
**Attachment 50 to PLA-6219
Calculation EC-041-0508, Revision 4,
Cooling Tower Evaporation and Blowdown Rates
for Power Uprate**

(NRC Document Request 109)

NUCLEAR ENGINEERING CALCULATION COVER SHEET NEPM-QA-0221-1	1. Page 1 of 6 Total Pages <u>10</u>
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>2. TYPE: CALC >3. NUMBER: EC-041-0508 >4. REVISION: 4

*>5. UNIT 3 *>6. QUALITY CLASS: N

>7. DESCRIPTION: COOLING TOWER EVAPORATION AND BLOWDOWN RATES FOR POWER
UPRATE (Reviewed for both TRP and Moisture Separator Upgrade projects)

8. SUPERSEDED BY: _____

9. Alternate Number: _____ 10. Cycle: _____

11. Computer Code/Model used: _____ 12. Discipline: M

>13. Are any results of this calculation described in the Licensing Documents?

Yes, Refer to NDAP-QA-0730 and NDAP-QA-0731 No

>14. Is this calculation changing any method of evaluation described in the FSAR and using the results to support or change the FSAR? (Refer to PPL Resource Manual for Definition of FSAR)

Yes, 50.59 screen or evaluation required. No

>15. Is this calculation Prepared by an External Organization?

Yes No

EG771 Qualifications may not be required for individuals from external organizations (see Section 7.4.3).

>16. Prepared by: Matthew A. Hober Jr Matthew A Hober Jr 9-30-2004
Print Name(EG771 Qualification Required) Signature Date

>17. Reviewed by: Joseph A. Zola Joseph Zola 9/30/04
Print Name(EG771 Qualification Required) Signature Date

>18. Verified by: N/A
Print Name(EG771 Qualification Required) Signature Date

>19. Approved by: David G. Kostelnik David Kostelnik 10/8/07
Print Name(Qualified per NEPM-QA-0241 and comply with Section 7.8 of NEPM-QA-0221) Signature Date

>20. Accepted by: _____
Print Name(EG771 Qualification Required) and comply with Section 7.9 of NEPM-QA-0221 Signature Date

TO BE COMPLETED BY DCS

DCS SIGNATURE/DATE Barbara Madala

RECEIVED

OCT 14 2004

NUCLEAR REGULATORY COMMISSION

**TECHNICAL CHANGE SUMMARY PAGE
NEPM-QA-0221-5**

Calculation: Number: EC-041-0508 Revision No. 4

This form shall be used to (1) record the Technical Scope of the revision and (2) record the scope of verification if the calculation was verified. It should not be more than one page. Its purpose is to provide summary information to the reviewer, verifier, approver, and acceptor about the technical purpose of the change. For non-technical revisions, state the purpose or reason for the revision.

Scope of Revision: The implementation of the Moisture Separator Upgrade Project will result in slight changes to the turbine heat balance and flow. The cooling tower flow will not change. The cooling tower (i.e., condenser) heat load will change from 8.1382 on Unit #1 and 7.9964 on Unit #2 to 8.0385 trillion Btu/Hr for both Unit #1 and Unit #2 after the Moisture Separator Vanes are upgraded. All of these values are less than the 8.14 trillion Btu/Hr heat load from Power Uprate.

Scope of Verification (If verification applies): N/A

This calculation has been reviewed for both the Turbine Retrofit Project (TRP) and the Moisture Separator Upgrade Project (MSUP) to determine the impacts to the 'actual' data calculated in previous revisions.

Given the following information it was determined that the 'actual' information presented in this calculation would not be affected by 'required' parameters as a result of either project and that this calculation bounds plant operation following both the TRP and the MSUP installations. No actual changes were made to the body of the calculation.

For system flow purposes:

- a. The circulating water flow requirements have not changed for either TRP or MSUP.
- b. The cooling tower and blowdown line designs have not been changed.
- c. The calculated 'required' service water per PPL calculation EC-011-0508 remains unchanged from power uprate.

Therefore the system flow remains unchanged.

For heat load purposes:

- a. The previous calculated heat load to the cooling tower after Power Uprate is 8.14 trillion Btu/Hr
- b. Per EC-043-0507 revision 3, the condenser heat load after TRP for Unit #1 is 7.9337, after TRP for Unit #2 is 7.7919 and after MSUP for both unit #1 and Unit #2 is 7.834 trillion Btu/Hr
- c. Per EC-011-0508, the service water Design heat load is 0.2045 trillion Btu/Hr.

Therefore, the total rejected heat load for the cooling tower is expected to be 8.1382 for TRP Unit #1, 7.9964 for TRP Unit #2 and 8.0385 trillion Btu/Hr for both Unit #1 and Unit #2 after the MSUP are replaced. All of these values are less than previously evaluated for Power Uprate.

Given the system flow and heat load following both the TRP and the MSUP, the calculations in revision 0 are bounding and do not require change.



