APPLICATION FOR PREAPPROVAL

SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

APPLICATION NO.

OSP – 0133-10

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

1.0

Toshiba Medical Systems — *Manufacturer*

Greg Patterson — *Manufacturer's Technical Representative*

2441 Michelle Drive, Tustin, CA 92780 — *Mailing Address*

(714) 669-2486 — *Telephone*

E-mail Address

2.0

Kalare R&F System — *Product Name*

X-Ray & Fluoroscopy Medical Imaging — *Product Type*

SEE ATTACHMENT 1

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

General Description: A multi-component X-ray & fluoroscopy system used for medical imaging.

3.0

EQUIPMENTANCHORAGE.COM — *Applicant Company Name*

JONATHAN ROBERSON, S.E. — *Contact Person*

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

(406) 541-EASE (3273) — *Telephone*

jon@easeco.com — *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

November 18, 2010 — *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*

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Anchorage Pre-Approval

6.0

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

☒ Anchorage is not Pre-approved ***SEE ATTACHMENT 1, Table # 3***

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) = ***SEE ATTACHMENT 1, Table # 4***

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

a_p (In-structure equipment or component amplification factor) = ***SEE ATTACHMENT 1, Table # 4***

R_p (Equipment or component response modification factor) = ***SEE ATTACHMENT 1, Table # 4***

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

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

Equipment or Component fundamental frequency(s) = ***SEE ATTACHMENT 1, Table # 2***

Building period limits (if any) = ***NO LIMIT***

Overall dimensions and weight (or range thereof) = ***SEE ATTACHMENT 1, Table # 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):*

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

1/10/11	**December 31, 2016**
Signature & Date	*Approval Expiration Date*
Chris Tokas, SHFR	S_{DS} (g) = **2.0** z/h = **1.0**
Name & Title	*Special Seismic Certification Valid Up to*

Condition of Approval (if any):

APPLICATION FOR PREAPPROVAL

SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

ATTACHMENT 1: Seismically Certified Components

Table 1: Seismic Certified Components: Kalare Radiograpghy & Fluoroscopy System

UUT NO.	COMPONENT	MODEL NO.	W (IN)	D (IN)	H (IN)	MAX. WT. (LBS)	MOUNT [B, C]
1	TABLE CONTROL UNIT	TA-450F	9.5	17.75	49.125	130	Floor
2	EPS CPU TOWER	ADR-1000A/PF MPU	8.375	17.5	26.5	50	Floor
3	SYSTEM CABINET	TA-450F	22.5	15.875	75	468	Wall/Floor
4	PULSED FLUOROSCOPY UNIT	XKGC-80XM	26.5	15.75	75	238	Wall/Floor
5	DTS 100S OVERHEAD TUBE CRANE	Bridge: DST-100S, Collimator: BLR-15AA Tube: DXR-3724HD	126	202	32- 91	664 + 232 rails	Ceiling Suspension
6	GENERATOR CONTROL PANEL	DC-80XD	13.625	5	13	17	Wall
7	WALL STAND POWER SUPPLY	PS-8	8.5	4.2	10.5	14	Wall
8	TW-420-T TILTING BUCKY STAND	TW-420-T	32	33	83	388	Wall/Floor
9	GENERATOR CABINET	KXO-80XD	43.875	15.75	73.5	900	Wall/Floor
10	EPS 21" MONITOR,	Chromamaxx Model: PLH2150-B1	18.375	8.25	22.25	23	Countertop
11	IDI 1000F-1 SINGLE MONITOR SUSPENSION	IDI 1000F-1	80.5	197	39-62.5	245	Ceiling Suspension
12	KALARE X-RAY DIAGNOSTIC TABLE	TA-450F	82.5	77.4	86.75	3820[A]	Floor
13	TW-420 NON-TILTING BUCKY STAND	TW-420	33	12	83	292	Wall/Floor
14	EPS KEYBOARD & MOUSE	---	---	---	---	3	Countertop

Note:

A) Listed weight does not include maximum patient load of 350 lb.

B) Wall/Floor" indicates 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 at the top of the equipment.

C) "Countertop" refers to a condition where the unit sits atop but is not otherwise anchored to a counter, desk, or other piece of fixed furniture (unless otherwise noted).

Table 2: Test Specimen Lowest Resonant Frequencies

PLATE NO.	UUT	CHANNEL	LOWEST RESONANT FREQUENCIES (HZ)		
			FRONT-TO-BACK AXIS	SIDE-TO-SIDE AXIS	TOP-TO-BOTTOM AXIS
1	EPS CPU – Top Corner Table Control Unit	2 4	6.4 3.4	15.0 5.0	32 >50
2	Kalare Table	2	3.2	4.4	5.1

Table 3: Pending OSHPD Anchorage Pre-Approvals

COMPONENT	OPA NO.	APPROVAL STATUS
GENERATOR CABINET	OPA-2590-10	PENDING
GENERATOR CONTROL PANEL	OPA-2591-10	PENDING
DTS 100S OVERHEAD TUBE CRANE	OPA-2592-10	PENDING
KALARE X-RAY DIAGNOSTIC TABLE	OPA-2593-10	PENDING
PULSED FLUOROSCOPY UNIT	OPA-2594-10	PENDING
SYSTEM CABINET	OPA-2595-10	PENDING
TABLE CONTROL UNIT	OPA-2596-10	PENDING
TW-420 BUCKY STAND	OPA-2598-10	PENDING

Table 4: Example ASCE 7-05 Seismic Design Basis of Equipment

COMPONENT	TYPE	F_p/W_p	z/h	S_{DS}	a_P	R_P
Table Control Unit	A	1.50Wp	1.0	2.00	2.5	6.0
System Cabinet						
Pulsed Fluoro Unit						
Generator Cabinet						
EPS CPU Tower						
Wall Stand Power Supply						
Kalare X-Ray Diagnostic Table	B	2.40Wp	1.0	2.00	1.0	1.5
Generator Control Panel						
TW-420 Non-Tilting Bucky Stand						
TW-420-T Tilting Bucky Stand						
EPS 21" Monitor, Keyboard & Mouse						
DTS 100S Overhead Tube Crane	C	3.00Wp	1.0	2.00	2.5	3.0
IDI 1000F-1 Single Monitor Suspension						

Type Key:

A) Panel boards, instrumentation cabinets and other components constructed of sheet metal framing.
B) Typical medical equipment.
C) Suspended medical equipment conveyors.