Inflow Design Control System Plan

Unit 2/3 Bottom Ash Pond

Charles R. Lowman Power Plant

October 2026

Prepared for:

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CERTIFICATION PAGE

I hereby certify that, in my professional judgment, the components of this document and associated work satisfy the applicable requirements set forth in 40 CFR 257.82(a)(1), 40 CFR 257.82(a)(2), 40 CFR 257.82(b), 40 CFR 257.82(c), ADEM 335-13-15-.05(3)(c) and are consistent with generally accepted professional consulting principles and practices. The information submitted herein, to the best of my knowledge and belief, is true, accurate, and complete.

This document has been prepared based on available site assessment data and has been prepared for the Charles R. Lowman Power Plant in Leroy, Washington County, Alabama. This report should not be construed to apply to any other site.

Joe Adams

2026-10-14

Joseph R. Adams, P.E.
Alabama Registration No. 30013-E

Date



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1.0 SCOPE OF SERVICES

PowerSouth Energy Cooperative (PowerSouth) requested Three Notch Group, Inc. (Three Notch Group) to perform an analysis of Inflow Design Flood Controls in accordance with 40 CFR 257.82 of EPA's Disposal of Coal Combustion Residuals from Electric Utilities (CCR rule). In association with this scope of services, Three Notch Group performed Hydrologic and Hydraulic Capacity modeling of the plants CCR impoundments and downstream hydraulic structures.

This report is the summary of the modeling efforts intended to meet the requirements of the "Inflow Design Flood Control System Plan" for the Unit 2/3 Bottom Ash Pond. The Charles R. Lowman Power Plant in Leroy, AL has three CCR impoundments that were investigated: Unit 1 Bottom Ash Pond, Unit 2/3 Bottom Ash Pond, and the FGD Waste Pond. As per the Rule, CCR surface impoundments must:

1. "Adequately manage flow into the CCR unit during and following the peak discharge of the inflow design flood" (40 CFR 257.82(a)(1)) (ADEM 335-13-15-.05(3)(c))

2. "Adequately manage flow from the CCR unit to collect and control the peak discharge resulting from the inflow design flood" (40 CFR 257.82(a)(2)) (ADEM 335-13-15-.05(3)(c))

3. "Discharge from the CCR unit must be handled in accordance with the surface water requirements under 40 CFR 257.3-3." (40 CFR 257.82(b)) (ADEM 335-13-15-.05(3)(c))

2.0 PROJECT DESCRIPTION

The Charles R. Lowman Power Plant in Leroy, AL has three CCR impoundments that were analyzed: Unit 1 Bottom Ash Pond, Unit 2/3 Bottom Ash Pond, and FGD Waste Pond. For purposes of this analysis, flow from the Unit 2/3 Bottom Ash Pond and FGD Waste Pond is routed through the dewatering treatment system prior to discharge through permitted outfall DSN006. Flow from the Unit 1 Bottom Ash Pond is discharged directly to the discharge canal through permitted outfall DSN017. Scenarios were created to represent normal and abnormal operating conditions. The flow order to each pond is shown in Figure 2.1 below.

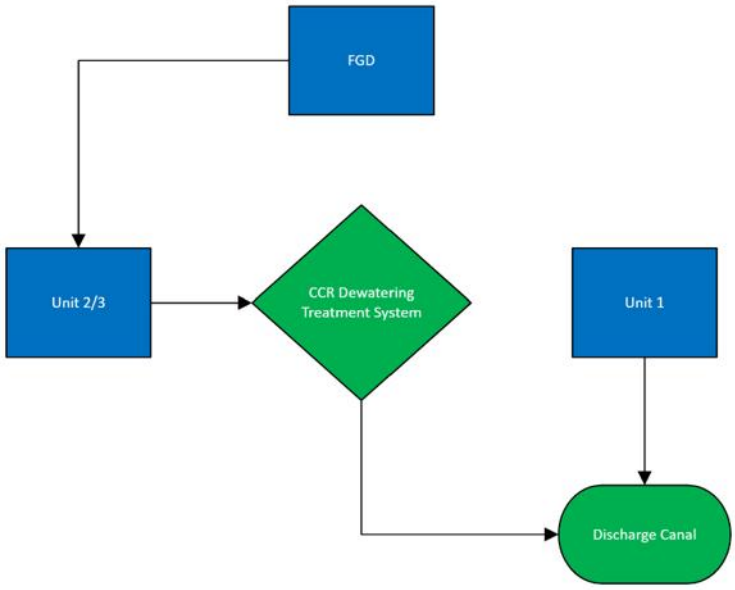


Figure 2.1 – Impoundments Flow Order

3.0 MODEL VARIABLES AND ASSUMPTIONS

3.1 Identification of Design Storm Inflow

As per the "Hazard Potential Classification Assessment," each of the impoundments has a hazard classification of "Significant," requiring that the impoundments be analyzed for the 1000-yr flood.

Based on a review of topographic information collected March 2026, it is evident that each impoundment has a contributing drainage shed that is primarily the impoundment itself. Therefore, the rainfall inflow for each impoundment is the volume of rainfall that accumulates in each impoundment during the inflow design flood event. These rainfall inflows are tied to a specific impoundment and storm duration and therefore do not change between model scenarios. The 72-hr, 1000-yr flood event was modeled for the rainfall event. Per the NOAA Atlas 14, the total rainfall for this event is 21.2 inches. NOAA Temporal distributions for 96hr events were used. All four Quartiles were modeled using the 50% values. A copy of the NOAA Atlas 14 data can be seen in Appendix C.

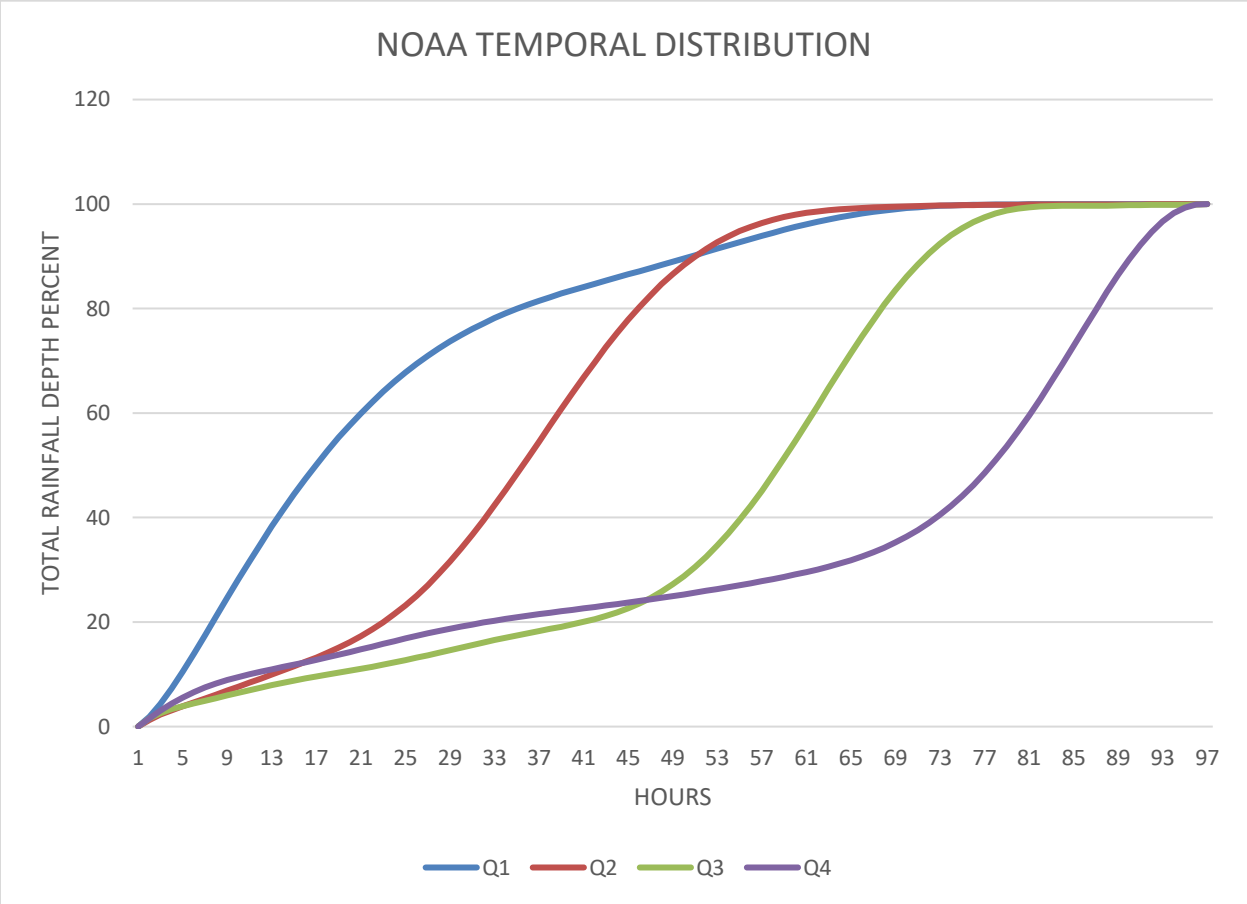


Figure 3.1 – NOAA Temporal Distributions

3.1.1 Unit 2/3 Bottom Ash Pond Additional Inflows

The pond no longer receives any process flows from the plant.