CALCULATION COVER SHEET

CALC. NO. M-CWS-021
 FILE NO. R2-1M
 SUPERSEDED BY _____

SAFETY-RELATED
 ASME III OR XI
 OTHER QUALITY
 NON QUALITY

PROJECT Susquehanna Steam Electric Station Units #1 and #2 ER/CTN NO. 402372/3
 DESIGN ACTIVITY/PMR NUMBER Power Uprate Project PAGE 2 OF 6

TITLE/DESCRIPTION Evaporation and Blowdown Rates of Circulating Water System

SYSTEMS AFFECTED Circulating Water, River Water Makeup, Cooling Towers

STATEMENT OF PROBLEM

Calculate the cooling tower evaporation and blowdown rates at current operating, original design and uprate conditions.

THIS CALCULATION SUPERSEDES BECHTEL CALCULATION 115-36 REV. 0

DESIGN BASIS (EPM-QA-208 OR EPM-QA-400)

See Design Inputs

REFERENCES/FORMULAE

1. Bechtel Calc 115-36 Rev. 0, Evaporation and Blowdown of Circulating Water System
2. SSES Environment Report Operating License Stage, May 1978
3. Cooling Tower Performance Curves (FF105590 Sh 0101 Rev. 2)
4. SEA-ME-265 Rev. 1, Power Uprate Impact Review Circulating Water System, Main Condenser, Cooling Tower
5. SEA-ME-315 Rev. 0, Power Uprate Impact Review Service Water System
6. Cooling Tower Manual Chapter 3, Cooling Tower Institute, January 1977

SUMMARY/CONCLUSIONS

The current operating, original design and uprate evaporation rates per tower are 13,060 gpm, 13,700 gpm and 13,820 gpm respectively.

The current operating, original design and uprate blowdown rates per tower are 4,740 gpm, 4,980 gpm and 5,025 gpm respectively.

Further results are provided in Tables 2 and 3 and Figure 1.

ENGINEERING TURNOVER (ETO) BINDER AFFECTED?

YES - If Yes Enter:
 NO

Binder# n/a Vol. _____
 Calc. File n/a Pgs. _____

REV.	DATE	PREPARED BY	REVIEWED/CHECKED BY	DATE	APPROVED BY	DATE
0	1-16-92	<i>Dennis A. Fellman</i>	<i>NECQA/C. Carlson</i>	2/14/92	<i>M.R. Nejatpour</i>	3/30/92

Dept. Nuclear
 Date 01/16/91
 Designed by Lochbaum
 Approved by _____

PENNSYLVANIA POWER & LIGHT COMPANY
 CALCULATION SHEET
 PROJECT Evaporation and Blowdown
Rates of Circulating Water System

ER No. 402372/3
 EWR n/a
 Sh.No. 28 of 6

PURPOSE:

To determine the cooling tower evaporation rate and blowdown flow at the current operating conditions, at the original design conditions and at the uprate conditions.

METHOD:

- 1) The current operating, original design and uprate conditions are obtained from engineering studies of the service water and circulating water systems for power uprate (Refs. 4 and 5), the original Bechtel calc on this subject (Ref. 1) and the SSES Environmental Report (Ref. 2) and summarized in Table 1 below.
- 2) The cooling tower evaporation rates are determined from the cooling tower performance curve (Ref. 3) using the wet-bulb temperature, relative humidity, range and cooling tower flow rate for each month of the year, the maximum cooling tower conditions and the design cooling tower conditions.

The wet-bulb temperature and relative humidity conditions from Table 1 were used to establish the range point on the performance curve. For the appropriate range from Table 1, corresponding evaporation rates for cooling tower flows of 478,000 gpm and 396,740 gpm were determined. For conservatism, the evaporation rate for these flows was read as the lowest intersection of the flow/range lines, thus providing higher evaporation rates. The evaporation rate was then obtained from these two bounding evaporation rates by extrapolating using the appropriate flow value from Table 1.

The evaporation rates are rounded to the nearest value of ten based on the accuracy involved with interpolating data from the performance curve.

- 3) The blowdown rates are determined using the evaporation rates from step (2) above, and the design concentration factor of solids in the circulating water, 3.7 from the original Bechtel calc (Ref. 1) using this equation (Ref. 6):

$$\text{Blowdown} = [\text{Evaporation} / (\text{Concentration Factor} - 1)] - \text{Drift}$$

- 4) The total makeup flows are determined by summing the evaporation rates from step (2), the blowdown rates from step (3) and the drift and average consumptive use values from step (1) to obtain the makeup flows per unit. These sums are then multiplied by two to obtain the total required station makeup flow rates.
- 5) The evaluation of condenser, circulating water and cooling tower performance for power uprate (Ref. 4) reported a recent test determined the cooling tower to be operating at $\approx 85\%$ of design efficiency. This degraded condition does not affect this calc because the method used to determine evaporation rate (step 2) was not a function of cooling tower efficiency. Lower efficiency may affect circulating water temperature to the main condenser, but the range, cooling tower flow rate, and ambient conditions used in step 2 are not affected.

00011/8004

Dept. Nuclear
Date 01/16/91
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Approved by _____

PENNSYLVANIA POWER & LIGHT COMPANY
CALCULATION SHEET
PROJECT Evaporation and Blowdown
Rates of Circulating Water System

ER No. 402372/3
EWR n/a
Sh.No. 3 of 6

RESULTS:

The results of this calculation are provided in Tables 2 and 3 and in Figure 1.

