

## เอกสารแนบที่ 101

ตัวอย่างการตรวจสอบยาและเวชภัณฑ์โดยบุคลากรทางการแพทย์  
ประจำเรือที่ใช้ในการปฏิบัติงาน





NIPPON STEEL ENGINEERING CO. LTD.  
DERRICK BARGE KUROSHIO II

## WEEKLY MEDICINES CONSUMPTION

Location : Songkhla, Thailand  
Period : 8-14 Nov 21

No	Medicines	Unit	Initial stock	Incoming stock	Total stock	Nov								Total usage	Final Stock	PTTEP Requirement	Expired date	Remarks
						8	9	10	11	12	13	14						
A.PHARMACEUTICALS																		
I.EMERGENCY DRUG																		
1	Adenosine 6 mg/Adenocor	Vial/ampoule	12	0	12								0	12	5		28/Feb/23	
2	Adrenaline 1 mg/ml	Vial/ampoule	20	0	20								0	20	10		31/Oct/22	
3	Aspirin 300 mg	tablet/Capsule	300	0	300								0	300	100		31/Aug/23	
4	Aspirin 100 mg	tablet/capsule	120	0	120								0	120	50		31/Jul/22	
5	Calcium Gluconate injection 10 % 10 ml	Ampoule	50	0	50								0	50	5		31/Dec/22	
6	Atropine sulfate	Ampoule	10	0	10								0	10	10		4/Jul/23	
7	Cordarone 150 mg/ml 3 ml	Vial/ampoule	15	0	15								0	15	5		31/Jul/22	
8	Lignocaine 2% 10 mL	Vial/ampoule	25	0	25								0	25	2		30/Sep/23	
9	Dobutamine	Ampoule	2	0	2								0	2	2		28/Feb/24	received 16-6-21
10	Dopamine 40 mg	Vial/ampoule	5	0	5								0	5	2		27/May/22	
11	Nicardipine	Ampoule	5	0	5								0	5	5		30-11-23	received 26-6-21
12	Glyceryl Trinitrate inj 1 mg/ml - 10 ml	Vial/ampoule	10	0	10								0	10	2		31/May/23	
13	Glyceryl Trinitrate 0.4 mg spray	Can	5	0	5								0	5	0		30/Apr/23	
14	Invoril 5/Enalapril 5mg	tablet/capsule	300	0	300								0	300			31/Jul/23	
15	Isosorbide Dinitrate SL 5 mg/ Hartsorb 5 mg	tablet/capsule	50	0	50								0	50	50		8/Apr/23	
16	Lignocaine 2% 10 mL	Vial/ampoule	50	0	50								0	50	2		30/Sep/23	
17	Lisinopril Stada 10 mg	tablet/capsule	500	0	500								0	500			1/Oct/22	
18	MgSO4 5 ml	Vial/ampoule	10	0	10								0	10	5		31/Jan/25	
19	NaHCO3 8.4% 20 ml (Meylon/Bic-Nat)	Vial/ampoule	10	0	10								0	10	5		31/Jan/23	
20	Plavix 75 mg/Apo-Clopidogrel 75 mg	tablet/capsule	70	0	70								0	70	40		1/Jan/22	Mar-23
21	Furosemid Injection 20 mg/2 ml	Vial/ampoule	5	0	5								0	5			30/Apr/23	
22	Lignocaine 1% 5 mL	Vial/ampoule	5	0	5								0	5			30/Jun/22	
23	Hydrochlorothiazide	tablet/capsule	210	0	210	10							10	200			30/Jun/24	received 2 Nov 21
24	Atacand /Candesartan	tablet/capsule	120	0	120								0	120			31/May/23	
25	Swamlo/Amlodipine 10 mg	tablet/capsule	50	0	50								0	50			30/Jun/22	
II.Controlled drugs																		
1	Diazepam / Diapine 10 mg/2ml (Controlled Drug)	Vial/ampoule	10	0	10								0	10	10		3/Jul/23	
2	Alprazolam /Xanax 0.5 mg (Controlled Drug)	tablet/capsule	100	0	100								0	100	50		31/Dec/22	
3	Escitalopram/lexapro 10 mg (Controlled Drug)	tablet/capsule	56	0	56								0	56			30/Sep/23	
4	Haloperidol 5 mg/ml (Controlled Drug)	Vial/ampoule	10	0	10								0	10	5		31/May/23	
5	Lorazepam 1 mg (Controlled Drug - Anxiolytic)	tablet/capsule	50	0	50								0	50			31/May/22	
6	Naloxone 4 mg/10 ml (Controlled Drug)	Vial/ampoule	8	0	8								0	8	2		31/Jan/22	received 15-6-21
7	Tramadol Injection 50 mg/mL (Controlled Drug)	vial/ampoule	10	0	10								0	10	10		17/Nov/23	
8	Tramadol 50 mg (Controlled Drug)	tablet/capsule	50	0	50								0	50			31/Jul/22	
9	Tramadol 50 mg (Controlled Drug)	tablet/capsule	50	0	50								0	50			31/Jan/24	
10	Tramadol 50 mg (Controlled Drug)	tablet/capsule	300	0	300								0	300			18/Jul/24	
11	Morphine inj (Controlled Drug)	Vial/ampoule	2	0	2								0	2	2			received 15-6-21
III.Antibiotic/Anti Viral/Anti Fungus																		
1	Amoxycillin 500 mg	tablet/capsule	330	0	330			10					10	320	500		31-May-23	
2	Augmentine/Moxiclav 1 G	tablet/capsule	532	0	532								0	532	500		31/Dec/22	
3	Azithromycin 250 mg/Erithromycin 250 mg	tablet/capsule	200	0	200								0	200			31-Aug-23	
4	Azithromycin 500 mg	tablet/capsule	300	0	300								0	300	200		31-Aug-23	
5	Cloxacilin 250 mg	tablet/capsule	228	0	228					20			20	208			31-May-22	
6	Cefazolin Injection	Vial/ampoule	50	0	50								0	50	4		7/31/2023	
7	Ceftriaxone 1 g	vial/ampoule	5	0	5								0	5	4		31/Aug/22	
8	Ciprofloxacin 500 mg	tablet/capsule	600	0	600								0	600	500		6/Apr/23	
9	Clindamycin 150 mg	tablet/capsule	265	0	265							10	10	255	300		31-Aug-23	
10	Co-Trimoxazole 480 mg	tablet/capsule	300	0	300								0	300	100		31-Jan-22	30-Nov-23
11	Doxycycline 100 mg	tablet/capsule	166	0	166								0	166	200		31-Aug-23	
12	Doxycycline 100 mg	tablet/capsule	20	0	20								0	20			31-Aug-23	Received 25-8-21
13	Metronidazole/Flagyl 500 mg	tablet/capsule	200	0	200								0	200	100		31-Aug-22	*
14	Norfoxacin 400 mg	tablet/Capsule	318	0	318								0	318	500		1/19/2025 26-3-24	received 26-6-21
15	Norfoxacin 400 mg	tablet/Capsule	220	0	220								0	220			31-Aug-24	Received 25-8-21
16	Aciclovir 200 mg	tablet/capsule	200	0	200								0	200			31-Jan-24	
17	Aciclovir 800 mg	tablet/capsule	300	0	300								0	300			31-Dec-23	
18	Ketoconazole tab	tablet/capsule	200	0	200								0	200			28-Feb-23	
19	Griseofulvin 500 mg	tablet/capsule	300	0	300								0	300			29-Feb-24	
20	Rivovir-EM	tablet/capsule	20	0	20								0	20	20		30-Mar-22	received 16-6-21
21	Osetamivir 75 mg	tablet/capsule	150	0	150								0	150	100		1-Jan-22	31-Jan-22
22	Cloxacilin 500 mg	tablet/capsule	76	0	76								0	76			1-May-24	
IV.Antidote																		
1	Naloxone 4 mg/10 ml	Vial/ampoule	5	0	5								0	5	2		31-Jan-22	
V.Antihistamines/Skin System																		
1	Dexamethsone 0.5 mg	tablet/capsule	960	0	960			11					11	949			31/May/22	
2	Dexamethsone Injection	Ampoule	10	0	10								0	10			31/Aug/22	
3	Cetirizine	tablet/capsule	20	0	20								0	20			9/Dec/22	
4	Cetirizine	tablet/capsule	82	0	82						7		7	75			1/Oct/24	Received 25-8-21
5	Chlorpheniramine 4 mg CPM	tablet/capsule	1371	0	1371	6		10					16	1355	500		1/Dec/21	30-Apr-23
6	Chlorpheniramine Injection	Ampoule	10	0	10								0	10	5		28/Jun/24	
7	Hydroxyzine 10 mg /Tarazin	tablet/capsule	100	0	100								0	100			7/May/24	Received 2-11-21
8	Loratadine 10 mg/Lorita	tablet/capsule	171	0	171	5							5	166	500		19/Aug/23	
VI.Central Nervous System																		
1	Alprazolam /Xanax	tablet/capsule	100	0	100								0	100	50		31/Dec/22	
2	lexapro	tablet/capsule	56	0	56								0	56			30/Sep/25	
3	Diazepam / Diapine 10 mg/2ml (Controlled Drug)	Vial/ampoule	10	0	10								0	10	10		3/Jul/23	
4	Lorazepam 1 mg (Controlled Drug - Anxiolytic)	tablet/capsule	50	0	50								0	50			31-Jul-25	
VII.Eye,Ear,Nose and Throat																		
1	Antazallerg Eye drop	bottle	37	0	37	1							1	36			19/Dec/21	
2	Mybacin Lozenges (10's/pack)	tablet/capsule	49	0	49	2		1	1	1			5	44			30/Apr/23	received 16-6-21
3	Dorithrion	tablet/capsule	67	0	67								0	67			31/Oct/22	
4	Klean&Kare Normal Saline 100 ml	Bottle	2	0	2								0	2			1/Jan/23	
5	Oticog ear Drops	Bottle	5	0	5								0	5			30/Nov/22	
6	Hexifresh Mouthwash	Bottle	50	0	50			1			1		2	48			30/Apr/23	received 1 Oct 21
7	Tobramycin eye drop	Bottle	8	0	8								0	8	10		31/Dec/22	
8	Opsar Eye Lotion	Bottle	32	0	32	1							1	31			22/Dec/23	
9	Tobramycine/Dexamethason eye drop	Bottle	17	0	17								0	17			30/Sep/22	
10	Tears Natural II eye drops	Bottle	17	0	17			2	1				3	14			31/May/23	
11	Tetracycline Eye ointment	tube	19	0	19								0	19			30/Jun/23	
12	Tetracaine eye drops	Tube	14	0	14								0	14			28/Feb/23	
13	Oxy Metazoline Nasal drops	Tube	18	0	18								0	18			31/May/23	



