Facilities Development Division www.oshpd.ca.gov/fdd
400 R Street. Suite 200, Sacramento, California 95811-6213 Phone (916) 440-8300 Fax (916) 654-2973

APPLICATION FOR PREAPPROVAL

SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

APPLICATION NO.

OSP – 0097 – 10

Check whether application is: NEW [X] RENEWAL [ ]

1.0

Siemens Industry, Inc.	Mr. Scott E. May
Manufacturer	*Manufacturer's Technical Representative*

1320 Old Georgia Road, Roebuck, SC 23376
Mailing Address

864-595-4721	Scott.May@siemens.com
Telephone	*E-mail Address*

2.0

Dry Type Transformers	Transformers
Product Name	*Product Type*

Various, See Attached Tables

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

General Description: Dry type transformer family. Includes a range of kVA ratings, mounting types, construction materials, enclosure types and potted or ventilated construction. See Attached tables for more details. Products supplied under OSP-0109-10.

3.0

Tobolski Watkins Engineering, Inc.	Dr. Matthew J. Tobolski, Ph.D., P.E.
Applicant Company Name	*Contact Person*

3710 Ruffin Road, San Diego, CA 92123
Mailing Address

858-381-5843	mtobolski@tobolskiwatkins.com
Telephone	*E-mail Address*

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

Signature of Applicant	February 08, 2011
	Date
President and CEO	Tobolski Watkins Engineering, Inc
Title	*Company Name*

Registered Design Professional Preparing the Report

4.0

Tobolski Watkins Engineering, Inc.
Company Name

Dr. Matthew J Tobolski, Ph.D., P.E. — *Contact Name*
C72806 — *California License Number*

3710 Ruffin Road, San Diego, CA 92123
Mailing Address

858-381-5843 — *Telephone*
mtobolski@tobolskiwatkins.com — *E-mail Address*

California Licensed Structural Engineer Review and Acceptance of the Report

5.0

Tobolski Watkins Engineering, Inc.
Company Name

Derrick Watkins, S.E. — *Contact Name*
S5257 — *California License Number*

3710 Ruffin Road, San Diego, CA 92123
Mailing Address

858-381-5843 — *Telephone*
dwatkins@tobolskiwatkins.com — *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

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

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

Testing Laboratory (if applicable)

8.0

Clark Dynamic Test Laboratory, Inc. — *Company Name*
J.R. Antenucci — *Contact Name*

1801 Route 51 South, Building 8, Jefferson Hills, PA 15025
Mailing Address

412-381-1001 — *Telephone*
jrantenucci@clarkdynamic.com — 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) = ***0.72*** *S_{DS}*

S_{DS} (Spectral response acceleration at short period) = 2.0g or 1.6g as listed in Attachment Tables

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 OSP-0109-10

Building period limits (if any) = None

Overall dimensions and weight (or range thereof) = See Attachment Tables

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

Ω_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)*

2/8/2011 *Signature & Date*	**December 31, 2016** *Approval Expiration Date*
Chris Tokas, SHFR *Name & Title*	S_{DS} (g) = **See Section 9.0** z/h = **1.0** *Special Seismic Certification Valid Up to*

Condition of Approval (if any):

TOBOLSKI WATKINS ENGINEERING

Table 1

Special Seismic Certification Certified Product Matrix

TWEI Project No.: 2010-0119-CO-001

Manufacturer: Siemens Industry, Inc.

Model Line: Dry Type Transformers

Certified Product Construction Summary:
NEMA 3R Enclosure. Encapsulated core. Single Phase.

Certified Options Summary:
Copper or aluminum windings

Certified Mounting Summary:
Wall mounting only.

Building Code: IBC 2009/CBC 2010	S_{DS} = 2.0g	z/h = 1.0	I_p = 1.5

Model Line	Model	Dimension (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
Group A	1.5 kVA	5.3	6.7	12.5	32	Original OSP Reference OSP-0109-10 Group 1 and 2	
	2 kVA	5.3	6.7	12.5	40		
	3 kVA	7.2	7.6	14.6	68		
	5 kVA	7.2	7.6	14.6	104		
	7.5 kVA	8.6	10.6	16.1	126		
	10 kVA	8.6	10.6	16.1	185		
	15 kVA	10.1	13.7	21.1	245		
	25 kVA	10.1	13.7	21.1	385		

TOBOLSKI WATKINS ENGINEERING

Table 2

Special Seismic Certification Certified Product Matrix

TWEI Project No.: 2010-0119-CO-001

Manufacturer: Siemens Industry, Inc.

Model Line: Dry Type Transformers

Certified Product Construction Summary:
NEMA 3R Enclosure. Encapsulated core. Three Phase.

Certified Options Summary:
Copper or aluminum windings

Certified Mounting Summary:
Floor mounting only.

Building Code: IBC 2009/CBC 2010	S_{DS} = 2.0g	z/h = 1.0	I_p = 1.5

Model Line	Model	Dimension (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
Group B	30	12.8	25.3	37.0	1,062	Original OSP Reference OSP-0109-10 Group 3	
	45	12.8	25.3	37.0	1,182		
	75	12.8	25.3	37.0	1,320		

TOBOLSKI WATKINS ENGINEERING

Table 3

Special Seismic Certification Certified Product Matrix

TWEI Project No.: 2010-0119-CO-001

Manufacturer: Siemens Industry, Inc.

Model Line: Dry Type Transformers

Certified Product Construction Summary:
NEMA 1 or 3R Enclosure. Ventilated. Single or Three Phase.

Certified Options Summary:
Copper or aluminum windings

Certified Mounting Summary:
Floor mounting only.

Building Code: IBC 2009/CBC 2010	S_{DS} = 1.6g	z/h = 1.0	I_p = 1.5

Model Line	Model	Dimension (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
Group C	1 kVA	12.0	13.0	18.0	59	Original OSP Reference OSP-0109-10 Group 4 and 5	
	2 kVA	12.0	13.0	18.0	78		
	3 kVA	12.0	13.0	18.0	101		
	5 kVA	12.0	13.0	18.0	104		
	6 kVA	12.0	13.0	18.0	144		
	7.5 kVA	14.0	15.0	24.0	155		
	9 kVA	14.0	17.0	21.0	199		
	10 kVA	14.0	15.0	24.0	188		
	12 kVA	14.0	17.0	21.0	243		
	15 kVA	16.0	19.0	27.0	250		
	25 kVA	17.0	17.0	29.0	298		
	30 kVA	17.0	22.0	25.0	350		
	37.5 kVA	20.0	18.0	31.0	451		
	45 kVA	18.5	25.0	28.0	500		
	50 kVA	22.0	20.0	32.0	538		
	75 kVA	22.0	25.0	34.0	740		
	100 kVA	22.0	24.0	36.0	844		
	112.5 kVA	23.0	29.0	38.0	930		
	150 kVA	26.0	33.0	42.0	1,210		
	167 kVA	35.0	30.0	46.0	1,148		
	225 kVA	30.0	35.0	46.0	1,500		
	300 kVA	30.0	35.0	52.0	2,125		
	500 kVA	33.0	48.0	60.0	3,090		
	750 kVA	39.0	56.0	66.0	4,800		
	1,000 kVA	44.0	64.0	71.0	5,500		