## Siam Water Solutions Co.,Ltd.

54 BB Building 8th Fl, Room 3813A, Sukumvit 21 Rd. (Asoke Rd.), Klongtoey-Nua, Wattan, Bangkok 10110 Thailand.

Tel No.: +66-2664-1196, Fax: +66-2664-1245 E-mail: info@siamwatersolutions.com Web Site: http://www.siam-solution.com/

## COOLING WATER SYSTEM SURVEY

COMPANY NAME	DATE:		
ADDRESS:			
Tel No.:	Fax:		
Contact Person: 1)	Designation:		
2)	Designation:		
OPERATI	NG DATA		
MANUFACTURER & SERIAL NO.			
INDUCED, FORCED, OR NATURAL DRAFT			
MATERIALS OF CONSTRUCTION, GENERAL			
CIRCULATION RATE: DESIGN, (m <sup>3</sup> /h)			
ACTUAL, (m <sup>3</sup> /h)			
NUMBER OF CIRCULATING PUMPS			
AVERAGE NUMBER OF PUMPS ON LINE			
m³/h OF EACH PUMP			
SYSTEM VOLUME □ ESTIMATED □ ACUTAL, (m³)			
TEMPERATURE DIFFERENTIAL (ΔT): DESIGN, (°C)			
(ΔT): ACTUAL, (°C)			
HOT RETURN TEMPERATURE, (°C)			
COLD OUTLET TEMPERATURE, (°C)			
HOURS OF OPERATION; PER DAY, DAYS PER YEAR			
FIRE PUMP (S) ON LINE (YES/NO)			
IF YES, m <sup>3</sup> /h OF FIRE PUMP (S)			
SIDE STREAM FILTER (S) (YES/NO)			
IF YES, TYPE OF MEDIA			
MANUAL OR AUTOMATIC OPERATION			
BACKWASH FREQUENCY			
EVAPORATION RATE; IN (m³/h) OR % RECIRCULATION	EVAPORATION RATE; IN (m³/h) OR % RECIRCULATION		
WINDAGE OR DRIFT LOSS, (m <sup>3</sup> /h)			
BLEEDOFF RATE, (m <sup>3</sup> /h)	BLEEDOFF RATE, (m³/h)		
MAKEUP RATE, (m <sup>3</sup> /h)			
FREQUENCY OF PUMP SEAL REPLACEMENT			

OTHER:		

## **ENVIRONMENTAL REGULATIONS**

REGULATORY AUTHORITY (LOCAL, STATE, CENTRAL, OTHER):				
P.C.B. PERMIT   DATED  EFFLUENT TREATMENT:  TYPE				
DISCHARGE LIMITS:		EITE	CELVI TREZITIVIETO	1112
BOD <sub>5</sub>	pr	om*	ZINC	ppm as
COD				ppm as
COLOR	as	• • • • • • • • • • • • • • • • • • • •		ppm as
				ppm as
OTHER	• • • • • • • • • • • • • • • • • • • •	OTHER	OT	THER
*or mg/L				
	EQ	UIPMENT	INSPECTIONS	
CORROSION:				
LOCATION(S):				
CORPOGION TEGERNIC LOCATE	ION OF COUR	ONIG	EDEOLE	NOV OF TROUBLE
CORROSION TESTING, LOCATI		ONS:	HISTORI	NCY OF TESTING
CORROSION RATES (MPY), PRI LOCALIZED CORROSION, SEVI		\	пыток	ICAL:
DEPOSITION	SCALE	FOULING	MICROBIOLOGICAL	PROCESS CONTAMINATION
LOCATION	SCALE	POULING	MICKODIOLOGICAL	FROCESS CONTAMINATION
TYPE				
FREQUENCY AND SEVERITY				
COMMENTS:				<u>l</u>
RESULTS OF COOLING TOWER INSPECTION (include basin, fill, distribution deck, plenum etc)				
RESOLITO OF COOLING TO WERE INSTITUTE (Include outsin, IIII, distribution deek, plenum etc)				
FREQUENCY OF CRITICAL HEAT EXCHANGER CLEANING (indicated partial or general cleaning):				
TYPE OF CLEANING	-		· · · · · · ·	C/
BUNDLE REPLACEMENT:				
PROCESS LEAKS:				
□ NONE □ HYDROCARBONS □ GLYCOL □ H2S □ AMMONIA □ MERCAPTANS □ NIRATE				
□ OTHER				
MICROBIOLOGICAL DATA				
LOCATION:   TOWER  BASIN  TUBE SHEET  OTHER				
				COLOUR?
TREATMENT USED IN PAST :				
BIOCIDE TREATMENT USED NOW:				
CHLORINATION : $\Box$ CONTINUOUS $\Box$ SHOCK $\Box$ RESIDUAL $\Box$ PPM APPLIED TO:				
POUNDS CHLORINE PER DAY?	ROTTE	N EGG ODO	R NOTICED? PRES	ENCE OF IRON BACTERIA?
CHLORINATOR CAPACITY				
REMARKS				