3.2 Characterization of Abstractions

3.2.1 Pond Detention

In developing the geometric modeling parameters for this project, Three Notch Group relied on topographic information and construction plans prepared by Stanley Engineering Company circa 1965 for work at the plant. Table 3.1 shows the stage-storage information used for modeling. Only the volume of the impoundment above normal pool was considered in this study.

Table 3.1 Unit 2/3 Pond Elevation-Area Table

Elevation	Area-AC
33	3.05
34	4.08
35	4.62
36	5.13
37	5.76
38	6.84
39	8.31
40	10.61
41	11.77

The normal pool elevation for the Unit 2/3 Bottom Ash Pond is 31.00 feet. All elevations in report are in reference to Mean Sea Level (MSL).

3.2.2 Other Abstraction Values

As mentioned in Section 3.1, the drainage catchments for Ponds are mainly the ponds themselves. The pond has a normal pool elevation and because of the standing water the catchment is considered mainly impervious with a CN value of 98 or higher. No evapo-transpiration or infiltration was considered in the modeling efforts.

3.3 Selection of Run-off Model

The US Army Corps of Engineers Hydrologic Modeling System 4.13 (HEC-HMS) was chosen for use in this modeling effort. HEC-HMS is a widely known, used, and trusted modeling software for complete processing of dendritic watershed systems. This software is also compatible with other associated studies at the site and is used for large scale hydrologic and hydraulic modeling of the Tombigbee River.

3.4 Identification and Characterization of Intake or Decant Structures

3.4.1 Unit 2/3 Bottom Ash Pond Intake/Decant Structures

The impoundment is drained by means of a pump with a flow rating of 900 gpm to the site dewatering treatment system.

3.4.2 Supplemental Structures

If necessary, during high rainfall events mobile suction lift pumps are utilized at the site to supplement permanent intake structures. These pumps are used in instances of existing pump or pond maintenance.

3.4.3 Downstream Hydraulic Structures

The Unit 2/3 Bottom Ash Pond is drained solely by pumping. As shown in Figure 2.1, all liquids extracted from the Unit 2/3 Bottom Ash Pond are conveyed to the discharge outfall (DSN006). All liquids which are pumped to downstream hydraulic structures are handled in accordance with the surface water requirements under 40 CFR 257.3-3 (ADEM 335-13-15-.05(3)(c)).

4.0 SCENARIOS AND RESULTS

4.1 Scenario 1 – Normal Operations

4.1.1 Scenario 1 Flow Diagram

Scenario 1 assumes that all the pond pumps are fully operational and that each pond has its contributing rainfall inflow. The figure below illustrates the flows for this scenario.

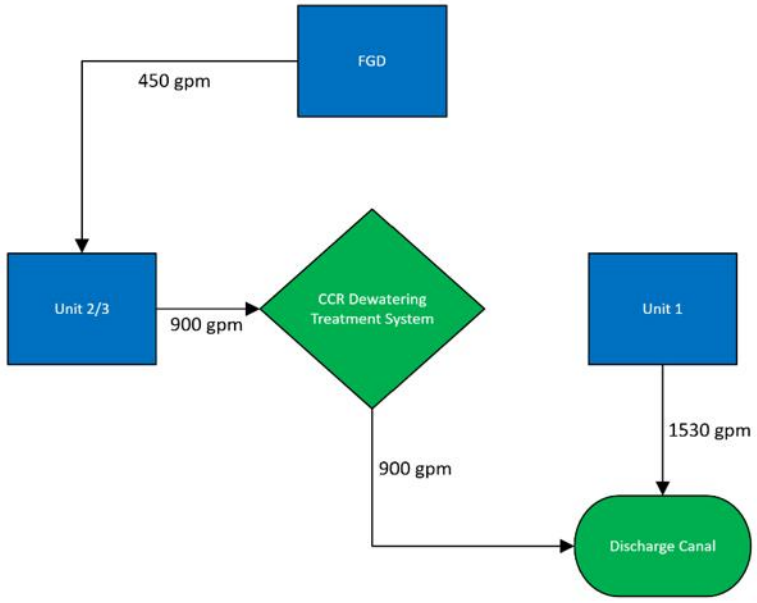


Figure 4.1 – Scenario 1 Flow Diagram

4.1.2 Scenario 1 Results

This scenario was modeled using HEC-HMS 4.13 with the above listed variables. The table below shows the results from the hydraulic model.

Table 4.1 – Scenario 1 Unit 2/3 Bottom Ash Pond Maximum Hydraulic Grades

Overtopping Elev: 42.0	Normal Max WSEL	Drawdown (Days)	Pass/Fail
First Quartile	40.4	13+	Pass
Second Quartile	40.5	13+	Pass
Third Quartile	40.5	13	Pass
Fourth Quartile	40.4	13	Pass

The total drawdown time shown in Table 4.1 is defined as the time from the beginning of the model to the time when the impoundment returns to the normal pool elevation.

4.2 Scenario 2 – Abnormal Operations

4.2.1 Scenario 2 Flow Diagram

Scenario 2 is intended to represent abnormal operations at the facility such as a loss of power, pumping failure, or other similar conditions. For this scenario, a pumping failure is assumed. It is also assumed that pumping operations will resume within 5 days of the rain event. Since all the ponds rely on pumping systems for outflow, failure would mean that the impoundments could not discharge inflows. It also means that the plant would not be producing an inflow because its operations would be ceased. Therefore, the only impoundment inflows are from the 72-hr inflow design flood event itself. The figure below illustrates the flows for this scenario.

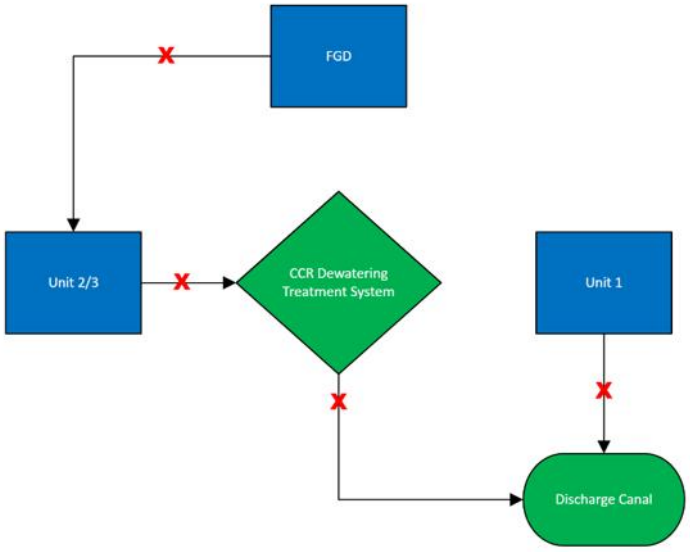


Figure 4.4 – Scenario 2 Flow Diagram

4.2.2 Scenario 2 Results

This scenario was modeled using HEC-HMS 4.13 with the above listed variables. The model determined that the Unit 2/3 Bottom Ash Pond does not overtop during this scenario. The maximum hydraulic grade can be found in the following table. Since no pumping occurs in this scenario and all quartile storms supply the same rainfall runoff quantity, only one quartile has to be modeled.

Table 4.2 – Scenario 2 Unit 2/3 Bottom Ash Pond Maximum Hydraulic Grades

Impoundment Name	Max HGL	Pond Overtopping Elevation.	Pass/Fail
	(feet)	(feet)	
Unit 2/3 Pond	40.9	42.0	Pass

