



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP – 0524 – 10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☒ New ☐ Renewal

Manufacturer Information

Manufacturer: Xtralis

Manufacturer's Technical Representative: Ryan Sandler

Mailing Address: 175 Bodwell Street, Avon, MA 02322

Telephone: (619) 252-2015 Email: rsandler@xtralis.com

Product Information

Product Name: Aspirated detector units and battery backed power supplies

Product Type: Electrical Equipment

Product Model Number: See Attachment

(List all unique product identification numbers and/or part numbers)

General Description: Enclosures contain tubing, batteries, circuit board, sample points, rotary valve assembly, pump assembly, smoke sensor assembly, volumetric chamber assembly and firepanel module tray

Mounting Description: Rigid wall mounted or flexible wall mounted

Applicant Information

Applicant Company Name: The VMC Group

Contact Person: John Giuliano

Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: (973) 838-1780 Email: john.giuliano@thevmcgroup.com

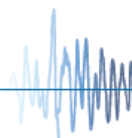
I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant:  Date: 5/25/17

Title: President Company Name: The VMC Group

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY
OSH-FD-759 (REV 12/16/15)



OSHPD

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**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: The VMC Group

Name: Ken Tarlow California License Number: SE-2851

Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: (973) 838-1780 Email: Ken.tarlow@thevmcgroup.com

Supports and Attachments Preapproval

- ☐ Supports and attachments are preapproved under OPM-
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)
- ☒ Supports and attachments are not preapproved

Certification Method

- ☒ Testing in accordance with: ☒ ICC-ES AC156
- ☐ Other (Please Specify): _____

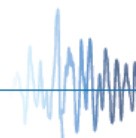
Testing Laboratory

Company Name: Dynamic Certification Laboratories

Contact Name: Kelly Laplace, Project Manager

Mailing Address: 1315 Greg Street, Suite 109, Sparks, NV 89431

Telephone: (775) 358-5085 Email: Kelly@shaketest.com





OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

Seismic Parameters

Design in accordance with ASCE 7-10 Chapter 13: ☒ Yes ☐ No

Design Basis of Equipment or Components (F_p/W_p) = 1.88

S_{DS} (Design spectral response acceleration at short period, g) = 2.5

a_p (In-structure equipment or component amplification factor) = 2.5

R_p (Equipment or component response modification factor) = 6.0

Ω_0 (System overstrength factor) = 1.5

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0

Equipment or Component Natural Frequencies (Hz) = See attachments

Overall dimensions and weight (or range thereof) = See attachments

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: ☐ Yes ☒ No

Design Basis of Equipment or Components (V/W) = _____

S_{DS} (Design spectral response acceleration at short period, g) = _____

S_{D1} (Design spectral response acceleration at 1 second period, g) = _____

R (Response modification coefficient) = _____

Ω_0 (System overstrength factor) = _____

C_d (Deflection amplification factor) = _____

I_p (Importance factor) = 1.5

Height to Center of Gravity above base = _____

Equipment or Component Natural Frequencies (Hz) = _____

Overall dimensions and weight (or range thereof) = _____

Tank(s) designed in accordance with ASME BPVC, 2015: ☐ Yes ☒ No

List of Attachments Supporting Special Seismic Certification

☒ Test Report(s) ☒ Drawings ☐ Calculations ☒ Manufacturer's Catalog

☐ Other(s) (Please Specify): _____

OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022

Signature: M. R. Karim

Date: 6/6/2017

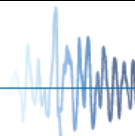
Print Name: M. R. Karim

Title: SHFR

Special Seismic Certification Valid Up to : S_{DS} (g) = 2.5

z/h = 1.0

Condition of Approval (if applicable): _____



Special Seismic Certification Certified Components



Manufacturer: Xtralis

Product Line: Aspirated Detector Units and Battery Backed Power Supplies

Certified Product Construction: Aluminum or galvanized steel enclosures, plastic nylon sampling points

Certified Options: Detectors with / without displays, relay module, black and while power supplies with battery backup, standard and surface mount sampling points

Mounting Description: Wall mount (rigid or flexible)

