Engineer:

Location: Ayala Alabang Muntinlupa 16.2.0C Date: 04-12-2019

Contract: SN: APSI-PH001

Study Case: HA

Revision:

Base

Filename: Alabang R1P Config.: Normal

### VIHD (Individual Harmonic Distortion) Report

Bus	Voltage Distortion			
		Fund.	VIHD	
ID	kV	%	%	Order
Bus2	0.480	95.71	10.56	3.00
Bus3	0.480	95.46	10.53	3.00
Bus5	0.480	95.46	10.53	3.00
Bus6	0.480	95.44	10.53	3.00
Bus9	0.460	98.20	10.68	3.00
Bus10	0.460	99.02	10.59	3.00
Bus11	0.460	98.93	10.60	3.00
Bus13	0.460	98.84	10.61	3.00
Bus14	0.480	95.41	10.53	3.00
Bus15	0.240	94.00	2.59	3.00
Bus19	0.460	99.45	10.50	3.00
Bus2	0.480	95.71	4.11	7.00
Bus3	0.480	95.46	4.21	7.00
Bus5	0.480	95.46	4.21	7.00
Bus6	0.480	95.44	4.21	7.00
Bus9	0.460	98.20	4.22	7.00
Bus10	0.460	99.02	4.23	7.00
Bus11	0.460	98.93	4.24	7.00
Bus13	0.460	98.84	4.24	7.00
Bus14	0.480	95.41	4.21	7.00
Bus15	0.240	94.00	4.41	7.00
Bus19	0.460	99.45	4.21	7.00
Bus2	0.480	95.71	1.64	9.00
Bus3	0.480	95.46	1.63	9.00
Bus5	0.480	95.46	1.63	9.00
Bus6	0.480	95.44	1.63	9.00
Bus9	0.460	98.20	1.66	9.00
Bus10	0.460	99.02	1.64	9.00
Bus11	0.460	98.93	1.65	9.00
Bus13	0.460	98.84	1.65	9.00
Bus14	0.480	95.41	1.64	9.00
Bus19	0.460	99.45	1.63	9.00
Bus2	0.480	95.71	3.08	11.00
Bus3	0.480	95.46	3.17	11.00
Bus5	0.480	95.46	3.17	11.00
Bus6	0.480	95.44	3.18	11.00
Bus9	0.460	98.20	3.18	11.00
Bus10	0.460	99.02	3.19	11.00
Bus11	0.460	98.93	3.20	11.00
Bus13	0.460	98.84	3.20	11.00

Location: Ayala Alabang Muntinlupa 16.2.0C Date: 04-12-2019

Contract: SN: APSI-PH001

Study Case: HA

Revision:

Base

Filename: Alabang R1P Config.: Normal

Engineer:

