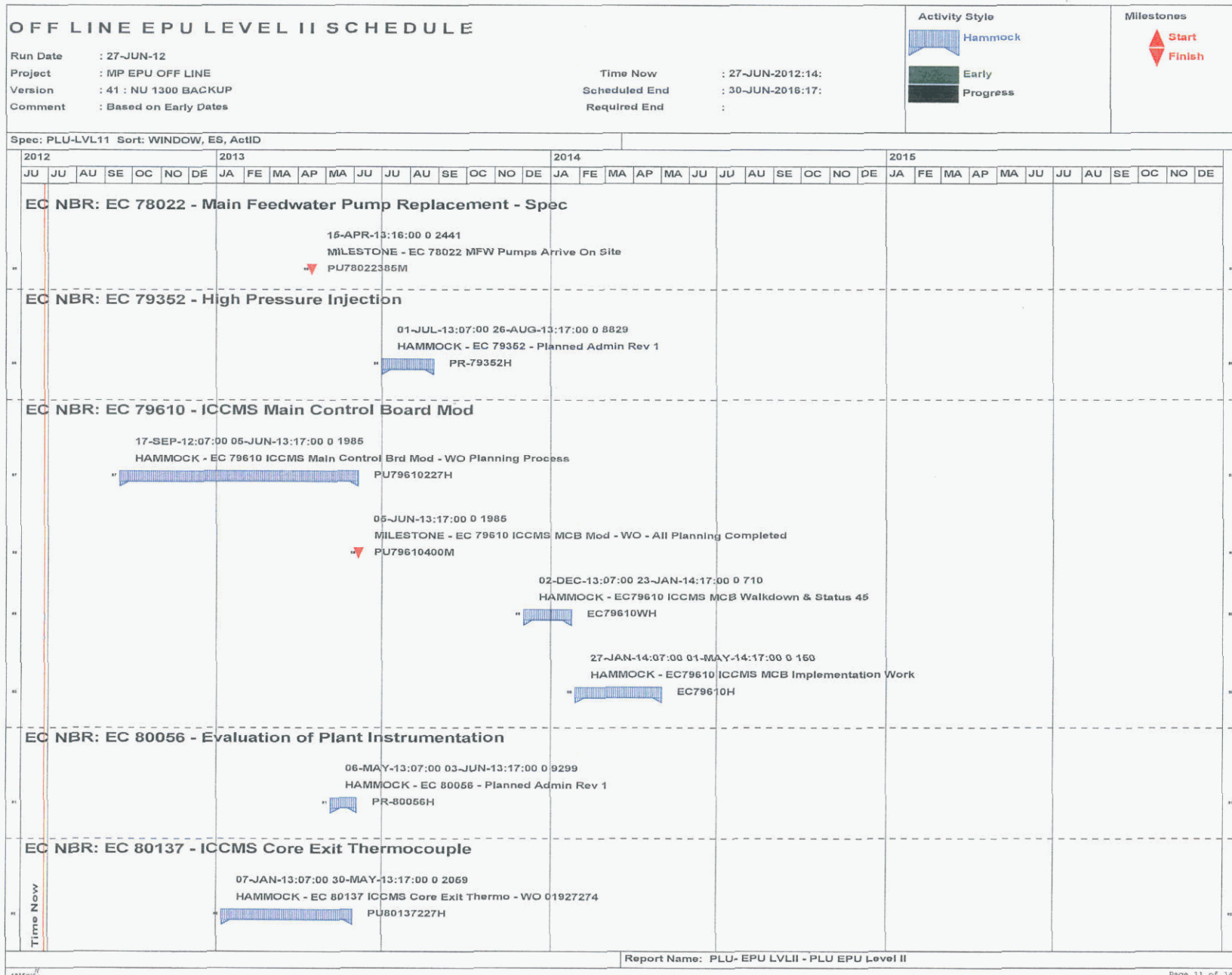
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