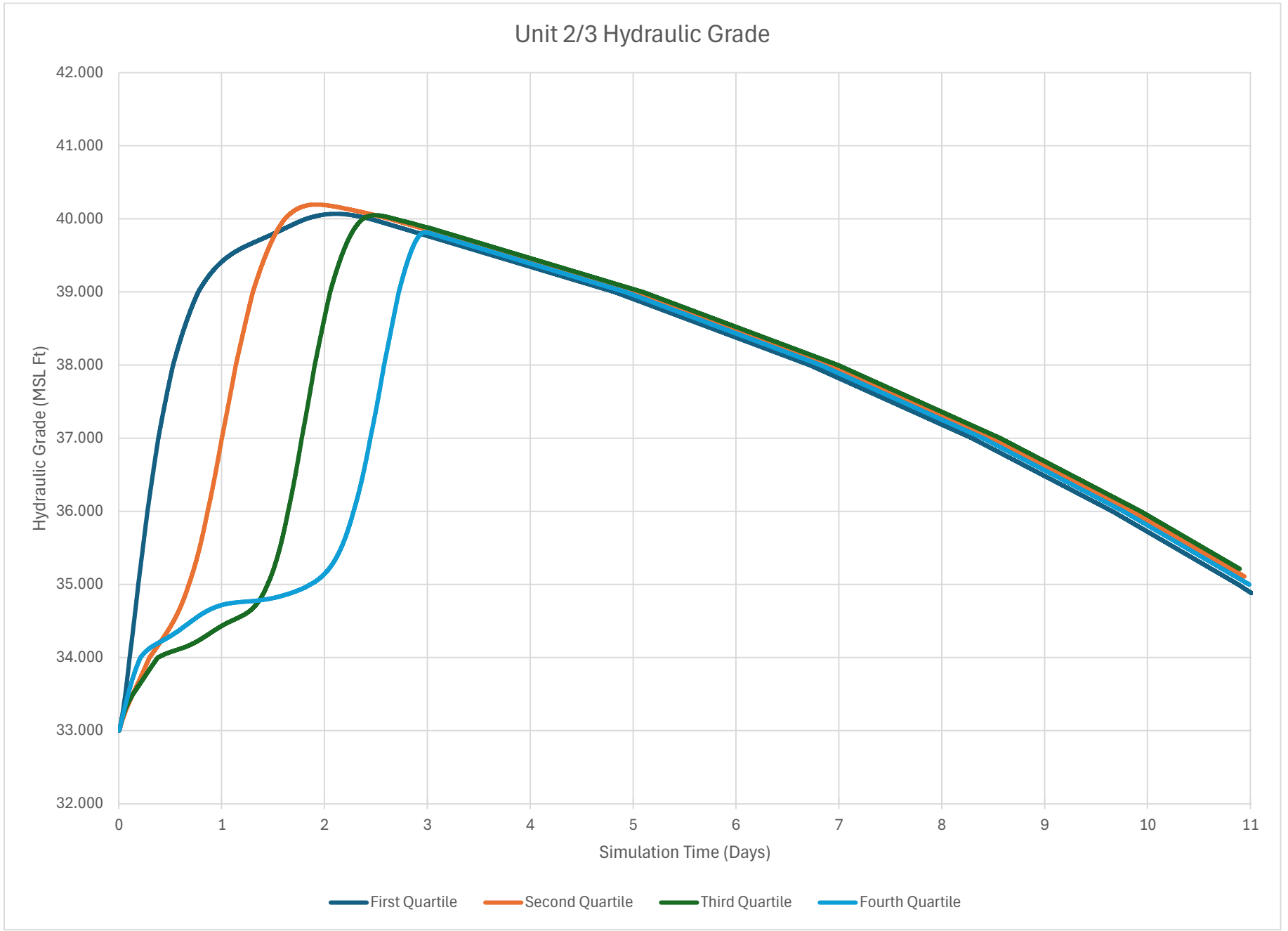
5.0 SUMMARY AND CONCLUSIONS

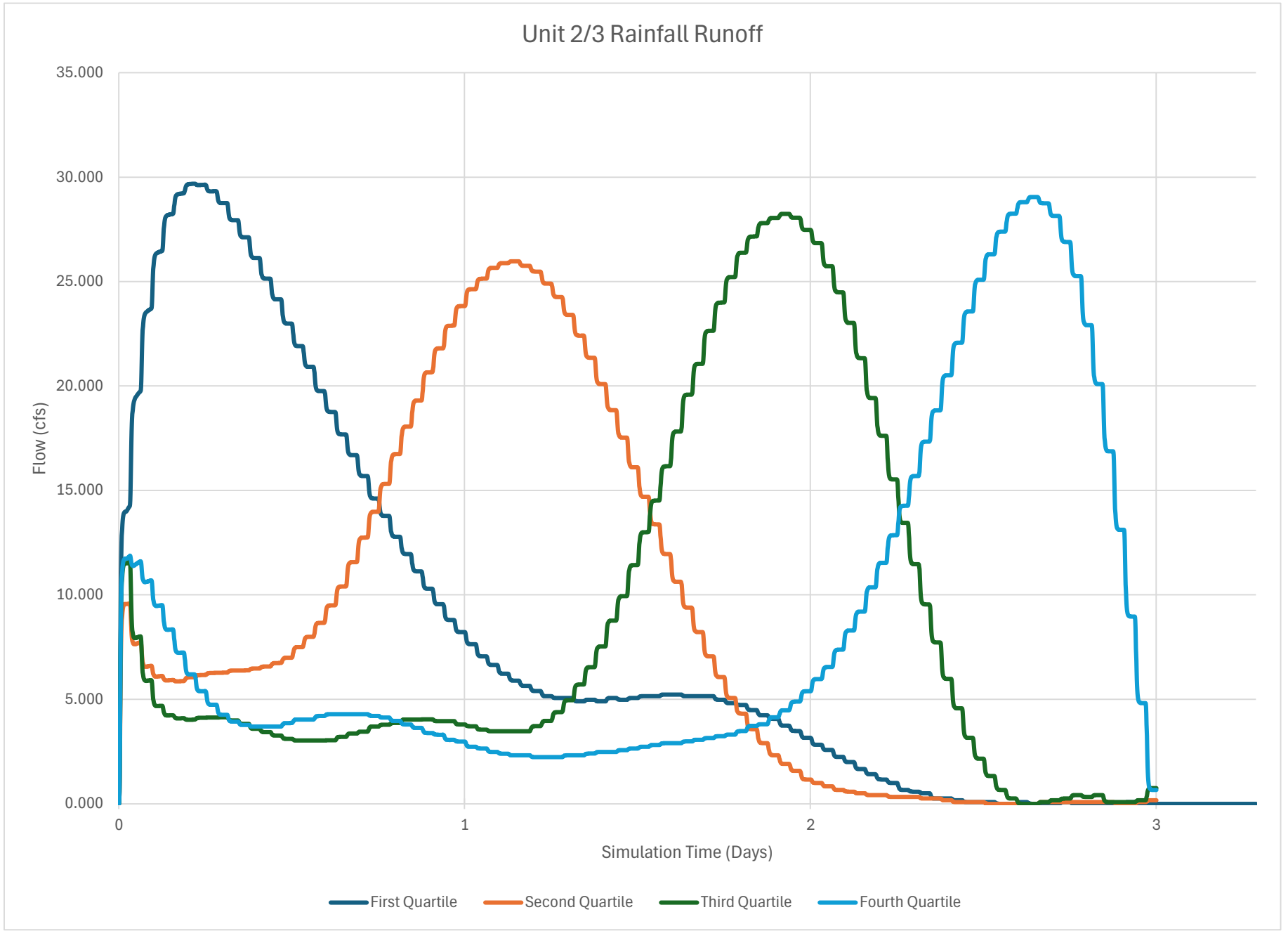
In conclusion, as per this report and supporting documents, Unit 2/3 Bottom Ash Pond at the Charles R. Lowman Power Plant meets the requirements for inflow design flood controls as per the CCR Rule. This document and its Attachments are intended to meet the requirements of the Initial Inflow Design Flood Control System Plan as per 40 CFR 257.82(ADEM 335-13-15-.05(3)(c)).

The conclusions presented in this report are based upon currently accepted engineering principles, practices, and standards in the area where the services were provided. No other warranty, expressed or implied, is made. The findings in this report were developed from engineering calculations performed to meet the standards of the CCR Rule. Plant operation information was provided by the owner.

Appendix A
Scenario 1 Results

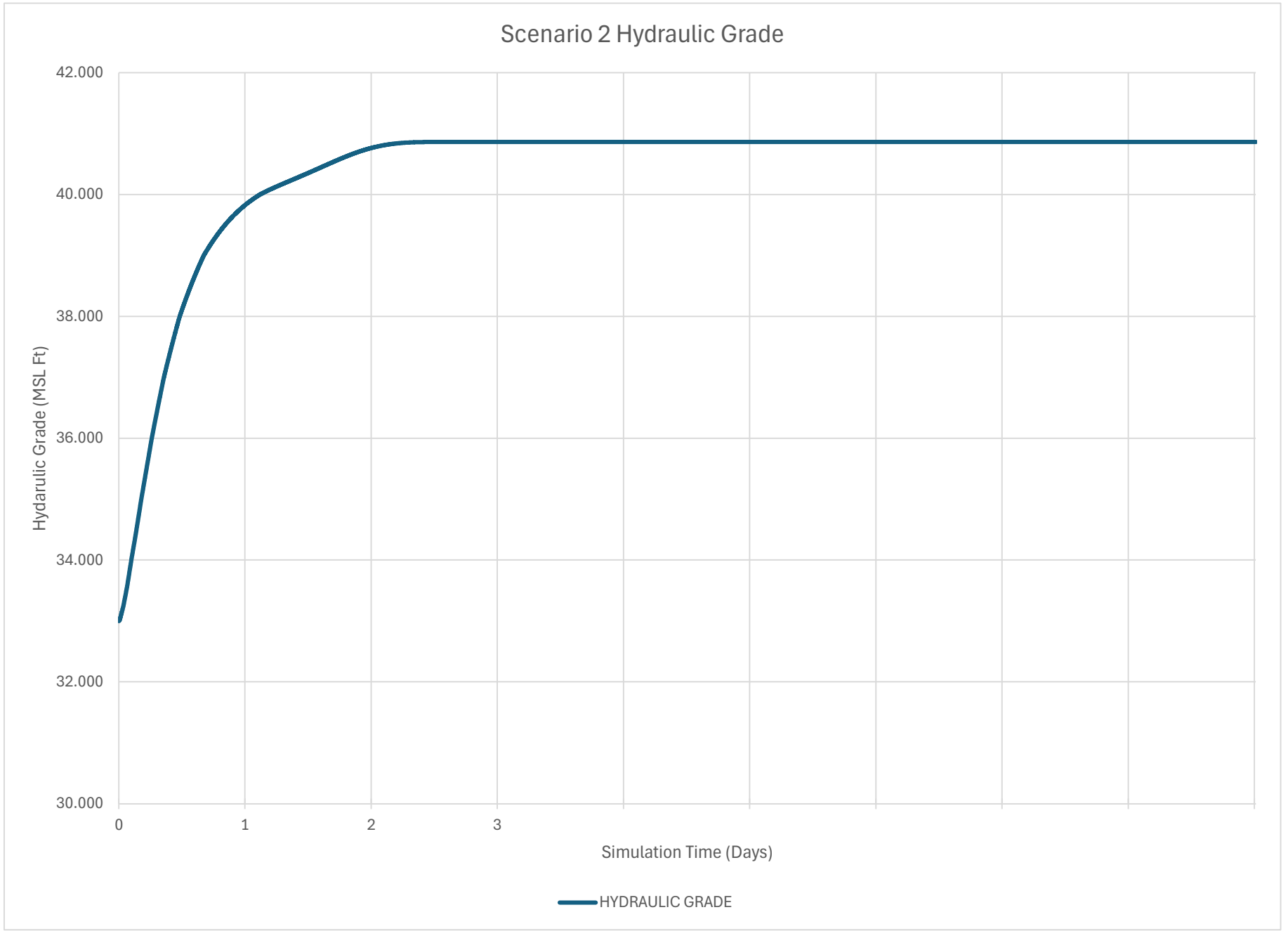
Figure A.1 – Unit 2/3 Bottom Ash Pond HGL and Inflow Graph


