



# APPLICATION FOR PREAPPROVAL SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

**APPLICATION NO.**

**OSP -0254-10**

Check whether application is: NEW  RENEWAL

<b>1.0</b>	<u>Tramont Corporation</u>	<u>Shivam Desai</u>
	<i>Manufacturer</i>	<i>Manufacturer's Technical Representative</i>
	<u>3701 North Humboldt BLVD</u>	<u>Milwaukee, WI 53212</u>
	<i>Mailing Address</i>	

	<u>(414) 967-8800</u>	<u>sdesai@tramont.com</u>
	<i>Telephone</i>	<i>E-mail Address</i>

<b>2.0</b>	<u>Tramont UL-142 Fuel Day Tanks</u>	<u>Stand Alone UL-142 Fuel Tank</u>
	<i>Product Name</i>	<i>Product Type</i>
	<i>See Attachments</i>	

*Product model No (List all unique product identification numbers and/or serial numbers)*

*General Description: Rigid base mounted steel UL-142 standalone fuel day tanks with integral and remote base pumping systems.*

<b>3.0</b>	<u>Tramont Corporation</u>	<u>Shivam Desai</u>
	<i>Applicant Company Name</i>	<i>Contact Person</i>
	<u>3701 North Humboldt BLVD</u>	<u>Milwaukee, WI 53212</u>
	<i>Mailing Address</i>	
	<u>(414) 967-8800</u>	<u>sdesai@tramont.com</u>
	<i>Telephone</i>	<i>E-mail Address</i>

I hereby agree to reimburse the Office of Statewide Health Planning and Development for the actual costs incurred by the department for review.

<u>S. J. Desai</u>	<u>1/10/12</u>
<i>Signature of Applicant</i>	<i>Date</i>

<u>Design Engineer</u>	<u>Tramont Corporation</u>
<i>Title</i>	<i>Company Name</i>



**Registered Design Professional Preparing the Report**

**4.0** Rice Engineering  
*Company Name*

Bradley J. Kuehl C66394

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*Contact Name* *California License Number*

105 School Creek Trail Luxemburg, WI 54217

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*Mailing Address*

(920) 845-1042 [bradkuehl@rice-inc.com](mailto:bradkuehl@rice-inc.com)

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*Telephone* *E-mail Address*

**California Licensed Structural Engineer Review and Acceptance of the Report**

**5.0** Arches Engineering, LLC  
*Company Name*

Ruth Miller S4657

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*Contact Name* *California License Number*

P.O. Box 3852 Grand Junction, CO 81502

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*Mailing Address*

(970) 255-6788 ruth@archesengineering.com

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*Telephone* *E-mail Address*

**Anchorage Pre-Approval**

**6.0**

Anchorage is pre-approved under OPA-  
 (Separate application for anchorage pre-approval is required)

Anchorage is not Pre-approved

**Certification Method**

**7.0**  Testing in accordance with:  ICC-ES AC-156  Other (Please Specify):

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Analysis

Experience data

Combination of Testing, Analysis, and/or Experience Data (Please Specify):

**Testing Laboratory (if applicable)**

**8.0** Environ Laboratories Kent L. Erickson

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*Company Name* *Contact Name*

9725 Girard Avenue South Minneapolis, MN 55431

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*Mailing Address*

(952) 888-7795 [kle@environlab.com](mailto:kle@environlab.com)

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*Telephone* *E-mail:*



**Approval Parameters**

9.0

Design in accordance with ASCE 7-05 Chapter 13:  Yes  No

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 1.44

$S_{DS}$  (Spectral response acceleration at short period) = 2.0g

$a_p$  (In-structure equipment or component amplification factor) = 1.0

$R_p$  (Equipment or component response modification factor) = 2.5

$I_p$  (Importance factor) = 1.5

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

Equipment or Component fundamental period(s) = See Attachments

Building period limits (if any) = N/A

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

Equipment or Components @ grade designed in accordance with ASCE 7-05 Chapter 15:  Yes  No