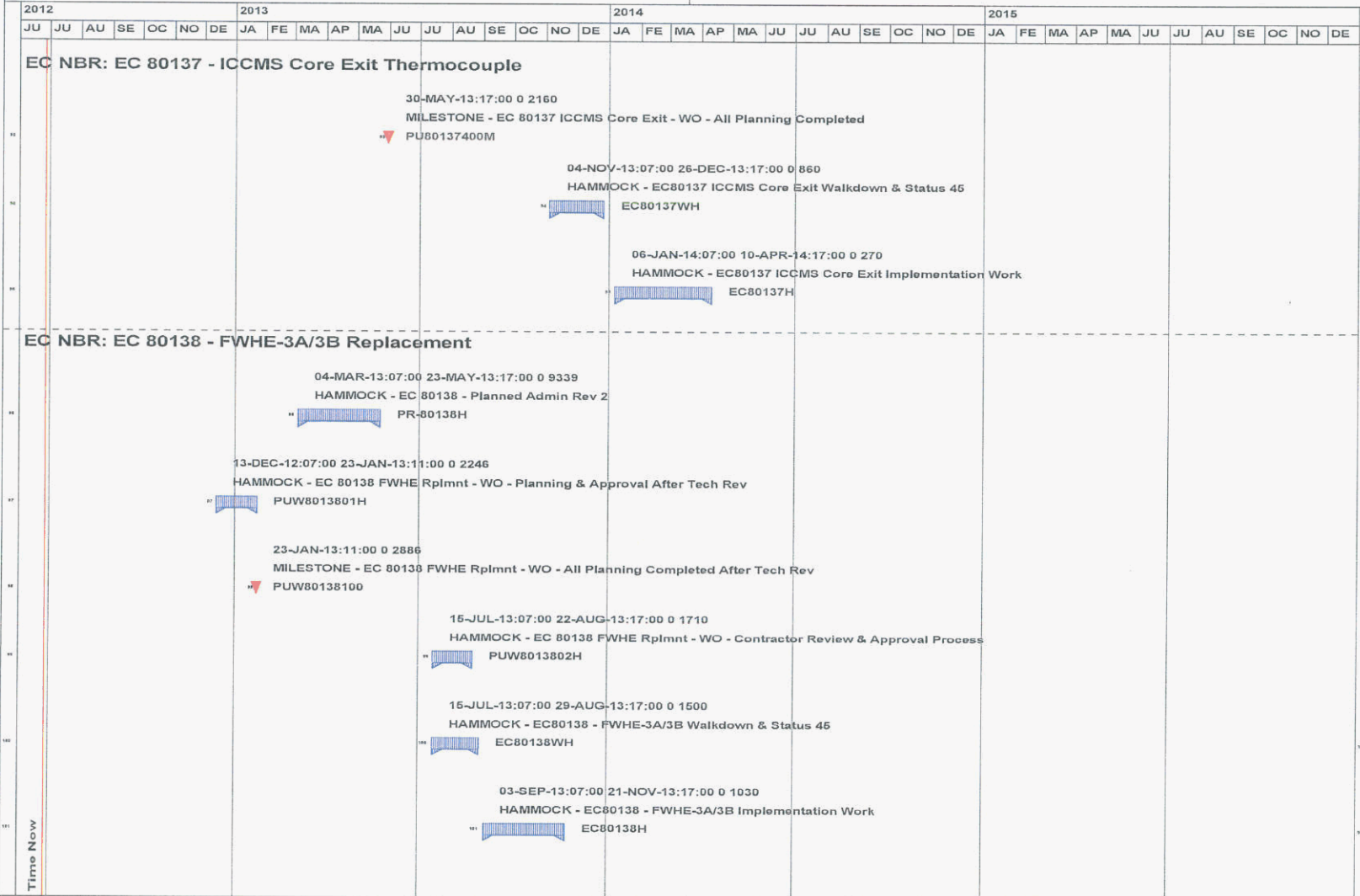
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