The data reported in Tables 2 and 3 varies slightly from that stated in the SSES Environmental Report (Ref. 2) and original system calc (Ref. 1) due to the inaccuracies in reading points off the cooling tower performance curves (Ref. 3).

This calc regenerated data rather than use available data from the references to permit comparisons between uprate and existing conditions based on results obtained from consistent techniques.

ASSUMPTIONS:

- 1) The ranges determined for the current operating, original design and uprate conditions are assumed to be constant over the entire year. Minor variations in the cooling tower heat rejection rate due to plant efficiency differences and changing loads on the service water system are neglected since they are considered to have an insignificant affect on the results of this calculation.

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 CALCULATION SHEET
 PROJECT Evaporation and Blowdown
Rates of Circulating Water System

ER No. 402372/3
 EWR n/a
 Sh.No. 4 of 6

TABLE 1 INPUT CONDITIONS

Parameter	Actual	Original Design	Uprate	Reference
Circulating Water Flow, gpm	437,400 ^e	448,000	437,400 ^e	Ref. 4
Service Water Flow, gpm	24,800	27,146	27,704 ^f	Ref. 5
Cooling Tower Flow ^a , gpm	462,200	475,146	465,104	n/a
Drift Loss ^b , gpm	95	95	95	Ref. 1
Average Consumptive Use ^c , gpm	45	45	45	Ref. 2
Heat Rejected to Cooling Tower, 10 ⁶ BTU/hr	7.68	8.07	8.14	Ref. 4
Range ^d , °F	33.56	34.30	35.35	Ref. 4
Ambient Wet-bulb Temp, °F	18.5-58.6	73	73	Ref. 2
Relative Humidity, %	0 - 76	65	65	Ref. 2

NOTES:

- a) 'Cooling tower flow' is the sum of the circulating water and service water flow to the cooling tower.
- b) 'Drift loss' is defined to be 0.02% of the design cooling tower flow.
- c) 'Average consumptive use' is defined to be 0.1 ft³/sec:

$$0.1 \text{ ft}^3/\text{sec} * 60 \text{ sec/min} * 7.48 \text{ gal/ft}^3 = 45 \text{ gpm per unit}$$
- d) 'Range' (cooling tower hot water temperature minus cooling tower cold water temperature) is derived from cooling tower heat rejection and flow rates:

$$\text{Range} = [(\text{Heat Rejection Rate} / \text{Flow Rate}) / 495.1] * C_p$$

$$= [(\text{BTU/hr} / \text{GPM}) / (\text{min/hr} * \text{lb/gallon})] * \text{°F/BTU/lb}$$
- e) Value represents average of Unit 1 (436,100) and Unit 2 (438,700) flows.
- f) Preliminary value - final value will be in this range. Any difference between preliminary value and final value will be small compared to the total cooling tower flow and thus use of the preliminary value is acceptable for this calc.

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 Date 01/16/91
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PENNSYLVANIA POWER & LIGHT COMPANY
 CALCULATION SHEET
 PROJECT Evaporation and Blowdown
Rates of Circulating Water System

ER No. 402372/3
 EWR n/a
 Sh.No. 5 of 6

TABLE 2 EVAPORATION AND BLOWDOWN RATES

	WB Temp °F	Rel Hum %	Current Operating		Original Design		Uprate	
			Evap Rate gpm/tower	Blowdown Rate	Evap Rate gpm/tower	Blowdown Rate	Evap Rate gpm/tower	Blowdown Rate
January	22.3*	24*	9,640	3,475	10,030	3,620	10,030	3,620
February	18.5*	0*	9,540	3,440	9,930	3,585	10,030	3,620
March	27.1*	15*	10,310	3,725	10,730	3,880	10,900	3,940
April	35.4	28*	10,850	3,925	11,320	4,100	11,380	4,120
May	48.4	53	11,520	4,170	12,020	4,360	12,160	4,410
June	58.6	67	12,000	4,350	12,520	4,540	12,690	4,605
July	62.4	69	12,280	4,455	12,810	4,650	12,880	4,675
August	63.3	76	12,100	4,385	12,720	4,615	12,830	4,655
September	53.8	72	11,520	4,170	12,020	4,360	12,160	4,410
October	45.5	63	11,140	4,030	11,720	4,245	11,730	4,250
November	35.4	45	10,550	3,815	11,020	3,990	11,100	4,015
December	25.5*	33*	9,780	3,530	10,130	3,655	10,210	3,690
Maximum Design	75.0 73.0	37 65	14,130 13,060	5,140 4,740	14,700 13,700	5,345 4,980	14,830 13,820	5,400 5,025

* Data required extrapolation beyond information provided on cooling tower performance curves (Ref. 3), therefore results for these cases are for information only.