## CRITICAL AND/OR MAJOR HEAT EXCHANGERS

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SYSTEM IDENTIFICATION	
COOLING WATER ON SHELL OR TUBESIDE	
MATERIAL OF CONSTRUCTION: TUBES	
TUBE SHEET	
SHELL	
NUMBER OF PASSES	
WATER FLOW, m3/h: DESIGN, (°C)	
ACTUAL, (°C)	
INLET WATER TEMPERATURE : DESIGN, (°C)	
ACTUAL, ( <sup>o</sup> C)	
DESIGN HEAT LOAD (KJ/h),(Kcal/hr)	
OUTLET WATER TEMPERATURE: DESIGN, (°C)	
ACTUAL, (°C)	
PRESSURE DROP (Δ P): DESIGN, ( <sup>O</sup> C)	
ACTUAL, (°C)	
VELOCITY (m/s) OF COOLING WATER : DESIGN	
ACTUAL	
IDENTIFY ANY VALVES THROTTLED	
PROCESS FLOW, m <sup>3</sup> /h : DESIGN	
ACTUAL	
INLET PROCESS TEMPERATURE: DESIGN, (°C)	
ACTUAL, ( <sup>o</sup> C)	
OUTLET PROCESS TEMPERATURE: DESIGN, (°C)	
ACTUAL, ( <sup>o</sup> C)	
IF SURFACE CONDENSER, VACUUM : DESIGN, IN.HG.	
ACTUAL,IN.HG.	
CONNECTIONS FOR BACKWASH (YES/NO)	
BACKWASH FREQUENCY	
CONNECTIONS FOR AIR BUMPING (YES/NO)	
AIR BUMPING FREQUENCY	
CONNECTIONS FOR BLOWDOWN PORTS (YES/NO)	
BLOWDOWN FREQUENCY	
OTHER	
OTHER:	

					·
MAKEUP WATER DATA					
SOURCE (WELL, SURFA	CE, OTHER):	IF CONDENSATE I	N MAKEUP, P	ERCENT:	
EXTERNAL TREATMEN	T:				
TEMPERATURE: IDENTIFY SAMPLES SUBMITTED OR ATTACH WATER ANALYSIS:					

WAT	TER ANALY	SIS		
TEST	UNITS	MAKEUP	CIRCULATING	
***		WATER	WATER	
pH				
PHENOLPHTHALEIN (P) ALKALINITY				
TOTAL (M) ALKALINITY				
CHLORIDES				
CALCIUM HARDENSS				
TOTAL HARDNESS				
SULFATES				
PHOSPHATES				_
SILICA				
IRON				
TOTAL DISSOLVED SOLIDS				
CONDUCTIVITY				
OTHER (specify)				
• •				
	I			
COOLING WATE	R TREATMI	ENT PROG	RAM	
	PRESEN	NT	RECO	OMMENDED
CYCLES OF CONCENTRATION				
BLEEDOFF RATE,(m3/h)				
MICROBICIDE				

COOLING WATER TREATMENT PROGRAM		
	PRESENT	RECOMMENDED
CYCLES OF CONCENTRATION		
BLEEDOFF RATE,(m3/h)		
MICROBICIDE		
SCALE INHIBITOR		
CORROSION INHIBITOR		
DISPERSANT		
TYPE:		
pH CONTROL		
FEED POINT:		
FREQUENCY:		
CLEANING FLUSHING		
METHOD:		
FREQUENCY:		
WATER TEST		
METHODS:		

For.	Internal	lU	se	:
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Reported By:	
Date:	