Unit 2/3 Hydraulic Grade
Hydraulic Grade (MSL Ft)
42.000
41.000
40.000
39.000
38.000
37.000
36.000
35.000
34.000
33.000
32.000
0
1
2
3
4
5
6
7
8
9
10
11
Simulation Time (Days)
First Quartile
Second Quartile
Third Quartile
Fourth Quartile


Unit 2/3 Rainfall Runoff
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
Flow (cfs)
0
1
2
3
Simulation Time (Days)
First Quartile
Second Quartile
Third Quartile
Fourth Quartile

Appendix B
Scenario 2 Results

Figure B.1 – Unit 2/3 Bottom Ash Pond HGL and Inflow Graph


Scenario 2 Hydraulic Grade
42.000
40.000
38.000
36.000
34.000
32.000
30.000
Hydarulic Grade (MSL Ft)
0
1
2
3
Simulation Time (Days)
HYDRAULIC GRADE



Appendix C

NOAA Atlas 14 Information

Tabulated temporal distribution data for NOAA Atlas 14 Volume 9: Southeastern Region 1

This is a comma delimited file containing temporal distribution data for all four quartile cases and for all cases combined for the 96-hour duration.

First column of each table shows time from 0 to 96 hours in hourly increments

Second column shows cumulative percentages of total precipitation that occurred by given time in 90% of cases etc.

CUMULATIVE PERCENTAGES OF TOTAL PRECIPITATION FOR FIRST-QUARTILE CASES

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
0	0	0	0	0	0	0	0	0	0
1	0.34	0.74	1.37	1.45	1.87	3.07	5.07	8.63	12.78
2	0.88	1.56	2.59	3.25	4.35	6.57	10.18	16.18	23.52
3	1.44	2.43	3.84	5.37	7.27	10.36	15.25	22.84	32.62
4	1.93	3.39	5.26	7.75	10.5	14.35	20.19	28.77	40.4
5	2.38	4.47	6.91	10.36	13.93	18.43	24.97	34.1	47.12
6	2.86	5.72	8.83	13.16	17.47	22.55	29.56	38.93	52.97
7	3.45	7.19	11.03	16.12	21.06	26.64	33.93	43.35	58.11
8	4.24	8.91	13.49	19.19	24.64	30.65	38.09	47.43	62.68
9	5.3	10.88	16.19	22.34	28.18	34.55	42.01	51.24	66.76
10	6.66	13.12	19.08	25.53	31.65	38.31	45.72	54.81	70.43
11	8.37	15.6	22.11	28.75	35.02	41.91	49.22	58.18	73.75
12	10.4	18.3	25.24	31.94	38.29	45.33	52.51	61.37	76.76
13	12.75	21.17	28.41	35.09	41.44	48.58	55.61	64.41	79.49
14	15.37	24.17	31.58	38.17	44.47	51.65	58.54	67.3	81.98
15	18.21	27.25	34.71	41.16	47.38	54.54	61.3	70.05	84.24
16	21.2	30.35	37.75	44.04	50.15	57.26	63.9	72.67	86.29
17	24.27	33.42	40.67	46.79	52.79	59.81	66.37	75.16	88.14
18	27.36	36.41	43.46	49.41	55.31	62.21	68.71	77.53	89.8
19	30.41	39.29	46.08	51.88	57.69	64.45	70.92	79.76	91.29
20	33.35	42	48.53	54.2	59.95	66.55	73.03	81.85	92.62
21	36.13	44.53	50.79	56.37	62.08	68.53	75.02	83.82	93.79
22	38.72	46.85	52.87	58.38	64.09	70.38	76.92	85.65	94.82
23	41.08	48.95	54.76	60.25	65.98	72.13	78.72	87.35	95.72
24	43.19	50.83	56.47	61.97	67.74	73.77	80.43	88.92	96.49
25	45.04	52.48	58.01	63.55	69.4	75.32	82.05	90.35	97.16
26	46.63	53.91	59.39	65	70.94	76.79	83.59	91.66	97.72
27	47.98	55.14	60.62	66.33	72.38	78.18	85.04	92.84	98.19
28	49.1	56.19	61.72	67.55	73.72	79.5	86.41	93.9	98.58
29	50.01	57.07	62.71	68.68	74.96	80.75	87.7	94.84	98.9
30	50.74	57.81	63.6	69.71	76.11	81.94	88.91	95.68	99.16
31	51.31	58.44	64.4	70.67	77.17	83.08	90.04	96.41	99.37
32	51.76	58.98	65.14	71.57	78.16	84.16	91.1	97.05	99.52
33	52.12	59.45	65.83	72.4	79.08	85.2	92.08	97.6	99.65

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
34	52.42	59.87	66.48	73.19	79.93	86.19	92.98	98.07	99.73
35	52.67	60.27	67.1	73.94	80.73	87.13	93.81	98.46	99.8
36	52.92	60.67	67.7	74.66	81.48	88.03	94.57	98.79	99.84
37	53.16	61.07	68.29	75.35	82.19	88.89	95.26	99.06	99.87
38	53.43	61.49	68.89	76.03	82.87	89.71	95.89	99.28	99.89
39	53.73	61.94	69.49	76.69	83.52	90.49	96.46	99.45	99.9
40	54.07	62.42	70.09	77.33	84.14	91.23	96.96	99.59	99.91
41	54.45	62.93	70.7	77.97	84.75	91.94	97.41	99.69	99.91
42	54.86	63.48	71.33	78.6	85.36	92.61	97.81	99.77	99.91
43	55.32	64.07	71.97	79.22	85.95	93.24	98.16	99.83	99.91
44	55.8	64.68	72.61	79.84	86.55	93.84	98.46	99.87	99.91
45	56.31	65.31	73.26	80.46	87.14	94.41	98.72	99.89	99.91
46	56.83	65.96	73.92	81.07	87.75	94.94	98.95	99.91	99.92
47	57.36	66.62	74.58	81.67	88.35	95.44	99.14	99.92	99.92
48	57.88	67.28	75.24	82.27	88.96	95.91	99.3	99.92	99.92
49	58.4	67.94	75.89	82.86	89.58	96.34	99.44	99.92	99.93
50	58.9	68.58	76.54	83.45	90.2	96.75	99.55	99.92	99.93
51	59.38	69.22	77.17	84.04	90.83	97.12	99.64	99.93	99.94
52	59.84	69.84	77.8	84.62	91.46	97.47	99.71	99.93	99.95
53	60.28	70.44	78.41	85.19	92.08	97.79	99.77	99.93	99.95
54	60.7	71.03	79.01	85.76	92.7	98.08	99.82	99.93	99.96
55	61.11	71.59	79.59	86.33	93.32	98.34	99.86	99.93	99.96
56	61.51	72.14	80.17	86.89	93.92	98.58	99.89	99.94	99.97
57	61.92	72.69	80.73	87.46	94.5	98.8	99.91	99.94	99.97
58	62.33	73.22	81.28	88.03	95.07	98.99	99.93	99.95	99.98
59	62.75	73.75	81.82	88.59	95.61	99.16	99.94	99.95	99.98
60	63.21	74.28	82.37	89.16	96.12	99.31	99.95	99.96	99.98
61	63.7	74.82	82.91	89.74	96.61	99.44	99.96	99.96	99.98
62	64.23	75.38	83.45	90.31	97.06	99.55	99.97	99.97	99.98
63	64.8	75.95	84	90.89	97.48	99.64	99.97	99.97	99.98
64	65.43	76.54	84.56	91.48	97.86	99.72	99.97	99.97	99.98
65	66.1	77.15	85.14	92.06	98.2	99.78	99.98	99.98	99.98
66	66.83	77.78	85.74	92.65	98.51	99.83	99.98	99.98	99.98
67	67.6	78.44	86.35	93.24	98.78	99.87	99.98	99.98	99.98
68	68.41	79.12	86.99	93.82	99.02	99.9	99.98	99.98	99.98
69	69.26	79.82	87.65	94.4	99.22	99.92	99.98	99.98	99.98
70	70.12	80.55	88.33	94.96	99.39	99.94	99.98	99.98	99.98
71	71.01	81.29	89.04	95.52	99.53	99.95	99.98	99.98	99.98
72	71.9	82.04	89.76	96.05	99.65	99.95	99.98	99.98	99.99
73	72.78	82.81	90.5	96.56	99.73	99.95	99.98	99.98	99.99
74	73.66	83.58	91.26	97.05	99.8	99.95	99.98	99.98	99.99
75	74.52	84.37	92.02	97.5	99.86	99.95	99.98	99.98	99.99