Product Line	Model Number	Dimensions (inches)			Max. Operating Weight (lb)	Mounting	Sds (g), z/h=1	Unit
		Depth	Width	Height				
Aspirated Dectector Units	VEA-040-A00	5.33	13.90	13.20	22	Rigid and flexible wall mounted	2.50	UUT3a,b
	VEA-040-A10	5.33	13.90	13.20	23		2.50	UUT1a,b
	VEA-040-STX	5.20	13.90	13.20	21		2.50	UUT4a,b
	VER-A40-40-STX	5.30	13.90	13.40	12		2.50	UUT2a,b
Battery Backed Power Supplies	VPS-VEA-115UL-1	5.75	17.50	13.25	60		2.50	UUT5a,b
	VPS-VEA-115UL-2	5.75	20.00	13.25	62		2.50	UUT6a,b

Special Seismic Certification Certified Subcomponents



Manufacturer: Xtralis

Product Line: Aspirated Detector Units and Battery Backed Power Supplies

Enclosures								
Model Number	Manufacturer	Material	NEMA Rating	Dimensions (inches)			Max. Loaded Weight (lb)	Unit
				Depth	Width	Height		
LF46412	Xtralis	Aluminum, polycarbonate and ABS plastic	1	5.33	13.90	13.20	22	UUT3a,b
LF46413				5.33	13.90	13.20	23	UUT1a,b
LF46414				5.20	13.90	13.20	21	UUT4a,b
LF46415				5.30	13.90	13.40	12	UUT2a,b
ZCAB-VPS-VEA-1	Altronix	Galvanized carbon steel enclosure		5.75	17.50	13.25	60	UUT5a,b
ZCAB-VPS-VEA-2				5.75	20.00	13.25	62	UUT6a,b

Special Seismic Certification Certified Subcomponents



Manufacturer: Xtralis

Product Line: Aspirated Detector Units and Battery Backed Power Supplies

Tubing

Manufacturer's Model Number	Manufacturer	Material	Description	Unit
Driscoplex 2500	Performance Pipe	Polyethylene	4mm Tube	UUT1,3,4 a,b
Driscoplex 2600			6mm Tube	UUT1,3,4 a,b

Batteries

Model Number	Manufacturer	Material	Description	Unit
SP12-35	Sigmas Tek	Sealed Lead-Acid	12V battery	UUT5 a,b
PS-12350 NB	Power Sonic	Sealed Lead-Acid	12V battery	UUT6 a,b

Circuit Board

Model Number	Manufacturer	Material	Description	Unit
VEA24PS230	Altronix Corp.	Printed circuit board	PCB for charge / capacitor	UUT5 a,b, UUT6 a,b

Sample Points

Model Number	Manufacturer	Material	Description	Unit
VSP-98x-W/Byy*	Xtralis	Nylon	See below	UUT1,3,4 a,b
VSP-98x-W/Byy**				UUT1,3,4 a,b

* x=0,1 for 4mm and 6mm version, W=White or B=Black, yy=none for single and 22 = pack of 22

** x=2,3 for 4mm and 6mm surface mount version, W=White or B=Black, yy=none for single and 22 = pack of 22

Other Subcomponents

Model Number	Manufacturer	Material	Unit
Rotary Valve Assembly	Xtralis	Poly Carbonate	UUT1,3,4 a,b
Pump Assembly	Xtralis	EPDM, Polybutylene terephthalate (PBT), steel galvanized	UUT1,3,4 a,b
Smoke Sensor Assembly	Xtralis	Polycarbonate	UUT1,3,4 a,b
Volumetric Chamber Assembly	Xtralis	Polycarbonate	UUT1,3,4 a,b
Firepanel Module Tray	Xtralis	Polycarbonate	UUT2 a,b

Special Seismic Certification

Tested Components



Manufacturer: Xtralis

Product Line: Aspirated Detector Units and Battery Backed Power Supplies

Tested Product Construction: Aluminum or galvanized steel enclosures, plastic nylon sampling points

Tested Options: Detectors with / without displays, relay module, black and while power supplies with battery backup, standard and surface mount sampling points

Tested Mounting Description: Wall mount (rigid and flexible)

