



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0921

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☒ New ☐ Renewal

Manufacturer Information

Manufacturer: Fuel Oil Systems

Manufacturer's Technical Representative: Matthew Penny

Mailing Address: 17500 Murphy Pkwy, Lathrop, CA 95330

Telephone: (925) 556-5424

Email: mpenny@fueloilsystems.net

Product Information

Product Name: MCC UL-142 Tanks

Product Model Number(s): MCC 60 through MCC 400

Product Category: Emergency and Standby Power Systems

Product Sub-Category: Fuel Tanks

General Description: Welded carbon steel inner and outer tanks meeting UL 142.

Mounting Description: Base Mounted Rigid

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: Manwill Engineering LLC

Contact Person: Derek Manwill

Mailing Address: PO Box 1194, Bend, OR 97709

Telephone: (541) 241-2102

Email: derek@manwillse.com

Title: President



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

Company Name: MANWILL ENGINEERING LLC

Name: Derek Manwill

California License Number: S6266

Mailing Address: PO Box 1194, Bend, OR 97709

Telephone: (541) 241-2102

Email: derek@manwillse.com

Certification Method

☐ GR-63-Core

☒ ICC-ES AC156

☐ IEEE 344

☐ IEEE 693

☐ NEBS 3

☐ Other (Please Specify): _____

Testing Laboratory

Company Name: ENVIRONMENTAL TESTING LABORATORIES, INC. (ETL)

Contact Person: Jeremy Lange

Mailing Address: 11034 Indian Trail, Dallas TX 75229-3513

Telephone: (972) 247-9657

Email: jeremy@etldallas.com

BY: Mohammad Karim

DATE: 10/08/2026



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Seismic Parameters

Certified Response Spectral Acceleration Factors: (F_p/W_p)

Horizontal (A Flx-H), $g =$ 3.20 (A Rig-H), $g =$ 2.15

Vertical (A Flx-V), $g =$ 1.68 (A Rig-V), $g =$ 0.68

SDS (Design spectral response acceleration at short period, g) = 2.50 @ $z/h=0$; 2.00 @ $z/h=1$

H_f (Force amplification height factor) = 1 @ $z/h = 0$; 3.5 @ $z/h = 1$

R_u (Structure ductility reduction factor) = 1 @ $z/h = 0$; 1.3 @ $z/h = 1$

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 0 and 1

HCAI Approval (For Office Use Only) - Approval Expires on 10/08/2032

Date: 10/8/2026

Name: Mohammad Karim

Title: Supervisor, Health Facilities

Condition of Approval (if applicable):

OSP-0921

BY: Mohammad Karim

DATE: 10/08/2026

ATTACHMENT 1: CERTIFIED COMPONENTS

SPECIAL SEISMIC CERTIFICATION

FUEL OIL SYSTEMS MCC UL-142 Tanks

TABLE 1

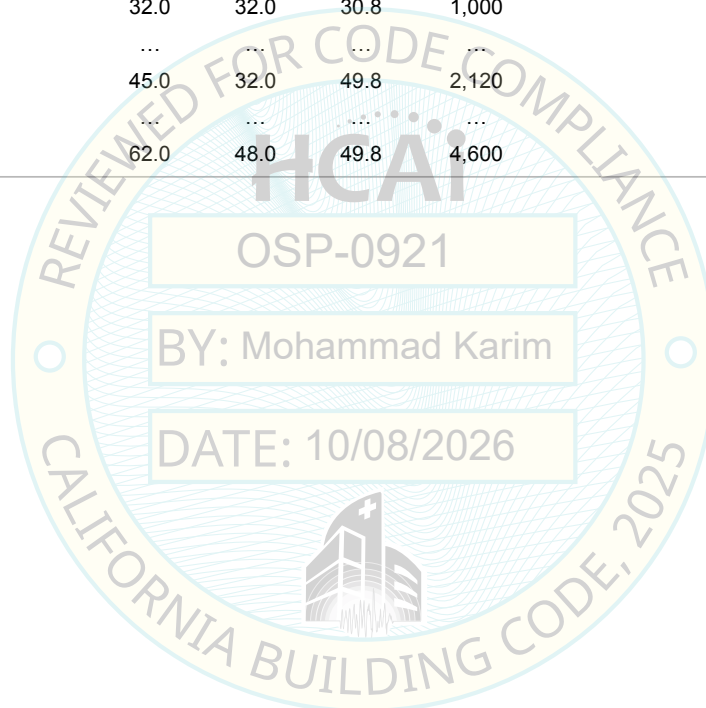
	S_{DS} (g)	z/h	H_f/R_{μ}	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}	I_p
Mounting: Base Mounted Rigid	2.00	1	3.5/1.3	3.20	2.15	1.68	0.68	1.5
	2.50	0	1.0/1.0					