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
76	75.36	85.17	92.79	97.92	99.89	99.95	99.98	99.98	99.99
77	76.2	85.97	93.55	98.3	99.92	99.96	99.98	99.98	99.99
78	77.02	86.79	94.3	98.65	99.94	99.96	99.98	99.99	99.99
79	77.85	87.62	95.03	98.94	99.95	99.96	99.98	99.99	99.99
80	78.7	88.48	95.73	99.2	99.96	99.96	99.99	99.99	99.99
81	79.59	89.36	96.39	99.41	99.97	99.97	99.99	99.99	99.99
82	80.53	90.26	97.01	99.59	99.97	99.97	99.99	99.99	99.99
83	81.55	91.2	97.58	99.72	99.97	99.97	99.99	99.99	99.99
84	82.66	92.16	98.1	99.82	99.98	99.98	99.99	99.99	99.99
85	83.88	93.14	98.55	99.89	99.98	99.98	99.99	99.99	99.99
86	85.21	94.14	98.93	99.93	99.98	99.98	99.99	99.99	99.99
87	86.67	95.15	99.25	99.95	99.98	99.99	99.99	99.99	99.99
88	88.22	96.12	99.51	99.96	99.99	99.99	99.99	99.99	100
89	89.86	97.06	99.7	99.96	99.99	99.99	99.99	99.99	100
90	91.55	97.91	99.83	99.96	99.99	99.99	99.99	99.99	100
91	93.24	98.65	99.92	99.97	99.99	99.99	99.99	99.99	100
92	94.87	99.24	99.96	99.97	99.99	99.99	99.99	100	100
93	96.38	99.65	99.98	99.98	99.99	99.99	100	100	100
94	97.75	99.89	99.98	99.99	100	100	100	100	100
95	98.94	99.98	99.98	100	100	100	100	100	100
96	100	100	100	100	100	100	100	100	100

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
CUMULATIVE PERCENTAGES OF TOTAL PRECIPITATION FOR SECOND-QUARTILE CASES									
0	0	0	0	0	0	0	0	0	0
1	0	0.39	0.68	0.99	1.28	1.29	1.29	1.4	5.13
2	0.28	0.81	1.22	1.72	2.28	2.56	3.15	3.82	9.65
3	0.62	1.18	1.64	2.29	3.12	3.84	5.28	6.69	13.5
4	0.9	1.45	1.97	2.79	3.89	5.1	7.46	9.63	16.67
5	1.09	1.62	2.26	3.26	4.63	6.33	9.53	12.37	19.18
6	1.18	1.72	2.53	3.75	5.36	7.52	11.39	14.76	21.12
7	1.22	1.79	2.82	4.27	6.11	8.65	12.99	16.73	22.56
8	1.22	1.85	3.15	4.83	6.87	9.71	14.31	18.27	23.61
9	1.23	1.94	3.52	5.43	7.64	10.7	15.36	19.4	24.39
10	1.26	2.09	3.95	6.07	8.41	11.63	16.17	20.2	25
11	1.32	2.29	4.43	6.73	9.19	12.49	16.79	20.74	25.54
12	1.44	2.56	4.95	7.42	9.97	13.31	17.28	21.13	26.1
13	1.59	2.89	5.52	8.13	10.76	14.1	17.69	21.45	26.75
14	1.78	3.29	6.12	8.86	11.56	14.88	18.1	21.8	27.58
15	1.99	3.74	6.76	9.6	12.38	15.69	18.56	22.26	28.61
16	2.21	4.23	7.42	10.37	13.23	16.53	19.12	22.91	29.91
17	2.44	4.76	8.1	11.16	14.14	17.45	19.84	23.79	31.47
18	2.66	5.32	8.82	12	15.11	18.47	20.75	24.95	33.33
19	2.87	5.91	9.57	12.89	16.16	19.6	21.9	26.43	35.47
20	3.07	6.54	10.36	13.84	17.31	20.88	23.29	28.24	37.88
21	3.28	7.2	11.2	14.87	18.57	22.31	24.95	30.37	40.54
22	3.51	7.91	12.12	16.01	19.97	23.91	26.88	32.82	43.43
23	3.77	8.68	13.12	17.25	21.51	25.7	29.08	35.58	46.51
24	4.1	9.53	14.21	18.62	23.2	27.67	31.54	38.6	49.73
25	4.51	10.47	15.43	20.13	25.05	29.84	34.24	41.85	53.07
26	5.03	11.53	16.77	21.79	27.07	32.18	37.16	45.29	56.49
27	5.69	12.71	18.26	23.61	29.25	34.7	40.26	48.88	59.92
28	6.52	14.05	19.91	25.6	31.58	37.39	43.53	52.56	63.35
29	7.54	15.54	21.73	27.74	34.07	40.22	46.91	56.3	66.73
30	8.77	17.21	23.72	30.04	36.7	43.19	50.38	60.03	70.02
31	10.23	19.06	25.87	32.5	39.46	46.26	53.91	63.73	73.2
32	11.92	21.09	28.2	35.11	42.33	49.41	57.44	67.34	76.23
33	13.85	23.31	30.69	37.84	45.3	52.62	60.96	70.82	79.09
34	16.01	25.7	33.33	40.69	48.33	55.87	64.42	74.16	81.77
35	18.4	28.25	36.1	43.64	51.42	59.12	67.79	77.31	84.26
36	20.99	30.95	38.99	46.66	54.54	62.35	71.05	80.27	86.53
37	23.76	33.78	41.97	49.73	57.67	65.53	74.17	83	88.59
38	26.68	36.71	45.01	52.83	60.77	68.64	77.12	85.5	90.43
39	29.73	39.71	48.1	55.93	63.84	71.66	79.9	87.76	92.07
40	32.86	42.76	51.2	59	66.84	74.56	82.49	89.79	93.5

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
41	36.04	45.81	54.28	62.04	69.76	77.33	84.88	91.58	94.74
42	39.22	48.85	57.31	65	72.58	79.95	87.06	93.14	95.8
43	42.37	51.84	60.27	67.87	75.28	82.41	89.03	94.48	96.68
44	45.45	54.75	63.13	70.62	77.85	84.69	90.8	95.62	97.41
45	48.42	57.55	65.88	73.25	80.27	86.8	92.37	96.57	98.01
46	51.25	60.22	68.47	75.73	82.54	88.72	93.73	97.36	98.48
47	53.91	62.73	70.91	78.06	84.65	90.46	94.92	97.98	98.84
48	56.37	65.07	73.18	80.22	86.59	92.01	95.93	98.48	99.12
49	58.63	67.23	75.26	82.22	88.36	93.39	96.78	98.86	99.32
50	60.67	69.19	77.16	84.04	89.97	94.59	97.48	99.14	99.46
51	62.49	70.96	78.88	85.69	91.41	95.63	98.05	99.34	99.55
52	64.08	72.54	80.41	87.17	92.69	96.51	98.51	99.48	99.61
53	65.46	73.93	81.76	88.49	93.82	97.25	98.86	99.57	99.64
54	66.64	75.15	82.95	89.65	94.81	97.86	99.13	99.62	99.66
55	67.64	76.21	83.99	90.68	95.66	98.35	99.33	99.65	99.66
56	68.48	77.13	84.9	91.57	96.39	98.74	99.47	99.66	99.66
57	69.19	77.93	85.69	92.35	97	99.04	99.56	99.66	99.66
58	69.78	78.63	86.39	93.03	97.52	99.26	99.62	99.66	99.67
59	70.3	79.25	87.01	93.62	97.95	99.43	99.65	99.66	99.67
60	70.77	79.83	87.58	94.14	98.3	99.54	99.67	99.67	99.68
61	71.22	80.38	88.11	94.6	98.58	99.61	99.67	99.68	99.7
62	71.67	80.91	88.63	95.01	98.81	99.65	99.68	99.69	99.72
63	72.14	81.46	89.14	95.39	99	99.67	99.68	99.71	99.74
64	72.65	82.03	89.66	95.74	99.14	99.68	99.68	99.74	99.77
65	73.22	82.64	90.2	96.08	99.26	99.68	99.68	99.76	99.79
66	73.85	83.29	90.77	96.4	99.36	99.68	99.69	99.79	99.82
67	74.56	83.99	91.37	96.72	99.44	99.68	99.71	99.81	99.84
68	75.32	84.74	92	97.04	99.51	99.69	99.73	99.84	99.86
69	76.15	85.54	92.66	97.35	99.57	99.7	99.75	99.85	99.87
70	77.03	86.37	93.34	97.65	99.62	99.71	99.78	99.87	99.88
71	77.96	87.24	94.04	97.95	99.67	99.73	99.8	99.88	99.89
72	78.91	88.12	94.74	98.24	99.71	99.75	99.82	99.89	99.89
73	79.87	89.02	95.43	98.52	99.75	99.78	99.84	99.89	99.9
74	80.83	89.91	96.1	98.77	99.79	99.8	99.86	99.9	99.9
75	81.78	90.78	96.73	99.01	99.82	99.83	99.88	99.9	99.9
76	82.7	91.62	97.32	99.22	99.85	99.85	99.89	99.9	99.9
77	83.59	92.43	97.86	99.4	99.87	99.87	99.9	99.9	99.9
78	84.44	93.19	98.33	99.55	99.88	99.88	99.9	99.9	99.9
79	85.26	93.9	98.74	99.67	99.89	99.89	99.9	99.9	99.91
80	86.06	94.57	99.07	99.76	99.9	99.9	99.9	99.91	99.91
81	86.84	95.19	99.34	99.82	99.9	99.9	99.9	99.92	99.92
82	87.63	95.76	99.54	99.86	99.9	99.9	99.9	99.93	99.93