Product Line	Model Number	Dimensions (inches)			Max. Operating Weight (lb)	Mounting	Sds (g), z/h=1	Unit
		Depth	Width	Height				
Aspirated Dectector Units	VEA-040-A10	5.33	13.90	13.20	23	Rigid and flexible wall mounted	2.50	UUT1a,b
	VER-A40-40-STX	5.30	13.90	13.40	12		2.50	UUT2a,b
	VEA-040-A00	5.33	13.90	13.20	22		2.50	UUT3a,b
	VEA-040-STX	5.20	13.90	13.20	21		2.50	UUT4a,b
Battery Backed Power Supplies	VPS-VEA-115UL-1	5.75	17.50	13.25	60		2.50	UUT5a,b
	VPS-VEA-115UL-2	5.75	20.00	13.25	62		2.50	UUT6a,b

UUT1a and UUT1b

UNIT UNDER TEST (UUT) Summary Sheet

Manufacturer: Xtralis

Product Line: Aspirated detector units

Model Number: VEA-040-A10

Product Construction Summary:

Aluminum, polycarbonate and ABS plastic enclosure, NEMA 1

Subcomponent Summary:

Tubing, sample points, rotary valve assembly, pump assembly, smoke sensor assembly, volumetric chamber assembly

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

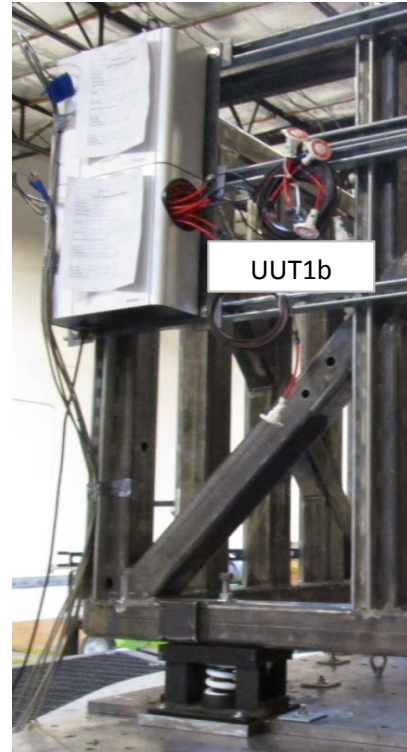
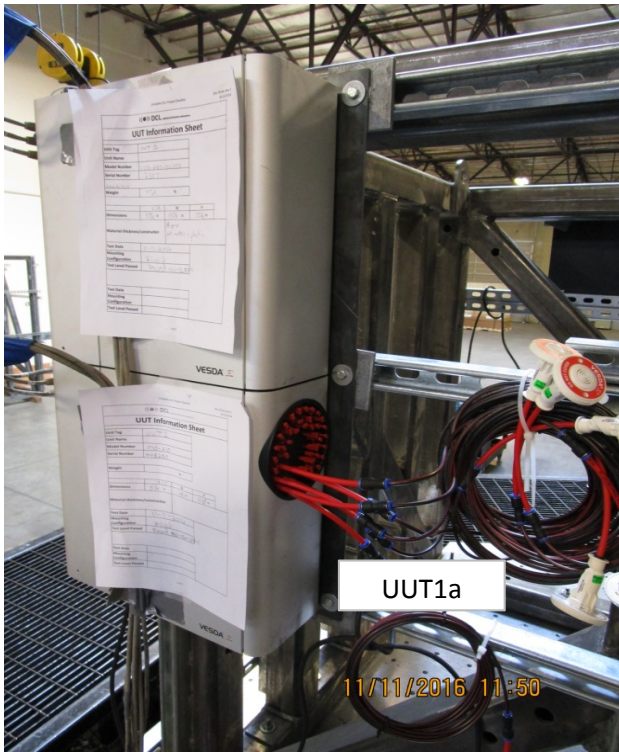
UUT Properties

Operating Weight (lb)	Dimensions (inches)				Lowest Natural Frequency (Hz)		
		Depth	Width	Height	Front-Back	Side-Side	Vertical
23	UUT1a,b	5.33	13.90	13.20	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2016	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:



UUT1a/b was attached to the shake table interface fixture with six 1032 screws with nylon nuts. For UUT1a, the fixture was bolted directly to the shake table. For UUT1b, the fixture was attached to the shake table with spring isolators.

