

ATTACHMENT 4

MONTICELLO NUCLEAR GENERATING PLANT

License Amendment Request to Revise the Emergency Action Level Scheme

Supporting Calculations for Emergency Action Level Thresholds

CA-02-179, "MNGP 125 Volt Div. I Battery Calculation," with only Attachment K
(supports CU4, SG8, and SS8)

CA-02-192, "MNGP 125 Volt Div II Battery Calculation," with only Attachment K
(supports CU4, SG8 and SS8)

CA-04-194, "Containment High Range Radiation Monitor (CHRRM) Response to
Drywell Airborne Activity," including Minor Revision, with Attachment C as annotated
(supports Fission Product Barrier EALs)

CA-04-199, "Methodology Used to Derive Radiation Monitor Readings
for NEI 99-01, Rev 6," full calculation
(supports RU1, RA1, RS1 and RG1)

CA-04-202, "Dose Rates to CHRRM Detectors Due to Drop
in RPV Water Level," without Attachments
(supports CS1 and CG1)

(178 pages to follow)



1.0 Purpose/Objective

This minor revision is prepared to revise the DCSDM scenario step time entry format to address the issue documented under CAP AR 01474466. Specifically, colons are replaced with periods between the digits for seconds and tenths of a second.

The pending changes associated with EC 25695 and EC 25753 are also incorporated in the DCSDM database under this minor revision.

2.0 Methodology

The methodology of Revision 003 remains unaffected.

3.0 Acceptance Criteria

Acceptance criteria are not changed by this minor revision.

4.0 Assumptions

This minor revision adds no assumptions.

5.0 References

The following references are added under this minor revision:

5.9 DC Load Study Reports

5.9.1 DC Load Study Report EC 25695 – Evaluate Replacement for Obsolete Relays ESRX1/2, ZSR1/2, MSR1/2, VSR1/2

5.9.2 DC Load Study Report EC 25753 – Replace Normally Energized HGA Relays with Century Coil HGA Relay

6.0 Input Data

Revision 003 inputs are unaffected by this minor revision.

7.0 Calculation

The database file which was used to perform this analysis is:
02-179_Rev003A.db, 02/18/2016 11:09, 19,130,368 bytes

8.0 Results and Conclusions

The conclusions of revision 003 remain unchanged in that the battery is sufficiently sized to support the required duty cycle.

8.1 Device Voltage

All devices analyzed meet the acceptance criteria defined in Revision 003 Section 3.2 with the following justifications:

Items with negative voltage margins are identified in Attachment C, along with justifications for their acceptability. These justifications are unchanged by minor revision 003A.



The minimum battery voltage is 105.235 volts in the last minute of the scenario (105.509 volts in the next to last minute). Per Revision 003 section 2.2, the battery sizing will be performed using the device with the lowest positive voltage delta (from Attachment B) and the calculated terminal voltage for the battery at that time or using 105.0 Vdc, whichever is higher. Additionally, the resolutions the devices in Attachment C are also included in this review since the validity of those resolutions is dependent upon maintaining adequate voltage at the nodes supplying the devices.

The margin between the minimum calculated battery voltage and 105.0 Vdc is 0.509 Vdc (105.509-105) during the next to last minute and 0.235 Vdc (105.235 -105.0) during the last minute. The low margin loads were determined from a review of the Path Voltage Drop summary (Attachment B), Node Voltages (Attachment F), and the resolutions for items in Attachment C.

There are several loads associated with breaker controls on nodes 18 and 20 that are shown as marginal at times other than the last two minutes of the scenario. A review of these items indicates that those loads that must pick up during those times would have adequate voltage with a battery voltage of 105 Vdc. Those loads that are already energized during those marginal times would remain energized due to their hold in voltage being less than pickup voltage.

During the last 2 minutes of the scenario, there are several devices supplied from Panel C-91 (EDG #11 controls), with voltage margins of less than 0.509 Vdc in the next to last minute or 0.235 Vdc in the last minute. These are all loads that are previously energized and only dip to these lower voltages during spring charge inrush or EDG field flash and would remain energized since their dropout voltages are significantly less than their pickup voltage.

The remaining loads in attachment B have a greater margin than 0.509 Vdc. Therefore the battery will be sized to 105.0 Vdc.

8.2. Battery Sizing

8.2.1. Minimum Battery Terminal Voltage

The minimum battery terminal voltage from Attachment F is 105.235 Volts. The minimum required battery terminal voltage as determined by the methodology outlined in Revision 003 Section 2.2 and as described in section 8.1 is then 105.00 Vdc. This voltage translates to 1.81 volts per cell for the 58 cell battery (105.00 Vdc).

