

**From:** R1WORKFLOW Resource  
**Subject:** PI&R requests for 6/13

**From:** Rosebrook, Andrew  
**Sent:** Monday, June 13, 2016 4:17 PM  
**To:** Pagliaro, Nicole <Nicole.Pagliaro@TalenEnergy.com>  
**Subject:** FW: PI&R requests for 6/13

Nicole,

See the attached information request for Andrew Siwy.

Andy

**From:** Siwy, Andrew  
**Sent:** Monday, June 13, 2016 4:01 PM  
**To:** Rosebrook, Andrew <[Andrew.Rosebrook@nrc.gov](mailto:Andrew.Rosebrook@nrc.gov)>  
**Subject:** PI&R requests for 6/13

Andy,

Below are the requests for today. Thanks!

- Please provide an electronic copy of all contents for each item listed below.
  - CR-1430270
  - CR-1431288
  - CR-1450534
  - CR-1464812
  - CR-1681032
  - CR-2013-02910
  - CR-2014-21117
  - CR-2015-12139
  - CR-2015-25102
  - NDAP-QA-0702

Andrew Siwy, P.E.  
Project Engineer | Branch 1  
Region I | (:610.337.5376

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**From:** R1WORKFLOW Resource  
**Subject:** Items for PI&R

**From:** Rosebrook, Andrew  
**Sent:** Thursday, May 26, 2016 11:05 AM  
**To:** Pagliaro, Nicole <Nicole.Pagliaro@TalenEnergy.com>  
**Cc:** Siwy, Andrew <Andrew.Siwy@nrc.gov>  
**Subject:** FW: Items for PI&R

Nicole

Please see the attached information requests for Andrew Siwy. If you provide an internal link or shortcut to the UFSAR and QA Manual that should work.  
(Note: I did tell you a hardcopy for the room was ok for me but Andrew prefers electronic copies since they are easier to search.)

Thanks  
Andy  
610-337-5199

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**From:** Siwy, Andrew  
**Sent:** Thursday, May 26, 2016 10:12 AM  
**To:** Rosebrook, Andrew <[Andrew.Rosebrook@nrc.gov](mailto:Andrew.Rosebrook@nrc.gov)>  
**Subject:** Items for PI&R

Andy,

I've quickly reviewed all the requests listed on Certrec and below are the only items I noted that may need some attention. They may have already provided the information (for the closed items), but it was not easily discernable from Certrec. For the open item, I'm uncertain how they intend to provide the documentation, but I do have a preference for electronic.

Electronic is much easier to word search J

#3 (closed): Please provide an electronic copy of the list of PI&Ds. Also, will need a quick tutorial upon arrival at the site on how to access PI&Ds electronically.

#4 (open): Please provide an electronic copy of the UFSAR and bases.

#5 (closed): Please provide an electronic copy of the Quality Assurance Manual.

#26 (closed): Please provide electronic copies of reports issued by safety review committees (i.e. PORC, NSRB, etc.) since last PI&R inspection

Andrew Siwy, P.E.  
Project Engineer | Branch 1  
Region I | (610.337.5376

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**From:** R1WORKFLOW Resource  
**Subject:** Document Request-Mark Draxton

**From:** Rosebrook, Andrew  
**Sent:** Wednesday, June 15, 2016 3:15 PM  
**To:** Pagliaro, Nicole <Nicole.Pagliaro@TalenEnergy.com>  
**Subject:** FW: Document Request-Mark Draxton

Nicole,

Please see the information request for Mark Draxton.

Andy,

Please pass on the below to Susquehanna. Thanks.

1. ACT-05-CR-2015-06936 – pdf copy of work order(s) that completed this action.
2. Please provide pdf copies of the entire ActionWay CR package for the below CRs (Some of these were requested previously, but only the CR evaluations were placed in Certrec)
  - a. CR-2015-14868
  - b. CR-2015-13824
  - c. CR-2016-07678
  - d. CR-2016-06513
  - e. CR-2015-29469
  - f. CR-2016-02537
  - g. CR-2015-17006
  - h. CR-2015-12112
  - i. CR-2013-01143
  - j. CR-2013-04794
  - k. CR-2016-01016
  - l. CR-2015-13822
  - m. CR-2015-32656
  - n. CR-2015-23403
  - o. CR-2015-31409
  - p. CR-2014-35235
  - q. CR-2014-31911
  - r. CR-2015-10768
  - s. CR-2015-23519
  - t. CR-2016-07100
  - u. CR-2015-25476
  - v. CR-2016-05965
  - w. CR-2016-07807
  - x. CR-2015-28523
  - y. CR-2014-30891

If you should have any questions, please don't hesitate to call or email me.