UUT2a and UUT2b

UNIT UNDER TEST (UUT) Summary Sheet

Manufacturer: Xtralis

Product Line: Aspirated detector units

Model Number: VER-A40-40-STX

Product Construction Summary:

Aluminum, polycarbonate and ABS plastic enclosure, NEMA 1

Subcomponent Summary:

Firepanel module tray

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

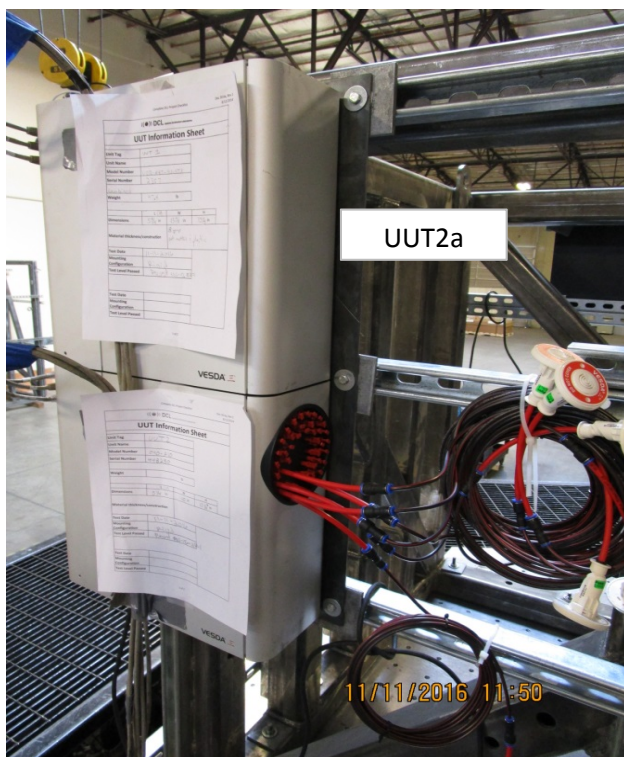
UUT Properties

Operating Weight (lb)	Dimensions (inches)				Lowest Natural Frequency (Hz)		
		Depth	Width	Height	Front-Back	Side-Side	Vertical
12	UUT2a,b	5.30	13.90	13.40	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2016	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:



UUT2a/b was attached to the shake table interface fixture with six 1032 screws with nylon nuts. For UUT2a, the fixture was bolted directly to the shake table. For UUT2b, the fixture was attached to the shake table with spring isolators.

UUT3a and UUT3b

UNIT UNDER TEST (UUT) Summary Sheet

Manufacturer: Xtralis

Product Line: Aspirated detector units

Model Number: VEA-040-A00

Product Construction Summary:

Aluminum, polycarbonate and ABS plastic enclosure, NEMA 1

Subcomponent Summary:

Tubing, sample points, rotary valve assembly, pump assembly, smoke sensor assembly, volumetric chamber assembly

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)				Lowest Natural Frequency (Hz)		
		Depth	Width	Height	Front-Back	Side-Side	Vertical
22	UUT3a,b	5.33	13.90	13.20	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2016	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:



UUT3a/b was attached to the shake table interface fixture with six 1032 screws with nylon nuts. For UUT3a, the fixture was bolted directly to the shake table. For UUT3b, the fixture was attached to the shake table with spring isolators.

UUT4a and UUT4b

UNIT UNDER TEST (UUT) Summary Sheet

Manufacturer: Xtralis

Product Line: Aspirated detector units

Model Number: VEA-040-STX

Product Construction Summary:

Aluminum, polycarbonate and ABS plastic enclosure, NEMA 1

Subcomponent Summary:

Tubing, sample points, rotary valve assembly, pump assembly, smoke sensor assembly, volumetric chamber assembly

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)				Lowest Natural Frequency (Hz)		
		Depth	Width	Height	Front-Back	Side-Side	Vertical
21	UUT4a,b	5.20	13.90	13.20	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2016	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:



UUT4a/b was attached to the shake table interface fixture with six 1032 screws with nylon nuts. For UUT4a, the fixture was bolted directly to the shake table. For UUT4b, the fixture was attached to the shake table with spring isolators.