8.2.2. Minimum Required Battery Size

Battery D1 (C&D KCR-13 Cells) was shown to be adequately sized for the evaluated scenario and corresponding load profile. The acceptability of the battery is based on the results of Attachment H. The battery size is determined using a minimum required battery terminal voltage of 105.00 Vdc. An additional 1.0 Adc constant impedance load is included on panel D11 to allow for future load additions.

<u>Scenario</u>	<u>Required Battery Size</u>	<u>Actual Battery Size</u>	<u>Spare Capacity</u>
D1DBA	5.65 Positive Plates	6 Positive Plates	6.38%



8.2.3. Minimum Number of Cells

Based on these results, an analysis of the battery will not be performed to determine the number of cells that can be removed from service while maintaining adequate battery capacity as it is clear that there is not adequate margin to remove a cell and maintain a positive design margin with cells removed and the parameters used in this calculation.

8.3. Margin Load

An additional 1.0 Adc constant impedance load is included on panel D11 to allow for future load additions.

8.4. Cable Ampacity Verification

The cables in the system are sized adequately with regard to ampacity as described in section 7.7 of major revision 003.

9.0 Plant Impact

9.1. No new Future Actions are identified in this minor revision.

**Attachment K
Voltage Profile**

By: _____ Date: _____

Check: _____ Date: _____

CA-02-179, "MNGP 125 Volt Div. I Battery Calculation"

Voltage Profile

Generation Date: 02/17/2016 10:29 am

Battery: D1

Load (amperes)	Corrected Load (amps)	Time (min.)	AMP-HRS Removed	AMP-HR/ Pos Plt	AMPS/ Pos Plt	Cell Voltage (Volts)	Terminal Voltage (Volts)
149.09	183.69	1	3.06	0.51	30.62	* 1.902	110.29
77.97	96.07	2	4.66	0.78	16.01	1.942	112.62
77.81	95.88	3	6.26	1.04	15.98	1.942	112.62
77.81	95.88	4	7.86	1.31	15.98	1.941	112.61
77.81	95.88	5	9.46	1.58	15.98	1.941	112.60
77.81	95.88	6	11.05	1.84	15.98	1.941	112.59
77.81	95.88	7	12.65	2.11	15.98	1.941	112.58
77.81	95.88	8	14.25	2.38	15.98	1.941	112.57
77.81	95.88	9	15.85	2.64	15.98	1.941	112.56
77.81	95.88	10	17.45	2.91	15.98	1.940	112.55
77.81	95.88	11	19.04	3.17	15.98	1.940	112.53
77.81	95.88	12	20.64	3.44	15.98	1.940	112.52
77.81	95.88	13	22.24	3.71	15.98	1.940	112.51
77.81	95.88	14	23.84	3.97	15.98	1.940	112.50
77.81	95.88	15	25.44	4.24	15.98	1.939	112.49
77.81	95.88	16	27.03	4.51	15.98	1.939	112.48
77.81	95.88	17	28.63	4.77	15.98	1.939	112.47
77.81	95.88	18	30.23	5.04	15.98	1.939	112.46
77.81	95.88	19	31.83	5.30	15.98	1.939	112.45
77.81	95.88	20	33.43	5.57	15.98	1.939	112.43
77.81	95.88	21	35.02	5.84	15.98	1.938	112.42
77.81	95.88	22	36.62	6.10	15.98	1.938	112.41
77.81	95.88	23	38.22	6.37	15.98	1.938	112.40
77.81	95.88	24	39.82	6.64	15.98	1.938	112.39
77.81	95.88	25	41.41	6.90	15.98	1.938	112.38
77.81	95.88	26	43.01	7.17	15.98	1.937	112.36
77.81	95.88	27	44.61	7.44	15.98	1.937	112.35
77.81	95.88	28	46.21	7.70	15.98	1.937	112.34
77.81	95.88	29	47.81	7.97	15.98	1.937	112.33
83.39	102.75	30	49.52	8.25	17.12	1.933	112.11
64.85	79.90	31	50.85	8.48	13.32	1.944	112.77
64.85	79.90	32	52.18	8.70	13.32	1.944	112.77
64.85	79.90	33	53.51	8.92	13.32	1.944	112.76
64.85	79.90	34	54.85	9.14	13.32	1.944	112.75
64.85	79.90	35	56.18	9.36	13.32	1.944	112.74
64.85	79.90	36	57.51	9.58	13.32	1.944	112.73
64.85	79.90	37	58.84	9.81	13.32	1.943	112.72
64.85	79.90	38	60.17	10.03	13.32	1.943	112.71
64.85	79.90	39	61.50	10.25	13.32	1.943	112.70
64.85	79.90	40	62.84	10.47	13.32	1.943	112.69
64.85	79.90	41	64.17	10.69	13.32	1.943	112.68

* Denotes Extrapolated Data. Please Verify the Battery Characteristics Library.

