1.0 Reference and Address			
Report Number	170501953SHA-001	Original Issued: 20-Jun-2017	Revised: None
Standard(s)	ENERGY STAR® Program Requirements for Displays Version 7.0 and 7.1		

Applicant	Top Victory Electronics (Taiwan) Co.,Ltd.	Manufacturer	TPV Electronics(Fujian) Co., Ltd
Address	10F.,No.230,Liancheng Rd. Zhonghe City. Taipei Country 23553	Address	Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province
Country	Taiwan	Country	P.R.China
Contact	David.Cheng	Contact	Lissa Wang
Phone	+886-2-82261668-2375	Phone	+86-591-85285555
FAX	+886-2-82261668-2375	FAX	+86-591-85285447
Email	David.cheng@tpv-tech.com	Email	lissa.wang@tpv-tech.com
Manufacturer 2	TPV Display Technology (Beihai) Co.,Ltd	Manufacturer 3	TPV Display Technology (China) Co., Ltd.
Address	China Electronic Beihai Industry Park,Northeast of the Crossing between Taiwan Road and Jilin Road Beihai City,Guangxi	Address	No.106 Jinghai 3 Rd., BDA, Beijing City
Country	China	Country	China
Contact	Yin Tao	Contact	Nancy.Shang
Phone	18277949678	Phone	86(10)64326699-8312
FAX	86-779-2232270	FAX	
Email	yin.tao@tpv-tech.com	Email	lijia.shang@tpv-tech.com
Manufacturer 4	L&T Display Technology (Fujian) Ltd.	Manufacturer 5	TPV Display Technology(Wuhan)Co.,Ltd
Address	Optoelectronic Park, Rongqiao Economic and Technological Development Zone,Fuqing City,Fujian	Address	Unique No.11 Zhuankou Development District of Economic Technological Development Zone Wuhan
Country	China	Country	China
Contact	Shan Xu	Contact	Zhe.Zhou
Phone	86(591)8651-5556	Phone	86(27)-6884 3822
FAX	86(591)8651-5556	FAX	86(27)-6884 3822
Email	shan.xu@lntdisplayfj.com	Email	zhe.zhou@tpv-tech.com

2.0 Product Description					
Product	Display(LCD Monitor)				
Brand Name	AOC				
Description	The product covered by this report is a LCD Display (LED backlighting) The evaluation standard of this report is based on: ENERGY STAR Program Requirements Product Specification for Displays Eligibility Criteria Version 7.1 And the test specification of this report refer to: IEC 62301:2011(Ed.2.0): Household electrical appliances -Measurement of standby power IEC 62087:2011(Ed.3.0): Methods of measurement for the power consumption of audio, video and related equipment				
Models	Q2790PQU(270LM00043);Q2790VQ(270LM00043)				
Model Similarity	Model Name: Q2790PQU; Q2790VQ Model Number: 270LM00043 Different model use different base, no effect on power consumption.				
Ratings	100-240Vac, 50/60Hz, 1.5A				
Other Ratings	NA				
Date Available	6/16/2017	Market Availability	Yes	Last Mfg Date	NA
Major Markets	Australia,New Zealand,Canada,Europe,Japan,Switzerland,Taiwan,United States				
Trans Type	Initial Certification: Model Meets ENERGY STAR Requirements				
Notes	NA				
Additional Model Details (Optional)	Model Name and Number	Identifying Information			
Original Certificate Actual Issued Date for Model Tested (Only Applies to Revised Reports)					NA

3.0 Product Photographs

Photo 1 - External view (Front)