No	Medicines	Unit	Initial stock	Incoming stock	Total stock	Nov								Total usage	Final Stock	PTTEP Requirement	Expired date	Remarks
						8	9	10	11	12	13	14						
VIII.Fluids																		
1	0.9 % NaCl(NSS) 1,000 ml	Bottle	25	0	25								0	25	5	1/Mar/23	31-Oct-24	
2	0.9 % NaCl(NSS) Inj 20 mL	Bottle	20	0	20								0	20		26/May/23		
3	5 % Dextrose water 500 ml and sodium chloride 0.9 %inj 500 ML	Bottle	25	0	25								0	25	5	30/Jun/23		
4	5% Dextrose/1/2 1000 mg	bottle	10	0	10								0	10	10	24/Dec/25	received 16-6-21	
5	Otsu 0.9 % NSS 500 ml	bottle	10	0	10								0	10		14/Feb/24		
6	D-5 Infusion 500 ml	Bottle	5	0	5								0	5		30/Jun/23		
7	Emergency Eye Wash 250ml	Bottle	28	0	28								0	28	10	25/May/24		
8	Laktate Ringer Solution 500 mL	Bottle	5	0	5								0	5		27 May/22		
9	Ringer Lactase Solution 1,000 ml	Bottle	6	0	6								0	6	5			
10	Voluven solution 8 % and N Saline Infusion 500 ml	bottle	2	0	2								0	2	2	3/Nov/22		
11	Hartmann'S Solution 500 ml	bottle	10	0	10								0	10		7/Sep/23		
12	Mannitol infusion 20 %250ml	bottle	2	0	2								0	2		31/May/23		
13	Water For Injection 500ml	Bottle	5	0	5								0	5		30/Apr/23		
14	Water For Injection 500ml	Bottle	5	0	5								0	5		30/Jun/23		
15	NSS 0.9 % 1,000 ml for irrigation	bottle	10	10	20								0	20	5	26/Feb/26	Received 29Jun21	
16	NSS 0.9 % 100 ml	bottle	30	0	30								0	30		12/Mar/26	received 1 Oct 21	
17	Purified Water 500 ml	bottle	10	0	10								0	10	20	1/Jan/23		
IX.Gastro Intestinal																		
1	Car-X-Bon	tablet/Capsule	190	0	190								0	190	200	3/Mar/26	Received 25-8-21	
2	Air-X 80 mg	tablet/capsule	90	0	90							10	10	80		8/Mar/26	Received 2-11-21	
3	Antacid (Trisilicate 250mg+ Alum Hydroxide 120mg)	tablet/capsule	406	0	406								0	406	200	28/Feb/23		
4	Bisacodyl/Dulcolax	tablet/Capsule	196	0	196								0	196	100	31/Jan/23		
5	Buscopan/Hyoscine Butylbromide	tablet/Capsule	118	0	118								0	118	100	26/Feb/23		
6	Copan/Buscopan/Hyoscine Butyl Bromide Injection	Ampoule	10	0	10								0	10	10	30/Jun/23		
7	ENO (Antacid Salt)	Sachet	32	0	32								0	32		28/Sep/23		
8	ENO	Sachet	60	0	60								0	60		7/Jan/23	Received 25-8-21	
9	CPD Mag Trisilicate	tablet/capsule	490	0	490								0	490		28/Feb/23		
10	Anti Haemorrhoid Supp	Suppository	0	0	0								0	0	20	31/Jul/23		
11	Anti Haemorrhoid Supp	Suppository	48	0	48								0	48		31/Jul/22	Received 25-8-21	
12	Gaviscon liquid	bottle	0	0	0								0	0		20/Jan/23	Received 25-8-21	
13	Imodium/Eldoper 2 mg/Loperamide	tablet/Capsule	194	0	194								0	194	100	13/Jul/24		
14	Lactulose/Lactus syr 200 mL	Bottle	3	0	3								0	3		28/Feb/23		
15	Metoclopramide Injection 10 mg	Ampoule	10	0	10								0	10	10	15/Sep/24		
16	M. Carminative 180 cc	bottle	10	0	10							1	1	9	10	26/Nov/23	received 16-6-21	
17	Metoclopramide	tablet/capsule	100	0	100								0	100		28/Feb/25		
18	Motilium (Domperidone 10 mg.)	tablet/capsule	90	0	90								0	90	10	31/Oct/24		
19	Nexium 40 mg Inj/Ranitidine (Gastril) Inj	Vial/ampoule	10	0	10								0	10	10	30/Sep/22		
20	Omeprazole 20 mg	tablet/capsule	228	0	228							14	14	214	100	30/Apr/23		
21	Ondansetron 4 mg	tablet/Capsule	89	0	89								0	89		31/Oct/22		
22	Ondansetron 4mg/2 ml	Vial/ampoule	5	0	5								0	5		31/May/22		
23	Cimetidine	tablet/Capsule	300	0	300								0	300		19/Aug/24		
24	Xandine (Ranitidine 150 mg.)	tablet/Capsule	29	0	29								0	29		31/Jan/23		
X.Analgesics																		
1	Meloxicam	Tablet/Capsule	40	0	40								0	40		31/Mar/22		
2	Meloxicam	tablet/Capsule	100	0	100								0	100		31/Jul/22		
3	Arcoxia 90 mg	Tablet/Capsule	49	0	49								0	49		28/Nov/22		
4	Diclofenac 50 mg	Tablet/Capsule	256	0	256								40	216		31/May/23		
5	Diclofenac Sodium 50 mg/ Bufenac / Remethan	tablet/Capsule	190	0	190								0	190	250	31/May/23		
6	Diclofenac Sodium 100 mg	tablet/Capsule	195	0	195								0	195		31/Aug/23		
7	Diclofenac Sodium injection 75 mg /3 ml	Ampoule	2	0	2								0	2		30/Sep/22		
8	Ibuprofen 400 mg	Tablet/Capsule	222	0	222							10	20	202	500	31/Aug/23	Received 25-8-21	
9	Cataflam 50 mg	tablet/Capsule	260	0	260								0	260		30/Sep/22		
10	Norgesic/Suntion	tablet/Capsule	223	0	223							9	19	204	500	31/Aug/24	Received 16-6-21	
11	Norgesic	tablet/Capsule	9	0	9								0	9		7/May/24	Received 25-8-21	
12	Paracetamol	Tablet/capsule	1156	0	1156								30	1126		31/Aug/23		
13	Cold and flu tablet "chiromamol"	Tablet/capsule	499	0	499								0	499		31/May/23		
14	Ponstan/Mefenamic Acid	Tablet/Capsule	428	0	428								0	428	100	31-May-23		
15	Aspirin 100 mg	tablet/Capsule	300	0	300								0	300	100	31-Aug-23		
16	Tylenol (Paracetamol 500 mg)	Tablet/capsule	170	0	170								0	170	1000	17-Aug-22		
17	Panadol Actifast	tablet/Capsule	124	0	124								40	84		1-Sep-23		
18	Panadol Caplets Extra Optizorb	tablet/Capsule	106	0	106								14	92		28-Nov-22		
19	Betahistine/Merislon	tablet/Capsule	96	0	96								0	96		30-Apr-23		
20	Danzen	tablet/Capsule	115	0	115								0	115		5-Feb-24		
21	Ultracet (Tramadol 37.5 + Paracetamol 325 )	Tablet/Capsule	195	0	195								0	195		30/Apr/23		
XI.Anti Gout/Anti Hyperuricemia																		
1	Allopurinol 300 mg	Tablet/Capsule	223	0	223								10	213		30/Dec/22		
XII.Parasites																		
1	Mebendazole 500 mg	Tablet/Capsule	120	0	120								0	120	100	Sep-22		
XIII.Respiratory																		
1	Bisolvon/Bromhexine 8 mg Tab	tablet/Capsule	210	0	210								0	210		31-Jan-25		
2	Bromhexine syrup	bottle	24	0	24								0	24		30-Apr-23		
3	De-Cold	tablet/Capsule	193	0	193								0	193		7-Jul-22		
4	Decolgen Caplets (Non Drowse)	Tablet/capsule	0	0	0								0	0		10-Feb-23		
5	Decolgen Caplets (Non Drowse)	tablet/capsule	61	0	61								2	59		14-Apr-24		
6	Chlornamol Cold and Flu	Tablet/capsule	700	0	700								0	700		30-Apr-24		
7	Decondine Cold Tablets	Tablet/capsule	344	0	344								0	344		28-Feb-24		
8	Icold/Dextromethorphan 15 mg	Tablet/capsule	237	0	237								10	227	100	5-Mar-23		
9	Dextromethorphan 15 mg	tablet/capsule	300	0	300								0	300	100	30-Jun-24		
10	Mucosolvan/ Carbocysteine Tab 375 mg	Tablet/capsule	240	0	240								0	240		31-Mar-23		
11	Acetylcysteine Eff (Mucinact00)	tablet/capsule	120	0	120								0	120		30-Nov-22		
12	Robtusin DM	Bottle	69	0	69								0	69		1-Aug-24	6-Feb-24	
13	Robtusin EX	Bottle	46	0	46								0	46		29/Aug/23	8-Feb-24	
14	Salbutamol/Ventolin 2 mg/Asmol	Tablet/capsule	56	0	56								0	56	100	30/Nov/24		
15	Salbutamol nebule	nebule	20	0	20								0	20		31/May/23	Received 25-8-21	
16	Salbutamol 2 mg	tablet/capsule	10	0	10								0	10		31/Oct/22	Received 25-8-22	
17	Salbutamol/Ventolin Inhaler/Buto-Asma	Bottle	6	0	6								0	6	5	31-Jul-22		
18	Ventoline Nebules	Can	16	0	16								0	16		31-Dec-22		
19	PovSan Inhaler	Tube	124	0	124								10	114		5-May-23	Received 25-8-21	