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

$S_{DS}$  (Spectral response acceleration at short period) =

$S_1$  (Spectral response acceleration at 1 second period) =

$R$  (Response modification coefficient) = 1.0

$\Omega_0$  (System overstrength factor) = 1.0

$C_d$  (Deflection amplification factor) = 1.0

$I_p$  (Importance factor) = 1.5

Height to Center of Gravity above base =

Equipment or Component fundamental period(s) = Sec

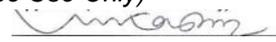
Overall dimensions and weight (or range thereof) =

Tank(s) designed in accordance with ASME BPVC, 2007:  Yes  No

**10.0 List of attachments supporting the special seismic certification of equipment or components:**

- Test Report  Drawings  Manufacturer's Catalog
- Calculations  Others (Please Specify):

**11.0 OSHPD Approval (For Office Use Only)**

 _____ Signature & Date <b>M. R. Karim, SHFR</b> _____ Name & Title	<b>3/9/2012</b> _____	<b>December 31, 2016</b> _____ Approval Expiration Date $S_{DS}$ (g) = <b>2.0</b> $z/h$ = <b>1.0</b> _____ Special Seismic Certification Valid Up to
Condition of Approval (if any):		

**TABLE 1**  
**Special Seismic Certification Approved Units**

Model #	Gallons	Empty Weight [lbs]	Full Operating Weight [lbs]	Length [in]	Width [in]	Height [in]	Wall Thickness	Max Stiffener Spacing [in]	Max Tie Rod Spacing [in]	UUT
UOTRS-10, UOTRX-10	10	157	228	16	36	12	12 ga	18"	18"	1
UOTRS or UOTRX-10 to UOTRS or UOTRX-350	10 to 350	157 to 1091	228 to 3576	16 to 51	36 to 48	12 to 50	12 ga	18"	18"	
UOTRS-350, UOTRX-350	350	1091	3576	51	48	50	12 ga	18"	18"	2
Remote Enclosure Duplex	N/A	80 to 219	N/A	24	18	4	10 ga	N/A	N/A	3

Note: UOTRS includes tank with control system, UOTRX is tank only with various pipe fittings.

## Day Tank Mounted Options

Equipment Description	Mfr	Mfr #	Desc	UUT	Tanks	Remote	OSHPD Apprvd
Pump	Oberdorfer	N61K10G01	2 gpm, 3/8" NPT	2	X	X	
Pump	Oberdorfer	N991	2gpm, 1/4" NPT	1,3	X	X	
Pump	Oberdorfer	N992	4 gpm		X	X	
Pump	Oberdorfer	N993	7 gpm		X	X	
Pump	Oberdorfer	N994	10 gpm		X	X	
Pump	Oberdorfer	N970	19 gpm		X	X	
Pump	Oberdorfer	N990	23 gpm	2,3	X	X	
Pump	Oberdorfer	N1100	30 gpm	2	X	X	
Motor	Marathon Elec	5KH32FN5586X	1/3 Hp, 1725 rpm, 115 VAC, 1 ph	2	X	X	
Motor	Leeson	A4C17DB2H	1/3 Hp, 1725 rpm, 115/208-230 VAC, 1 ph	1,3	X	X	
Motor	Leeson	C4C17DK18H	1/2 Hp, 1725 rpm 115/208-230 VAC, 1 ph		X	X	
Motor	Leeson	C4C17DK19H	3/4 Hp, 1725 rpm 115/208-230 VAC, 1 ph		X	X	
Motor	Leeson	C6C17DK11F	1 Hp, 1725 rpm, 115/208-230 VAC, 1 ph		X	X	
Motor	Leeson	C6K17DK16E	1.5 Hp, 1725 rpm, 115/208-230 VAC, 1 ph	2,3	X	X	
Motor	Baldor	36-3301	1.5 Hp, 1200 rpm, 208 VAC, 1 ph	2	X		
Motor	Eaton	ECX09	Motor Starter	1,2,3	X	X	
Motor	Tramont	2116-22887	Motor Starter Mount	3		X	
Control System	MEC	System 2000 Plus	Controller, Single	1	X	X	
Control System	MEC	System 2000 Plus	Controller, Duplex	2,3	X	X	
Control System	Tramont	2300004	Pump Running / Critical High Plug-in Relay	1,2	X	X	
Control System	Madison Switch	92400	Float Switch	1,2	X		
Control System	Rochester	9340-8140	Level Sensor	1,2	X		
Control System	Krueger Sentry	H-1.5	Visual Level Gauge	1,2	X		
Control System	Tramont	#2425	Steel Weatherproof Tank Cover	1,2,3	X	X	
Vent	OEM	4023	1 1/4" Mushroom Vent	1	X		
Vent	OEM	4025	2" Mushroom Vent	2	X		
Vent	GTC	Series 100-2	2" NPT Emergency Vent	1	X		
Vent	GTC	Series 100-3	3" NPT Emergency Vent		X		
Vent	GTC	Series 100-4	4" NPT Emergency Vent	2	X		
Valve, Solenoid	GC Valve	S201GF02V5CG4E	3/8" NPT, 120 VAC, N. C. Solenoid Valve		X	X	
Valve, Solenoid	GC Valve	S201GF02V5DG4E	1/2" NPT, 120 VAC, N. C. Solenoid Valve		X	X	
Valve, Solenoid	GC Valve	S201GF02V5EG5E	3/4" NPT, 120 VAC, N. C. Solenoid Valve		X	X	
Valve, Solenoid	GC Valve	S201GF02V5FG9E	1" NPT, 120 VAC, N. C. Solenoid Valve		X	X	
Valve, Solenoid	GC Valve	S201GF02L7DG4	1/2" NPT, 120 VAC, N. O. Solenoid Valve S.S.	1,3	X	X	
Valve, Solenoid	GC Valve	S202GF02L7DG4	1/2" NPT, 120 VAC, N. O. Solenoid Valve S.S.		X		
Valve, Solenoid	GC Valve	S201GF02V5DG4ME	1/2" NPT, 120 VAC, N. C. Solenoid Valve w/ MO		X	X	
Valve, Solenoid	GC Valve	S201GF02V5EG5ME	3/4" NPT, 120 VAC, N. C. Solenoid Valve w/ MO		X	X	
Valve, Solenoid	GC Valve	S201GF02V5FG9ME	1" NPT, 120 VAC, N. C. Solenoid Valve w/ MO	2,3	X	X	

