

ELECTRICITY GENERATING AUTHORITY OF THAILAND

Supplemental Notice No. 2

Invitation to Bid No. VKS1-SWG-01

Supply of 115 kV Compact Switchgear

**Transmission System for Hydro-Floating
Solar Hybrid Project Vajiralongkorn Dam Unit 1**

The attached Supplemental Notice shall be considered as part of the bidding documents No. VKS1-SWG-01.

As acknowledgement of receipt that all additions, deletions and revisions contained in this Supplemental Notice are incorporated into the above bidding documents, Bidder is requested to sign and return this acknowledgement via email address : kanchanok.p@egat.co.th within three (3) days from the date of the announcement of this Supplemental Notice on <http://www4.egat.co.th/fprocurement/biddingeng/>.

The original acknowledgement which is manually signed in ink by a person or persons duly authorized shall be included in the proposal to be submitted on the bid opening date.

ELECTRICITY GENERATING AUTHORITY OF THAILAND

February 7, 2025

ACKNOWLEDGEMENT

This undersigned Bidder hereby certifies that the additions, deletions and revisions set forth in this Supplemental Notice to Invitation to Bid No. VKS1-SWG-01 are incorporated as part of the above bidding documents and will be fully included in any bids which he may submit.

Signed _____

Title _____

Company _____

Date _____

ELECTRICITY GENERATING AUTHORITY OF THAILAND

SUPPLEMENTAL NOTICE NO. 2

INVITATION TO BID NO. VKS1-SWG-01

SUPPLY OF 115 kV COMPACT SWITCHGEAR

TRANSMISSION SYSTEM FOR HYDRO-FLOATING SOLAR
HYBRID PROJECT VAJIRALONGKORN DAM UNIT 1

The following supplemental information is hereby given for the above described Invitation:

1. Section C : Proposal

Revise Price Schedule Item No.1-6 with the revised excel files of Price Schedule attached

2. Section G : Ratings and Features

Replace Ratings and Features No. CW7748(IEC) with the revised one with (Rev.1) attached.

3. Section J : Drawings

Delete and substitute as follows :

Deleted Dwg. No.Substitute with Attached Dwg.No.

1. VRK2-S-1 sh.01/02 rev.-

VRK2-S-1 sh.01/02 rev.1

2. VRK2-S-1 sh.02/02 rev.-

VRK2-S-1 sh.02/02 rev.0

Bid submitted must be in accordance with this Notice. Receipt of this Notice shall be acknowledged by the Bidder on the proposal included in the Bidding Documents in the space provided on page C3, Article C-7 Supplemental Notices.

ELECTRICITY GENERATING
AUTHORITY OF THAILAND

..... February 7, 2025

**115 kV Compact Switchgear
Specification No. 163**



**Substation Electrical
Equipment Engineering Department**

Ratings and Features	Designed : via ECM system	Validated : via ECM system	Revision 1	Page 1/2
RF No. CW7748(IEC)	Verified : via ECM system	Approved : via ECM system	Dated : via ECM system	

- | | | |
|--|--|----------------------------------|
| a. Type | Outdoor, SF6 gas | |
| b. Enclosure | Single phase enclosure | |
| c. Rated voltage | 123 | kV |
| d. Number of phases | 3 | |
| e. Rated frequency | 50 | Hz |
| f. Rated Insulation level | | |
| - Rated short-duration power-frequency withstand voltage, r.m.s. | | |
| - Phase-to-earth, across open switching device and between phases | 230 | kV |
| - Across the isolating distance | 265 | kV |
| - Rated lightning impulse withstand voltage, peak. | | |
| - Phase-to-earth, across open switching device and between phases | 550 | kV |
| - Across the isolating distance | 630 | kV |
| g. Current rating | | |
| - Rated normal current | 2,000 | A |
| - Rated short-time (1 s) withstand current for main and earthing circuit | 40 | kA |
| - Rated peak withstand current for main and earthing circuit | 100 | kA |
| h. Circuit Breaker | | |
| - Type of mechanism | Spring Operating mechanism | |
| - Rated Insulation level | | |
| - Rated short-duration power-frequency withstand voltage, r.m.s. | | |
| - Phase-to-earth, across open switching device and between phases | 230 | kV |
| - Rated lightning impulse withstand voltage, peak. | | |
| - Phase-to-earth, across open switching device and between phases | 550 | kV |
| - Rated normal current | 2,000 | A |
| - Rated short-time (1 s) withstand current | 40 | kA |
| - Rated short circuit breaking current | 40 | kA |
| - Rated interrupting time | 3 | Cycles |
| - Rated short circuit making current | 100 | kA |
| - Rated permissible tripping delay | 1 | Sec |
| - Rated reclosing time | 20 | Cycles |
| - Type of tripping | Three poles | |
| - Rated operating sequence | O - 0.3s - CO - 3 min - CO | |
| - Control circuit voltage | 125 | V _{dc} |
| - Max/Min control voltage | | |
| - Opening coil | 137.5/87.5 | V _{dc} /V _{dc} |
| - Closing coil | 137.5/106.25 | V _{dc} /V _{dc} |
| - External AC power source | 400/230 V _{ac} , 50 Hz | |
| i. Disconnecting Switch Combined with Standard Earthing Switch | | |
| - Type | Triple pole, Triple throw and Single break | |
| - Rated Insulation level | | |
| - Rated short-duration power-frequency withstand voltage, r.m.s. | | |
| - Phase-to-earth and between phases | 230 | kV |
| - Across the isolating distance | 265 | kV |
| - Rated lightning impulse withstand voltage, peak. | | |
| - Phase-to-earth and between phases | 550 | kV |
| - Across the isolating distance | 630 | kV |