Product Construction: Welded carbon steel inner and outer tanks.

Options/Subcomponents: None.

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
MCC UL-142 Tanks						
MCC 60	32.0	32.0	30.8	1,000		EXTRAP
...	...	...	...	...		EXTRAP
MCC 160	45.0	32.0	49.8	2,120		UUT 2
...	...	...	...	...		INTERP
MCC 400	62.0	48.0	49.8	4,600		UUT 1

End of Table 1.



ATTACHMENT 2: UNIT UNDER TEST SUMMARIES

SPECIAL SEISMIC CERTIFICATION

UUT 1

Manufacturer: Fuel Oil Systems
Model number: MCC 400
Unit function: UL-142 Fuel Tank
Serial number: N/A

Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
62.0	48.0	49.8	4,600	12.9	6.6	14.8

Code & criteria: 2025 CBC, ICC-ES AC156-24 (2nd Edition)

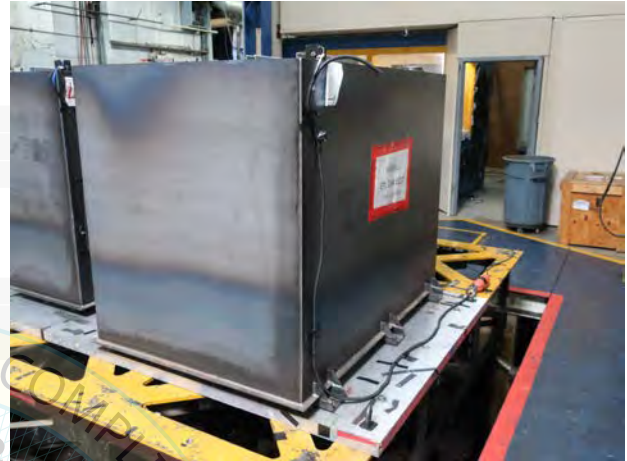
Test laboratory: Environmental Testing Laboratory

Report: 26057TR1.0 (dated 10-6-26), tested on 8-10-26

S _{DS} (g)	z/h	H _r /R _u	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
2.00	1	3.5/1.3	3.20	2.15	1.68	0.68
2.50	0	1.0/1.0				

Importance Factor, $I_p = 1.5$: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Rigid base mounted to fixture using (6) 5/8 in diameter Grade 8 bolts.
Construction: Welded carbon steel inner and outer tanks.
Subcomponents: None.
Testing notes: Tank was filled with 3,290-lb of water weight during testing.



ATTACHMENT 2: UNIT UNDER TEST SUMMARIES

SPECIAL SEISMIC CERTIFICATION

UUT 2

Manufacturer: Fuel Oil Systems
Model number: MCC 160
Unit function: UL-142 Fuel Tank
Serial number: N/A

Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
45.0	32.0	49.8	2,120	13.0	7.0	17.2

Code & criteria: 2025 CBC, ICC-ES AC156-24 (2nd Edition)

Test laboratory: Environmental Testing Laboratory

Report: 26057TR1.0 (dated 10-6-26), tested on 8-10-26

S _{DS} (g)	z/h	H _r /R _u	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
2.00	1	3.5/1.3	3.20	2.15	1.68	0.68
2.50	0	1.0/1.0				

Importance Factor, $I_p = 1.5$: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Rigid base mounted to fixture using (4) 5/8 in diameter Grade 8 bolts.
Construction: Welded carbon steel inner and outer tanks.
Subcomponents: None.
Testing notes: Tank was filled with 1,390-lb of water weight during testing.