CA-02-179, "MNGP 125 Volt Div. I Battery Calculation"

Voltage Profile

Generation Date: 02/17/2016 10:29 am

Battery: D1

Load (amperes)	Corrected Load (amps)	Time (min.)	AMP-HRS Removed	AMP-HR/ Pos Plt	AMPS/ Pos Plt	Cell Voltage (Volts)	Terminal Voltage (Volts)
64.85	79.90	42	65.50	10.92	13.32	1.943	112.67
64.85	79.90	43	66.83	11.14	13.32	* 1.942	112.66
64.85	79.90	44	68.16	11.36	13.32	* 1.942	112.65
64.85	79.90	45	69.49	11.58	13.32	* 1.942	112.64
64.85	79.90	46	70.83	11.80	13.32	* 1.942	112.64
64.85	79.90	47	72.16	12.03	13.32	* 1.942	112.63
64.85	79.90	48	73.49	12.25	13.32	* 1.942	112.62
64.85	79.90	49	74.82	12.47	13.32	1.941	112.61
64.85	79.90	50	76.15	12.69	13.32	1.941	112.59
64.85	79.90	51	77.48	12.91	13.32	1.941	112.58
64.85	79.90	52	78.82	13.14	13.32	1.941	112.57
64.85	79.90	53	80.15	13.36	13.32	1.941	112.56
64.85	79.90	54	81.48	13.58	13.32	1.941	112.55
64.85	79.90	55	82.81	13.80	13.32	1.940	112.54
64.85	79.90	56	84.14	14.02	13.32	1.940	112.53
64.85	79.90	57	85.47	14.25	13.32	1.940	112.52
64.85	79.90	58	86.81	14.47	13.32	1.940	112.51
64.85	79.90	59	88.14	14.69	13.32	1.940	112.50
65.51	80.72	60	89.48	14.91	13.45	1.939	112.46
64.76	79.79	61	90.81	15.14	13.30	1.939	112.48
64.76	79.79	62	92.14	15.36	13.30	1.939	112.47
64.76	79.79	63	93.47	15.58	13.30	1.939	112.46
64.76	79.79	64	94.80	15.80	13.30	1.939	112.45
64.76	79.79	65	96.13	16.02	13.30	1.939	112.44
64.76	79.79	66	97.46	16.24	13.30	1.938	112.43
64.76	79.79	67	98.79	16.47	13.30	1.938	112.42
64.76	79.79	68	100.12	16.69	13.30	1.938	112.40
64.76	79.79	69	101.45	16.91	13.30	1.938	112.39
64.76	79.79	70	102.78	17.13	13.30	1.938	112.38
64.76	79.79	71	104.11	17.35	13.30	1.937	112.37
64.76	79.79	72	105.44	17.57	13.30	1.937	112.36
64.76	79.79	73	106.77	17.80	13.30	1.937	112.35
64.76	79.79	74	108.10	18.02	13.30	1.937	112.34
64.76	79.79	75	109.43	18.24	13.30	1.937	112.32
64.76	79.79	76	110.76	18.46	13.30	1.936	112.31
64.76	79.79	77	112.09	18.68	13.30	1.936	112.30
64.76	79.79	78	113.42	18.90	13.30	1.936	112.29
64.76	79.79	79	114.75	19.12	13.30	1.936	112.28
64.76	79.79	80	116.08	19.35	13.30	1.936	112.26
64.76	79.79	81	117.41	19.57	13.30	1.935	112.25
64.76	79.79	82	118.74	19.79	13.30	1.935	112.24

*** Denotes Extrapolated Data. Please Verify the Battery Characteristics Library.

CA-02-179, "MNGP 125 Volt Div. I Battery Calculation"