**115 kV Compact Switchgear
Specification No. 163**



**Substation Electrical
Equipment Engineering Department**

Ratings and Features	Designed : via ECM system	Validated : via ECM system	Revision 1	Page 2/2
RF No. CW7748(IEC)	Verified : via ECM system	Approved : via ECM system	Dated : via ECM system	

- Rated normal current 2,000 A
- Rated short-time (1 s) withstand current 40 kA
- Rated peak withstand current 100 kA
- Operating mechanism Motor and emergency manual operation
- Operating and control voltage 125 V_{dc}

Note: The mechanism of each disconnecting switch combined with standard earthing switch shall be separated.

- j. Current Transformer as specified in Rating and Features of CT for Compact Switchgear Sheets
- k. Terminations
 - Entrance Bushing (if any, see Single Line Diagram Drawing)
 - Number per feeder 3
 - Type SF₆ to Air
 - Rated current 2,000 A
 - Rated thermal short-time current 40 kA
 - Rated dynamic current 100 kA
 - Cantilever withstand load 4,000 N
 - Creepage distance ≥3,075 mm
 - Insulation level
 - Power-frequency withstand voltage, rms 230 kV
 - Lightning impulse withstand voltage, peak 550 kV
 - Terminal Terminal and Terminal connector suitable for 2x1272 MCM ACSR (supplied by contractor)
 - EMC at $1.1U_r/\sqrt{3}$ RIV ≤ 2,500 μV or partial discharge free
- l. Rated control circuit voltage 125 V_{dc}
- m. Total Height at Terminal of Compact Switchgear (Preferable) 5 m