**Unit Under Test (UUT)  
Summary Sheet**

**Manufacturer:** *Tramont Corporation*

**Model Line:** *10 Gallon Day Tank*

**Model Number:** *UOTRS-10, UOTRX-10*

**Product Construction Summary:**

Tramont 10 Gallon Day Tank, 12 gauge, formed and welded cold rolled carbon steel double walled tank with painted finish.

**Options/Subcomponent Summary:**

See Table 1: Special Seismic Certification Approved Units for subcomponent summary.

Tested as installed and show in Test Mounting Details.

Tested Empty and Full.

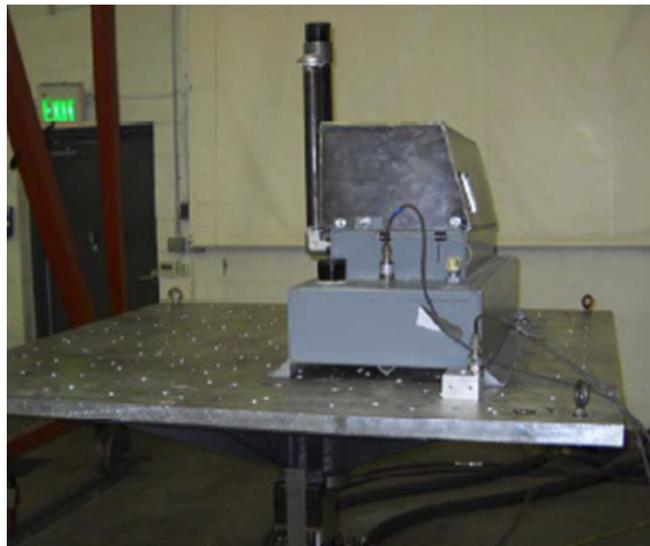
**UUT Properties**

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
228	16	36	12	N/A*	N/A*	N/A*

**UUT Highest Passed Seismic Test Information**

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2010	ICC-ES AC 156	2.00g	1	1.5	3.20g	2.40g	1.34g	0.54g

**Test Mounting Details:**



Rigid base mounted to the test table fixture using (4) 3/8" diameter SAE Grade 8 Bolts.