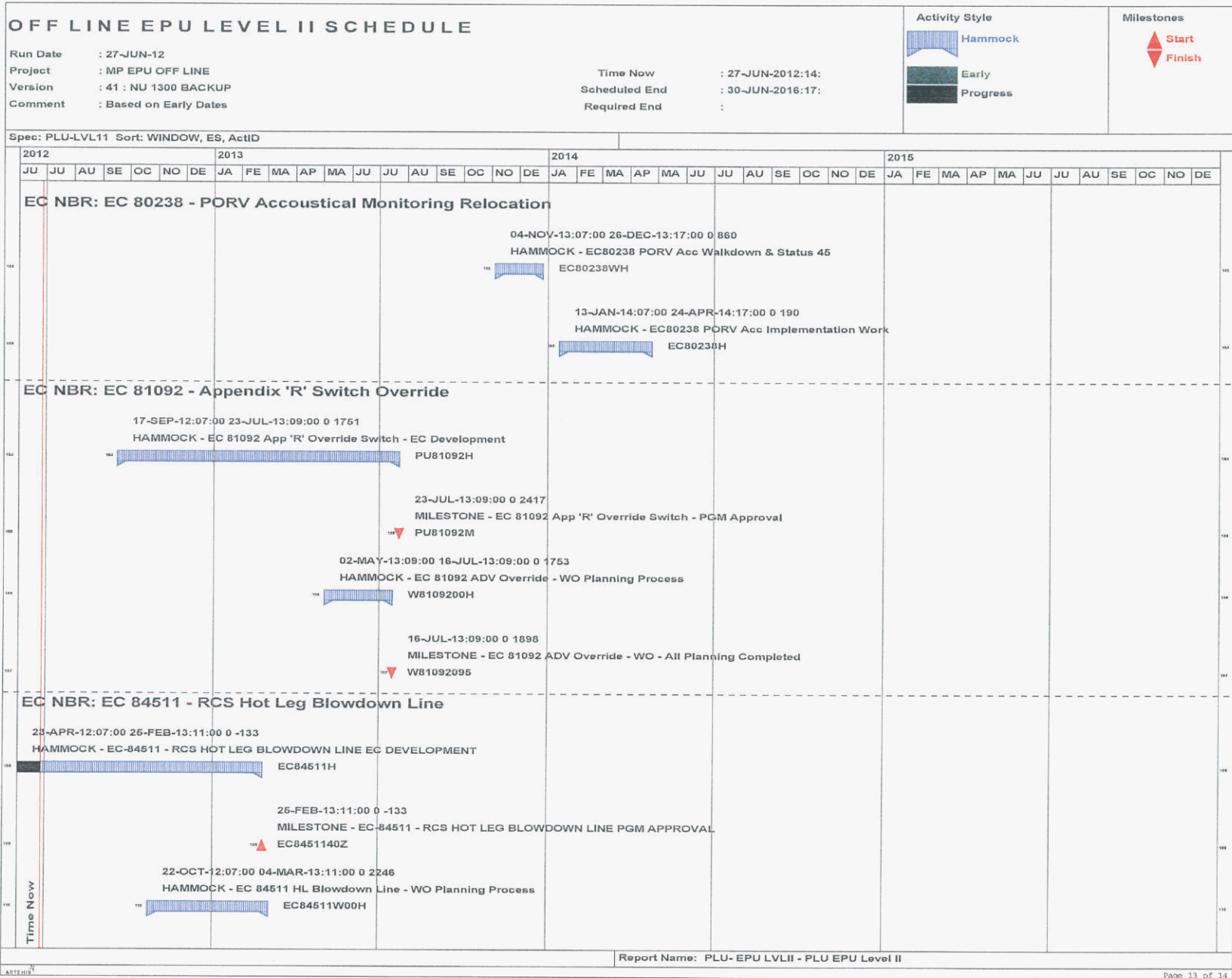
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