No	Medicines	Unit	Initial stock	Incoming stock	Total stock	Nov								Total usage	Final Stock	PTTEP Requirement	Expired date	Remarks
						8	9	10	11	12	13	14						
XIV.Antihypertensive/Diabetes/Lipid/Miscellaneous																		
1	Atorvastatin 20 mg	Tablet/Capsule	17	0	17								0	17		30/Apr/22		
2	Atorvastatin 20 mg	tablet/Capsule	120	0	120								0	120		31/Oct/22		
3	Amaryl 2 mg	Tablet/Capsule	440	0	440								0	440		21/Dec/22		
4	Atenolol 50 mg	tablet/Capsule	20	0	20								0	20	20	24/Feb/25	Received 16-6-21	
5	Hydrochlorothiazide 50 mg	tablet/Capsule	3	0	3								0	3	20	29/Aug/23		
6	Bonyels Oral Paste / Keno Oral Paste	Tube	11	0	11								0	11		01/Sep/22		
7	Oral Rehydration Solution / ORS	Sachet	300	0	300								0	300		31/May/24		
8	Oral Rehydration Solution	Sachet	155	0	155								0	155		31/Aug/23		
9	Dimenhydrinate injection	Ampoule	1	0	1								0	1		29/Feb/24		
10	Cramamine / Dimenhydrinate	Tablet/Capsule	993	0	993		5						5	988	200	17/Apr/25	Expired item 143 table	
11	Fenosup/Fenofibrate 160 mg	Tablet/Capsule	90	0	90								0	90		26/Feb/23		
12	Fenosup/Fenofibrate 160 mg	Tablet/Capsule	30	0	30								0	30		31/Oct/23		
13	Simvastatin	tablet/capsule	418	0	418		10						10	408		31/Jul/24	received 2 Nov 21	
14	Pharmaton Formula	Tablet/Capsule	556	0	556		7						7	549	300	31/Oct/22		
15	Siamformet 500 mg/Diabetmin/Metformin	Tablet/Capsule	800	0	800								0	800		31/May/23		
16	Novoravid Insulin	Vial/ampoule	5	0	5								0	5		May-23		
17	Tranexamic Acid 500 mg	Tablet/Capsule	60	0	60								0	60		10/Jul/23		
18	Condesatan 8mg	Tablet/capsule	120	0	120								0	120		31/May/23		
19	Amlodipine 10 mg	Tablet/capsule	420	0	420								0	420		30/Jun/24	received 2 Nov 21	
20	Vitamin C 500 mg/Hi-Cee	Tablet/capsule	392	0	392		7						7	385	200	31/Jan/24		
XV.Topical/Balm																		
1	Acyclovir Cream / Acivir 5% Cream (5 gr.)	tube	14	0	14								0	14	10	30/Sep/22		
2	Ammelitz Yoko Yoko	Bottle	27	0	27								0	27		30/Sep/24		
3	Antibiotic Ointment	Tube	19	0	19				1				1	18		30/Jun/24		
4	Terbinafine cream	Tube	29	0	29								0	29		31/Aug/22		
5	Betadine solution 10 % 125 ml/ 30 ml	Bottle	15	0	15								0	15	10	30/Apr/24		
6	Betamethason Cream 15 g	tube	100	40	140						1		1	139	10	31/Aug/25	received 12 Nov 21	
7	Bothametason-N Cream 15 g	tube	23	0	23						1		1	22	10	31/May/23		
8	Benzyl benzoate 25% 30 ml	bottle	12	0	12								0	12	1	30/Mar/26		
9	Gentamicin Cream	tube	19	0	19								0	19		31/Mar/22		
10	Gentamicin Cream	Tube	1	0	1								0	1		31/Jan/23		
11	Clotrimazole Powder	Tube	10	0	10								0	10		3/Dec/24		
12	Counterpain 30 gm	tube	6	0	6				1				1	5		31/Jan/24	received 26-6-21	
13	Counterpain 30 gm	tube	49	0	49								0	49		30/Apr/24	Received 25-8-21	
14	Counterpain cool 60 g	pcs	16	0	16								0	16		31/Jan/23		
15	Counterpain cool 30 g	pcs	45	0	45								0	45		31/May/23	Received 25-8-21	
16	Acustop Cata plasma 40 mg	Tube	0	0	0								0	0		11/May/23		
17	Acustop Cata plasma 40 mg	Tube	47	0	47		1						1	46		25/Oct/23		
18	Calamine lotion	bottle	16	0	16						1		1	15	10	1/Feb/25	Received 16-6-21	
19	1 % hydrocortisone cream(Histisone)	tube	3	0	3								0	3	10	26/Nov/24	Received 16-6-22	
20	21 % hydrocortisone cream(Histisone)	tube	10	0	10								0	10		26/Nov/24	Received 25-8-21	
21	NL Gescic Balm	pcs	134	0	134		2	1			1	4	8	126		4/Aug/23		
22	Elomet Cream	tube	22	0	22								0	22	10	16/Nov/22		
23	Fastum Gel/ Ketoprofen Gel	Tube	1	0	1						1		1	0		31/Mar/25		
24	Fastum Gel/ Ketoprofen Gel	tube	8	0	8								0	8		31/May/25		
25	Salonsp Gel-patch Cool	Pack	7	0	7								0	7		1/May/23		
26	Mupirocin/ Mupirax 5g	tube	19	0	19								0	19		30/Sep/22		
27	Miconazole Cream	tube	17	0	17								0	17		31/Jul/23		
28	Nitazol/ Ketoconazole Shampoo	Bottle	37	0	37								0	37		30/Sep/22		
29	Nitazol/ Ketoconazole Shampoo	Bottle	2	0	2								0	2		31/Dec/22		
30	Salonpas Pain Relief Hot Large	box	3	0	3								0	3		31/May/23		
31	Salonpas Pain Relief Hot Large	box	23	0	23								0	23		1/Sep/23		
32	Silver Sulpha diazine 1% cream	tube	36	0	36						1		1	36		31/Aug/23		
33	M 16 Clove oil	Bottle	20	0	20								0	20		19/Oct/24		
34	Solcoseryl Jelly 10%	tube	12	0	12		1						1	11		30/Apr/23		
35	Tiger Balm Plaster 10 x14 cm ( Cool )	pkt	0	48	48								0	48		31/Jul/24	received 12 Nov 21	
36	Tiger Balm Plaster 7x10 cm (Hot)	pkt	0	0	0								0	0		31/Jul/22		
37	Tiger Balm White/Red Ointment	Bottle	41	0	41								1	40		31/May/23	received 2 Nov 21	
38	White Soft Paraffin	tube	10	0	10						1		1	9		1-Oct-21	30-Apr-24	
39	Snake Prickly Heat Powder	Can	115	0	115		1						1	114		16/Nov/23	received 2 Nov 21	
40	Xylocaine spray	Bottle	2	0	2								0	2		31/Jan/23	Received 16-6-20	
41	2% Xylocaine jelly	tube	3	0	3								0	3	1	31/Jan/24	Received 2-11-21	
42	Zancort 15 Gr	tube	39	0	39						1		1	38		31/Oct/23		
B.Medic Response Bag																		
I.Airway Management and Breathing/Oxygen																		
1	Bag Valve Mask	pcs	1	0	1								0	1	1			
2	Guedel Airway cannula	pcs	1	0	1								0	1	1			
3	Laryngoscope Complete Set	pcs	1	0	1								0	1	1			
4	Pocket Mask Laerdal	pcs	1	0	1								0	1	1			
5	Suction ( Manual ) with Catheters Rigid/Flexible	pcs	1	0	1								0	1	1			
II.Burn Kit																		
1	Water jel Wraps Various Sizes including Face mask	Set	2	0	2								0	2	1			
2	Burn Care Gel 4x4 inch 50GM	pkt	5	0	5								0	5	2	31/Mar/25		
3	Burn Care Gel 8x18 inch 300GM	pkt	5	0	5								0	5	1	31/Mar/25		
4	Burn Care Gel 12x16 inch 360GM	pkt	5	0	5								0	5	2	31/Mar/25		
5	Burn Care water jel 12x12 inch	pkt	5	0	5								0	5	2	4/30/2023	received 10-6-21	
6	Burn Care water jel Blanket 91.4 x 36.2 cm	pkt	7	0	7								0	7	1	30-4-26	received 28-8-21	
III.Dextrostrix/Bloop pressure/Stethoscope/flash light																		
1	Blood Glucose Machine and Strips	Set	1	0	1								0	1	1			
2	BP apparatus	Set	3	0	3								0	3	1			
3	Digital Thermometer	pcs	1	0	1								0	1	1			
4	Disposable gloves	pcs	2	0	2								0	2	2			
5	Flashlight	pcs	3	0	3								0	3	1			
6	Stethoscope	pcs	1	0	1								0	1	1			
IV.Disposable for injection/IV																		
1	Disposable syringe 3 ml	pcs	100	0	100								0	100	100	2-Oct-25		
2	Disposable syringe 5 ml	pcs	100	0	100								0	100	100	31-Jan-25		
3	Disposable syringe 10 ml	pcs	100	0	100								0	100	100	31-May-23		
4	Disposable syringe 20 ml	pcs	60	0	60								0	60	50	31-Mar-26	received 10-6-21	
5	Disposable syringe 50 ml	pcs	20	0	20								0	20	20	1-May-23		
6	Alcohol pad (100 pieces/box)	box	9	0	9								0	9	1	12-Nov-22		
7	Needle No. 18 (100 pieces/box)	box	1	0	1								0	1	1	31/Dec/24		
8	Needle No. 21 (100 pieces/box)	box	1	0	1								0	1	1	31/Jul/25		
9	Needle No. 23 (100 pieces/box)	box	1	0	1								0	1	1	31/Mar/25		
10	Needle No. 25 (100 pieces/box)	box	1	0	1								0	1	1	31/Dec/25		
11	IV administration Sets	set	4	0	4								0	4	3	31/Jul/24		
12	IV Cannula 14G	pcs	5	0	5								0	5		30-Jun-22		
13	IV Cannula 16G	pcs	5	0	5								0	5		31-Jul-24		
14	IV Cannula 18G	pcs	50	0	50								0	50	50	31-Jul-24		
15	IV securing tapes	pcs	6	0	6								0	6	6			
16	SC Needles	pcs	6															