Voltage Profile

Generation Date: 02/17/2016 10:29 am

Battery: D1

Load (amperes)	Corrected Load (amps)	Time (min.)	AMP-HRS Removed	AMP-HR/ Pos Plt	AMPS/ Pos Plt	Cell Voltage (Volts)	Terminal Voltage (Volts)
64.76	79.79	83	120.07	20.01	13.30	1.935	112.23
64.76	79.79	84	121.40	20.23	13.30	1.935	112.22
64.76	79.79	85	122.73	20.45	13.30	1.935	112.20
64.76	79.79	86	124.06	20.68	13.30	1.934	112.19
64.76	79.79	87	125.39	20.90	13.30	1.934	112.18
64.76	79.79	88	126.72	21.12	13.30	1.934	112.17
64.76	79.79	89	128.05	21.34	13.30	1.934	112.15
64.76	79.79	90	129.38	21.56	13.30	1.933	112.14
62.20	76.64	91	130.66	21.78	12.77	1.935	112.24
62.20	76.64	92	131.93	21.99	12.77	1.935	112.23
62.20	76.64	93	133.21	22.20	12.77	* 1.935	112.22
62.20	76.64	94	134.49	22.41	12.77	* 1.935	112.20
62.20	76.64	95	135.76	22.63	12.77	* 1.934	112.19
62.20	76.64	96	137.04	22.84	12.77	* 1.934	112.18
62.20	76.64	97	138.32	23.05	12.77	* 1.934	112.17
62.20	76.64	98	139.60	23.27	12.77	* 1.934	112.15
62.20	76.64	99	140.87	23.48	12.77	* 1.933	112.14
62.20	76.64	100	142.15	23.69	12.77	1.933	112.13
62.20	76.64	101	143.43	23.90	12.77	1.933	112.12
62.20	76.64	102	144.71	24.12	12.77	1.933	112.10
62.20	76.64	103	145.98	24.33	12.77	1.933	112.09
62.20	76.64	104	147.26	24.54	12.77	1.932	112.08
62.20	76.64	105	148.54	24.76	12.77	1.932	112.06
62.20	76.64	106	149.82	24.97	12.77	1.932	112.05
62.20	76.64	107	151.09	25.18	12.77	1.932	112.04
62.20	76.64	108	152.37	25.39	12.77	1.931	112.03
62.20	76.64	109	153.65	25.61	12.77	1.931	112.01
62.20	76.64	110	154.92	25.82	12.77	1.931	112.00
62.20	76.64	111	156.20	26.03	12.77	1.931	111.98
62.20	76.64	112	157.48	26.25	12.77	1.931	111.97
62.20	76.64	113	158.76	26.46	12.77	1.930	111.96
62.20	76.64	114	160.03	26.67	12.77	1.930	111.94
62.20	76.64	115	161.31	26.89	12.77	1.930	111.93
62.20	76.64	116	162.59	27.10	12.77	1.930	111.91
62.20	76.64	117	163.87	27.31	12.77	1.929	111.90
62.20	76.64	118	165.14	27.52	12.77	1.929	111.89
62.20	76.64	119	166.42	27.74	12.77	1.929	111.87
127.83	157.50	120	169.05	28.17	26.25	1.877	108.84
62.21	76.65	121	170.32	28.39	12.78	1.928	111.83
62.21	76.65	122	171.60	28.60	12.78	1.928	111.81
62.21	76.65	123	172.88	28.81	12.78	1.928	111.80

* Denotes Extrapolated Data. Please Verify the Battery Characteristics Library.

CA-02-179, "MNGP 125 Volt Div. I Battery Calculation"

