



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

**APPLICATION FOR OSHPD SPECIAL SEISMIC  
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP – 0122-10

**OSHPD Special Seismic Certification Preapproval (OSP)**

Type:  New  Renewal

**Manufacturer Information**

Manufacturer: Loren Cook Company

Manufacturer's Technical Representative: Bradley F. Skidmore, P.E.

Mailing Address: 2015 East Dale St., Springfield, MO 65808

Telephone: 417.869.6474 Email: bskidmore@lorencook.com

**Product Information**

Product Name: ASP Supply Fans

Product Type: Supply Fans

Product Model Number: 90ASP/100ASP/120ASP/150ASP/180ASP/200ASP

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

General Description: Supply fans with carbon steel housings and forward curved carbon steel wheels.

Mounting Description: Rigid mounted on 9-1/2" tall Aluminum or Carbon Steel curb or 24" tall Carbon Steel curb.

**Applicant Information**

Applicant Company Name: TRU Compliance, LLC

Contact Person: Matthew J. Tobolski, S.E.

Mailing Address: 960 SW Disk Dr., Suite 104, Bend, OR 97702

Telephone: 844.878.0200 Email: mtobolski@trucompliance.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: 10/17/2016

Title: President & CEO Company Name: TRU Compliance, LLC

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





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

Company Name: TRU Compliance, LLC

Name: Matthew J. Tobolski, S.E. California License Number: S5648

Mailing Address: 960 SW Disk Dr., Suite 104, Bend, OR 97702

Telephone: 844.878.0200 Email: mtobolski@trucompliance.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): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

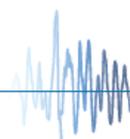
**Testing Laboratory**

Company Name: Environ Laboratories

Contact Name: Kent L. Erickson

Mailing Address: 9725 Girard Avenue South, Minneapolis, MN 55431

Telephone: 952.888.7795 Email: kle@environlab.com





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**Seismic Parameters**

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

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 1.71

$S_{DS}$  (Design spectral response acceleration at short period, g) = 2.28

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

$R_p$  (Equipment or component response modification factor) = 6.0

$\Omega_0$  (System overstrength factor) = 2.0

$I_p$  (Importance factor) = 1.5

$z/h$  (Height factor ratio) = 1.0

Equipment or Component Natural Frequencies (Hz) = See attached

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

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) = \_\_\_\_\_

$\Omega_0$  (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): Attachment A

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

Signature:  Date: 11/14/16

Print Name: M. R. Karim Title: SHFR

Special Seismic Certification Valid Up to :  $S_{DS}$  (g) = 2.28  $z/h$  = 1.0

Condition of Approval (if applicable): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_











# UNIT UNDER TEST (UUT) SUMMARY SHEET

TRU PROJECT NO. 16034



<b>Manufacturer:</b> Loren Cook Company	<b>UUT 1</b>
<b>Model Line:</b> ASP	
<b>Model Number:</b> 90 ASP <b>Serial Number:</b> N/A	

**Product Construction Summary:**  
16ga. carbon steel outer housing; 16ga. carbon steel housing base; forward curve carbon steel wheel; 16ga. Carbon steel inner housing

**Options/Subcomponent Summary:**  
9 1/2" tall Aluminum curb; BDMI-18 motorized damper; Baldor EM3116T 1 hp Motor; (4) 9 ASP Aluminum filters

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
263	33	33	26.5	24.0	16.1	16.6

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
IBC 2015	ICC-ES AC156	2.28	1.0	1.5	3.65	2.74	1.52	0.61

**Test Mounting Details:**



Vertical axis



Horizontal axis

The unit was attached to the curb using self-drilling sheet metal screws through the fan housing into the curb. The curb was attached to the shake table using 5/16" diameter fasteners at 6" spacing around perimeter of the mounting flange. Unit maintained structural integrity and remained functional per manufacturer requirement. Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET

TRU PROJECT NO. 16034



<b>Manufacturer:</b> Loren Cook Company	<b>UUT 2</b>
<b>Model Line:</b> ASP	
<b>Model Number:</b> 200 ASP <b>Serial Number:</b> N/A	

**Product Construction Summary:**  
16ga. carbon steel outer housing; 16ga. carbon steel housing base; forward curve carbon steel wheel; 16ga. Carbon steel inner housing

**Options/Subcomponent Summary:**  
24" tall Carbon Steel curb; BDMI-42 motorized damper; Baldor EM3311T 7.5 hp Motor; (4) 20 ASP Aluminum filters

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
925	68	68	47	10.4	8.1	29.2

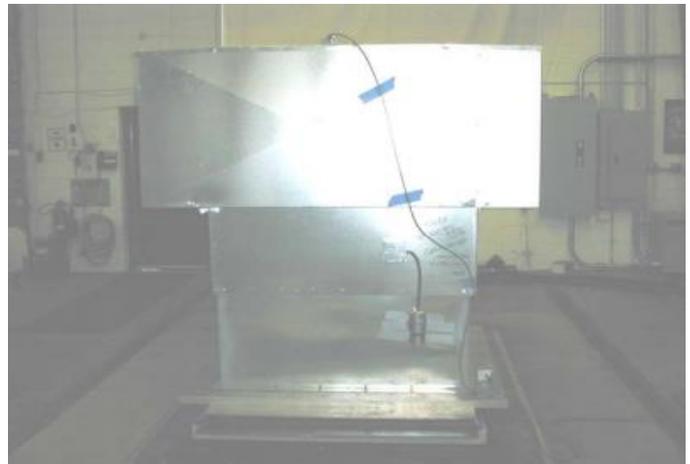
**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
IBC 2015	ICC-ES AC156	2.28	1.0	1.5	3.65	2.74	1.52	0.61

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Horizontal Axis

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