APPLICATION FOR PREAPPROVAL

SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

APPLICATION NO.

OSP – 0281-10

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

1.0

TOSHIBA MEDICAL SYSTEMS	Greg Patterson
Manufacturer	*Manufacturer's Technical Representative*

2441 Michelle Drive, Tustin, CA 92681
Mailing Address

(714) 669-7842	
Telephone	*E-mail Address*

2.0

KALARE	**R/F MEDICAL IMAGING**
Product Name	*Product Type*

SEE ATTACHMENT 1
Product model No (List all unique product identification numbers and/or serial numbers)

General Description: A multi-component radiography/fluoroscopy (R/F) medical diagnostic imaging system.

3.0

EQUIPMENTANCHORAGE.COM	JONATHAN ROBERSON, S.E.
Applicant Company Name	*Contact Person*

5877 Pine Ave, Suite 210, Chino Hills, CA. 91709
Mailing Address

(406) 541-EASE (3273)	jon@easeco.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	July 5, 2012 *Date*
Principal Engineer *Title*	***EQUIPMENTANCHORAGE.COM*** *Company Name*

Registered Design Professional Preparing the Report

4.0 ***EQUIPMENTANCHORAGE.COM***
Company Name

Jonathan Roberson, S.E. | S4197
Contact Name | *California License Number*

5877 Pine Ave, Suite 210, Chino Hills, CA. 91709
Mailing Address

909-606-7622 | jon@easeco.com
Telephone | *E-mail Address*

California Licensed Structural Engineer Review and Acceptance of the Report

5.0 ***EQUIPMENTANCHORAGE.COM***
Company Name

Jonathan Roberson, S.E. | S4197
Contact Name | *California License Number*

5877 Pine Ave, Suite 210, Chino Hills, CA. 91709
Mailing Address

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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

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

Environmental Testing Laboratory, Inc. | Brady Richard
Company Name | *Contact Name*

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

972-247-9657 | brady@etldallas.com
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) = ***0.6(S_{DS})(a_P/R_P)(1+2 z/h)***

S_{DS} *(Spectral response acceleration at short period)* = ***2.0g @ z/h=1.0; 2.6g @ z/h=0***

a_p *(In-structure equipment or component amplification factor)* = ***See Attachment 2***

R_p *(Equipment or component response modification factor)* = ***See Attachment 2***

I_p *(Importance factor)* = ***1.5***

z/h (Height factor ratio)= ***varies***

Equipment or Component fundamental period(s) = ***See Attachment 2***

Building period limits (if any) = ***NONE***

Overall dimensions and weight (or range thereof) = ***See Attachment 1***

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):* ***Attachments 1 & 2***

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

8/6/2012	**December 31, 2016**
Signature & Date	*Approval Expiration Date*
M. R. Karim, SHFR	S_{DS} (g) = **See Section 9.0** z/h = **See Section 9.0**
Name & Title	*Special Seismic Certification Valid Up to*

Condition of Approval (if any):

TOSHIBA MEDICAL SYSTEMS

SPECIAL SEISMIC CERTIFICATION OF RADIOGRAPHIC IMAGING SYSTEMS

ATTACHMENT 1: SEISMIC CERTIFIED COMPONENTS

TABLE 1: SEISMIC CERTIFIED SYSTEMS:

DESCRIPTION	NOTES
Kalare	Special Seismic Certification is limited to the systems identified in Table 1 and the subsystem components identified in Table 2.

TABLE 2: SEISMIC CERTIFIED COMPONENTS:

SYSTEM MANUFACTURER	**Toshiba Medical Systems**
PRODUCT LINE	**Kalare System Components**

SYSTEM COMPONENT	MANUF.	MODEL NO.	DIMENSIONS (IN.)			MAX. WT. (LB.)	MOUNTING	BASIS
			W	D	H			
Main Processing Unit (MPU)	CMT	HDR-08A	7.8	18.9	24.8	43.0	Rigid Base	UUT2
System Cabinet	TMSC	TA-450F	22.4	15.7	74.8	420	Rigid Base	UUT3
Vertical Wall Stand	QMI	TW-420-T-D	34	40.75 / 42.625	84.19	415	Wall/Floor	UUT1
Vertical Wall Stand	QMI	TW-420-T	34	40.75 / 42.625	84.19	415	Wall/Floor	OSP-0133-10
Vertical Wall Stand	QMI	TW-420-D	25.19	13.25	84	200	Wall/Floor	INT
Vertical Wall Stand	QMI	TW-420	27.5	12.75	84	225	Wall/Floor	OSP-0133-10