Bus	Voltage Distortion				
		Fund.	VIHD		
ID	kV	%	%	Order	
Bus14	0.480	95.41	3.18	11.00	
Bus15	0.240	94.00	3.04	11.00	
Bus19	0.460	99.45	3.18	11.00	
Bus2	0.480	95.71	3.19	13.00	
Bus3	0.480	95.46	3.28	13.00	
Bus5	0.480	95.46	3.28	13.00	
Bus6	0.480	95.44	3.28	13.00	
Bus9	0.460	98.20	3.29	13.00	
Bus10	0.460	99.02	3.30	13.00	
Bus11	0.460	98.93	3.30	13.00	
Bus13	0.460	98.84	3.30	13.00	
Bus14	0.480	95.41	3.28	13.00	
Bus15	0.240	94.00	3.11	13.00	
Bus19	0.460	99.45	3.28	13.00	
Bus2	0.480	95.71	3.33	17.00	
Bus3	0.480	95.46	3.41	17.00	
Bus5	0.480	95.46	3.41	17.00	
Bus6	0.480	95.44	3.41	17.00	
Bus9	0.460	98.20	3.42	17.00	
Bus10	0.460	99.02	3.43	17.00	
Bus11	0.460	98.93	3.43	17.00	
Bus13	0.460	98.84	3.44	17.00	
Bus14	0.480	95.41	3.41	17.00	
Bus15	0.240	94.00	3.17	17.00	
Bus19	0.460	99.45	3.41	17.00	
Bus2	0.480	95.71	3.45	19.00	
Bus3	0.480	95.46	3.52	19.00	
Bus5	0.480	95.46	3.52	19.00	
Bus6	0.480	95.44	3.53	19.00	
Bus9	0.460	98.20	3.53	19.00	
Bus10	0.460	99.02	3.54	19.00	
Bus11	0.460	98.93	3.55	19.00	
Bus13	0.460	98.84	3.55	19.00	
Bus14	0.480	95.41	3.53	19.00	
Bus15	0.240	94.00	3.23	19.00	
Bus19	0.460	99.45	3.53	19.00	
Bus2	0.480	95.71	3.68	23.00	
Bus3	0.480	95.46	3.74	23.00	
Bus5	0.480	95.46	3.74	23.00	
Bus6	0.480	95.44	3.75	23.00	
Bus9	0.460	98.20	3.76	23.00	
Bus10	0.460	99.02	3.77	23.00	
Bus11	0.460	98.93	3.77	23.00	

Engineer:

Location: Ayala Alabang Muntinlupa 16.2.0C Date: 04-12-2019

Contract: SN: APSI-PH001

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Base

Revision:

Filename: Alabang R1P Config.: Normal

Bus	Voltage Distortion				
		Fund.	VIHD		
ID	kV	%	%	Order	
Bus13	0.460	98.84	3.77	23.00	
Bus14	0.480	95.41	3.75	23.00	
Bus15	0.240	94.00	3.34	23.00	
Bus19	0.460	99.45	3.75	23.00	
Bus2	0.480	95.71	3.81	25.00	
Bus3	0.480	95.46	3.87	25.00	
Bus5	0.480	95.46	3.87	25.00	
Bus6	0.480	95.44	3.87	25.00	
Bus9	0.460	98.20	3.88	25.00	
Bus10	0.460	99.02	3.89	25.00	
Bus11	0.460	98.93	3.90	25.00	
Bus13	0.460	98.84	3.90	25.00	
Bus14	0.480	95.41	3.87	25.00	
Bus15	0.240	94.00	3.40	25.00	
Bus19	0.460	99.45	3.87	25.00	
Bus2	0.480	95.71	3.88	29.00	
Bus3	0.480	95.46	3.94	29.00	
Bus5	0.480	95.46	3.94	29.00	
Bus6	0.480	95.44	3.94	29.00	
Bus9	0.460	98.20	3.95	29.00	
Bus10	0.460	99.02	3.96	29.00	
Bus11	0.460	98.93	3.97	29.00	
Bus13	0.460	98.84	3.97	29.00	
Bus14	0.480	95.41	3.94	29.00	
Bus15	0.240	94.00	3.35	29.00	
Bus19	0.460	99.45	3.94	29.00	
Bus2	0.480	95.71	4.00	31.00	
Bus3	0.480	95.46	4.05	31.00	
Bus5	0.480	95.46	4.05	31.00	
Bus6	0.480	95.44	4.05	31.00	
Bus9	0.460	98.20	4.06	31.00	
Bus10	0.460	99.02	4.07	31.00	
Bus11	0.460	98.93	4.08	31.00	
Bus13	0.460	98.84	4.08	31.00	
Bus14	0.480	95.41	4.05	31.00	
Bus15	0.240	94.00	3.38	31.00	
Bus19	0.460	99.45	4.05	31.00	
Bus2	0.480	95.71	4.06	35.00	
Bus3	0.480	95.46	4.11	35.00	
Bus5	0.480	95.46	4.11	35.00	
Bus6	0.480	95.44	4.11	35.00	
Bus9	0.460	98.20	4.12	35.00	
Bus10	0.460	99.02	4.13	35.00	