No	Medicines	Unit	Initial stock	Incoming stock	Total stock	Nov								Total usage	Final Stock	PTTEP Requirement	Expired date	Remarks
						8	9	10	11	12	13	14						
V.Immobilization Set																		
1	Adjusting C-Spine splint	Set	1		1								0	1	1			
2	Upper limb Splints (aluform/box)	Set	1		1								0	1	1			
VI.Dressings																		
1	Adhesive tape	set	1		1								0	1	1			
2	Bandages	pack	1		1								0	1	1			
3	Eye pads	pack	1		1								0	1	1			
4	Gauze Pads	pack	1		1								0	1	1			
5	Multi trauma dressings	pack	2		2								0	2	2			
6	Sterile Eye Pad	pcs	9		9								0	9	1			
7	Survival Blanket	pack	2		2								0	2	2			
VII.ACLS Medicines																		
1	50 % Glucose inj 20 ml / 40% Dextrose inj. 20 ml	Bottle	1		1								0	1	1			
2	Adenosine inj	Vial/ampoule	3		3								0	3	2			
3	Adrenaline inj	Vial/ampoule	5		5								0	5	5			
4	Amiodaron inj	Vial/ampoule	3		3								0	3	2			
5	Aspirin 100 mg/ Aspirin 81 mg	tablet/capsule	50		50								0	50	100			
6	Dopamine inj 200 mg/5 ml pre mix	Vial/ampoule	1		1								0	1	1			
7	Isosorbide Dinitrate SL 5 mg	tablet/capsule	12		12								0	12	10			
8	Lidocaine HCL 2% (50 ml)(10 ml)	Vial/ampoule	4		4								0	4	2			
9	Nitroglycerine spray	Bottle	1		1								0	1	1			
10	Plavix (Clopidogrel)	tablet/Capsule	38		38								0	38	10			
11	Sodium Bicarbonate inj 50 ml	Bottle	0		0								0	0	2			
VIII.Other Emergency Medicines																		
1	Chlorpheniramine inj	Vial/ampoule	2		2								0	2	2			
2	Dexamethason 4 mg/ml	Vial/ampoule	2		2								0	2	2			
3	Lactated Ringer 500 ml	bottle	2		2								0	2	1			
4	Naloxon inj 4 mg /10 ml	Vial/ampoule	5		5								0	5	1		31-Jan-22	
5	Normal Saline 1,000 ml. for Irrigation	bottle	0		0								0	0				
6	Normal Saline 100 ml. for Irrigation	bottle	20		20								0	20	5			
7	Normal Saline 100 ml. for Irrigation	Vial/ampoule	2		2								0	2	2		require to myocine (N. n	



No	Medicines	Unit	Initial stock	Incoming stock	Total stock	Nov								Total usage	Final Stock	PTTEP Requirement	Expired date	Remarks
						8	9	10	11	12	13	14						
IV.Dressing and Suture Instruments																		
1	Bandage Scissors	pcs	5		5								0	5	1			
2	Dressing forcep w/o tooth	pcs	2		2								0	2	2			
3	Emergency Room Shears	pcs	2		2								0	2	2			
4	Forceps Curved tray with lid for instruments	pcs	2		2								0	2	2			
5	Kidney Shaped Bowl	pcs	2		2								0	2	2			
6	Lotion Bowl (small)	pcs	2		2								0	2	1			
7	Metalic tray 19" X 12" X 1"	pcs	1		1								0	1	1			
8	Needle Holder 5" small	pcs	3		3								0	3	2			
9	Scissor 4 1/2 Mesquite	pcs	2		2								0	2	2			
10	Toothed Forceps	pcs	2		2								0	2	2			
11	Wash Bowl	pcs	1		1								0	1	1			
V.Immobilization and Carrying Equipment																		
1	Alumunium First Aid Box	pcs	12		12								0	12	5			
2	Ankle Support Size L	pcs	0		0								0	0	5			
3	Basket Stretcher with Restraints	pcs	2		2								0	2	2			
4	Box Splint (lower limb) Cardboard box	pcs	1		1								0	1	1			
5	Cervical splint -adjustable	pcs	2		2								0	2	2			
6	Cervical splint -set (complete w/full adult size)	pcs	1		1								0	1	1			
8	Femur traction splint	pcs	2		2								0	2	2			
10	Inflatable splints	pcs	1		1								0	1	1			
11	Kendrick Extrication Device	pcs	1		1								0	1	1			
16	Lifting straps (stretcher/bridal sling)	pcs	1		1								0	1	1		received 26-6-21	
17	Padded Board Splint (Lower Limb)	pcs	1		1								0	1	1			
18	Padded Board Splint (Upper Limb)	pcs	1		1								0	1	1			
19	Padded board splints for upper limb	pcs	1		1								0	1	1			
20	SAM Splint type Dixie 4.25"x 36"	pcs	4		4								0	4	1			
21	Scoop Stretcher	pcs	1		1								0	1	1			
22	Spider straps for spinal board	pcs	1		1								0	1	2			
23	Splint (upper limb) cardboard	pcs	1		1								0	1	1			
24	Splint Finger Padded subst universal velcro finger	pcs	5		5								0	5	1			
25	Splints common set of 3s	pcs	3		3								0	3	1			
26	Universal head immobilizer	pcs	2		2								0	2	2			
27	Vacum mattresses complete w/pump and repair kit	pcs	2		2								0	2	1			
VI.Medical Furniture																		
1	Adjustable light for examination Magnifying	set	1		1								0	1	1			
2	Examination Table Adjustable head	set	1		1								0	1	1			
3	Refrigerator Small top table w/thermometer	set	1		1								0	1	1			
4	Snellen Eye Chart (10 feet distance)	set	1		1								0	1	1			
5	Trashcan w/lid foot operated stainless steel	set	2		2								0	2	1	N/A	received 10-6-21	
6	Wall Cabinet w/lock (small size) for controlled drugs	set	1		1								0	1	1			
VII.Sterilizer																		
1	Sterilizer	Set	1		1								0	1	1			
VIII.Miscellaneous																		
1	Computer Scanner (for sending ECG pictures etc)	pcs	1		1								0	1	1			
2	Digital Camera	pcs	1		1								0	1	1			
3	Eye bath for eye Washing	pcs	3		3								0	3	3			
4	Eye magnet with Loop	pcs	2		2								0	2	2			
5	Responder bag (backpack type)	pcs	1		1								0	1	1		received 16-6-21	
6	Modular Emergency Bag	pcs	1		1								0	1	1			
7	Pocket Food thermometer	pcs	2		2								0	2	2			
8	Rechargeable wall mounted high power flashlight	pcs	1		1								0	1	1			
9	Finger Ring Cutter	pcs	1		1								0	1	1			
10	Digital Incubator mini	set	1		1								0	1	1			
11	E.coli coliform test kit	box	20		20								0	20				
12	Logitech G733 wireless headset with microphone	set	1		1								0	1				
13	Webcam HD full	pc	1		1								0	1				
14	Scale (standing type)	pcs	1		1								0	1	1			
IX.Oxygen																		
1	Oxygen Cylinders	set	3		3								0	3	2			
2	Potable Oxygen Set w/case	set	3		3								0	3	2			
X.Ventilation/Suction/Oxymetri																		
1	Cartridge for portable Suction	pcs	7		7								0	7	3		received 28-8-21	
2	Portable Suction Manual Operated	pcs	2		2								0	2	1		received 28-8-22	
3	Pulse Oxymeter hand held w/carrying pouch	pcs	1		1								0	1	1			
4	Suction catheter 12G with control	pcs	10		10								0	10	10		1-Jul-25	
5	Suction catheter 14G with control	pcs	10		10								0	10	10		8-Mar-24	
6	Suction catheter 16G with control	pcs	10		10								0	10	10		8/Nov/23	
8	Yankauer Suction Tip	pcs	3		3								0	3			1/Nov/24	
9	Ky Lubricating Jelly	pcs	1		1								0	1			9/Aug/23	
10	Ky Lubricating Jelly	pcs	2		2								0	2			4/Nov/23	
11	Suction tube rigid (Yankauer)	pcs	2		2								0	2	2			
XI.Reference Material																		
1	Advanced Cardiovascular Life Support Provider Manual	pcs	1		1								0	1	1		ACLS PERKI Indonesia	
2	Advanced Providers (Brady/Prentice Hall)	pcs			0								0	0	1		ITLS Textbook	
3	Basic Trauma Life Support to Paramedic or other	pcs	1		1								0	1	1		ITLS Textbook	
4	Medical Dictionary	pcs	1		1								0	1	1		Dorland's Medical at A	
5	Merck Manual (John Wiley and Son's)	pcs	1		1								0	1	1		Soft Copy Available	
6	MIMs (CD or online)	pcs	1		1								0	1	1		Online Subscribe	
7	Mosby's Paramedic Textbook (Mosby) or equivalent	pcs	1		1								0	1	1		Soft Copy Available	
8	Physician's Desk Reference	pcs	1		1								0	1	1		Current Medical Disa	