Voltage Profile

Generation Date: 02/17/2016 10:29 am

Battery: D1

Load (amperes)	Corrected Load (amps)	Time (min.)	AMP-HRS Removed	AMP-HR/ Pos Plt	AMPS/ Pos Plt	Cell Voltage (Volts)	Terminal Voltage (Volts)
62.21	76.65	124	174.16	29.03	12.78	1.927	111.78
62.21	76.65	125	175.43	29.24	12.78	1.927	111.77
62.21	76.65	126	176.71	29.45	12.78	1.927	111.75
62.21	76.65	127	177.99	29.66	12.78	1.927	111.74
62.21	76.65	128	179.27	29.88	12.78	1.926	111.72
62.21	76.65	129	180.54	30.09	12.78	1.926	111.71
62.21	76.65	130	181.82	30.30	12.78	1.926	111.69
62.21	76.65	131	183.10	30.52	12.78	1.925	111.68
62.21	76.65	132	184.38	30.73	12.78	1.925	111.66
62.21	76.65	133	185.65	30.94	12.78	1.925	111.64
62.21	76.65	134	186.93	31.16	12.78	1.925	111.63
62.21	76.65	135	188.21	31.37	12.78	1.924	111.61
62.21	76.65	136	189.49	31.58	12.78	1.924	111.60
62.21	76.65	137	190.76	31.79	12.78	1.924	111.58
62.21	76.65	138	192.04	32.01	12.78	1.924	111.56
62.21	76.65	139	193.32	32.22	12.78	1.923	111.55
62.21	76.65	140	194.60	32.43	12.78	1.923	111.53
62.21	76.65	141	195.87	32.65	12.78	1.923	111.51
62.21	76.65	142	197.15	32.86	12.78	1.922	111.50
62.21	76.65	143	198.43	33.07	12.78	1.922	111.48
62.21	76.65	144	199.71	33.28	12.78	1.922	111.46
62.21	76.65	145	200.98	33.50	12.78	1.921	111.45
62.21	76.65	146	202.26	33.71	12.78	1.921	111.43
62.21	76.65	147	203.54	33.92	12.78	1.921	111.41
62.21	76.65	148	204.82	34.14	12.78	1.921	111.39
62.21	76.65	149	206.09	34.35	12.78	1.920	111.38
62.21	76.65	150	207.37	34.56	12.78	1.920	111.36
67.25	82.86	151	208.75	34.79	13.81	1.915	111.06
110.60	136.26	152	211.02	35.17	22.71	1.875	108.75
61.96	76.34	153	212.30	35.38	12.72	1.919	111.30
61.96	76.34	154	213.57	35.59	12.72	1.919	111.28
61.96	76.34	155	214.84	35.81	12.72	1.918	111.27
61.96	76.34	156	216.11	36.02	12.72	1.918	111.25
61.96	76.34	157	217.39	36.23	12.72	1.918	111.23
61.96	76.34	158	218.66	36.44	12.72	1.917	111.21
61.96	76.34	159	219.93	36.66	12.72	1.917	111.19
61.96	76.34	160	221.20	36.87	12.72	1.917	111.17
61.96	76.34	161	222.48	37.08	12.72	1.916	111.15
61.96	76.34	162	223.75	37.29	12.72	1.916	111.13
61.96	76.34	163	225.02	37.50	12.72	1.916	111.11
61.96	76.34	164	226.29	37.72	12.72	1.915	111.09

*** Denotes Extrapolated Data. Please Verify the Battery Characteristics Library.

CA-02-179, "MNGP 125 Volt Div. I Battery Calculation"

Voltage Profile

Generation Date: 02/17/2016 10:29 am

Battery: D1

Load (amperes)	Corrected Load (amps)	Time (min.)	AMP-HRS Removed	AMP-HR/ Pos Pit	AMPS/ Pos Pit	Cell Voltage (Volts)	Terminal Voltage (Volts)
61.96	76.34	165	227.56	37.93	12.72	1.915	111.07
61.96	76.34	166	228.84	38.14	12.72	1.915	111.05
61.96	76.34	167	230.11	38.35	12.72	1.914	111.03
61.96	76.34	168	231.38	38.56	12.72	1.914	111.01
61.96	76.34	169	232.65	38.78	12.72	1.914	110.99
61.96	76.34	170	233.93	38.99	12.72	1.913	110.97
61.96	76.34	171	235.20	39.20	12.72	1.913	110.95
61.96	76.34	172	236.47	39.41	12.72	1.913	110.93
61.96	76.34	173	237.74	39.62	12.72	1.912	110.91
61.96	76.34	174	239.02	39.84	12.72	1.912	110.89
61.96	76.34	175	240.29	40.05	12.72	1.911	110.86
61.96	76.34	176	241.56	40.26	12.72	1.911	110.84
61.96	76.34	177	242.83	40.47	12.72	1.911	110.82
61.96	76.34	178	244.11	40.68	12.72	1.910	110.80
61.96	76.34	179	245.38	40.90	12.72	1.910	110.78
61.96	76.34	180	246.65	41.11	12.72	1.910	110.75
61.81	76.15	181	247.92	41.32	12.69	1.909	110.74
61.81	76.15	182	249.19	41.53	12.69	1.909	110.72
61.81	76.15	183	250.46	41.74	12.69	1.909	110.70
61.81	76.15	184	251.73	41.95	12.69	1.908	110.67
61.81	76.15	185	253.00	42.17	12.69	1.908	110.65
61.81	76.15	186	254.27	42.38	12.69	1.907	110.63
61.81	76.15	187	255.54	42.59	12.69	1.907	110.61
61.81	76.15	188	256.80	42.80	12.69	1.907	110.58
61.81	76.15	189	258.07	43.01	12.69	1.906	110.56
61.81	76.15	190	259.34	43.22	12.69	1.906	110.54
61.81	76.15	191	260.61	43.44	12.69	1.905	110.51
61.81	76.15	192	261.88	43.65	12.69	1.905	110.49
61.81	76.15	193	263.15	43.86	12.69	1.905	110.47
61.81	76.15	194	264.42	44.07	12.69	1.904	110.44
61.81	76.15	195	265.69	44.28	12.69	1.904	110.42
61.81	76.15	196	266.96	44.49	12.69	1.903	110.39
61.81	76.15	197	268.23	44.70	12.69	1.903	110.37
61.81	76.15	198	269.50	44.92	12.69	1.902	110.34
61.81	76.15	199	270.77	45.13	12.69	1.902	110.32
61.81	76.15	200	272.03	45.34	12.69	1.902	110.29
61.81	76.15	201	273.30	45.55	12.69	1.901	110.26
61.81	76.15	202	274.57	45.76	12.69	1.901	110.24
61.81	76.15	203	275.84	45.97	12.69	1.900	110.21
61.81	76.15	204	277.11	46.19	12.69	1.900	110.19
61.81	76.15	205	278.38	46.40	12.69	1.899	110.16