Engineer:

Location: Ayala Alabang Muntinlupa 16.2.0C Date: 04-12-2019

Contract: SN: APSI-PH001

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Base

Revision:

Filename: Alabang R1P Config.: Normal

Bus	Voltage Distortion				
		Fund.	VIHD		
ID	kV	%	%	Order	
Bus11	0.460	98.93	4.13	35.00	
Bus13	0.460	98.84	4.14	35.00	
Bus14	0.480	95.41	4.11	35.00	
Bus15	0.240	94.00	3.30	35.00	
Bus19	0.460	99.45	4.11	35.00	
Bus2	0.480	95.71	4.19	37.00	
Bus3	0.480	95.46	4.23	37.00	
Bus5	0.480	95.46	4.23	37.00	
Bus6	0.480	95.44	4.23	37.00	
Bus9	0.460	98.20	4.25	37.00	
Bus10	0.460	99.02	4.26	37.00	
Bus11	0.460	98.93	4.26	37.00	
Bus13	0.460	98.84	4.26	37.00	
Bus14	0.480	95.41	4.24	37.00	
Bus15	0.240	94.00	3.33	37.00	
Bus19	0.460	99.45	4.23	37.00	
Bus2	0.480	95.71	4.27	41.00	
Bus3	0.480	95.46	4.31	41.00	
Bus5	0.480	95.46	4.31	41.00	
Bus6	0.480	95.44	4.31	41.00	
Bus9	0.460	98.20	4.33	41.00	
Bus10	0.460	99.02	4.34	41.00	
Bus11	0.460	98.93	4.34	41.00	
Bus13	0.460	98.84	4.34	41.00	
Bus14	0.480	95.41	4.32	41.00	
Bus15	0.240	94.00	3.26	41.00	
Bus19	0.460	99.45	4.31	41.00	
Bus2	0.480	95.71	4.33	43.00	
Bus3	0.480	95.46	4.36	43.00	
Bus5	0.480	95.46	4.36	43.00	
Bus6	0.480	95.44	4.37	43.00	
Bus9	0.460	98.20	4.38	43.00	
Bus10	0.460	99.02	4.39	43.00	
Bus11	0.460	98.93	4.39	43.00	
Bus13	0.460	98.84	4.40	43.00	
Bus14	0.480	95.41	4.37	43.00	
Bus15	0.240	94.00	3.23	43.00	
Bus19	0.460	99.45	4.37	43.00	
Bus2	0.480	95.71	4.30	47.00	
Bus3	0.480	95.46	4.34	47.00	
Bus5	0.480	95.46	4.34	47.00	
Bus6	0.480	95.44	4.34	47.00	
Bus9	0.460	98.20	4.35	47.00	

Engineer:

Location: Ayala Alabang Muntinlupa 16.2.0C Date: 04-12-2019

Contract: SN: APSI-PH001

Study Case: HA

Revision:

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Filename: Alabang R1P Config.: Normal