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
83	88.43	96.3	99.68	99.88	99.9	99.9	99.9	99.94	99.94
84	89.27	96.81	99.78	99.89	99.9	99.9	99.91	99.95	99.95
85	90.16	97.29	99.84	99.89	99.9	99.91	99.92	99.96	99.96
86	91.12	97.76	99.87	99.89	99.91	99.91	99.92	99.96	99.96
87	92.14	98.2	99.89	99.9	99.92	99.92	99.93	99.97	99.97
88	93.22	98.62	99.9	99.9	99.93	99.93	99.95	99.97	99.97
89	94.34	99	99.91	99.91	99.94	99.94	99.96	99.97	99.97
90	95.47	99.34	99.92	99.92	99.95	99.95	99.96	99.97	99.97
91	96.57	99.62	99.93	99.94	99.96	99.97	99.97	99.97	99.97
92	97.58	99.81	99.94	99.95	99.97	99.97	99.97	99.98	99.98
93	98.46	99.92	99.95	99.95	99.97	99.97	99.97	99.99	99.99
94	99.15	99.95	99.95	99.95	99.97	99.97	99.97	100	100
95	99.65	99.94	99.96	99.96	99.98	99.98	99.98	100	100
96	100	100	100	100	100	100	100	100	100

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
CUMULATIVE PERCENTAGES OF TOTAL PRECIPITATION FOR THIRD-QUARTILE CASES									
0	0	0	0	0	0	0	0	0	0
1	0	0.25	0.65	0.91	1.54	2.19	2.45	3.19	5.78
2	0.24	0.67	1.19	1.68	2.57	3.61	4.39	6	10.34
3	0.55	1.1	1.64	2.34	3.32	4.61	6.01	8.45	13.9
4	0.83	1.45	2.01	2.88	3.91	5.42	7.41	10.58	16.67
5	1.03	1.69	2.32	3.34	4.44	6.16	8.67	12.41	18.83
6	1.16	1.83	2.57	3.73	4.95	6.9	9.8	13.96	20.5
7	1.22	1.89	2.8	4.08	5.45	7.64	10.81	15.26	21.82
8	1.25	1.9	3	4.39	5.96	8.39	11.72	16.34	22.87
9	1.25	1.91	3.2	4.69	6.47	9.11	12.53	17.23	23.74
10	1.25	1.92	3.39	4.98	6.98	9.8	13.25	17.99	24.48
11	1.27	1.96	3.58	5.26	7.47	10.45	13.89	18.63	25.15
12	1.3	2.04	3.77	5.56	7.94	11.03	14.46	19.2	25.78
13	1.36	2.16	3.97	5.86	8.38	11.56	14.97	19.73	26.4
14	1.43	2.32	4.17	6.17	8.8	12.03	15.46	20.24	27.02
15	1.53	2.51	4.38	6.49	9.2	12.46	15.93	20.76	27.66
16	1.62	2.73	4.6	6.82	9.58	12.86	16.41	21.31	28.32
17	1.72	2.95	4.82	7.16	9.95	13.25	16.9	21.89	28.99
18	1.81	3.18	5.05	7.5	10.32	13.63	17.42	22.52	29.68
19	1.89	3.4	5.28	7.85	10.69	14.03	17.98	23.19	30.37
20	1.95	3.6	5.52	8.21	11.06	14.46	18.58	23.89	31.06
21	2	3.79	5.77	8.57	11.45	14.92	19.22	24.62	31.73
22	2.02	3.96	6.02	8.93	11.86	15.42	19.89	25.36	32.37
23	2.04	4.11	6.28	9.3	12.28	15.96	20.58	26.11	32.98
24	2.04	4.24	6.55	9.67	12.73	16.53	21.29	26.84	33.55
25	2.04	4.37	6.83	10.04	13.19	17.14	21.99	27.54	34.07
26	2.04	4.48	7.12	10.41	13.66	17.77	22.68	28.2	34.55
27	2.05	4.6	7.41	10.79	14.15	18.41	23.33	28.81	34.98
28	2.09	4.73	7.71	11.16	14.64	19.05	23.95	29.36	35.36
29	2.14	4.87	8.02	11.53	15.13	19.67	24.52	29.85	35.71
30	2.22	5.03	8.34	11.91	15.61	20.27	25.03	30.27	36.03
31	2.33	5.21	8.65	12.28	16.09	20.83	25.48	30.62	36.34
32	2.47	5.41	8.97	12.65	16.55	21.36	25.87	30.93	36.65
33	2.65	5.65	9.3	13.02	17	21.84	26.2	31.2	36.98
34	2.85	5.91	9.62	13.4	17.43	22.28	26.49	31.44	37.35
35	3.08	6.19	9.95	13.77	17.85	22.68	26.75	31.68	37.78
36	3.33	6.5	10.28	14.16	18.27	23.04	26.99	31.94	38.29
37	3.59	6.83	10.62	14.56	18.69	23.39	27.25	32.24	38.89
38	3.87	7.18	10.97	14.97	19.11	23.74	27.53	32.61	39.61
39	4.14	7.54	11.34	15.41	19.56	24.1	27.88	33.08	40.46
40	4.42	7.92	11.72	15.88	20.04	24.51	28.31	33.68	41.47

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
41	4.69	8.32	12.14	16.39	20.57	24.98	28.86	34.42	42.63
42	4.95	8.74	12.6	16.96	21.17	25.53	29.55	35.33	43.96
43	5.2	9.17	13.12	17.59	21.86	26.2	30.41	36.43	45.47
44	5.46	9.64	13.7	18.29	22.65	27.02	31.45	37.74	47.16
45	5.72	10.14	14.35	19.09	23.56	27.99	32.71	39.26	49.02
46	5.99	10.7	15.1	20	24.62	29.16	34.19	41.01	51.05
47	6.29	11.32	15.96	21.03	25.82	30.52	35.91	42.98	53.24
48	6.63	12.02	16.95	22.19	27.2	32.11	37.87	45.16	55.58
49	7.04	12.82	18.07	23.49	28.77	33.93	40.06	47.56	58.05
50	7.52	13.74	19.35	24.96	30.52	35.97	42.49	50.14	60.62
51	8.12	14.8	20.79	26.6	32.47	38.25	45.13	52.9	63.28
52	8.84	16.01	22.41	28.42	34.62	40.76	47.98	55.81	66
53	9.71	17.41	24.22	30.43	36.98	43.48	51	58.83	68.75
54	10.77	19	26.22	32.62	39.52	46.39	54.16	61.94	71.5
55	12.02	20.79	28.41	35	42.25	49.48	57.44	65.1	74.23
56	13.49	22.81	30.8	37.57	45.14	52.72	60.8	68.27	76.91
57	15.19	25.06	33.38	40.32	48.18	56.06	64.2	71.42	79.5
58	17.15	27.53	36.14	43.23	51.36	59.48	67.6	74.51	81.99
59	19.35	30.22	39.07	46.3	54.63	62.95	70.95	77.51	84.35
60	21.81	33.13	42.16	49.5	57.98	66.41	74.23	80.38	86.56
61	24.51	36.24	45.38	52.8	61.36	69.84	77.38	83.09	88.61
62	27.45	39.52	48.7	56.19	64.76	73.18	80.39	85.62	90.48
63	30.61	42.94	52.11	59.63	68.14	76.42	83.21	87.94	92.16
64	33.96	46.48	55.56	63.09	71.45	79.5	85.83	90.05	93.65
65	37.47	50.1	59.04	66.53	74.68	82.4	88.22	91.93	94.94
66	41.1	53.74	62.5	69.93	77.78	85.1	90.36	93.57	96.05
67	44.81	57.38	65.91	73.24	80.73	87.57	92.26	94.99	96.97
68	48.55	60.96	69.23	76.43	83.5	89.8	93.9	96.17	97.73
69	52.28	64.44	72.43	79.47	86.07	91.77	95.3	97.15	98.33
70	55.94	67.77	75.49	82.33	88.41	93.49	96.46	97.92	98.79
71	59.49	70.93	78.37	84.98	90.53	94.96	97.39	98.52	99.13
72	62.88	73.87	81.05	87.4	92.4	96.19	98.12	98.96	99.36
73	66.08	76.57	83.52	89.57	94.02	97.18	98.68	99.26	99.52
74	69.05	79.02	85.76	91.49	95.4	97.97	99.07	99.47	99.61
75	71.76	81.2	87.75	93.15	96.55	98.57	99.35	99.59	99.66
76	74.2	83.13	89.52	94.55	97.48	99	99.52	99.65	99.68
77	76.36	84.81	91.05	95.7	98.2	99.3	99.61	99.67	99.68
78	78.25	86.26	92.37	96.62	98.75	99.49	99.66	99.68	99.68
79	79.89	87.52	93.49	97.34	99.13	99.61	99.68	99.68	99.68
80	81.3	88.62	94.43	97.87	99.39	99.66	99.68	99.68	99.69
81	82.52	89.61	95.22	98.25	99.55	99.68	99.68	99.69	99.72
82	83.61	90.53	95.89	98.52	99.63	99.68	99.69	99.72	99.75