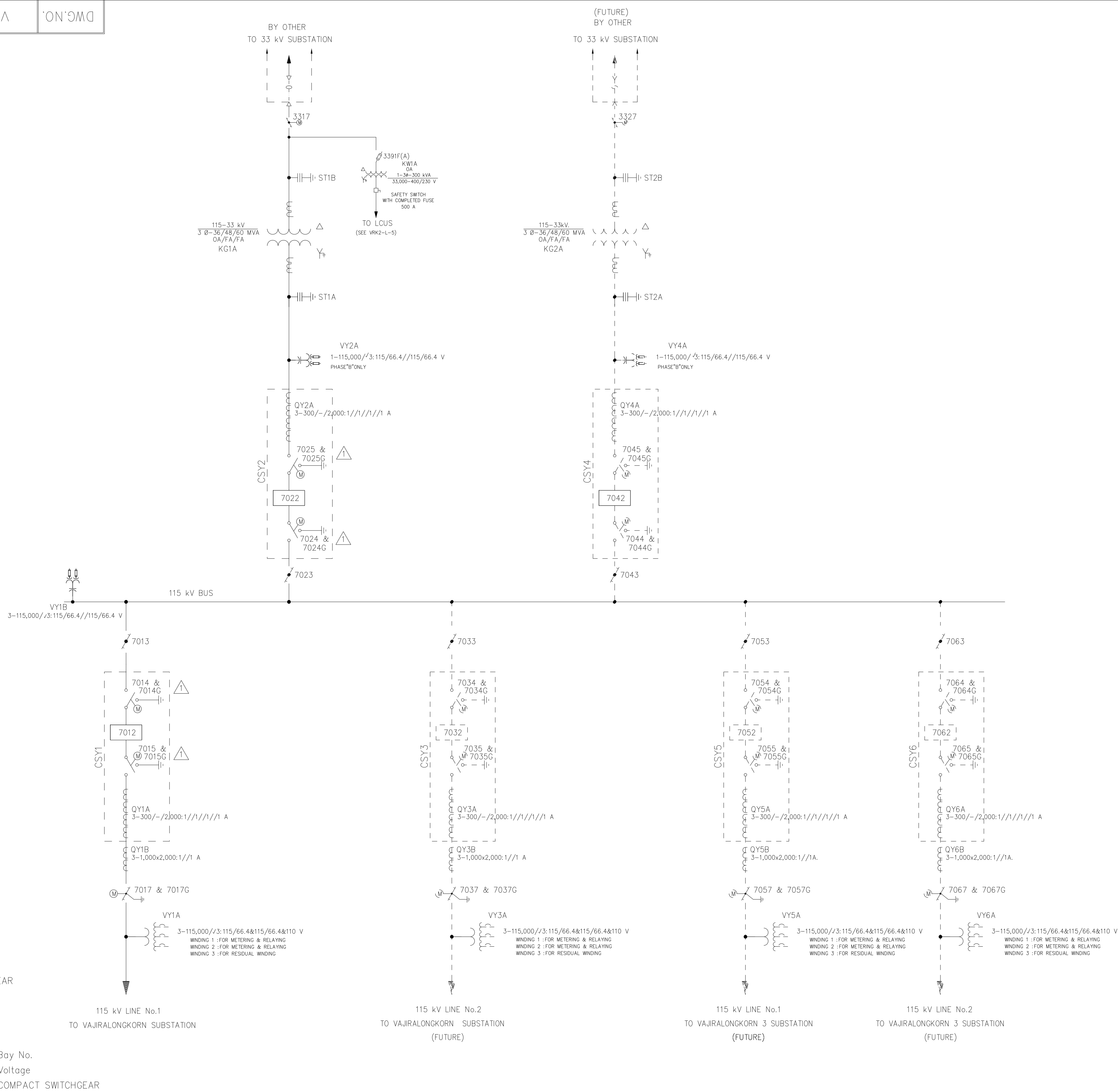
Ratings and Features of CT for Compact Switchgear (RF No.CW7748 (IEC))	Revision 1	Page 1/1
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Current Transformer

for all CTs As specified in DWG. NO. VRK2-S-1 Sheet 01/02

- Quantity per phase	1	set
- No of core	4	
- Current ratio	300/400/500/800/1,100/1,200/ 1,500/1,600/2,000:1//1//1//1 A	
- Accuracy class & burden	5P20, 20	VA
- Continuous thermal current rating factor	1.0	
- Polarity	Subtractive	
- Thermal short time current rating for 1 s	40	kA
- Mechanical short time current rating, peak	100	kA

DWG. NO.	VRK2-S-1	
	01	02
	REV.	1



DRAWING LIST

VAJIRALONGKORN 2 SUBSTATION	
SINGLE LINE DIAGRAM.....	DWG.NO.VRK2-S-1-01/02
SINGLE LINE DIAGRAM.....	DWG.NO.VRK2-S-1-02/02
GENERAL ARRANGEMENT PLAN.....	DWG.NO.VRK2-S-2-01/01
BUS STRUCTURE PLAN.....	DWG.NO.VRK2-S-3-01/01
BUS STRUCTURE SECTIONS.....	DWG.NO.VRK2-S-4-01/01
SUBSTATION GROUNDING SYSTEM.....	DWG.NO.VRK2-S-5-01/01
BUILDING EQUIPMENT LAY-OUT.....	DWG.NO.VRK2-S-6-01/01
SUBSTATION STRUCTURE LAY-OUT.....	DWG.NO.VRK2-S-7-01/01
SUBSTATION LIGHTING PLAN.....	DWG.NO.VRK2-L-1-01/01
LIGHTING FIXTURE AND LOAD SCHEDULE.....	DWG.NO.VRK2-L-2-01/01
SINGLE LINE DIAGRAM FOR STATION SERVICE SYSTEM.....	DWG.NO.VRK2-L-5-01/01

LEGEND

ADDITIONAL FOR JOB NO.VKS1-01-S01(BY EGAT)
 FUTURE

ได้ตรวจสอบแล้ว
ลงชื่อ..... **พรพิมล**
(นางสาวพรพิมล สวัสดิ์มงคล)
วันที่..... **06 Feb 2025**
กองวิศวกรรมสถานไฟฟ้าแรงสูง