MOUNTING	Rigid Base Mounted (Floor Mounted): a free-standing, base mounted condition with the component rigidly attached to a supporting structure and no lateral support above the base Wall/Floor Mounted: a condition where the unit bears on, and is anchored directly to the supporting floor. In addition, lateral restraint anchoring the unit to an adjacent wall or other supporting structure is provided along the height of the equipment.
NOTES	1. BASIS: • UUT#: Indicates that a test specimen matching these characteristics was tested. • SAME: Model is physically, mechanically & electrically the same as test specimen. Difference is limited to model number, color and/or software. • INT (Interpolate): indicates a model that was not specifically tested, and by which seismic qualification was established through evaluation of testing of other, similar models in the product line. 2. MANUF (MANUFACTURER): • TMSC = Toshib Medical Systems Corporation • CMT = CMT Medical Technologies • QMI = Quantum Medical Imaging.

TOSHIBA MEDICAL SYSTEMS

SPECIAL SEISMIC CERTIFICATION OF RADIOGRAPHIC IMAGING SYSTEMS

ATTACHMENT 2: TEST SPECIMEN

UUT-1 Wall Stand

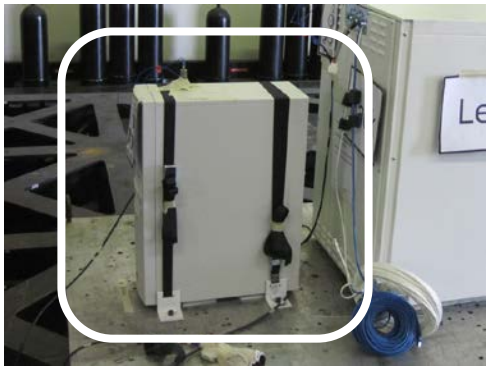
MANUFACTURER: Quantum Medical Imaging
MODEL: TW-420-T-D
IDENTIFICATION: S/N: QW420TD-12D-0401
DESCRIPTION: Sub-component of Kalare System.
MOUNTING: Wall/Floor
a_P 1
R_P 1.5

UUT PROPERTIES:

DIMENSIONS (in.)			WEIGHT (lb.)	LOWEST RESONANT FREQUENCY (Hz.)		
WIDTH	DEPTH	HEIGHT		X-Axis	Y-Axis	Z-Axis
34	40.75 / 42.625	83.125	383	6.2	8.0	11.8

UUT-2 Main Processing Unit

MANUFACTURER: CMT Medical Technologies.
MODEL: HDR-08A
IDENTIFICATION: P/N: 84MPU02000
S/N: HRM-0635
DESCRIPTION: Sub-component of Kalare System.
MOUNTING: Floor
a_P 1
R_P 2.5



UUT PROPERTIES:

DIMENSIONS (in.)			WEIGHT (lb.)	LOWEST RESONANT FREQUENCY (Hz.)		
WIDTH	DEPTH	HEIGHT		X-Axis	Y-Axis	Z-Axis
7.8	18.9	24.8	43	10.5	21.9	16.7

TOSHIBA MEDICAL SYSTEMS

SPECIAL SEISMIC CERTIFICATION OF RADIOGRAPHIC IMAGING SYSTEMS

ATTACHMENT 2: TEST SPECIMEN

UUT-3 System Cabinet

MANUFACTURER:	Toshiba
MODEL:	TA-450F
IDENTIFICATION:	SN: 1234567890
DESCRIPTION:	Sub-component of Kalare System.
MOUNTING:	Wall/Floor
a_P	2.5
R_P	6.0

UUT PROPERTIES:

DIMENSIONS (in.)			WEIGHT (lb.)	LOWEST RESONANT FREQUENCY (Hz.)		
WIDTH	DEPTH	HEIGHT		X-Axis	Y-Axis	Z-Axis
22.4	15.7	74.8	418	12.6	20.4	34.5