No	Medicines	Unit	Initial stock	Incoming stock	Total stock	Nov							Total usage	Final Stock	PTTEP Requirement	Expired date	Remarks
						8	9	10	11	12	13	14					
D.DISPOSABLE ITEMS																	
I.Airway																	
1	CPR face Shield	pcs	40		40								0	40	6		
2	CPR Pocket Mask	pcs	6		6								0	6	5	31/Dec/23	
3	Endotracheal tubes cuffed size 6	pcs	2		2								0	2	2		
4	Endotracheal tubes cuffed size 7	pcs	2		2								0	2	2		
5	Endotracheal tubes cuffed size 8	pcs	2		2								0	2	2		
6	Introducer/Guide for ET tubes (Stylette)	pcs	20		20								0	20	3		
7	I-Gel supraglottic airway size 3	pcs	1		1								0	1		31/Mar/23	
8	I-Gel supraglottic airway size 4	pcs	1		1								0	1		31/Mar/22	
9	LMA size 3	pcs	2		2								0	2	1		
10	LMA size 4 (50-70 Kg)	pcs	2		2								0	2	1		
11	LMA size 5	pcs	2		2								0	2	1	5/Nov/23	received 16-6-21
12	Mask for Nebulization/Adult	pcs	10		10								0	10	5		
13	Nasal canula for Oxygen administration	pcs	12		12								0	12	5		
14	O2 Non Rebreathing mask	pcs	26		26								0	26	5		31-Aug-24
15	Orppharyngeal airways Guedel size 2	pcs	3		3								0	3	3	30/Apr/24	
16	Orppharyngeal airways Guedel size 3	pcs	3		3								0	3	3	30/Apr/24	
17	Orppharyngeal airways Guedel size 4	pcs	3		3								0	3	3	31/May/24	
18	Oxygen Face Mask Partial Re-breathing	pcs	12		12								0	12	10		
19	Ventury Variable Oxygen mask adult	pcs	15		15								0	15		28/Feb/24	
20	Oxygen Tubing 2 mtr	pcs	2		2								0	2			
21	Flexible catheter mount	pcs	2		2								0	2		28/Feb/23	
22	Tracheostomy set	pcs	3		3								0	3			
23	Water based Jely KY	pcs	2		2								0	2	3		
II.Bandage/Suture/Dressing																	
1	Assorted Plaster Waterproof	Box	400		400								0	400		21/Oct/25	
2	Fire Aid plaster waterproof	Box	2000		2000								0	2000		31/Jul/24	
3	3M Sten Strip 1/2 x 4 inch	each	10	0	10								0	10		1/Jan/24	received 2 Nov 21
4	Bandage strip 1x3 inch	pcs	299		299								0	299	300	29/Sep/25	received 10-6-21
5	Silk Suture 4/0	pcs	24		24								0	24		31/Aug/24	
6	Nylon Suture 2/0	pcs	24		24								0	24		31/Mar/23	
7	Nylon Suture 3/0	Pcs	24		24								0	24		31/Mar/24	
8	Nylon B Braun Dafilon 4/0	pcs	36		36								0	36	24	8/Jan/26	received 10-6-21
9	Silk Suture 4/0	pcs	24		24								0	24		31/Aug/25	
10	Polyester Suture 5 0	pcs	24		24								0	24		31/Aug/25	
11	Suture Strip	pcs	33		33								0	33		30/Nov/23	
12	Dermabond Skin Adhesive 0.35 ml	pcs	6		6								0	6		31/Jul/22	
13	Scalpel Blade no 10	pcs	100		100								0	100		31/Dec/22	
14	Scalpel Blade no 11	pcs	100		100								0	100		31/Aug/25	
15	Tagaderm Transparent	pcs	50		50								0	50		14/Sep/23	
16	IV canula 22 G x 25 cm	pcs	50		50								0	50		31/Jul/24	
17	Transpore Surgical tape	pcs	12		12								0	12		15/Oct/24	
18	3M Transpore	box	11		11								0	11			received 28-8-21
19	Casualty Dressing	pcs	25		25								0	25		31/Oct/23	
20	Duoderm extra thin 7.5 x 7.5 cm	pcs	20		20								0	20		1/Dec/24	
21	Duoderm extra thin 10x10 cm	pcs	20		20								0	20			
22	Conforming Bandages 7.5 X 4.5 M	Pack	20		20								0	20	2	31/Aug/23	
23	Conforming Bandages 10 cm X 4.5 M	pack	30		30								0	30	2	31/Aug/23	
24	Conforming Bandages 6"x5yard	roll	24		24								0	24	24	30/Sep/25	received 10-6-21
25	Ammed Steril Cotton	pcs	10		10								0	10	1	27/Jun/25	
26	Steri cotton ball 100 gm/pack	pack	1		1								0	1	1	9/Mar/26	received 10-6-21
27	Steri cotton stick size L 100's/pack	pack	5		5								0	5	2	17/Feb/24	received 10-6-21
28	Sterile Cotton Applicators	pcs	10		10								0	10		30/Jun/23	
29	Gauze Swab 7.5x 7.5 cm	pcs	100		100								0	100		31/Mar/23	
30	Gauze Swab 7.5x 7.5 cm	pcs	100		100								0	100		30/Jun/25	
31	Gauze Swab 10 x 10 cm	pcs	200		200								0	200			
32	Finger tube Gauze	pcs	1		1								0	1		31 April 2024	
33	surgical tape	pcs	120		120								0	120		20/Apr/24	
34	Steri Eye Pad	pcs	108		108								0	108		30/Apr/24	
35	Elastic Bandage 10 cm X 4.5 m	pcs	36		36								0	36		30/Jun/24	
36	Elastic Bandage 15 x 4.5 m	pcs	39		39								0	39		28/Feb/24	
37	Sterile Basic Dressing Set	pcs	0		0								0	0		30/Apr/25	
38	Sterile Basic Dressing Set	pcs	90		90						1		1	89		30/Nov/25	
39	Non -Adheren Gauze pad	pcs	50		50								0	50		31/Dec/25	
40	Burncare Burn Gel	pcs	5		5								0	5		31/Mar/25	
41	Burncare Burn Gel	pcs	5		5								0	5		31/Oct/25	
42	Burn Kit	Set	1		1								0	1	5		