Thanks. Best regards.

Mark

**Mark S. Draxton**  
Project Engineer  
US Nuclear Regulatory Commission  
Region I Division of Reactor Projects - Branch 3  
2100 Renaissance Park  
King of Prussia, PA 19406  
(610) 337-5375 (W)  
[mark.draxton@nrc.gov](mailto:mark.draxton@nrc.gov)

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**From:** R1WORKFLOW Resource  
**Subject:** Sus PI&R Open Certrec items

**From:** Rosebrook, Andrew  
**Sent:** Thursday, June 30, 2016 9:46 AM  
**To:** Pagliaro, Nicole <Nicole.Pagliaro@TalenEnergy.com>  
**Subject:** FW: Sus PI&R Open Certrec items

Nicole,

There are a number of Certrec items which are still open that we need for the report documentation. Also I wanted to confirm I received the information you sent regarding HPCI.

Thanks for your help.

**Andy,**  
Please see my requests below:

- I currently have open requests for Certrec which I would like resolved. Item numbers 154, 155, 162, 163. These items are needed for the report write up
- I have received Certrec item #164 and am currently reviewing it.

Andrew Siwy, P.E.  
Project Engineer | Branch 1  
Region I | (:610.337.5376

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**From:** R1WORKFLOW Resource  
**Subject:** Susquehanna PIR NCV assignments

**From:** Rosebrook, Andrew  
**Sent:** Friday, May 27, 2016 3:04 PM  
**To:** Draxton, Mark <Mark.Draxton@nrc.gov>; Daun, Travis <Travis.Daun@nrc.gov>; Siwy, Andrew <Andrew.Siwy@nrc.gov>  
**Cc:** Schroeder, Daniel <Daniel.Schroeder@nrc.gov>; Greives, Jonathan <Jonathan.Greives@nrc.gov>  
**Subject:** Susquehanna PIR NCV assignments

NCV Assignments:

Mark Draxton Ops and HP/Chem;

2014-005-01  
2014-009-02  
2015-001-03  
2015-002-01  
2015-002-02  
2015-002-05  
2015-003-01  
2016-001-01

Travis Daun Maintenance and Security:

2014-004-02  
2014-005-04  
2015-004-02  
2015-004-04  
2015-201-01  
2015-201-02  
2015-403-01  
2015-404-01

Andrew Siwy Engineering and EP:

2014-005-02  
2014-009-04 (Green NOV-Open IP 92702)  
2015-001-01  
2015-002-03  
2015-004-01  
2015-004-03  
2015-503-01 (White NOV- Closed)  
2016-001-03

Andy Rosebrook QA/QC, CAP, ECP, Fire Protection

2014-005-03  
2014-009-01  
2014-009-03  
2015-001-02  
2015-001-05  
2015-002-04  
2015-003-02  
2015-003-03  
2016-001-02

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**From:** R1WORKFLOW Resource  
**Subject:** PI&R request

**From:** Rosebrook, Andrew  
**Sent:** Monday, June 13, 2016 11:43 AM  
**To:** Pagliaro, Nicole <Nicole.Pagliaro@TalenEnergy.com>  
**Subject:** FW: PI&R request

Nicole

See Andrew Siwy's RFI related to the HPCI 5 year look back. By Super Systems (third bullet) he is taking about MOVs, 480v Breakers, Relief Valves, etc. Some plants treat them as a separate "system" in plant health and or maintenance rule spaces.

Thanks  
Andy

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**From:** Siwy, Andrew  
**Sent:** Monday, June 13, 2016 7:26 AM  
**To:** Rosebrook, Andrew <Andrew.Rosebrook@nrc.gov>  
**Subject:** PI&R request

Andy,

Here's a list of requests from the weekend:

- HPCI system health reports for last five years
- "Design Basis Documents" / "Engineering Notebooks" / "System Descriptions" / etc. for HPCI (please do NOT include Tech Specs, UFSAR, Fire Plan, and Security Plan). These documents should be those available to employees and are approved for use. Please do NOT include "information only" documents.
- Does Susquehanna have "super system health reports" (which are not actual systems themselves but take health report inputs from multiple systems)? If not, please disregard the following questions. If so, what are these "super systems" and what inputs do they receive from other systems? Is any part of HPCI included in a "super system"?

If there are any questions about the requested information above, please call me at my office number below. Thanks!