	Voltage Distortion				
	Fund.	VIHD			
kV	%	<u>%</u>	Order		
.460	99.02	4.36	47.00		
.460	98.93	4.36	47.00		
.460	98.84	4.37	47.00		
.480	95.41	4.34	47.00		
.240	94.00	3.06	47.00		
.460	99.45	4.34	47.00		
.480	95.71	4.29	49.00		
.480	95.46	4.32	49.00		
.480	95.46	4.32	49.00		
.480	95.44	4.33	49.00		
.460	98.20	4.34	49.00		
.460	99.02	4.35	49.00		
.460	98.93	4.35	49.00		
.460	98.84	4.36	49.00		
.480	95.41	4.33	49.00		
.240	94.00	2.98	49.00		
.460	99.45	4.32	49.00		
	.460 .460 .460 .480 .240 .480 .480 .480 .480 .460 .460 .460 .460 .480	Fund.  8V %  1.460 99.02  1.460 98.93  1.460 98.84  1.480 95.41  1.240 94.00  1.460 99.45  1.480 95.46  1.480 95.46  1.480 95.46  1.480 95.46  1.480 95.44  1.460 98.20  1.460 98.93  1.460 98.93  1.460 98.84  1.480 95.41  1.240 94.00	Fund. VIHD  %  4.460 99.02 4.36  4.460 98.93 4.36  4.460 98.84 4.37  4.480 95.41 4.34  4.480 95.71 4.29  4.480 95.46 4.32  4.480 95.46 4.32  4.480 95.46 4.32  4.480 95.46 4.32  4.480 95.46 4.32  4.480 95.46 4.32  4.480 95.46 4.32  4.480 95.46 4.32  4.480 95.46 4.32  4.480 95.46 4.32  4.480 95.41 4.33  4.460 98.84 4.36  4.480 95.41 4.33  4.240 94.00 2.98		

Indicates buses with IHD (Individual Harmonic Distortion) exceeding the limit.

Project: Location:	Maynilad- Ayala Alabang R1P Ayala Alabang Muntinlupa	ETAP 16.2.0C	Page: Date:	6 04-12-2019
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Engineer:		Study Case: HA	Revision:	Base
Filename:	Alabang R1P		Config.:	Normal

### VTHD (Total Harmonic Distortion) Report

Bus	Voltage Distortion			
		Fund.	VTHD	
ID	kV	%	%	
Bus2	0.480	95.71	18.47	
Bus3	0.480	95.46	18.64	
Bus5	0.480	95.46	18.64	
Bus6	0.480	95.44	18.66	
Bus9	0.460	98.20	18.77	
Bus10	0.460	99.02	18.75	
Bus11	0.460	98.93	18.77	
Bus13	0.460	98.84	18.79	
Bus14	0.480	95.41	18.66	
Bus15	0.240	94.00	13.16	
Bus19	0.460	99.45	18.63	

Indicates buses with THD (Total Harmonic Distortion) exceeding the limit.

Location: Ayala Alabang Muntinlupa 16.2.0C Date: 04-12-2019

Contract: SN: APSI-PH001 Engineer: Study Case: HA Revision: Base

Filename: Alabang R1P Config.: Normal

### **Alert Summary Report**

### % Alert Settings

Bus	<u>Critical</u>	Marginal
<u> </u>	/ VIHD values are used.	
<b>Transformer</b>		
Total I	100.0	95.0
<u>Filter</u>		
Capacitor kV	100.0	95.0
Inductor Amp	100.0	95.0
<u>Capacitor</u> Max kV	100.0	95.0
Cable Ampacity	100.0	95.0

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Harmonic
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	10.59	706.1	3.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	4.23	282.2	7.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	1.64	109.6	9.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	3.19	212.9	11.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	3.30	219.9	13.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	3.43	228.7	17.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	3.54	236.3	19.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	3.77	251.0	23.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	3.89	259.5	25.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	3.96	264.2	29.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	4.07	271.5	31.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	4.13	275.3	35.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	4.26	283.7	37.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	4.34	289.1	41.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	4.39	292.6	43.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	4.36	290.7	47.00
Bus10	Bus	Exceeds Limit	1.50	Bus IHD	4.35	289.9	49.00
Bus10	Bus	Exceeds Limit	2.50	Bus THD	18.75	750.2	Total
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	10.60	706.8	3.00

Location: Ayala Alabang Muntinlupa 16.2.0C Date: 04-12-2019

Contract: SN: APSI-PH001

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Engineer:

# Critical Report

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Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Harmonic
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	4.24	282.4	7.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	1.65	109.7	9.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	3.20	213.0	11.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	3.30	220.0	13.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	3.43	228.9	17.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	3.55	236.5	19.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	3.77	251.2	23.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	3.90	259.7	25.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	3.97	264.4	29.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	4.08	271.7	31.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	4.13	275.5	35.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	4.26	283.9	37.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	4.34	289.3	41.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	4.39	292.9	43.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	4.36	291.0	47.00
Bus11	Bus	Exceeds Limit	1.50	Bus IHD	4.35	290.1	49.00
Bus11	Bus	Exceeds Limit	2.50	Bus THD	18.77	750.8	Total
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	10.61	707.4	3.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	4.24	282.7	7.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	1.65	109.8	9.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	3.20	213.2	11.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	3.30	220.2	13.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	3.44	229.1	17.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	3.55	236.7	19.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	3.77	251.4	23.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	3.90	260.0	25.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	3.97	264.6	29.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	4.08	272.0	31.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	4.14	275.8	35.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	4.26	284.2	37.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	4.34	289.6	41.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	4.40	293.1	43.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	4.37	291.2	47.00
Bus13	Bus	Exceeds Limit	1.50	Bus IHD	4.36	290.4	49.00
Bus13	Bus	Exceeds Limit	2.50	Bus THD	18.79	751.5	Total
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	10.53	702.3	3.00

Engineer:

Location: Ayala Alabang Muntinlupa 16.2.0C Date: 04-12-2019

Contract: SN: APSI-PH001

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Revision:

Base

Filename: Alabang R1P Config.: Normal

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Harmonic
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	4.21	280.9	7.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	1.64	109.0	9.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	3.18	211.9	11.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	3.28	218.8	13.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	3.41	227.6	17.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	3.53	235.2	19.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	3.75	249.8	23.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	3.87	258.3	25.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	3.94	262.9	29.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	4.05	270.2	31.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	4.11	274.0	35.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	4.24	282.3	37.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	4.32	287.7	41.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	4.37	291.2	43.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	4.34	289.3	47.00
Bus14	Bus	Exceeds Limit	1.50	Bus IHD	4.33	288.5	49.00
Bus14	Bus	Exceeds Limit	2.50	Bus THD	18.66	746.4	Total
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	2.59	172.6	3.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	4.41	294.3	7.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	3.04	202.4	11.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	3.11	207.3	13.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	3.17	211.3	17.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	3.23	215.6	19.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	3.34	222.9	23.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	3.40	227.0	25.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	3.35	223.5	29.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	3.38	225.6	31.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	3.30	220.1	35.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	3.33	222.3	37.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	3.26	217.2	41.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	3.23	215.1	43.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	3.06	204.2	47.00
Bus15	Bus	Exceeds Limit	1.50	Bus IHD	2.98	199.0	49.00
Bus15	Bus	Exceeds Limit	2.50	Bus THD	13.16	526.5	Total
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	10.50	699.9	3.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	4.21	280.8	7.00

Location: Ayala Alabang Muntinlupa 16.2.0C Date: 04-12-2019

Contract: SN: APSI-PH001

Study Case: HA

Revision:

Base

Filename: Alabang R1P Config.: Normal

Engineer:

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Harmonic
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	1.63	108.6	9.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	3.18	211.8	11.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	3.28	218.7	13.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	3.41	227.5	17.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	3.53	235.0	19.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	3.75	249.7	23.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	3.87	258.1	25.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	3.94	262.7	29.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	4.05	270.0	31.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	4.11	273.8	35.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	4.23	282.1	37.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	4.31	287.5	41.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	4.37	291.0	43.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	4.34	289.1	47.00
Bus19	Bus	Exceeds Limit	1.50	Bus IHD	4.32	288.3	49.00
Bus19	Bus	Exceeds Limit	2.50	Bus THD	18.63	745.3	Total
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	10.56	703.7	3.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	4.11	273.8	7.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	1.64	109.2	9.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	3.08	205.1	11.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	3.19	212.5	13.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	3.33	221.9	17.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	3.45	229.7	19.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	3.68	245.0	23.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	3.81	253.7	25.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	3.88	259.0	29.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	4.00	266.5	31.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	4.06	270.5	35.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	4.19	279.0	37.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	4.27	284.8	41.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	4.33	288.4	43.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	4.30	286.8	47.00
Bus2	Bus	Exceeds Limit	1.50	Bus IHD	4.29	286.1	49.00
Bus2	Bus	Exceeds Limit	2.50	Bus THD	18.47	739.0	Total
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	10.53	702.2	3.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	4.21	280.4	7.00