TABLE 3 TOTAL REQUIRED COOLING TOWER MAKEUP FLOW (GPM)

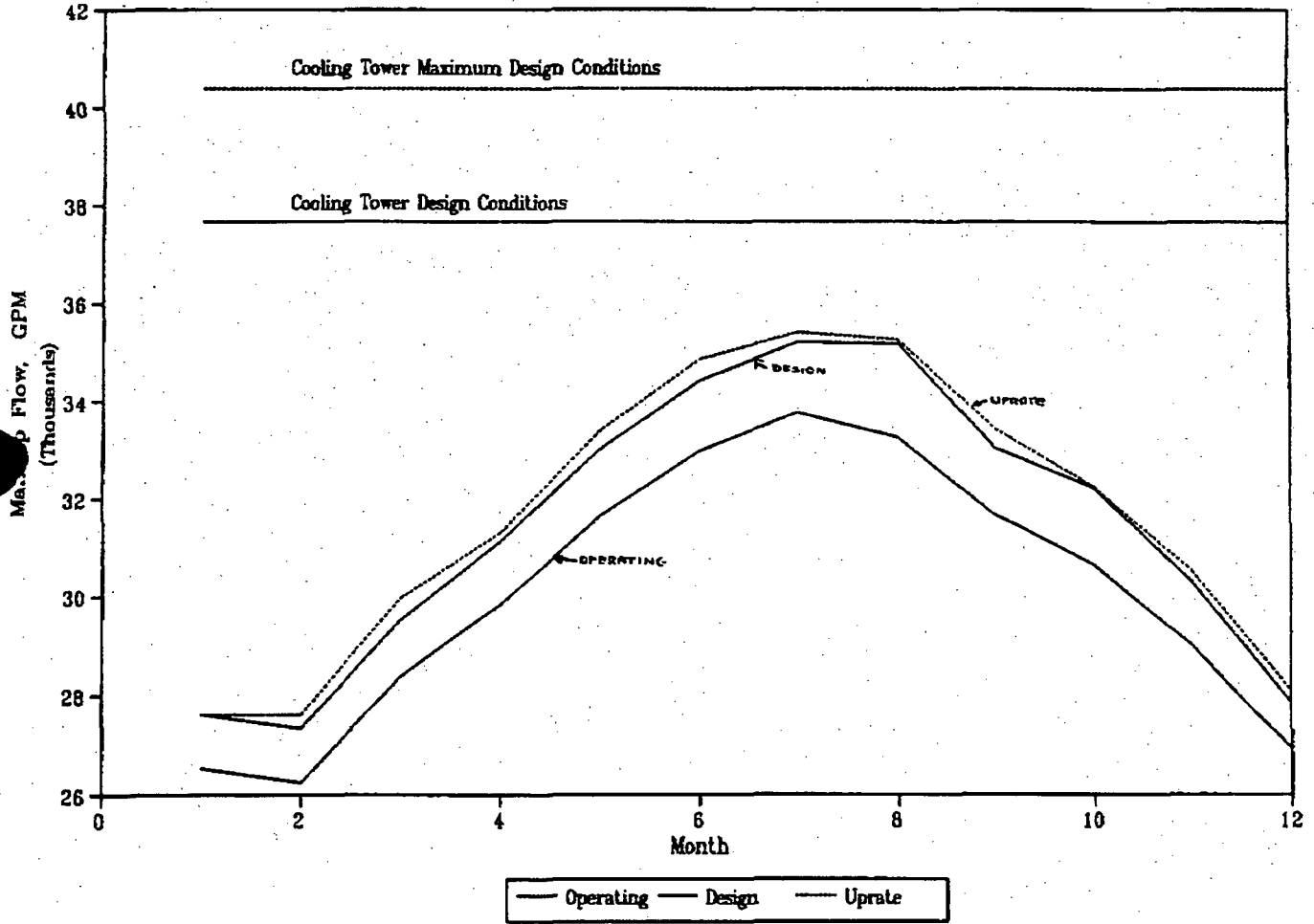
	Current Operating	Original Design	Uprate
January	26,510	27,580	27,580
February	26,240	27,310	27,580
March	28,350	29,500	29,960
April	29,830	31,120	31,280
May	31,660	33,040	33,420
June	32,980	34,400	34,870
July	33,750	35,200	35,390
August	33,250	35,170	35,250
September	31,660	33,040	33,420
October	30,620	32,210	32,240
November	29,010	30,300	30,510
December	26,900	27,850	28,080
Maximum Design	38,820 35,880	40,370 37,640	40,740 37,970

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Date 01/16/91
Designed by Lochbaum
Approved by _____

PENNSYLVANIA POWER & LIGHT COMPANY
CALCULATION SHEET
PROJECT Evaporation and Blowdown
Rates of Circulating Water System

ER No. 402372/3
EWR n/a
Sh.No. 6 of 6

Figure 1
Total Required Makeup Flow



74000711004

**Attachment 51 to PLA-6219
Condition Report Fact Sheet.
CR Number 696351**

(NRC Document Request 110)



CONDITION REPORT FACT SHEET

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Status Info | Event Info | Affected Objects | Actions Taken | Significance Rvw | Evaluation | Trend Info | Action Items | Workflow History | Attached Media