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
83	84.6	91.42	96.47	98.7	99.66	99.68	99.71	99.75	99.79
84	85.57	92.32	96.97	98.83	99.67	99.69	99.74	99.8	99.82
85	86.55	93.25	97.43	98.94	99.66	99.71	99.78	99.84	99.86
86	87.61	94.23	97.86	99.04	99.67	99.74	99.82	99.87	99.89
87	88.76	95.24	98.27	99.16	99.69	99.78	99.86	99.9	99.91
88	90.05	96.27	98.66	99.29	99.72	99.82	99.89	99.91	99.91
89	91.46	97.26	99.02	99.44	99.77	99.86	99.9	99.92	99.92
90	92.98	98.18	99.34	99.59	99.81	99.89	99.91	99.92	99.92
91	94.55	98.94	99.6	99.72	99.86	99.91	99.92	99.92	99.92
92	96.11	99.49	99.77	99.83	99.88	99.92	99.92	99.94	99.94
93	97.54	99.79	99.87	99.88	99.89	99.92	99.94	99.97	99.98
94	98.74	99.88	99.89	99.89	99.89	99.92	99.98	100	100
95	99.6	99.86	99.89	99.9	99.91	99.95	100	100	100
96	100	100	100	100	100	100	100	100	100

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
CUMULATIVE PERCENTAGES OF TOTAL PRECIPITATION FOR FOURTH-QUARTILE CASES									
0	0	0	0	0	0	0	0	0	0
1	0.36	0.67	0.87	1.07	1.57	2.28	3.61	5.77	7.89
2	0.64	1.16	1.61	2.1	3.05	4.25	6.24	9.5	13.33
3	0.87	1.54	2.25	3.06	4.39	5.96	8.3	12.08	17.19
4	1.05	1.85	2.8	3.92	5.57	7.47	10.03	14.05	20.03
5	1.2	2.12	3.28	4.69	6.6	8.79	11.56	15.73	22.23
6	1.33	2.37	3.71	5.36	7.49	9.97	12.96	17.28	24.03
7	1.43	2.6	4.09	5.94	8.25	11.02	14.27	18.78	25.58
8	1.52	2.82	4.43	6.46	8.91	11.95	15.49	20.21	26.95
9	1.59	3.03	4.75	6.91	9.49	12.78	16.62	21.58	28.18
10	1.65	3.23	5.05	7.32	10.01	13.54	17.65	22.84	29.3
11	1.71	3.43	5.33	7.7	10.49	14.22	18.57	23.97	30.31
12	1.76	3.62	5.61	8.06	10.95	14.84	19.39	24.96	31.22
13	1.82	3.81	5.88	8.42	11.4	15.42	20.11	25.8	32.03
14	1.88	3.99	6.16	8.77	11.85	15.96	20.74	26.49	32.76
15	1.95	4.17	6.44	9.14	12.3	16.48	21.3	27.06	33.41
16	2.03	4.36	6.73	9.51	12.77	16.98	21.8	27.52	34
17	2.12	4.55	7.02	9.9	13.26	17.48	22.26	27.91	34.54
18	2.23	4.74	7.32	10.3	13.75	17.97	22.7	28.26	35.05
19	2.34	4.94	7.63	10.71	14.26	18.47	23.13	28.59	35.54
20	2.47	5.15	7.95	11.13	14.78	18.97	23.56	28.94	36.02
21	2.6	5.36	8.27	11.56	15.3	19.47	24.02	29.31	36.51
22	2.74	5.57	8.59	11.99	15.82	19.98	24.49	29.73	37.01
23	2.88	5.79	8.91	12.43	16.34	20.49	24.99	30.2	37.51
24	3.03	6.01	9.23	12.86	16.85	21	25.51	30.73	38.04
25	3.17	6.23	9.55	13.29	17.35	21.51	26.04	31.31	38.57
26	3.32	6.45	9.86	13.71	17.83	22.01	26.59	31.93	39.1
27	3.45	6.66	10.16	14.11	18.29	22.5	27.15	32.58	39.64
28	3.58	6.87	10.46	14.51	18.73	22.97	27.7	33.24	40.17
29	3.7	7.07	10.74	14.89	19.14	23.43	28.23	33.9	40.68
30	3.82	7.27	11.02	15.26	19.54	23.86	28.75	34.54	41.17
31	3.92	7.46	11.28	15.61	19.91	24.27	29.23	35.15	41.63
32	4.02	7.65	11.54	15.94	20.27	24.66	29.69	35.72	42.06
33	4.12	7.83	11.79	16.26	20.6	25.03	30.1	36.23	42.45
34	4.2	8	12.04	16.57	20.92	25.37	30.48	36.69	42.81
35	4.29	8.17	12.28	16.87	21.22	25.69	30.82	37.08	43.13
36	4.37	8.34	12.51	17.16	21.51	25.99	31.13	37.42	43.42
37	4.46	8.51	12.75	17.43	21.79	26.27	31.4	37.7	43.68
38	4.55	8.68	12.98	17.71	22.07	26.55	31.66	37.94	43.92
39	4.64	8.86	13.22	17.97	22.34	26.81	31.9	38.15	44.16
40	4.74	9.04	13.46	18.23	22.61	27.08	32.14	38.33	44.38

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
41	4.84	9.22	13.7	18.5	22.88	27.34	32.38	38.51	44.61
42	4.95	9.41	13.95	18.76	23.16	27.61	32.63	38.7	44.86
43	5.07	9.61	14.21	19.02	23.44	27.88	32.91	38.91	45.12
44	5.19	9.82	14.47	19.29	23.73	28.17	33.21	39.14	45.4
45	5.32	10.03	14.73	19.56	24.03	28.47	33.54	39.42	45.7
46	5.46	10.26	15.01	19.83	24.33	28.79	33.9	39.73	46.03
47	5.6	10.49	15.29	20.11	24.64	29.12	34.3	40.09	46.38
48	5.74	10.73	15.58	20.4	24.96	29.48	34.73	40.49	46.76
49	5.89	10.97	15.87	20.69	25.29	29.84	35.18	40.93	47.15
50	6.04	11.23	16.18	20.99	25.63	30.23	35.66	41.39	47.55
51	6.19	11.49	16.49	21.31	25.98	30.62	36.15	41.88	47.95
52	6.35	11.76	16.81	21.63	26.33	31.03	36.65	42.36	48.34
53	6.51	12.04	17.14	21.97	26.69	31.45	37.14	42.83	48.73
54	6.68	12.34	17.49	22.32	27.06	31.87	37.62	43.28	49.08
55	6.86	12.65	17.85	22.69	27.44	32.29	38.07	43.69	49.42
56	7.05	12.98	18.23	23.08	27.83	32.71	38.49	44.05	49.72
57	7.26	13.33	18.63	23.49	28.23	33.14	38.88	44.36	50
58	7.49	13.71	19.06	23.92	28.65	33.57	39.23	44.6	50.25
59	7.75	14.13	19.52	24.39	29.1	34	39.55	44.79	50.49
60	8.05	14.58	20.02	24.89	29.56	34.43	39.83	44.93	50.72
61	8.4	15.09	20.56	25.44	30.06	34.88	40.09	45.03	50.97
62	8.79	15.65	21.15	26.03	30.6	35.36	40.35	45.13	51.25
63	9.25	16.27	21.8	26.67	31.19	35.86	40.63	45.23	51.59
64	9.77	16.96	22.51	27.37	31.84	36.41	40.94	45.39	52.01
65	10.36	17.72	23.29	28.14	32.56	37.02	41.32	45.63	52.56
66	11.03	18.56	24.15	28.99	33.35	37.7	41.79	46	53.25
67	11.79	19.49	25.08	29.92	34.24	38.48	42.39	46.54	54.13
68	12.62	20.5	26.11	30.94	35.24	39.38	43.16	47.31	55.21
69	13.54	21.6	27.23	32.06	36.35	40.41	44.12	48.33	56.53
70	14.54	22.79	28.44	33.29	37.6	41.6	45.32	49.65	58.11
71	15.63	24.07	29.75	34.64	38.99	42.97	46.77	51.3	59.95
72	16.8	25.44	31.17	36.11	40.54	44.54	48.5	53.29	62.06
73	18.04	26.89	32.69	37.72	42.26	46.33	50.53	55.64	64.44
74	19.36	28.43	34.32	39.47	44.15	48.35	52.87	58.34	67.06
75	20.75	30.05	36.07	41.37	46.24	50.6	55.5	61.37	69.9
76	22.21	31.76	37.93	43.42	48.51	53.1	58.42	64.68	72.91
77	23.74	33.55	39.91	45.63	50.98	55.84	61.6	68.24	76.05
78	25.36	35.43	42.02	48.01	53.64	58.81	65	71.96	79.24
79	27.07	37.42	44.27	50.56	56.48	61.98	68.57	75.76	82.41
80	28.89	39.52	46.67	53.28	59.5	65.34	72.25	79.55	85.5
81	30.86	41.77	49.23	56.17	62.67	68.84	75.96	83.24	88.42
82	33.01	44.19	51.97	59.22	65.97	72.44	79.63	86.71	91.09

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
83	35.38	46.82	54.91	62.44	69.37	76.08	83.18	89.87	93.45
84	38.04	49.7	58.05	65.8	72.84	79.69	86.52	92.65	95.45
85	41.03	52.87	61.43	69.28	76.34	83.21	89.58	94.97	97.05
86	44.44	56.39	65.06	72.88	79.8	86.55	92.28	96.8	98.24
87	48.32	60.29	68.93	76.55	83.19	89.65	94.58	98.14	99.05
88	52.75	64.6	73.04	80.25	86.43	92.42	96.44	99.02	99.52
89	57.75	69.33	77.36	83.93	89.47	94.8	97.86	99.51	99.73
90	63.34	74.43	81.82	87.52	92.23	96.73	98.85	99.71	99.77
91	69.48	79.83	86.32	90.92	94.65	98.19	99.47	99.77	99.77
92	76.06	85.33	90.69	94.02	96.68	99.16	99.78	99.79	99.8
93	82.86	90.66	94.67	96.68	98.26	99.71	99.89	99.89	99.95
94	89.53	95.36	97.92	98.72	99.34	99.9	99.9	100	100
95	95.51	98.78	99.92	99.92	99.92	99.92	99.92	100	100
96	100	100	100	100	100	100	100	100	100