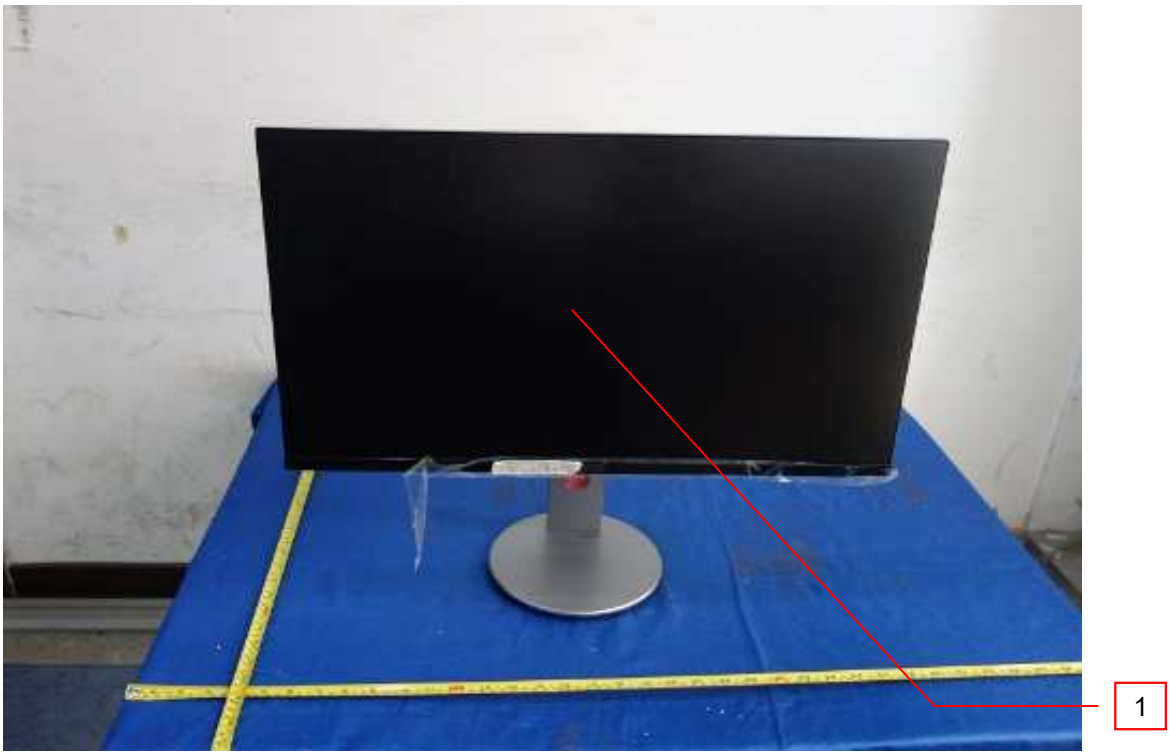
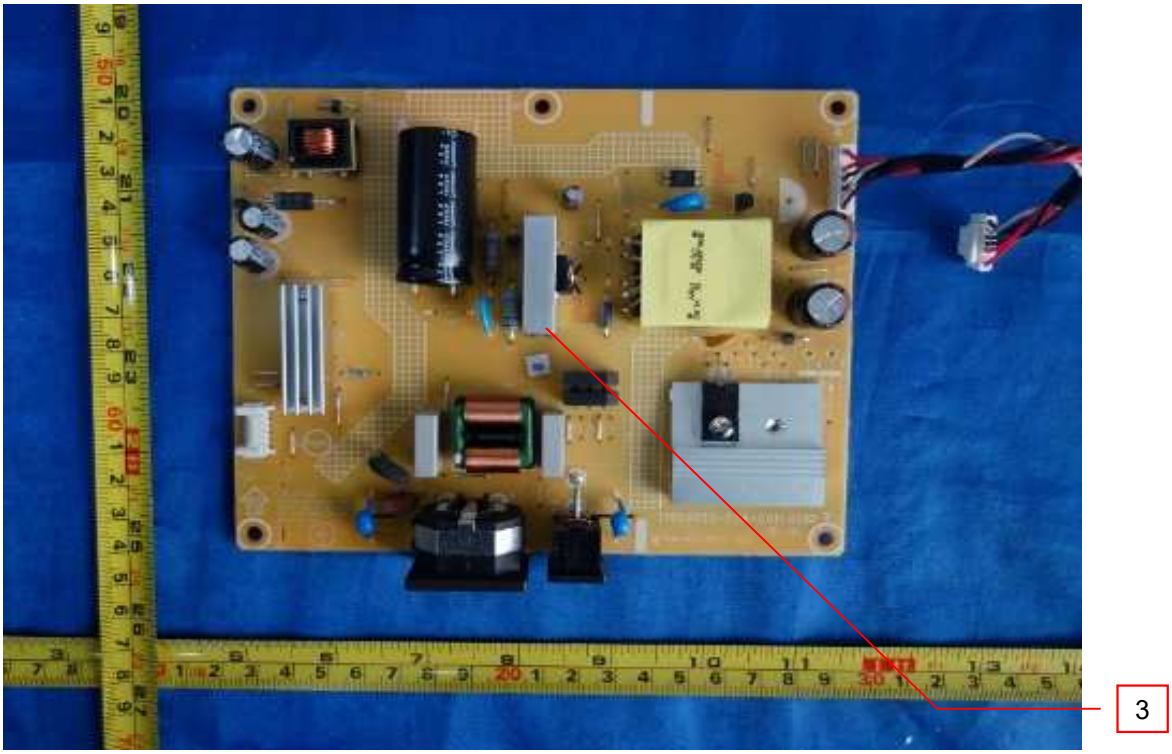