STATUS INFORMATION

CR Number: 696351	Sub Type/Sub Cat: CR
Lead Group: 312GL-GJT-NSE ELEC LEAD	Significance Level: Level 3 Cause Determination
Reso Due: 09/30/2005	Status: CLOSED
Reso Cmpl: 09/26/2005	

EVENT INFORMATION

Event Date	Originator	Problem Statement
08/01/2005 10:46AM	PONCAVAGE*COREY D	60M WIND DIRECTION METEOROLOGICAL CHANNEL DATA IS ABNORMAL AND APPEARS INACCURATE

ABS consulting reported "The 60m wind rose looks quite different than normal during June 2005. Most of the winds are from the ESE to the South. Normally the peak winds are from the NNE". The 60m wind direction channel data is changing (not flat-lined) and is in a valid data range, however a long term plot of the difference between the primary met tower 60m and 10m wind direction channels (attached) reveals an increasing difference in one direction between the channels starting in May 2005. This indicates that the abnormal data is due to a 60m wind direction equipment problem (rather than a meteorological condition). Based on this information the 60m wind direction channel appears to be inoperable.

AFFECTED OBJECTS

Object Category	ID	Description
Design Component	XXE03702	WIND DIRECTION ELEMENT 60M
Unit/System	099H	METEOROLOGICAL SYSTEMS
Document	696351	60M WIND DIRECTION METEOROLOGICAL CHANNEL DATA IS ABNORMAL AND APPEARS INACCURATE

PRELIMINARY ACTIONS TAKEN

Action Date	Action Taken By	Action Text
09/23/2005 02:00PM	PONCAVAGE*COREY D	Completed L3 Cause Evaluation (attached). Presented at Expert Panel meeting 2005-0920; no comments were provided. Verified trend codes correctly applied. No actions are remaining as required for closure of this AR.
08/02/2005 08:52AM	DYER*KARI A.	Per discussion with C Smith, the 60 m wind tower is not the primary tower, the 10 m wind tower is. There are no compensatory eplan actions that need to be taken. NERO personnel have been notified and notices have been placed on the EOF and TSC computers.
08/02/2005 05:42AM	LINSINBIGLER*SANDRA D	GENERATED PCWO #696602

08/01/2005 12:39PM AUSTIN JR*THOMAS J Emergency Planning notified of the equipment inoperability. They contacted HP to evaluate the impact on E-plan requirements and to initiate any compensatory measure.

ACTION PLAN ITEMS

Item Number	Responsible Group	Assigned To	Priority	Due Date	Status
No CRA Association					

SIGNIFICANCE REVIEW**Screening Summary:**

Screening Team Members: Lichtner, Capotosto, Van Horn, McGann, Whitmoyer, Saxton, Tonkinson, Morrissey, K Dyer, Sandy S. MRFF. If this is determined to be a program breakdown, this CR should be reclassified as a level 2.

Past Occurrences:

No Comment Provided

Significance Review:

No Comment Provided

Interim Actions:

No Comment Provided

Classifier:

DYER*KARI A

EVALUATION**Investigation:**

No Comment Provided

Safety Assessment:

No Comment Provided

Causes:

No Comment Provided

Use-As-Is/Repair:

No Comment Provided

ATTACHED MEDIA

Attached Document	Type	Description	Comment
49619078.JPG	ATTACHMENT	Primary Tower Wind Direction Delta Trend	
51217571.PDF	ATTACHMENT	696351 Evaluation	
51271414.PDF	ATTACHMENT	CR 696351	
51272571.PDF	ATTACHMENT	AR: 696351 TITLE: 60M WIND DIRECTION METEOROLOGICAL CHANNEL DATA IS ABNORMAL AND APPEARS INACCURATE	

TREND INFORMATION

Class	Trend Code	Value 1	Value 2	Comment
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CRCODES A01-CONSEQUENTIAL	(NO VALUE)	(NO VALUE)	
CRCODES A07-METHOD OF DISCOVERY	MOD-11	(NO VALUE)	SE review of vendor data
CRCODES ENGR OPERABILITY FOLLOWUP	(NO VALUE)	(NO VALUE)	
CRCODES A04-REPORTABILITY	NO_7	(NO VALUE)	kad, discussed with licensing.
CRCODES A08-IDENTIFIED BY WO DEFICIENCY TAG	ID- 9 NO	ELEC/I&C kad (NO VALUE)	NO COMMENT
CRCODES A10-EQUIPMENT TYPE	(NO VALUE)	(NO VALUE)	
CRCODES EMERGENT LCO/TRO	T-3.3.3	(NO VALUE)	kad
CRCODES A11-QUALITY	CAQ	(NO VALUE)	kad
CRCODES EQUIPMENT OPERABILITY	NOT OPER	(NO VALUE)	The 60m wind direction is operating erratically. The instrument is inoperable. (TR 3.3.3 Meteorological Monitoring Instrumentation) The OPERABILITY of the Meteorological Monitoring Instrumentation ensures that sufficient meteorological data is available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. This capability is required to evaluate the need for initiating protective measures to protect the health and safety of the public.
CRCODES REPORTABILITY DETERMINATION NO		(NO VALUE)	Condition is not immediate or prompt reportable under the guidelines of NDAP-QA-0720 Attachments E, F, G and H. No emergency plan impacts. The primary data that is used by Dose Calculators is the wind speed from the 10 meter tower. The 60 meter wind speed is used as a back-up to this. All Dose Calculators were notified by email of this instrument problem as well as posting this information in the TSC an EOF.
CRCODES A12-CR HOLD TAG	NO	(NO VALUE)	Reviewed by JLH 8/2/05
CRCODES A13-MAINT RULE FF	1-YES	(NO VALUE)	MRFF per screening. Reviewed at MR Expert Panel meeting 2005-0920.
WMCODES OSSCR EVALUATION	(NO VALUE)	(NO VALUE)	