No	Medicines	Unit	Initial stock	Incoming stock	Total stock	Nov								Total usage	Final Stock	PTTEP Requirement	Expired date	Remarks
						8	9	10	11	12	13	14						
III.Syringes , IV Sets, Suturing ,etc																		
1	Alcohol 70 % solution 500 ml	bottle	5		5								0	5	5	30/Apr/23		
2	Alcohol 70 % solution 500 ml	bottle	5		5								0	5		30/Apr/23		
3	Alcohol Swab	Pcs	900		900								0	900	100	12/Nov/22	ED: 26-Sep-20(100)	
4	Alcohol	bottle	2		2								0	2		30/Apr/23		
5	Steril Suture Insertion set	Set	10		10								0	10		31/May/25		
6	Dettol Antiseptic Liquid	bottle	2		2								0	2		31/May/23		
7	Suture Removal Kit	Set	10		10								0	10		30/Apr/25		
8	Winged Infusion Set 21 gx 20	Set	2		2								0	2		1/Apr/24		
9	Winged Infusion Set 21 gx 20	Set	1		1								0	1		1/Apr/25		
10	Winged Infusion Set 21 gx 20	Set	17		17								0	17		1/Apr/25		
11	Ryles tube Ch /FG 14 ( Nasogastric tube)	set	1		1								0	1		30/Apr/24		
12	Ryles tube Ch /FG 16( Nasogastric tube)	set	4		4								0	4		30/Apr/24		
13	Ryles tube Ch /FG 14 ( Nasogastric tube)	set	5		5								0	5		30/Apr/24		
14	Steril Long Surgical Gloves 260 mm	pcs	20		20								0	20		30/Sep/25		
15	Bedpan with Cover	pcs	1		1								0	1				
16	Steril Latex Foley Catheter 14 FG	pcs	5		5								0	5		26/Mar/25		
17	Steril Latex Foley Catheter 16 FG	pcs	5		5								0	5		29/Mar/25		
18	Burncare Burn kit	Box	5		5								0	5		31/Jun/26		
19	Povidone Iodine Solution 60 ml	Bottle	50		50								0	50		31/Jun/26		
20	Povidone Iodine Solution 125 ml	bottle	3		3								0	3		31/Dec/23		
21	Hibiscrub (CS scrub skin antiseptic 450 ml)	bottle	10		10								0	10	10	18/Apr/23	received 10-6-21	
22	Head immobilizer	Set	1		1								0	1				
23	Chronic catgut 2/0 w/cutting needle	pcs	10		10								0	10	3	22/May/22		
24	Extension Set 18"	pcs	15		15								0	15	15	1/Jul/22		
25	Heinz IV 16G	pcs	5		5								0	5	5	Dec-21		
26	Heinz IV 18 G	pcs	5		5								0	5	10			
27	Heinz IV 20 G	pcs	5		5								0	5	5			
28	Nipro IV Catheter 24G	pcs	100		100								0	100	50	31/Aug/25	received 28-6-21(teru	
29	IV Set (M Devices)	Pcs	0		0								0	0	0			
30	IV Set/Otsu IV set Standart	Pcs	40		40								0	40	15	30/Jun/25		
31	Plain Cat gut 3 / 0	pcs	4		4								0	4	2	1/Feb/22		
32	Silk 3/0 w/cutting needle	pcs	24		24								0	24	24	31/Jul/23		
33	Silk 4/0 w/cutting needle	pcs	24		24								0	24	24	31/Jul/23		
34	Surgical blade no.10 100's	Box	1		1								0	1	1	31/Dec/22		
35	Surgical Face Mask	Box	10		10								0	10	2	1/Aug/22		
36	Suture pack	pack	10		10								0	10	2	1/May/25		
37	Syringe 1 cc	pcs	10		10								0	10	10			
38	Syringe 10 ml	pcs	99		99								0	99	100	31/May/23		
39	Syringe 20 ml	pcs	10		10								0	10	20	31/May/24		
40	Syringe 3 ml	pcs	100		100								0	100	100	2/Oct/25		
41	Syringe 5 ml	pcs	100		100								0	100	100	31/Jun/25		
42	TEGADERM with pad size 6x10 cm	pcs	10		10								0	10	10			
43	Terumo / Nipro Needle no 18 G	pcs	100		100								0	100	100	1/Apr/22		
44	Terumo Winged infusion set 21 G (50 pieces/box)	pcs	5		5								0	5	50			
45	Tetanus Toxoid	ampoule	9		9								0	9		31/May/23		
46	Vasofix 14 G	pcs	5		5								0	5	5			
47	Vasofix 22 G	pcs	5		5								0	5	5			
48	Wound Suture Strip 6x 100 mm	pcs	1		1								0	1	1			
VIII.Miscellaneous																		
1	Ambu Bag	pcs	1		1								0	1	1			
2	Bedpan	pcs	1		1								0	1	1			
3	Biohazard bags	pack	1		1								0	1	1			
4	Isothermal/Rescue blanket	pcs	10		10								0	10	10			
5	In -Stopper LI /iv luer	pcs	100		100								0	100		1-Oct-25		
6	Iv Infusion set 20 drops/ml	pcs	40		40								0	40		30-Jun-25		
7	Discofix 3-way Stopcock	pcs	20		20								0	20		1-May-23		
8	SD Dengue NS1 AG+AB tests	pcs	20		20								0	20		10-Apr-22		
9	Heaigen Malaria Pf/Pan test kit	pcs	25		25								0	25		30-Nov-21		
10	Urine test Strips	pcs	100		100								0	100		31-Aug-22		
11	Covid -19 Ag test Casatler(Swab)	pcs	100		100								0	100		31-Jan-23		
12	Biohazard bags Yellow	pcs	100		100								0	100				
13	Mortuary transfer Bag	Pcs	5		5								0	5				
14	ECG super gel	bottle	2		2								0	2		4-Jun-25		
15	Virus & Infectious Disease Prevention kit	Set	30		30								0	30		25-Jul-25		
16	Ribbon Gauze 2.5 Cmx 61 cm	Rel	2		2								0	2		31-Dec-23		
17	Biopak Sharpbox 1.63 l	pcs	5		5								0	5		N/A		
18	Steril Wooden Tongue Depressors	pcs	100		100								0	100		31-Dec-24		
19	Aluminium First Aid Box	pcs	25		25								0	25		2-Sep-22		
20	Ammeda Knee Support Large	pcs	11		11								1	10				
21	Futuro Sport Adjustable Knee Sport	PCs	10		10								0	10				
22	Arm Sling adult	pcs	5		5								0	5				
23	Adjustable Cervical Collar	pcs	1		1								0	1				
24	Hard Cervical Collar Adjustable Large	pcs	2		2								0	2				
25	E-Life Lumbar sacro Support Large	pcs	4		4								0	4				
26	E-Life Lumbar sacro Support XL	pcs	3		3								0	3				
27	Amimed Ankle Support, Medium	Pcs	4		4								0	4				
28	Disp Ice Pack	pcs	10		10								0	10				
29	Ferno frac Care kit	set	1		1								0	1				
30	Malleable Splint 91 x 11 cm	set	5		5								0	5		28-Feb-26		
31	Laryngoscope	set(s)	1		1								0	1	1			
32	Latex Examination Gloves (size M)	pcs	200		200								0	200	100	31/Mar/26		
33	Latex Examination Gloves (size L)	pcs	200		200								0	200		30/Nov/25		
34	Memmert Model 30-1060 and incubator	Set	0		0								0	0	1			
35	Minor Surgery Set	Set	2		2								0	2	1			
36	NG tube no.14	pcs	5		5								0	5	5	1/Apr/24		
37	NG tube no.16	pcs	5		5								0	5	5	1/Apr/24		
38	Plastic bag for drugs dispensing	pcs	1000		1000								0	1000	1000			
39	Razor (Disposable)	pcs	20		20								0	20	20			
40	Sharp Collector 0.7 quart	pcs	5		5								0	5	5			
41	Tourniquet	pcs	3		3								0	3	3			
42	Urinal	pcs	1		1								0	1	1			
43	Urine bag	pcs	4		4								0	4	5			

Reported by

Acknowledged by

Barge Doctor K-2

Barge Superintendent



## เอกสารแนบที่ 102

ตัวอย่างเอกสารที่ใช้ในระบบการอนุญาตเข้าทำงาน (Permit to Work หรือ PTW)  
ของเรือที่ใช้ในการปฏิบัติงาน



SECTION 1 : Work Description

Site name: **Bongkot North** Area/Platform: **SL 26 PL**  
Location: **IN 500 M. ZONE** Operation unit: **N/A**  
Unit no.: **N/A** Equipment: **Nil** Tag no.: **Nil**

PTW is related to MOC  
☐ Yes (MOD/Deferral/Derogation/Downgrade Situation No. ....) ☒ No

Work/Task Description:  
**TO PERFORM ANCHOR HANDLING OPERATION  
INSIDE 500 M. RADIUS OF SL26PL FOR  
DLB K2 INSTALL WP46 JACKET & DECK**

Material / Tool / Work requirements:  
☐ Scaffolding/Ladder ☒ Hand tool ☐ Mobile Engine: Gen./Comp.  
☐ Ex. Elect./Battery/Pneum./Hyd.Tool ☐ Gas/Pressurized cylinder  
☐ Non-Ex. Elect./Battery Tool ☒ Crane/Lifting  
☒ Other **AHTs**

Hazard Identification:  
☒ **Area classification** ☐ Hazardous area ☒ Unclassified area / Non-Hazardous area  
☒ **Hazard classification**  
☐ Process hydrocarbon ☐ Pressure hazard ☐ Dust/Fume/Smoke ☐ Radiography  
☐ Flammable material ☐ Working at height ☐ Hot/Cold surface ☐ Loud Noise  
☐ Mercury/Toxic gas ☒ Insufficient light ☒ Ergonomic hazard ☐ Vibration  
☐ Hazardous chemical ☐ Biological hazard ☒ Slipping/tripping ☐ Spill  
☒ Equipment with moving/rotating part ☒ Pinch point/sharp object ☐ Ignition Source ☐ Explosive  
☒ Crane/Lifting/Rigging ☐ Critical lift ☒ Routine/Simple lift ☐ Electricity ☐ HV (> 1kV.) ☐ LV  
☐ Asphyxiates/Confined space/Water mist/FM200/CO<sub>2</sub> release  
☒ Environmental hazard (weather, temp.) ☒ Work on edge/over water ☒ Falling/Dropped/Flying objects  
☐ Other .....