Photo 2 - External view (Back)

3.0 Product Photographs

Photo 3 - Main board (TPV / 715G8853)

Photo 4 - Power board (TPV / 715G8852)



4.0 Critical Components

Photo #	Item no.[1]	Name	Manufacturer/ trademark[2]	Type / model[2]	Technical data and securement means	Mark(s) of conformity [3]
1	1	LCD panel	LGD	M270KCJ-L5B	27inch, TFT type, with LED backlight	NR
3	2	Main Board	TPV	715G8853	I/P: 19Vdc, 3.0A	NR
4	3	Power Board	TPV	715G8852	I/P: 100-240Vac, 50/60Hz, 1.5A; O/P: max.19Vdc, 3.5A	NR

NOTES:

1) Not all item numbers are indicated (called out) in the photos, as their location is obvious.

2) “Various“ means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity" can be used.

3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates: a) Unlisted and only visual examination is necessary or b) marks are not required to be verified.

5.0 Critical Unlisted CEC Components

Periodic Evaluation of Critical Unlisted Components by the Intertek Component Evaluation Centers (CEC) is not required under the INTERTEK ENERGY STAR Program.

6.0 Critical Features
Critical Features/Components - An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product's conformance to applicable requirements of the ENERGY STAR® Program Requirements. Listed Component - A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings. Recognized Component - A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability. Unlisted Component - A part that has not been previously evaluated to the appropriate designated component standard. It may also be a Listed or Recognized component that is being used outside of its evaluated Listing or component recognition.
Construction Details - For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements also apply.
1. Product Safety Compliance - NA
2. EMI Compliance - NA
3. Schematics - NA
4. Installation, Operating and Safety Instructions - Instructions for installation and use of this product are provided by the manufacturer. Refer to Illustration No.1-2.for details.
5. Package Markings - NA
6. Warranty Information - NA
7. Marking Label - Refer to Illustration No.3.for details.

7.0 Illustrations

Illustration 1 - Installation, Operating and Safety Instructions

Safety

National Conventions

The following subsections describe notational conventions used in this document.

Notes, Cautions, and Warnings

Throughout this guide, blocks of text may be accompanied by an icon and printed in bold type or in italic type. These blocks are notes, cautions, and warnings, and they are used as follows:

NOTE: A NOTE indicates important information that helps you make better use of your computer system.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates the potential for bodily harm and tells you how to avoid the problem. Some warnings may appear in alternate formats and may be unaccompanied by an icon. In such cases, the specific presentation of the warning is mandated by regulatory authority.