CR EVENT EQUIPMENT MALFUNCTION	EM	(NO VALUE)
CR EVENT EQUIPMENT MALFUNCTION	INDICATOR	(NO VALUE) kad
CR EVENT EMERGENCY PLAN	FAC & EQ	(NO VALUE) kad
CR CAUSE MAINTENANCE / TESTING	MT/CF	MT/CF1
CRCODES APLAN RVWD W/ ORIGINATOR?	NO	NO
CRCODES ODM REQUIREMENT FLAG	NO	(NO VALUE)

RELATED INFORMATION

Type	ID	Priority	Relation Type:	Status:
ZWO	696384	NA	RELATED	OPERABLE
<p>ABS CONSULTING REPORTED "THE 60M WIND ROSE LOOKS QUITE DIFFERENT THAN NORMAL DURING JUNE 2005. MOST OF THE WINDS ARE FROM THE ESE TO THE SOUTH. NORMALLY THE PEAK WINDS ARE FROM THE NNE". THE 60M WIND DIRECTION CHANNEL DATA IS CHANGING (NOT FLAT-LINED) AND IS IN A VALID DATA RANGE, HOWEVER A LONG TERM PLOT OF THE DIFFERENCE BETWEEN THE PRIMARY MET TOWER 60M AND 10M WIND DIRECTION CHANNELS (ATTACHED) REVEALS AN INCREASING DIFFERENCE IN ONE DIRECTION BETWEEN THE CHANNELS STARTING IN MAY 2005. THIS INDICATES THAT THE ABNORMAL DATA IS DUE TO A 60M WIND DIRECTION EQUIPMENT PROBLEM (RATHER THAN A METEOROLOGICAL CONDITION). BASED ON THIS INFORMATION THE 60M WIND DIRECTION CHANNEL APPEARS TO BE INOPERABLE.</p>				

PCWO	696602	2	CORRECT CONDITION	ARCHIVED
<p>CC/PR:XXE03702 - ABS consulting reported "The 60m wind rose looks quite different than normal during June 2005. Most of the winds are from the ESE to the South. Normally the peak winds are from the NNE". The 60m wind direction channel data is changing (not flat-lined) and is in a valid data range, however a long term plot of the difference between the primary met tower 60m and 10m wind direction channels (attached) reveals an increasing difference in one direction between the channels starting in May 2005. This indicates that the abnormal data is due to a 60m wind direction equipment problem (rather than a meteorological condition). Based on this information the 60m wind direction channel appears to be inoperable.</p>				

WORKFLOW HISTORY

Action	Step Name	Performed By	Date
COMPLETE	IDENTIFY	PONCAVAGE*COREY D	08/01/2005 11:50:00
no comment provided			
COMPLETE	SUPV RVW	TREVEN*GARY J	08/01/2005 12:03:00
SE, Corey Poncavage, has notified Operations U1-US of condition. PCWO needed for I&C investigation.			
APPROVE	OPER EVAL	CRAWFORD JR*LONNIE L	08/01/2005 13:36:00
no comment provided			
APPROVE	EVAL RPTBL	AUSTIN JR*THOMAS J	08/01/2005 14:32:00
no comment provided			
APPROVE	SS RPTBLTY	ILIADIS*A T	08/02/2005 02:08:00
no comment provided			
COMPLETE	SCREEN	SHUPP*SANDRA L	08/02/2005 10:29:00

no comment provided			
COMPLETE	CLASSIFY	DYER*KARI A	08/02/2005 12:35:00
no comment provided			
COMPLETE	CR ASSIGN	TREVEN*GARY J	08/02/2005 15:19:00
no comment provided			
COMPLETE	CR ACTPLAN	TREVEN*GARY J	08/17/2005 17:23:00
no comment provided			
COMPLETE	CR ACTPLAN	PONCAVAGE*COREY D	09/23/2005 14:04:00
no comment provided			
APPROVE	APLAN APPR	TREVEN*GARY J	09/26/2005 11:27:00
L3-ACE reviewed/approved at MRule Expert Panel mtg 2005-0920			
APPROVE	AP WORKING	TREVEN*GARY J	09/26/2005 11:28:00
Actions complete for CR closure			
APPROVE	AP WORKING	PAGODIN*RICHARD D	09/27/2005 10:00:00
no comment provided			
APPROVE	ARCHIVE	KLEINTOB*PAMELA K	09/27/2005 11:59:00
no comment provided			
Add On Data			
Name		Type	Description
Active			
NO DATA AVAILABLE			