Complementary permit :  
☐ Process/Mech./Inst. Isolation  
☐ HV ☐ LV Electrical isolation  
☐ Confined space entry  
☐ Radiography  
☐ Diving ☐ ROV ☐ Man  
☒ Anchoring/ De-anchoring **CPA - WP46**  
☐ Excavation ☐ Pressure testing

Complementary PTW No. ....  
☐ Self ☐ Isolation cross reference (ICR)  
☐ Self  
Other attachment: ☐ JIMS .....  
☒ Sketch/Drawing .....  
☒ JSA/Procedure/Plan **See in other** .....  
☐ Lifting Plan .....  
☒ Other: **JSA BF 001 Mooring and Anchor**

Performing Authority Name: **Capt. Somsak Ch.** Position: **Superintendent Logistic** Department: **PBN/FL** Signature: **Somsak Ch.** Date: **1700hrs.**

ha

Precautionary Requirements	Day 1		Day 2		Day 3		Day 4		Day 5		Day 6		Day 7	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
<b>Process System Requirements:</b>														
Equipment electrically isolated, locked and tagged	<input type="checkbox"/>													
Emergency stop latched and tagged	<input type="checkbox"/>													
Equipment isolated by valve / spade / blind, locked, tagged	<input type="checkbox"/>													
Equipment fully depressurized / flushed / fully drained	<input type="checkbox"/>													
Equipment inerted / purged / ventilated	<input type="checkbox"/>													
System inhibit / override / bypass (See section 3)	<input type="checkbox"/>													
Other .....	<input type="checkbox"/>													
<b>Safety Requirements:</b>														
No Naked Flame Hot Work (NFHW) in area	<input type="checkbox"/>													
Whip check & safety pin installed on hose connection	<input type="checkbox"/>													
Equipment integrity check / Emergency stop test before use	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Available of Work Plan / Procedure / Program on site	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Gloves: rubber / leather / high volt / welding / hyflex/Impact....	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Hearing protection / Safety goggles / Face shield / Cold suit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Air supply / Half mask / Full face mask: Type.....	<input type="checkbox"/>													
Disposable coveralls: Chemical / Mercury protection	<input type="checkbox"/>													
Safety harness with: double life lines/inertia reel/fall arrester	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Work vest / Life buoy / Standby boat	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Limit the working hours / Rotate worker every .12..... hour(s)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Dust containment/ Fire blanket/ Habitat/ Pressurized habitat	<input type="checkbox"/>													
Warning sign / Barrier tape / Scaffold tag / Secure ladder	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Protection guard / Cover / Frame / Lanyard / Finger saver	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Stay clear of: moving / rotating part / line of fire / hot surface	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Additional ventilation / Safety lighting: zone.....	<input type="checkbox"/>													
Spill containment / Absorbents / Earth wire connected	<input type="checkbox"/>													
Standby Operator / Technician / Firewatch / Rescuer / Safety	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Working under inclement weather criteria / requirements	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Available of JSA / Risk assessment / SDS on site	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Toolbox talk / Pre-job safety meeting	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Correct handling/working posture/Use lifting aid/Lifting Plan	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Personal / Stand alone gas detector in place	<input type="checkbox"/>													
Gas check: Prior to starting / Frequency .....	<input type="checkbox"/>													
Oxygen / LEL / Toxic: .....	<input type="checkbox"/>													
Inform concerned parties <b>BQP &amp; MA On board</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Maintain good housekeeping	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
Other .....	<input type="checkbox"/>													

Operating Authority Name: **Danupon D.** Safety Authority Name: **Kittiporn Treerate**  
Signature: **2021.10.13 17:46:59 +07'00'** Date / Time: **1700** Signature: **2021.10.13 17:58:58 +07'00'** Date / Time: **1700**  
\*In case Safety Critical Task  
Area Authority Name: ..... (\*)  
Signature: ..... Date / Time: .....

Permit Validity Date: (DD/MM/YY) ..... Time: ..... TO Date: (DD/MM/YY) ..... Time: .....

Inhibited/Overridden Systems					Fire and Gas Detection					Extinguishing System					ESD System					Others				
Unit/Tag No.	Inhibited/Overridden Date	Name	De-Inhibited Date	Name	Unit/Tag No.	Inhibited/Overridden Date	Name	De-Inhibited Date	Name	Unit/Tag No.	Inhibited/Overridden Date	Name	De-Inhibited Date	Name	Unit/Tag No.	Inhibited/Overridden Date	Name	De-Inhibited Date	Name	Unit/Tag No.	Inhibited/Overridden Date	Name	De-Inhibited Date	Name

Permit Issuing / Handback	Date: 14.10.21		Date:		Date:		Date:		Date:		Date:		Date:	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Task Supervisor name	2													
Shift Controller name														
Worksite Controller name														
Safety Authority / Worksite Safety Controller name														
Validating Date (dd/mm)	14/10	14/10	15/07	—/—	—/—	—/—	—/—	—/—	—/—	—/—	—/—	—/—	—/—	—/—
Validating Time (hh:mm)	13:15	19:00	07:00	—:—	—:—	—:—	—:—	—:—	—:—	—:—	—:—	—:—	—:—	—:—
Handback Date (dd/mm)	14/10	15/07	—/—	—/—	—/—	—/—	—/—	—/—	—/—	—/—	—/—	—/—	—/—	—/—
Handback Time (hh:mm)	19:00	07:00	—:—	—:—	—:—	—:—	—:—	—:—	—:—	—:—	—:—	—:—	—:—	—:—
Equipment status: A=Available, NA=Not available														
Worksite Controller name														
Task Supervisor name														
Shift Controller name														

SECTION 5 : Permit Closure (The undersigned confirms that work and the job site has been checked and completed)

☐ Completed : Area has been checked and cleaned by (TS) : ..... (SC/WSC): ..... Date: .....  
☐ Not Completed : Remark ..... Job Status : .....

Task Supervisor Name: ..... Signature: ..... Date/Time: .....  
Shift Controller Name: ..... Signature: ..... Date/Time: .....

Distribution List  
Original Worksite  
Copy 1: GREEN Control Room  
Copy 2: PINK Safety Authority  
Copy 3: BLUE Performing Authority





# COMPLEMENTARY PERMIT FOR ANCHOR OPERATION

(For only anchoring within 500 m. radius of Offshore Installation or Subsea Pipeline)

NO. **GBN-CPA-2021-WP46**

MAIN WORK PERMIT NO. **GBN-CPA-2021-WP46**

## 1) Location / Nature of Work

LOCATION OF ANCHOR OPERATION **SL26 PL** PURPOSE **TO INSTALL WP 46 JKT & DECK**  
NO. OF MOORING POINTS **8** DEPTH **70** M.  
COMMENCING **14<sup>th</sup> October 2021** DURATION **Until completed**  
COMPANY **NSC Engineering** TITLE **DLB Kuroshio II**

### SAFETY PRECAUTIONS REQUIRED:

- JSA/RA to be consulted. Pre-job meeting to be conducted with all parties involved in the operation prior to commencement of work
- Mooring pattern and catenaries analysis to be distributed to all involved masters and parties.
- DGPS equipment to be checked for its reliability and accuracy
- Chart to be checked for its updating

### CAUTION : CONTROL ROOM MUST BE INFORMED OF TIME IN AND OUT AND PRECISE LOCATION OF MARINE UNITS

Performing Authority Name : **Somsak Chainoo** Signature : \_\_\_\_\_  
Time : \_\_\_\_\_ Date : \_\_\_\_\_

## 2) Precaution to be Taken

Associated gear in good order : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	All operations dangerous to anchor operation ceased : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Area around the location clear : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	All winches and anchor handling gears on the Marine Units are in safe working conditions : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Control Room informed : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	All winches and anchor handling gears on all AHT/ AHTS are in safe working conditions : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Emergency Procedures agreed : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Mooring procedure : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Weather forecast considered : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Piggy back anchors required or contingency : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
SIMOPS dossier required : <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Lowest point of anchor line during anchor deployment or anchor retrieving at 50 % water depth confirmed : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Mooring pattern drawing : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Midline bouys required and are adequate size to stay afloat : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Mooring calculation and catenary's analysis : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Tension monitoring and record equipment : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Minimum 20 m. above all sea lines confirmed : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Closet points of sea line approach comply with GMI : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Anchor holding tests procedure : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
Special procedure required by GMI : <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
All mooring pattern designs verified by third party : <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

Number of mooring lines across sea lines : \_\_\_\_\_  
Mooring line no **NIL** crosses sea line of WP **NIL** Mooring line no **NIL** crosses sea line of WP **NIL**  
Mooring line no **NIL** crosses sea line of WP **NIL** Mooring line no **NIL** crosses sea line of WP **NIL**

### SPECIAL SAFETY PRECAUTIONS :

Strictly follow approved Installation Procedure

## BARGE MASTER / CAPTAIN

Name : \_\_\_\_\_ Signature : \_\_\_\_\_  
Time : **13:30 Hrs.** Date : **13.10.21**

## OFFSHORE MARINE CONTROL (OMC)

Name : **Somsak Chainoo** Signature : \_\_\_\_\_  
Time : **1700 Hrs.** Date : **13 Oct 2021**

Digitally signed by SomsakChainoo  
DN: cn=SomsakChainoo, o=PTTEP, ou=Offshore Marine Control, email=SomsakChainoo@pttep.com, c=TH  
Date: 2021.10.13 16:23:59 +07:00

## 3) Issue

I am satisfied that the requirements specified above provide an adequate level of safety and protection for the work described.