4

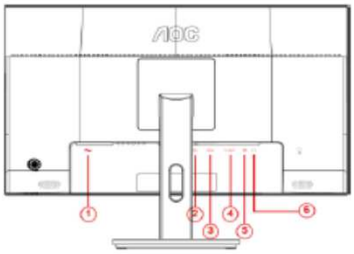
7.0 Illustrations

Illustration 2 - Installation, Operating and Safety Instructions (Continued)

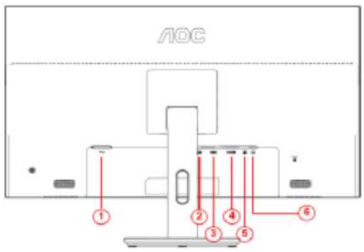
Connecting the Monitor

Cable Connections In Back of Monitor and Computer:

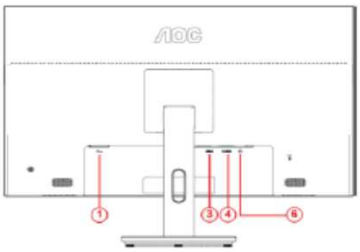
I2490VXQ



I2790VQ



I2790VH



1 Power
2 DP
3 HDMI
4 Analog (D-Sub 15-Pin VGA cable)
5 Audio in
6 Earphone out

To protect equipment, always turn off the PC and LCD monitor before connecting.

1. Connect the power cable to the AC port on the back of the monitor.
2. Connect one end of the 15-pin D-Sub cable to the back of the monitor and connect the other end to the computer's D-Sub port.
3. (Optional – Requires a video card with HDMI port) - Connect one end of the HDMI cable to the back of the monitor and connect the other end to the computer's HDMI port.
4. (Optional – Requires a video card with DP port) - Connect one end of the DP cable to the back of the monitor and connect the other end to the computer's DP port.
5. (Optional)Connect the audio cable to audio in port on the back of the monitor
6. Turn on your monitor and computer.
7. Video content supporting resolution: VGA/DP/HDMI

If your monitor displays an image, installation is complete. If it does not display an image, please refer Troubleshooting.

7.0 Illustrations

Illustration 3 -Marking Label

8.0 Test Summary					
Evaluation Period	6/20/2017-6/20/2017			Project No.	170501953SHA
Sample Rec. Date	25-May-2017	Condition	Prototype	Sample ID.	0170525-79-004
Test Location	Intertek Testing Services Shanghai Limited. EPA ID(1105997) Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China				
Test Procedure	Testing Lab			Test type	Qualification

Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.

The following requirements were evaluated:

Required Submittal Information	Submittal Data
Model Name and/or Number tested	Q2790PQU(270LM00043)
Date tested	6/20/2017
Serial number of Unit tested	1 sample
ENERGY_STAR_Specification_Version*	7.1
Product_Type*	Monitor
Display_Type*	Other
Other_Display_Type	TFT LCD
Display_Backlight_Technology*	LED
Other_Display_Backlight_Technology	NA
Display_Contrast_Ratio*	1000
Image_Height_in*	13.2
Image_Width_in*	23.5
Diagonal_Screen_Size_in*	27
Screen_Area_sq_in*	310.47
Aspect_Ratio*	1.78
Native_Vertical_Resolution_lines*	1440
Native_Horizontal_Resolution_lines*	2560
Total_Native_Resolution_megapixels*	3.7
Native_Pixel_Density_Dp_pixels_sq_in*	11874
Screen_Refresh_Rate_Hz*	60
Color_Gamut*	42.8
Enhanced_Performance_Criteria*	None
Reported_Contrast_Ratio_at_85_deg_Left_Horiz_Viewing_Angle	
Reported_Contrast_Ratio_at_85_deg_Right_Horiz_Viewing_Angle	
Is_This_Model_Shipped_With_an_External_Power_Supply_EPS*	No
Is_Model_Sold_Through_Enterprise_Channels*	Yes
Other_Available_Interfaces	NA
Other_Features	NA
Signal_Interface*	DisplayPort 1.2
Other_Interface	NA
Other_Power_Source	NA
VESA_FPDM2_Test_Pattern_Used*	No
Other_Mechanism_for_Automatically_Entering_Sleep_or_Off_Mode	NA
Default_Delay_Time_to_Sleep_min	5
Does_Model_Have_a_Forced_Menu_at_Initial_Start_up*	No
User_Interface*	No
Maximum_Measured_Luminance_cd_m_2*	400.4
Maximum_Reported_Luminance_cd_m_2*	400
As_shipped_Luminance_cd_m_2	363.4
As_tested_Luminance_cd_m_2*	200
On_Mode_Power_at_12_Lux_at_115_Volts_W	
On_Mode_Power_at_300_Lux_at_115_Volts_W	
Measured_On_Mode_Power_at_115_Volts_W	22.99
Reported_On_Mode_Power_at_115_Volts_W	22.99
Maximum_On_Mode_Power_Limit_for_Signage_Certification_W	
Measured_Sleep_Mode_Power_at_115_Volts_W	0.37