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16.2.0C Ayala Alabang Muntinlupa Date: 04-12-2019 Location:

Contract: SN: APSI-PH001

Engineer: Filename: Alabang R1P Config.: Normal

# Critical Report

Study Case: HA

Revision:

Base

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Harmonic
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	1.63	109.0	9.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	3.17	211.4	11.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	3.28	218.3	13.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	3.41	227.2	17.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	3.52	234.7	19.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	3.74	249.5	23.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	3.87	257.9	25.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	3.94	262.6	29.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	4.05	269.9	31.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	4.11	273.7	35.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	4.23	282.0	37.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	4.31	287.4	41.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	4.36	291.0	43.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	4.34	289.1	47.00
Bus3	Bus	Exceeds Limit	1.50	Bus IHD	4.32	288.3	49.00
Bus3	Bus	Exceeds Limit	2.50	Bus THD	18.64	745.7	Total
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	10.53	702.2	3.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	4.21	280.4	7.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	1.63	109.0	9.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	3.17	211.4	11.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	3.28	218.3	13.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	3.41	227.2	17.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	3.52	234.7	19.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	3.74	249.5	23.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	3.87	257.9	25.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	3.94	262.6	29.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	4.05	269.9	31.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	4.11	273.7	35.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	4.23	282.0	37.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	4.31	287.4	41.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	4.36	291.0	43.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	4.34	289.1	47.00
Bus5	Bus	Exceeds Limit	1.50	Bus IHD	4.32	288.3	49.00
Bus5	Bus	Exceeds Limit	2.50	Bus THD	18.64	745.7	Total
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	10.53	702.0	3.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	4.21	280.9	7.00

Location: Ayala Alabang Muntinlupa 16.2.0C Date: 04-12-2019

Contract: SN: APSI-PH001

Study Case: HA

Revision:

Base

Filename: Alabang R1P Config.: Normal

Engineer:

Device ID	Type	Condition	Rating/Limit	Unit	Operating	% Operating	Harmonic
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	1.63	109.0	9.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	3.18	211.8	11.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	3.28	218.8	13.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	3.41	227.6	17.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	3.53	235.1	19.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	3.75	249.8	23.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	3.87	258.2	25.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	3.94	262.8	29.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	4.05	270.1	31.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	4.11	273.9	35.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	4.23	282.3	37.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	4.31	287.6	41.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	4.37	291.1	43.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	4.34	289.3	47.00
Bus6	Bus	Exceeds Limit	1.50	Bus IHD	4.33	288.4	49.00
Bus6	Bus	Exceeds Limit	2.50	Bus THD	18.66	746.2	Total
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	10.68	712.0	3.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	4.22	281.3	7.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	1.66	110.5	9.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	3.18	212.2	11.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	3.29	219.2	13.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	3.42	228.1	17.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	3.53	235.6	19.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	3.76	250.4	23.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	3.88	258.9	25.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	3.95	263.5	29.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	4.06	270.8	31.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	4.12	274.6	35.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	4.25	283.0	37.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	4.33	288.4	41.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	4.38	291.9	43.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	4.35	290.1	47.00
Bus9	Bus	Exceeds Limit	1.50	Bus IHD	4.34	289.2	49.00
Bus9	Bus	Exceeds Limit	2.50	Bus THD	18.77	750.9	Total
Cable10	Cable	Overload	76.20	Amp	89.24	117.1	Total