Andrew Siwy, P.E.  
Project Engineer | Branch 1  
Region I | (:610.337.5376

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**From:** R1WORKFLOW Resource  
**Subject:** Susquehanna PI&R Inspector NCV assignments and info request

Nicole:

See below for the NCV/NOV review assignments for the PI&R team. One of the RFI items was for the CRs associated with the NCVs since the last inspection. If you could match up the CRs with the associated Inspection Report Finding Tracking number and group them by inspector (ie 4 folders NCVs for Mark Draxton, NCVs for Travis Daun, etc). I think it would be helpful and efficient for both my team and your team if we did this.

Thanks  
Andy - 610-337-5199

NCV Assignments:

Mark Draxton Ops and HP/Chem;

2014-003-01  
2014-005-01  
2014-009-02  
2015-001-03  
2015-002-01  
2015-002-02  
2015-002-05  
2015-003-01  
2016-001-01

Travis Daun Maintenance and Security:

2014-004-02  
2014-005-04  
2015-004-02  
2015-004-04  
2015-201-01  
2015-201-02  
2015-403-01  
2015-404-01

Andrew Siwy Engineering and EP:

2014-005-02  
2014-009-04 (Green NOV-Open IP 92702)  
2015-001-01  
2015-002-03  
2015-004-01  
2015-004-03  
2015-503-01 (White NOV- Closed)  
2016-001-03

Andy Rosebrook QA/QC, CAP, ECP, Fire Protection

2014-005-03  
2014-009-01  
2014-009-03  
2015-001-02  
2015-001-05  
2015-002-04  
2015-003-02  
2015-003-03  
2016-001-02

**From:** R1WORKFLOW Resource  
**Subject:** Susquehanna Document & Interview Requests

From: Rosebrook, Andrew  
Sent: Thursday, June 02, 2016 4:41 PM  
To: Pagliaro, Nicole <Nicole.Pagliaro@TalenEnergy.com>  
Subject: FW: Susquehanna Document & Interview Requests

Nicole  
Request for Mark Draxton

Andy,

Below, please find my document and interview requests for next week's inspection. Please pass this on to the Susquehanna POC. If you should need any clarification on the requests, please do not hesitate to contact me.

1.) To be placed in Certrec (Hard copies not required):

- CR packages (the CR plus any completed cause analysis and corrective actions), associated with the following:
  - 2014-38324
  - 2015-23403
  - 2013-01143
  - 2013-89530
  - 2013-04794
  - 2016-01016
  - 2015-13822
  - 2015-32656
  - 2015-23403
  - 2015-31409
  - 2014-35235
  - 2014-31911
  - 2015-10768
  - 2015-23519
  - 2016-07100
  - 2015-25476
  - 2016-05965
  - 2016-07807
  - 2015-28523
  - 2014-30891
  - 2015-12112
  - 2015-17006
  - 2016-02537
  - 2015-29469
  - 2016-06513
  - 2016-07678
  - 2015-13824
  - 2016-07893
  - 2016-07589
  - 2015-26768
  - 2014-31909
  - 2015-14877
  - 2015-14813
  - 2016-05930
  - 2016-08498
  - 2014-20115
  - 2014-24152
  - 2014-35063
  - 2015-10324
  - 2015-06936



- The following FASAs:
  - DI-2014-24510
  - DI-2014-38532
  - DI-2015-00097
- The latest Operations, RP, and Chemistry key performance indicators (if possible with  $\geq 1$  Yr. trend)

2.) Interviews:

- Please schedule appointments, one on Tuesday afternoon, one on Wednesday morning, and one on Wednesday afternoon as individuals are available for the following:
  - Operations CAPCO (30 min)
  - Chemistry CAPCO (30 min)
  - RP CAPCO (30 min)

Thanks.

Best regards.

Mark

Mark S. Draxton  
Project Engineer  
US Nuclear Regulatory Commission  
Region I Division of Reactor Projects  
2100 Renaissance Park  
King of Prussia, PA 19406  
(610) 337-5375 (W)  
[mark.draxton@nrc.gov](mailto:mark.draxton@nrc.gov)

General

1. Organization charts, phone list, and list of system engineers
2. List of system numbers/designations and risk-ranking of systems
3. Access to a set of system prints (P&IDs)
4. Final Safety Analysis Report and Technical Specifications (including the bases)
5. Copy of the Quality Assurance Manual
6. Schedule of the date/time/location of all meetings associated with the implementation of the corrective action program, such as, CRC, MRC, CARBs, etc.
7. During the inspection, please provide access to the site network, CAP Webpage, and Corrective Actions Database
8. During the inspection, please provide access to a computer with word processing program, such as WORD, and a local printer