8.0 Test Summary	
Reported_Sleep_Mode_Power_at_115_Volts_W	0.37
Measured_Disconnected_Sleep_Mode_Power_at_115_Volts_W	0.37
Maximum_Sleep_Mode_Power_Limit_for_Signage_Certification_W	
Measured_Off_Mode_Power_at_115_Volts_W	0.25
Reported_Off_Mode_Power_at_115_Volts_W	0.25
Measured_Total_Energy_Consumption_at_115_Volts_kWh	72.61
Reported_Total_Energy_Consumption_at_115_Volts_kWh	72.61
Max_Total_Energy_Consumption_Limit_for_Monitor_kWh	73.7
On_Mode_Power_at_12_Lux_at_230_Volts_W	
On_Mode_Power_at_300_Lux_at_230_Volts_W	
Measured_On_Mode_Power_at_230_Volts_W	23.08
Measured_Sleep_Mode_Power_at_230_Volts_W	0.44
Measured_Disconnected_Sleep_Mode_Power_at_230_Volts_W	0.44
Measured_Off_Mode_Power_at_230_Volts_W	0.3
Measured_Total_Energy_Consumption_at_230_Volts_kWh	73.27
True_Power_Factor_PF_During_On_Mode_Testing_at_115_Volts_W	0.52
True_Power_Factor_PF_During_On_Mode_Testing_at_230_Volts_W	0.44
Number_of_Sleep_Modes_in_Addition_to_Default_Sleep_Mode*	0
Color_Spaces_Supported*	sRGB
Available_Signal_or_Data_Interfaces*	DisplayPort 1.2,HDMI 1.4,USB 3.0,VGA
Model_Features*	Built-In Speakers
Features_Enabled_in_Default_On_Mode*	Built-In Speakers
Features_Enabled_in_Default_Sleep_Mode*	None
Wireless_Technologies_Supported*	None
Low_Power_Wireless_Technologies*	None
Ethernet_Supported*	None
Power_Source*	Ac power supply
Mechanism_for_Automatically_Entering_Sleep_or_Off_Mode*	Display Power Management Signaling
On_Mode_Power_at_12_Lux_at_100_Volts_50Hz_W	
On_Mode_Power_at_300_Lux_at_100_Volts_50Hz_W	
Measured_On_Mode_Power_at_100_Volts_50Hz_W	23.03
Measured_Sleep_Mode_Power_at_100_Volts_50Hz_W	0.36
Measured_Disconnected_Sleep_Mode_Power_at_100_Volts_50Hz_W	0.36
Measured_Off_Mode_Power_at_100_Volts_50Hz_W	0.26
Measured_Total_Energy_Consumption_at_100_Volts_50Hz_kWh	72.65
On_Mode_Power_at_12_Lux_at_100_Volts_60Hz_W	
On_Mode_Power_at_300_Lux_at_100_Volts_60Hz_W	
Measured_On_Mode_Power_at_100_Volts_60Hz_W	23.04
Measured_Sleep_Mode_Power_at_100_Volts_60Hz_W	0.36
Measured_Disconnected_Sleep_Mode_Power_at_100_Volts_60Hz_W	0.36
Measured_Off_Mode_Power_at_100_Volts_60Hz_W	0.25
Measured_Total_Energy_Consumption_at_100_Volts_60Hz_kWh	72.68

8.1 Signatures

A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.