											ELECTRICITY GENERATING AUTHORITY OF THAILAND						
											DRAWN R.PUNNARAT	RECOMMENDED AND VALIDATED CHIEF,SUBSTATION ENGINEERING DEPARTMENT		DRAWING NAME VAJIRALONGKORN 2 SUBSTATION			
											DESIGNED	CONCURRED		DESCRIPTION OF DETAIL DRAWING SINGLE LINE DIAGRAM			
											VERIFIED	ASSISTANT DIRECTOR,TRANSMISSION SYSTEM ENGINEERING DIVISION-2					
											APPROVED	DATE		JOB NO. VKSI-01-S01	REPLACING DWG.NO.	DWG.NO. VRK2-S-1	01 REV.
											DIRECTOR, TRANSMISSION SYSTEM ENGINEERING DIVISION						
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0	02	VRK2-S-1	DWG.NO.
REV.	02		

	EQUIPMENT	DESIGNATION	RATING	QTY.	BID NO.	REMARK
	ADDITIONAL EQUIPMENT FOR JOB.No.VKS1-01-S01					
	POWER & DIST. TRANSFORMER	KG1A (With Lightning Arrester)	30-36/48/60 MVA, 115-33 kV	1	-	-
		KW1A	300 kVA, 33,000-400/230 V, 3Ø	1	-	-
	SWITCHES & FUSES	3317	33 kV, 1,600 A, 13 kA (MOTOR OPERATE)	1	-	-
		3391F (A)	33 kV, 100 A	3	-	-
		FUSE LINK	33 kV FUSE LINK 7E	6	-	-
		7013, 7023	115 kV, 2,000 A, 40 kA	2	-	-
		7017&7017G (MOTOR OPERATED)	115 kV, 2,000 A, 40 kA	1	-	-
	INSTRUMENT TRANSFORMER	QY1B	115 kV, 1,000x2,000 : 1//1A, 40 kA	3	-	-
			METERING CLASS 0.2S			
		VY1A (3 PHASE) (WO/C)	115,000/√3:115/66.4&115/66.4&110 V	3	-	-
			WINDING 1 : METERING CLASS 0.2 & RELAYING CLASS 3P			
			WINDING 2 : METERING CLASS 0.2 & RELAYING CLASS 3P			
			WINDING 3 : RESIDUAL WINDING (FOR DAMPING RESISTOR)			
		VY1B (3 PHASE) (WO/C)	115,000/√3:115/66.4//115/66.4 V	3	-	-
		VY2A (PHASE "B") (WO/C)	115,000/√3:115/66.4//115/66.4 V	1	-	-
115 kV COMPACT SWITCHGEAR	POWER CIRCUIT BREAKERS	7012	115 kV, 2,000 A, 40 kA	1	-	-
	SWITCHES & FUSES	7014&7014G, 7015&7015G	115 kV, 2,000 A, 40 kA	2	-	-
	INSTRUMENT TRANSFORMERS	QY1A	115 kV, 300/-/2,000 : 1//1//1//1 A, 40 kA	3	-	-
			RELAYING CLASS 5P20, 20 VA			
	POWER CIRCUIT BREAKERS	7022	115 kV, 2,000 A, 40 kA	1	-	-
	SWITCHES & FUSES	7024&7024G, 7025&7025G	115 kV, 2,000 A, 40 kA	2	-	-
INSTRUMENT TRANSFORMERS	QY2A	115 kV, 300/-/2,000 : 1//1//1//1 A, 40 kA	3	-	-	
		RELAYING CLASS 5P20, 20 VA				

ได้ตรวจสอบแล้ว
ลงชื่อ.....**พรพิมล**.....
(นางสาวพรพิมล สุวดีสิงห์สุด)
วันที่.....**06 Feb 2025**.....
กองวิศวกรรมสถานีไฟฟ้าแรงสูง

ELECTRICITY GENERATING AUTHORITY OF THAILAND											
			DRAWN R.PUNNARAT			RECOMMENDED AND VALIDATED			DRAWING NAME		
			DESIGNED			CONCURRED			VAJIRALONGKORN 2 SUBSTATION		
			VERIFIED			ASSISTANT DIRECTOR,TRANSMISSION SYSTEM ENGINEERING DIVISION-2			DESCRIPTION OF DETAIL DRAWING		
			APPROVED			DATE			SINGLE LINE DIAGRAM		
			DIRECTOR, TRANSMISSION SYSTEM ENGINEERING DIVISION						JOB NO.	REPLACING DWG.NO.	DWG.NO.
									VKS1-01-S01		VRK2-S-1
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