Status Info | Event Info | Affected Objects | Actions Taken | Significance Rvw | Evaluation | Trend Info | Action Items | Workflow History | Attached Media

**Attachment 52 to PLA-6219
Condition Report Fact Sheet.
CR Number 362281**

(NRC Document Request 111)



CONDITION REPORT FACT SHEET

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Status Info | Event Info | Affected Objects | Actions Taken | Significance Rvw | Evaluation | Trend Info | Action Items | Workflow History | Attached Media

STATUS INFORMATION

CR Number:	362281	Sub Type/Sub Cat:	CR
Lead Group:	312GL-GJT-NSE ELEC LEAD	Significance Level:	Level 3 Evaluation
Reso Due:	02/19/2002	Status:	CLOSED
Reso Cmpl:	02/21/2002		

EVENT INFORMATION

Event Date	Originator	Problem Statement
10/09/2001 10:00AM	PONCAVAGE*COREY D	RECOMMENDATIONS IN CONTRACTOR REPORT REGARDING THE NEW PRIMARY METEOROLOGICAL TOWER LOCATION SHOULD BE EVALUATED AND ACCEPTABLE COMPLETION TIMES SET FOR ANY NECESSARY ACTIONS.

ABS CONSULTING SUBMITTED A REPORT ON 10/9/01, AS REQUESTED BY PPL, REGARDING THE IMPACT OF MOVING THE PRIMARY METEOROLOGICAL TOWER ON METEOROLOGICAL MEASUREMENTS. THE REPORT CONCLUDED THAT "THE ASH FACILITY WILL HAVE NO EFFECT ON THE NEW METEOROLOGICAL TOWER", BUT RECOMMENDED THAT THE TREES NEAR THE TOWER BE CUT DOWN, AND GRASS BE PLANTED IN A 20-FOOT RADIUS AROUND THE NEW TOWER. PER PORC DIRECTION, THESE RECOMMENDATIONS SHOULD BE EVALUATED IN THE CR PROCESS AND ACCEPTABLE TIMES FOR COMPLETION OF ANY ACTIONS DEFINED.

AFFECTED OBJECTS

Object Category	ID	Description
Design Component	0C541	MET TWR ENVIRON INST & TELE PANEL
Document	362281	ABS CONSULTING SUBMITTED A REPORT ON 10/9/01, AS REQUESTED BY PPL, REGARDING THE IMPACT OF MOVING THE PRIMARY METEOROLOGICAL TOWER ON METEOROLOGICAL MEASUREMENTS. THE REPORT CONCLUDED THAT "THE ASH FACILITY WILL HAVE NO EFFECT ON THE NEW METEOROLOGICAL TOWER", BUT RECOMMENDED THAT THE TREES NEAR THE TOWER BE CUT DOWN, AND GRASS BE PLANTED IN A 20-FOOT RADIUS AROUND THE NEW TOWER. PER PORC DIRECTION, THESE RECOMMENDATIONS SHOULD BE EVALUATED IN THE CR PROCESS AND ACCEPTABLE TIMES FOR COMPLETION OF ANY ACTIONS DEFINED.

PRELIMINARY ACTIONS TAKEN

Action Date	Action Taken By	Action Text
02/21/2002 03:58PM	PONCAVAGE*COREY D	See attached media for L3 eval. See Related work for the HWR's that implement the recommendations in ABS consulting letter.

ACTION PLAN ITEMS

Item Number	Responsible Group	Assigned To	Priority	Due Date	Status
No CRA Association					

SIGNIFICANCE REVIEW

Screening Summary:

- CONCERNS SHOULD HAVE BEEN INCLUDED IN SCOPE OF MET TOWER CHANGEOUT. - NSE REPRESENTATIVE TO INFORM INITIATOR TO HAVE THIS INCLUDED IN PROCESS BEING USED TO REPLACE MET TOWER.

CHANGE TO L3 EVAL TO NSE/ELEC BASED ON NSE RECOMMENDATION. (CORY PONCAVAGE)

Past Occurrences:

No Comment Provided

Significance Review:

No Comment Provided

Interim Actions:

No Comment Provided

Classifier:

MASICH*MELODY J

EVALUATION

Investigation:

No Comment Provided

Safety Assessment:

No Comment Provided

Causes:

No Comment Provided

Use-As-Is/Repair:

No Comment Provided

ATTACHED MEDIA

Attached Document	Type	Description	Comment
28363059.DOC	ATTACHMENT	L3 Eval-Met tower recommendations	
28371417.PDF	ATTACHMENT	CR 362281 Vendor Letter	
47693540.PDF	ATTACHMENT	CR 362281	
47693542.PDF	ATTACHMENT	AR: 362281 TITLE: RECOMMENDATIONS IN CONTRACTOR REPORT REGARDING THE NEW PRIMARY METEOROLOGICAL TOWER LOCATION SHOULD BE EVALUATED AND ACCEPTABLE COMPLETION TIMES SET FOR ANY NECESSARY ACTIONS.	