Completed by:	Carl Dong	Reviewed by:	Jarree Jiang
Title:	Engineer	Title:	Engineer
Signature:		Signature:	

9.0 Correlation Page For Multiple Listings			
The following products, which are identical to those identified in this report except for model number and Company name.			
BASIC LISTEE	Top Victory Electronics (Taiwan) Co., Ltd.		
Address	10F.,No.230,Liancheng Rd. Zhonghe City. Taipei Country 23553		
Country	Taiwan	EPA ID	1065104
Product	Display(LCD Monitor)		
Contact	David.Cheng		
Phone	+886-2-82261668-2375		
FAX	+886-2-82261668-2375		
Email	David.cheng@tpv-tech.com		

MULTIPLE LISTEE 1	None			
Address				
Country		EPA ID		
Contact				
Phone				
FAX				
Email				
Brand Name				
Date Available		Market Availability		Last Mfg Date
Major Markets				
Trans Type				
Notes				
ASSOCIATED MANUFACTURER				
Address				
Country				

MULTIPLE LISTEE 1 MODELS		BASIC LISTEE MODELS
Additional Model Details (Optional)	Model Name and Number	Identifying Information

MULTIPLE LISTEE 2	None			
Address				
Country		EPA ID		
Contact				
Phone				
FAX				
Email				
Brand Name				
Date Available		Market Availability		Last Mfg Date
Major Markets				
Trans Type				
Notes				
ASSOCIATED MANUFACTURER				
Address				
Country				

MULTIPLE LISTEE 2 MODELS		BASIC LISTEE MODELS
Additional Model Details (Optional)	Model Name and Number	Identifying Information

10.0 General Information

The Applicant has agreed to produce products in accordance with the requirements of this report and to maintain compliance with all ENERGY STAR Product Specification requirements.

Changes to Product Design / Alternate Components

As part of this agreement, the Applicant also has agreed to notify Intertek and to request authorization prior to making any changes to the product (including but not limited to using alternate parts, components or materials) which may effect compliance with the ENERGY STAR Product Specification. Those parts, components or materials identified as critical have been listed in Section 4.0 of this report.

Product Surveillance

Under this Program, market surveillance is conducted on an annual basis. For each Product Type defined in the EPA ENERGY STAR Program, Intertek will select 10% of those certified products for Verification Testing in accordance with the requirements of the EPA ENERGY STAR Product Specification.

The primary source for products under Verification Testing will be the retail market. Applicants whose products are selected for Verification Testing are required to provide a list of locations where the product might be obtained. The Applicant is responsible for the cost of procurement and the Verification Tests. Should products not be readily available on the retail market, the Applicant is required to provide access to distribution warehouses to allow selection of those products. Should the product not be available on the retail market or if procurement from the retail market is not feasible, then alternate arrangements for Verification Testing will be made by the

As a general rule under the Verification Testing requirements, the products must achieve energy values within 5% of the required Tier Limit.

Compliance with ENERGY STAR Product Specifications under Verification Testing

Products found non-compliant with ENERGY STAR Product Specification under Verification Testing, will be reported to the EPA within 48 hours and the product removed from the ENERGY STAR Program. If it is determined during Verification Testing that changes have been made to product design or critical components, the Certification Body may increase Verification Testing frequency of those products.

10.1 Evaluation of Unlisted Components

Because Unlisted Components are uncontrolled, and they do not fall under a third party follow up program, Intertek may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process. The Unlisted Components in Section 5.0 require testing and/or evaluation as indicated.

Note to Intertek Follow Up Inspector: The Component Evaluation Center, CEC, will notify you in writing when these components must be selected and sent to the CEC for re-evaluation

Ship the samples to:
Intertek Testing Services Shanghai Limited
ETL Component Evaluation Center
Building No. 86, 1198 Qinzhou Road (North)
Shanghai 200233, China
Attn: Ms. Angela Han
Sample Disposition: Due to the destructive nature of the testing, all samples will be discarded at the conclusion of testing unless, the manufacturer specifically requests the return of the samples. The request for return must accompany the initial component shipment.

11.0 Manufacturing and Production Tests

Manufacturing and Production tests are not required under the INTERTEK ENERGY STAR Program. However, Intertek encourages the use of such ongoing product testing to ensure compliance with the EPA ENERGY STAR Product Specifications.

12.0 Revision Summary				
The following changes are in compliance with the declaration of Section 8.1:				
Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change
				None