**Note:** N/A\* - indicates that the natural frequencies of the UUT were dominated by the test table fixture.

**Unit Under Test (UUT)  
Summary Sheet**

**Manufacturer:** *Tramont Corporation*

**Model Line:** *350 Gallon Day Tank*

**Model Number:** *UOTRS-350, UOTRX-350*

**Product Construction Summary:**

Tramont 350 Gallon Day Tank, 12 gauge, formed and welded cold rolled carbon steel double walled tank with painted finish.

**Options/Subcomponent Summary:**

See Table 1: Special Seismic Certification Approved Units for subcomponent summary.

Tested as installed and show in Test Mounting Details.

Tested Empty and Full.

**UUT Properties**

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
3576	51	48	50	19.24	33.19	23.99

**UUT Highest Passed Seismic Test Information**

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2010	ICC-ES AC 156	2.00g	1	1.5	3.20g	2.40g	1.34g	0.54g

**Test Mounting Details:**



Rigid base mounted to the test table fixture using (6) 3/8" diameter SAE Grade 8 Bolts.

**Unit Under Test (UUT)  
Summary Sheet**

**Manufacturer:** *Tramont Corporation*

**Model Line:** *Remote Base Enclosure*

**Model Number:** *N/A*

**Product Construction Summary:**

Tramont Remote Base Enclosure, 10 gauge, formed and welded cold rolled carbon steel enclosure with painted finish.

**Options/Subcomponent Summary:**

See Table 1: Special Seismic Certification Approved Units for subcomponent summary.  
Tested as installed and show in Test Mounting Details.

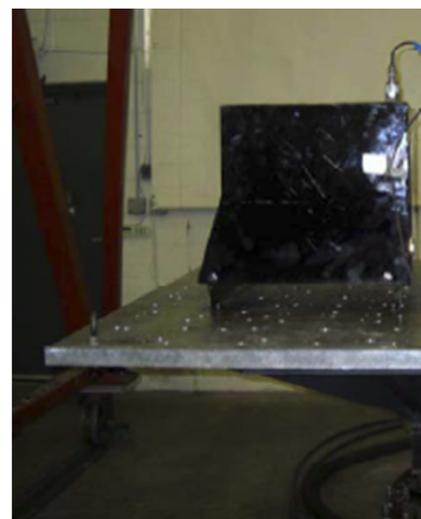
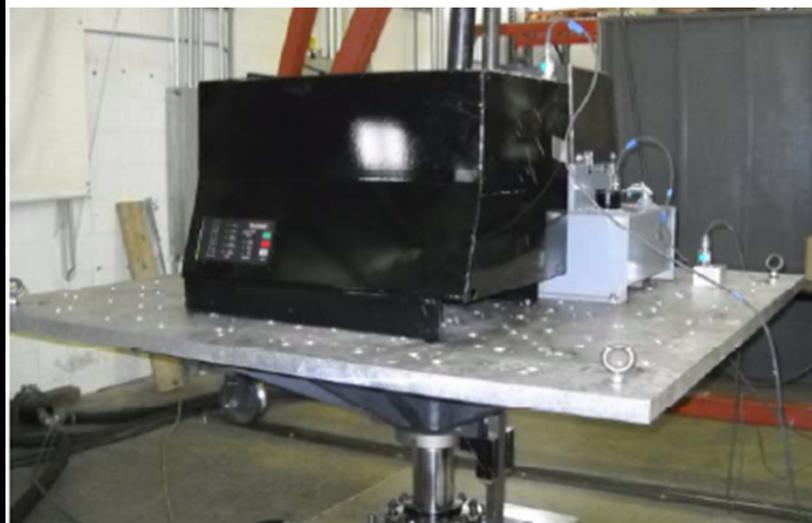
**UUT Properties**

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
219	24	18	4	19.74	30.41	N/A

**UUT Highest Passed Seismic Test Information**

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2010	ICC-ES AC 156	2.00g	1	1.5	3.20g	2.40g	1.34g	0.54g

**Test Mounting Details:**



Rigid base mounted to the test table fixture using (4) 3/8" diameter SAE Grade 8 Bolts.