TREND INFORMATION

Class	Trend Code	Value 1	Value 2	Comment
CRCODES	A02-EVENT CATEGORY	DESGN	(NO VALUE)	
CRCODES	A02-EVENT CATEGORY	AD	(NO VALUE)	
CRCODES	A01-CONSEQUENTIAL	(NO VALUE)	(NO VALUE)	
CRCODES	A07-METHOD OF DISCOVERY	MOD-11	(NO VALUE)	
CRCODES	ENGR OPERABILITY FOLLOWUP	(NO VALUE)	(NO VALUE)	
CRCODES	A04-REPORTABILITY	NO_7	(NO	

CRCODES A06-SELF IDENTIFICATION	SI-2	(NO VALUE)	
CRCODES A08-IDENTIFIED BY	ID- 9	(NO VALUE)	
WO DEFICIENCY TAG	NO	(NO VALUE)	NO COMMENT
CRCODES A09-PROCESS TRENDING CODES MOD		(NO VALUE)	
CRCODES A10-EQUIPMENT TYPE	(NO VALUE)	(NO VALUE)	
CRCODES A11-QUALITY	(NO VALUE)	(NO VALUE)	
CRCODES EQUIPMENT OPERABILITY	N/A	(NO VALUE)	na per gjr
CRCODES REPORTABILITY DETERMINATION	NO	(NO VALUE)	no per gjr
CRCODES A12-CR HOLD TAG	NO	(NO VALUE)	Reviewed By Frank Haubert 10/22/01
CRCODES A13-MAINT RULE FF	4-N/A	(NO VALUE)	
CRCODES CYCLE NUMBER	U211	(NO VALUE)	
WMCODES OSSCR EVAL SUPERCEDED	(NO VALUE)	(NO VALUE)	

RELATED INFORMATION

Type	ID	Priority	Relation Type:	Status:
HWR	353812	NA	CORRECT CONDITION	CLOSED
DURING THE NRC INSPECTION OF THE REMP AND METEOROLOGICAL PROGRAMS THAT WAS CONDUCTED 8/27-31/2001, IT WAS IDENTIFIED THAT THE VEGITATION GROWTH (TREES,SHRUBS) IN THE VICINITY OF THE PRIMARY MET TOWER MAY BE AFFECTING ACCURACY OF THE 10 METER INSTRUMENTATION. IT IS RECOMMENDED THAT THIS GROWTH BE REDUCED OR CLEARED.				

HWR	362140	NA	CORRECT CONDITION	CLOSED
An evaluation was performed by ABS consulting on 10/4/01 regarding the new primary meteorological tower location. One of the recomendations was to replace the gravel area near the new meteorological tower with topsoil and grass. The current gravel surface absorbs more heat than a grass surface and can cause the ambient and dew point temperatures to be higher than expected. At least a 20-foot radius around the new tower should be planted with grass to minimize the effects from the gravel around the ash facility.				

WORKFLOW HISTORY

Action	Step Name	Performed By	Date
COMPLETE	IDENTIFY no comment provided	PONCAVAGE*COREY D	10/19/2001 10:27:00
COMPLETE	SCREEN no comment provided	SHUPP*SANDRA L	10/22/2001 10:10:00
APPROVE	ARCHIVE CHANGE FROM A L4 CLOSURE TO A L3 EVAL TO NSE/ELEC.	MASICH*MELODY J	10/23/2001 11:37:00
COMPLETE	SUPV RVW no comment provided	*	11/10/2001 12:13:00

COMPLETE	OPER EVAL	*	11/10/2001 12:13:00
no comment provided			
COMPLETE	SS RPTBLTY	*	11/10/2001 12:13:00
no comment provided			
COMPLETE	EVAL RPTBL	*	11/10/2001 12:13:00
no comment provided			
COMPLETE	CLASSIFY	HELSEL*LISA S	11/19/2001 14:09:00
no comment provided			
COMPLETE	CR ASSIGN	TREVEN*GARY J	11/19/2001 16:04:00
no comment provided			
COMPLETE	CR ACTPLAN	ELLIS*STEPHEN J	11/27/2001 16:20:00
I would suggest that we spent little time on this item. Initiate appropriate documents to have the trees cleared and other work as needed to correct deficiencies.			
COMPLETE	CR ACTPLAN	PONCAVAGE*COREY D	02/21/2002 16:00:00
no comment provided			
APPROVE	APLAN APPR	TREVEN*GARY J	02/21/2002 16:22:00
no comment provided			
APPROVE	AP WORKING	GARREN*DEBRA L	02/22/2002 10:36:00
Per Cory poncavage, want to add a file to Attached Media.			
APPROVE	AP WORKING	GARREN*DEBRA L	09/30/2002 10:26:00
hardcopy			
APPROVE	ARCHIVE	KLEINTOB*PAMELA K	04/26/2005 08:39:00
no comment provided			
Add On Data			
Name	Type	Description	Active
NO DATA AVAILABLE			

Status Info | Event Info | Affected Objects | Actions Taken | Significance Rvw | Evaluation | Trend Info | Action Items | Workflow History | Attached Media