''' Denotes Extrapolated Data. Please Verify the Battery Characteristics Library.

CA-02-179, "MNGP 125 Volt Div. I Battery Calculation"

Voltage Profile

Generation Date: 02/17/2016 10:29 am

Battery: D1

Load (amperes)	Corrected Load (amps)	Time (min.)	AMP-HRS Removed	AMP-HR/ Pos Pit	AMPS/ Pos Pit	Cell Voltage (Volts)	Terminal Voltage (Volts)
61.81	76.15	206	279.65	46.61	12.69	1.899	110.13
61.81	76.15	207	280.92	46.82	12.69	1.898	110.11
61.81	76.15	208	282.19	47.03	12.69	1.898	110.08
61.81	76.15	209	283.46	47.24	12.69	1.898	110.06
61.81	76.15	210	284.73	47.45	12.69	1.897	110.03
61.62	75.93	211	285.99	47.67	12.65	1.897	110.02
61.62	75.93	212	287.26	47.88	12.65	1.896	109.99
61.62	75.93	213	288.52	48.09	12.65	1.896	109.96
61.62	75.93	214	289.79	48.30	12.65	1.895	109.93
61.62	75.93	215	291.05	48.51	12.65	1.895	109.91
61.62	75.93	216	292.32	48.72	12.65	1.894	109.88
61.62	75.93	217	293.58	48.93	12.65	1.894	109.85
61.62	75.93	218	294.85	49.14	12.65	1.893	109.82
61.62	75.93	219	296.12	49.35	12.65	1.893	109.79
61.62	75.93	220	297.38	49.56	12.65	1.892	109.76
61.62	75.93	221	298.65	49.77	12.65	1.892	109.73
61.62	75.93	222	299.91	49.99	12.65	1.891	109.70
61.62	75.93	223	301.18	50.20	12.65	1.891	109.67
61.62	75.93	224	302.44	50.41	12.65	1.890	109.64
61.62	75.93	225	303.71	50.62	12.65	1.890	109.61
61.62	75.93	226	304.97	50.83	12.65	1.889	109.58
61.62	75.93	227	306.24	51.04	12.65	1.889	109.55
61.62	75.93	228	307.50	51.25	12.65	1.888	109.51
61.62	75.93	229	308.77	51.46	12.65	1.888	109.48
61.62	75.93	230	310.04	51.67	12.65	1.887	109.45
61.62	75.93	231	311.30	51.88	12.65	1.887	109.42
61.62	75.93	232	312.57	52.09	12.65	1.886	109.38
61.62	75.93	233	313.83	52.31	12.65	1.885	109.35
61.62	75.93	234	315.10	52.52	12.65	1.885	109.32
61.62	75.93	235	316.36	52.73	12.65	1.884	109.28
61.62	75.93	236	317.63	52.94	12.65	1.884	109.25
61.62	75.93	237	318.89	53.15	12.65	1.883	109.22
61.62	75.93	238	320.16	53.36	12.65	1.882	109.18
105.63	130.14	239	322.33	53.72	21.69	1.819	105.51
108.28	133.42	240	324.55	54.09	22.24	1.814	105.24

^{***} Denotes Extrapolated Data. Please Verify the Battery Characteristics Library.