Corrective Actions

1. Copy of procedures related to the corrective action program, including identification, cause evaluations (root, apparent, common, etc.), corrective actions, trending, self-assessments, audits, operability determinations, work management, operating experience, etc.
2. List of all corrective action program condition reports initiated **since** the last PI&R inspection - in electronic spreadsheet format if possible - include system number/designation, date initiated, significance level, status (open or closed), title/short description, and, date closed or due, and if possible the number of due date extensions
3. Separate list of all corrective action program condition reports initiated **before** the last PI&R inspection **and** that remain open - in electronic spreadsheet format if possible - include system number/designation, date initiated, significance level, status (open or closed), title/short description, and, date closed or due, and if possible the number of due date extensions
4. List of all root cause evaluations (RCE), apparent cause evaluations (ACE), and common cause evaluations (CCE), performed **since** the last PI&R inspection.
5. Matrix of the total number of condition reports generated annually since the last PI&R inspection and sorted by department if possible.
6. For all non-cited violations (NCV) and findings (FIN) issued since the last PI&R inspection (including the PI&R) provide copies of the associated condition report and supporting information for each NCV/FIN
7. Provide a list of all LERs submitted and 10 CFR 50.72 reports made **since** the last PI&R inspection. Please provide any associated CRs if applicable
8. List of open temporary modifications, operability determinations, control room deficiencies and operator workarounds\challenges with corresponding CAP and work order numbers
9. List of rework and repeat maintenance items and maintenance metrics including the backlog of corrective and elective maintenance issues. Provide a list of the items in the corrective and elective maintenance backlog
10. Summary list of system health coding since the last PI&R (including copies of system health reports since the last PI&R available onsite)

11. List of all maintenance rule systems, include risk significance of system (high or low), system color and whether the system is considered a maintenance rule (a)(1) system. For all systems classified (a)(1) please provide the (a)(1) evaluation and enhanced monitoring plan developed for the SSC.

### Operating Experience

1. List of operating experience reviews, NRC Information Notices (IN), Generic Letters (GL), Bulletin's, and Part 21 notices since the last PI&R inspection. **Please provide a list of CRs initiated to Evaluate the above items.**
2. List of Industry Operating Experience issues (NSSS vendor reports, EPRI Reports, experience reports from similar facilities) entered into the corrective action program for review since the last PI&R Inspection. **(Note: Actual INPO/EPRI reports are not requested only Susquehanna's evaluations/CRs)**

### Audits and Assessments

1. Copy of all QA reviews (audits, assessments, etc.) and self-assessments of the corrective action program performed **since** the last PI&R inspection.
2. List of all QA audits, self-assessments and safety culture reviews since last PI&R
3. Copy of the corrective action program trend reports and performance indicators used by management **since** the last PI&R inspection.
4. A list of corrective action program reports generated as a result of identified trends (either by station or department) initiated **since** the last PI&R inspection. Include a brief description of the trend, how identified (internal or external), when it was identified and whether the CR is open or closed
5. Copies of reports issued by safety review committees (such as PORC, NSRB, etc.) or other management oversight mechanisms **since** the last PI&R inspection.

### Safety Conscious Work Environment and ECP

1. Procedures related to the Employee Concerns Program (ECP)
2. **Access to a list** of all ECP cases and contacts initiated **since** the last PI&R inspection and a list of corrective action program condition reports generated as a result of these reviews. **[Will be reviewed onsite to maintain confidentiality]**
3. List of all safety culture reviews (audits, assessments, surveys, trend review, etc.) initiated **since** the last PI&R inspection; and a list of any corrective action program condition reports generated as a result of these reviews

You may provide this information in whatever format you prefer, however, feel free to burn this information to CD if it is more convenient to you. If you have any questions concerning preparations for this inspection, please feel free to contact Andrew Rosebrook, Senior Project Engineer, USNRC/RI/DRP/PB1, at (610) 337-5199. Mr. Rosebrook will coordinate a pre inspection site visit.

**From:** R1WORKFLOW Resource  
**Subject:** FW: Follow up on severity level IV

**From:** Rosebrook, Andrew  
**Sent:** Wednesday, July 13, 2016 12:10 PM  
**To:** Pagliaro, Nicole <Nicole.Pagliaro@TalenEnergy.com>  
**Cc:** Schroeder, Daniel <Daniel.Schroeder@nrc.gov>; Jennings, Jason <Jason.Jennings@TalenEnergy.com>; Eckert, Mark T <Mark.Eckert@TalenEnergy.com>  
**Subject:** RE: Follow up on severity level IV

Nicole,  
Item 161 in Certrec is DCP 96-9006 Rev "1 "A" Control structure Chiller Oil Recovery Mod" approved in 1996

Is this the same modification that was completed in October 2013? In October 2013 the chiller had the refrigerant pumped out so the re-tubing project could be completed. Once this re-tubing was completed the chiller was recharged. My impression from the EWR is that they were different mods. Please verify with Engineering if they were the same modification and provide a copy of the work order associated with the re-tubing (and 50.59 if it was a different modification.)