UUT5a and UUT5b

UNIT UNDER TEST (UUT) Summary Sheet

Manufacturer: Xtralis

Product Line: Battery backed power supplies

Model Number: VPS-VEA-115UL-1

Product Construction Summary:

Galvanized carbon steel enclosure

Subcomponent Summary:

12V batteries and circuit board

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

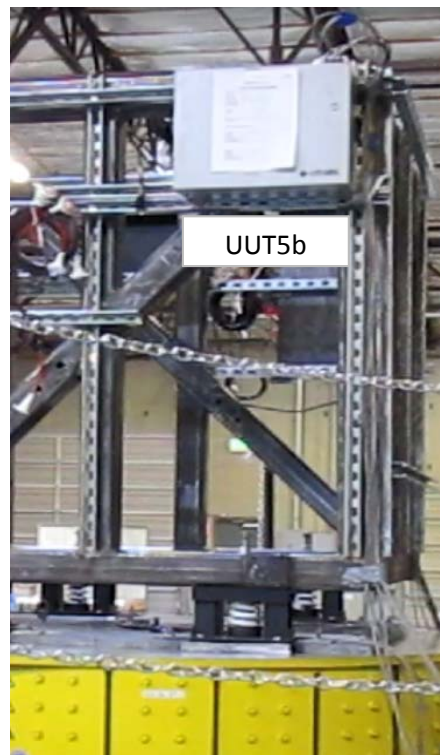
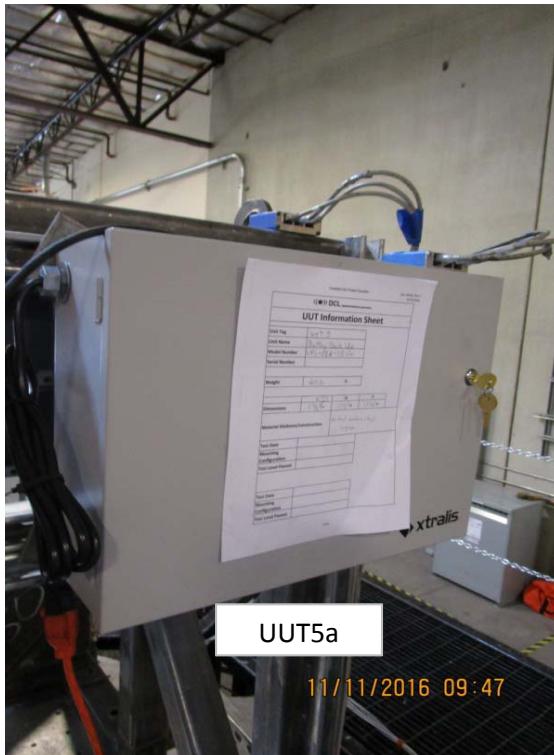
UUT Properties

Operating Weight (lb)	Dimensions (inches)				Lowest Natural Frequency (Hz)		
		Depth	Width	Height	Front-Back	Side-Side	Vertical
60	UUT5a,b	5.75	17.50	13.25	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2016	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:



UUT5a/b was attached to the shake table interface fixture with four 1/4" diameter Grade 5 bolts. For UUT5a, the fixture was bolted directly to the shake table. For UUT5b, the fixture was attached to the shake table with spring isolators.

UUT6a and UUT6b

UNIT UNDER TEST (UUT) Summary Sheet

Manufacturer: Xtralis

Product Line: Battery backed power supplies

Model Number: VPS-VEA-115UL-2

Product Construction Summary:

Galvanized carbon steel enclosure

Subcomponent Summary:

12V batteries and circuit board

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)				Lowest Natural Frequency (Hz)		
		Depth	Width	Height	Front-Back	Side-Side	Vertical
62	UUT6a,b	5.75	20.00	13.25	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2016	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:



UUT6a/b mounted to fixture



Flexible fixture mounting for UUT6b

UUT6a/b was attached to the shake table interface fixture with four 1/4" diameter Grade 5 bolts. For UUT6a, the fixture was bolted directly to the shake table. For UUT6b, the fixture was attached to the shake table with spring isolators.