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
CUMULATIVE PERCENTAGES OF TOTAL PRECIPITATION FOR ALL CASES									
0	0	0	0	0	0	0	0	0	0
1	0.58	0.58	0.7	1.14	1.34	2.21	3.38	4.95	8.72
2	0.88	1.04	1.45	2.26	2.93	4.47	6.55	9.38	16.13
3	1.03	1.44	2.21	3.34	4.61	6.69	9.52	13.41	22.48
4	1.13	1.81	2.94	4.39	6.26	8.85	12.3	17.12	27.99
5	1.21	2.18	3.65	5.42	7.84	10.92	14.91	20.59	32.84
6	1.31	2.54	4.32	6.44	9.33	12.89	17.38	23.87	37.18
7	1.42	2.91	4.98	7.45	10.73	14.78	19.75	27	41.11
8	1.56	3.29	5.62	8.45	12.07	16.59	22.03	30.01	44.74
9	1.71	3.69	6.27	9.45	13.36	18.34	24.25	32.91	48.14
10	1.87	4.09	6.93	10.46	14.63	20.04	26.43	35.73	51.35
11	2.04	4.5	7.61	11.47	15.91	21.72	28.59	38.47	54.42
12	2.22	4.93	8.31	12.5	17.2	23.38	30.73	41.15	57.38
13	2.4	5.37	9.05	13.54	18.52	25.03	32.87	43.75	60.24
14	2.58	5.83	9.81	14.6	19.87	26.7	35.01	46.3	63.02
15	2.77	6.3	10.6	15.67	21.27	28.37	37.14	48.79	65.71
16	2.97	6.79	11.41	16.76	22.71	30.06	39.27	51.22	68.32
17	3.18	7.3	12.25	17.86	24.18	31.78	41.39	53.59	70.85
18	3.4	7.83	13.1	18.98	25.68	33.51	43.5	55.9	73.29
19	3.65	8.38	13.97	20.12	27.2	35.26	45.59	58.16	75.64
20	3.9	8.96	14.85	21.27	28.74	37.02	47.65	60.37	77.88
21	4.18	9.54	15.74	22.43	30.28	38.8	49.69	62.52	80.02
22	4.48	10.15	16.63	23.6	31.82	40.58	51.69	64.62	82.04
23	4.79	10.77	17.53	24.78	33.36	42.37	53.64	66.67	83.95
24	5.11	11.4	18.42	25.97	34.88	44.15	55.56	68.66	85.73
25	5.45	12.04	19.31	27.16	36.39	45.91	57.43	70.59	87.39
26	5.8	12.69	20.21	28.36	37.87	47.67	59.26	72.47	88.92
27	6.15	13.34	21.1	29.56	39.34	49.41	61.04	74.3	90.33
28	6.51	13.99	21.99	30.76	40.79	51.12	62.77	76.07	91.62
29	6.86	14.64	22.89	31.97	42.23	52.81	64.45	77.78	92.78
30	7.22	15.29	23.79	33.17	43.65	54.46	66.1	79.43	93.83
31	7.57	15.94	24.69	34.38	45.05	56.09	67.7	81.02	94.77
32	7.92	16.58	25.61	35.59	46.45	57.69	69.26	82.55	95.6
33	8.26	17.22	26.53	36.8	47.84	59.25	70.79	84.02	96.33
34	8.61	17.87	27.47	38.01	49.23	60.78	72.28	85.42	96.96
35	8.95	18.51	28.42	39.23	50.62	62.28	73.75	86.75	97.52
36	9.3	19.16	29.38	40.45	52	63.75	75.18	88.01	97.99
37	9.66	19.82	30.36	41.68	53.39	65.18	76.59	89.21	98.39
38	10.02	20.49	31.36	42.91	54.77	66.59	77.97	90.33	98.72
39	10.4	21.18	32.37	44.14	56.16	67.97	79.32	91.39	99
40	10.8	21.88	33.41	45.39	57.54	69.33	80.65	92.37	99.23

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
41	11.22	22.61	34.46	46.64	58.93	70.66	81.96	93.28	99.42
42	11.67	23.37	35.53	47.9	60.3	71.96	83.23	94.12	99.56
43	12.15	24.15	36.62	49.17	61.67	73.25	84.47	94.89	99.68
44	12.66	24.97	37.73	50.44	63.03	74.51	85.69	95.59	99.77
45	13.21	25.83	38.87	51.72	64.38	75.76	86.87	96.23	99.84
46	13.8	26.73	40.02	53.01	65.7	76.99	88	96.8	99.88
47	14.42	27.67	41.19	54.31	67.01	78.19	89.1	97.3	99.92
48	15.08	28.64	42.38	55.61	68.3	79.38	90.16	97.75	99.94
49	15.78	29.66	43.6	56.92	69.57	80.55	91.16	98.15	99.96
50	16.52	30.72	44.83	58.24	70.81	81.7	92.11	98.49	99.97
51	17.29	31.82	46.09	59.56	72.03	82.83	93.01	98.78	99.98
52	18.1	32.95	47.37	60.88	73.23	83.94	93.86	99.03	99.98
53	18.94	34.13	48.67	62.2	74.41	85.03	94.64	99.24	99.98
54	19.81	35.33	50	63.53	75.56	86.09	95.36	99.41	99.98
55	20.71	36.57	51.35	64.85	76.7	87.12	96.03	99.55	99.98
56	21.63	37.85	52.72	66.18	77.83	88.12	96.63	99.66	99.98
57	22.59	39.15	54.12	67.5	78.94	89.09	97.17	99.75	99.98
58	23.57	40.48	55.54	68.83	80.04	90.03	97.65	99.81	99.98
59	24.59	41.84	56.98	70.15	81.13	90.93	98.08	99.86	99.98
60	25.64	43.23	58.44	71.47	82.21	91.8	98.45	99.89	99.98
61	26.73	44.64	59.92	72.79	83.3	92.63	98.76	99.92	99.99
62	27.87	46.08	61.42	74.11	84.38	93.41	99.03	99.93	99.99
63	29.06	47.55	62.93	75.42	85.46	94.15	99.25	99.94	99.99
64	30.3	49.05	64.45	76.74	86.53	94.85	99.44	99.95	99.99
65	31.6	50.59	65.98	78.05	87.6	95.5	99.58	99.95	99.99
66	32.98	52.16	67.51	79.35	88.65	96.1	99.7	99.95	99.99
67	34.43	53.76	69.05	80.65	89.7	96.65	99.78	99.95	100
68	35.97	55.4	70.59	81.94	90.72	97.16	99.85	99.95	100
69	37.59	57.08	72.12	83.23	91.72	97.61	99.89	99.95	100
70	39.3	58.8	73.65	84.5	92.69	98.02	99.92	99.95	100
71	41.1	60.57	75.17	85.76	93.62	98.39	99.94	99.95	100
72	42.99	62.37	76.67	87	94.51	98.7	99.95	99.96	100
73	44.97	64.2	78.16	88.22	95.34	98.98	99.96	99.96	100
74	47.03	66.07	79.64	89.41	96.11	99.21	99.96	99.97	100
75	49.17	67.97	81.1	90.56	96.81	99.4	99.96	99.97	100
76	51.37	69.88	82.54	91.68	97.44	99.56	99.96	99.98	100
77	53.62	71.82	83.97	92.75	97.99	99.68	99.96	99.98	100
78	55.92	73.75	85.38	93.76	98.47	99.78	99.96	99.98	100
79	58.25	75.69	86.76	94.71	98.87	99.85	99.96	99.98	100
80	60.6	77.61	88.13	95.59	99.2	99.9	99.97	99.99	100
81	62.96	79.51	89.48	96.4	99.46	99.93	99.97	99.99	100
82	65.33	81.38	90.79	97.13	99.65	99.95	99.98	99.99	100

Time	Percent of occurrence								
hours	90%	80%	70%	60%	50%	40%	30%	20%	10%
83	67.72	83.21	92.07	97.77	99.79	99.96	99.98	99.99	100
84	70.11	85	93.3	98.33	99.88	99.97	99.98	99.99	100
85	72.54	86.74	94.48	98.79	99.93	99.97	99.99	99.99	100
86	75	88.42	95.58	99.17	99.96	99.97	99.99	99.99	100
87	77.53	90.06	96.6	99.46	99.97	99.97	99.99	99.99	100
88	80.13	91.64	97.51	99.68	99.97	99.97	99.99	99.99	100
89	82.84	93.16	98.29	99.83	99.97	99.98	99.99	99.99	100
90	85.65	94.62	98.93	99.92	99.97	99.98	99.99	99.99	100
91	88.54	96.02	99.42	99.97	99.98	99.99	99.99	100	100
92	91.48	97.31	99.74	99.99	99.99	99.99	99.99	100	100
93	94.34	98.45	99.9	99.99	99.99	99.99	99.99	100	100
94	96.94	99.37	99.95	99.99	99.99	99.99	100	100	100
95	98.98	99.95	99.95	99.99	99.99	99.99	100	100	100
96	100	100	100	100	100	100	100	100	100



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