Thanks  
Andy

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**From:** Pagliaro, Nicole [mailto:Nicole.Pagliaro@TalenEnergy.com]  
**Sent:** Wednesday, July 13, 2016 8:13 AM  
**To:** Rosebrook, Andrew <Andrew.Rosebrook@nrc.gov>  
**Cc:** Schroeder, Daniel <Daniel.Schroeder@nrc.gov>; Jennings, Jason <Jason.Jennings@TalenEnergy.com>; Eckert, Mark T <Mark.Eckert@TalenEnergy.com>  
**Subject:** [External\_Sender] Follow up on severity level IV

Good Morning Andy,

As a follow up to the potential severity level IV violation on failure to report a condition under 50.73, Engineering has put together a write up on the 'A' Control Structure Chiller. The analysis documented below is also documented in EWR 2016-16096.

As a result of the analysis we plan providing a supplement to the LER in order to clarify the cause statement.

**"During a review of SE-030-014A surveillance sheets from 2013 and 2015 the following question was raised: If the 'A' Control Structure Chiller passed its surveillance in 2013 even with the overcharge did we come to the right cause or the complete cause in CR-2015-32904?"**  
The team that developed the FMA and troubleshooting plan narrowed the high power consumption issue down to a refrigerant overcharge. After removing 103 pounds of R-114 Freon, the chiller's power draw dropped to acceptable levels and the SE test passed successfully. Prior to this issue the service water temperature control loops for 0K112A had a controller failure. When the new controller was installed, it was calibrated to the set point with tighter tolerances than the previous unit. This brought the service water temperatures back within spec at the same temperature as accident conditions for emergency service water. With this parameter change the optimal refrigerant charge was now different. The removal of the 103 pounds of refrigerant optimized the chiller to the accident condition temperature and the normal operating service water temperature was matched to this point. From now on the chiller is to be set up to run exactly the same on service water and emergency service water. No evidence of a historical problem has been found with these parameter changes as conditions and set points were changed between 2013 and 2015.

**Was the chiller inoperable prior to January 2014?**

This goes back to varying amounts of refrigerant that have been charged into the chiller. The time frame in question is August 2013 to January 2014. A surveillance test proves that equipment performs its function under the conditions in the procedure for the duration of the test. It does not prove past or future functionality/operability. Satisfactory results under SE-030-014A were obtained on August 15, 2013, at which point the chiller (0K112A) had the 300 pound (2010 pound total charge) refrigerant overcharge. From this point forward until October 2013 the chiller was performing its function without any changes, abnormal parameters, or trips. In October 2013 the chiller had the refrigerant pumped out so the re-tubing project could be completed. Once this re-tubing was completed the chiller was recharged with the standard 1710 pounds of refrigerant as per MT-GE-021 Rev 20. In January 2014, 304 pounds of extra refrigerant was charged into 0K112A to aid in oil reclamation. Therefore from October 13, 2013 to January 9, 2014 the chiller was in an approved state where it was originally designed to operate.

A Failure Modes Analysis (FMA) and a troubleshooting plan were organized in December 2015 in response to a failure of SE-030-014A. The team that developed the plan came to the conclusion that the overcharge was causing the chiller's motor to draw too much power for the amount of cooling that was being provided. The chiller crew removed 103 pounds of refrigerant which reduced motor current and led to the successful performance of SE-030-014A. Therefore the station classified the chiller inoperable once the 300lb overcharge was introduced in January 2014, but not prior to this date. There is no evidence showing that 0K112A had any undetected degradation from August 15, 2013 to January 9, 2014. Following the successful surveillance test in August there were no changes to the chiller until October 2013. Following the tubing project the chiller was operated in its original design condition, therefore no operability issues would have been present from October 13, 2013 until January 9, 2014."

Thank you,



Nicole Pagliaro • Licensing Support Technology Specialist  
Business Line • (570) 542-6578 • [nicole.pagliaro@talenergy.com](mailto:nicole.pagliaro@talenergy.com)  
Talen Energy • 835 Hamilton St., Suite 150 • Allentown, PA 18101

"If you always do what you've always done, you'll always get what you've always got." –Henry Ford

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