### SHIFT CONTROLLER

Name : \_\_\_\_\_ Signature : \_\_\_\_\_ Time : **13:35 Hrs** Date : **13.10.21**

### MOORING MASTER / MARINE REPRESENTATIVE

Name : \_\_\_\_\_ Signature : \_\_\_\_\_ Time : **13:40 Hrs** Date : **13.10.21**

## 4) Acceptance

I have read this permit and understand and agree to accept all precautions and conditions.

### BARGE MASTER

Name : \_\_\_\_\_ Signature : \_\_\_\_\_ Time : **13:50 Hrs** Date : **13.10.21**

## 5) Completion

By signing below the Shift Controller declares:

That he has checked that the work has been properly completed, all tools and apparatuses and anything temporarily required for safety has been returned and normal operations may be safely resumed

That the work and precautions described on this permit are to continue under Complementary Permit.  
CD ..... \* Delete whichever is inapplicable :

### SHIFT CONTROLLER

Name : \_\_\_\_\_ Signature : \_\_\_\_\_ Time : \_\_\_\_\_ Date : \_\_\_\_\_

### DISTRIBUTION OF COPIES

ORIGINAL

GREEN

PINK

BLUE

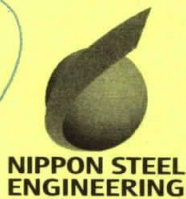
Worksite

Control Room

Safety Authority

Performing Authority





# MAIN PERMIT TO WORK FORM (PERMIT UTAMA UNTUK BORANG KERJA)

WORK PERMIT NO.:  
**WP 02629**REVALIDATE PERMIT BEFORE STARTING EACH SHIFT  
DIBARUHI PERMIT SEBELUM MEMULAKAN SETIAP SYIF

CONTINUATION OF

<input checked="" type="checkbox"/> HOT WORK (KERJA DENGAN API)	<input type="checkbox"/> ELECTRICAL WORK (KERJA ELEKTRIK)	<input type="checkbox"/> CONFINED SPACE ENTRY (MASUK RUANG TERKURUNG)	<input type="checkbox"/> CRITICAL LIFTING (MENGANGKAT KRITIKAL)
<input checked="" type="checkbox"/> COLD WORK (KERJA TANPA API)	<input type="checkbox"/> RADIOGRAPHY (RADIOGRAFI)	<input type="checkbox"/> DIVING ACTIVITIES (AKTIVITI MENYELAM)	

PERMIT NO: **NEW**AREA/LOCATION KAWASAN/LOKASI: **K2 - WPS 17**PROJ. NO: Date: **15/11/2021**PERMIT APPLICATION  
PERMOHONAN  
PERMIT

DESCRIPTION OF WORK TO BE PERFORMED: PERIHAL KERJA YANG PERLU DILAKUKAN:

**DECK INSTALLATION**EQUIPMENT TO BE WORKED ON: PERALATAN UNTUK BEKERJA PADA: **CRANE LIFTING GEAR**

Permit Validity

Date: (DD/MM/YY) **15/11/21** Time: **11:30** TO Date: (DD/MM/YY) **1/1/22** Time: **11:30**

Permit yang Sah dari:

SCAFFOLDING REQUIRED? PERANCAH YANG DIPERLUKAN?

☐ YES☒ NO

HAZARDS IDENTIFIED: BAHAYA YANG DIKENAL PASTI:

Fire or Explosion: Kebakaran atau Letupan:

Explosion/Fire of Platform Gas Letupan/kebakaran pelantar gas	<input type="checkbox"/>
Explosion/Fire of Stored Flammables Letupan/Api yang berkumpul yang mudah terbakar	<input type="checkbox"/>
Fire of Materials Around Work Site Bahan-bahan kebakaran di kawasan kerja	<input type="checkbox"/>
Explosion/Fire of Flame Cutting Gas Letupan/kebakaran api dari pemotongan gas	<input type="checkbox"/>
Explosives Letupan	<input type="checkbox"/>

Naked Flame Api	<input type="checkbox"/>
Flying Particle Sparks Api kecil yang berterbangan	<input type="checkbox"/>
Electricity Bekalan Elektrik	<input type="checkbox"/>
Moving Machinery Jentera Bergerak	<input checked="" type="checkbox"/>
Lifting Operations Operasi Mengangkat	<input checked="" type="checkbox"/>
Radiation Risk Risiko radiasi	<input type="checkbox"/>

Isolation of Critical Safety Pengasingan Keselamatan kritikal System Required: Sistem diperkukan:

Weather/Sea State Cuaca/Keadaan Laut	<input checked="" type="checkbox"/>
Working Over Water Berkerja atas air/laut	<input checked="" type="checkbox"/>
Confined Space Ruang Terkurung	<input type="checkbox"/>
Danger of Falling Bahaya dari terjatuh	<input checked="" type="checkbox"/>
Equipment Under Pressure Peralatan dibawa tekanan	<input type="checkbox"/>

Fire/Gas Detection Api / Gas Pengesanan	<input type="checkbox"/>
Fire Water Api Air	<input type="checkbox"/>
Fixed F/F System Sistem F/F Tetap	<input type="checkbox"/>
Life Saving Appliances Peralatan penyelamat nyawa	<input type="checkbox"/>
Alarm P.A. System Sistem Bunyi Suara	<input type="checkbox"/>
Escape Route Blocked Laluan melarikan diri yang disekat	<input type="checkbox"/>

Others:

PRECAUTIONS TO BE TAKEN:

Eye Protection Perlindungan Mata	<input checked="" type="checkbox"/>
Hearing Protection Perlindungan Pendengaran	<input type="checkbox"/>
Chemical Handling Clothing Pakaian untuk mengendalikan kimia	<input type="checkbox"/>
Fire Watchman Stand-By Pemerhatian Kebakaran yang petugas	<input type="checkbox"/>
Overhead Working Stand-By Yang berkerja ditepi barge	<input type="checkbox"/>
Harness/Line Baju penyelamat/Tali	<input type="checkbox"/>
Lift Jacket/Work Vest Jacket Keselamatan /vest kerja	<input checked="" type="checkbox"/>
Respiratory Protection Perlindungan Pernafasan	<input type="checkbox"/>
Scaffolding Barriers Perancah halangan	<input type="checkbox"/>
H <sub>2</sub> S Trained Personnel Only Kakitangan H <sub>2</sub> S yang tauilah saja	<input type="checkbox"/>
Escape Sels as Stand-By Set melarikan diri sebagai siap sedia	<input type="checkbox"/>
Full BA to be Worn BA yang cukup untuk dipakai	<input type="checkbox"/>

Limitation of Access Had capaian	<input type="checkbox"/>
Fire Extinguisher Alat Pemadaman Api	<input type="checkbox"/>
Fire Hose Run Out Hos Api pendek	<input type="checkbox"/>
Warning Notices & Barriers Nolis Amaran & Halangan	<input type="checkbox"/>
Additional Lighting Lampu Tambahan	<input checked="" type="checkbox"/>
Radio Communication Channel Saluran komunikasi radio	<input checked="" type="checkbox"/>
Foam Protection Perlindungan Buih	<input type="checkbox"/>
Gas Detection Requirement Keperluan pengesanan gas	<input type="checkbox"/>
Clear Combustible Materials Bahan-bahan mudah terbakar yang jelas	<input type="checkbox"/>
Wear Gloves Memakai sarung tangan	<input checked="" type="checkbox"/>
Wear Full Face Visor Pakai Visor penuh muka	<input type="checkbox"/>
Use Non Ferric Menggunakan alat-alat yang lazimnya bebas	<input type="checkbox"/>

COMPLIMENTARY SOKONGAN  
CERT SIJIL/SUP DOC TAMBAHAN**JSA-TS I 008**

I, Permit Applicant (the Responsible Supervisor) understand the precautions to be undertaken and fully accept the responsibility to carry out the job in the safest manner and that this permit is valid only as long as the terms and conditions are maintained. Saya, penyelia bertanggungjawab memahami langkah berjaga-jaga diambil dan menerima sepenuhnya tanggungjawab untuk menjalankan kerja dengan cara yang paling selamat dan permit ini sah hanya selagi terma dan syarat akan dikekalkan.

PERMIT APPLICANT  
(RESPONSIBLE SUPERVISOR)  
PENYELIA YANG BERTANGGUNG JAWABName: **[Signature]**  
Signature: **[Signature]**  
Date: **15/11/21** Time: **11:30**

GAS TEST: UJIAN GAS:

Gas Test is Required Ujian gas yang diperlukan

Gas Test is Not Required Ujian gas tak diperlukan

% LEL	O <sub>2</sub>	Testers Name Nama Tester	Signature Tandatangan	Time Waktu

HSE OFFICER

Name: **[Signature]**  
Signature: **[Signature]**  
Date: **15/11/21** Time: **11:30**PLANT STATUS REQUIRED:  
STATUS LOJI YANG DIPERLUKAN:

Mechanical Isolation Pengasingan mekanikal	<input type="checkbox"/>
Equipment Spaded/Blinded Peralatan spaded/tajam	<input type="checkbox"/>
Electrical Isolation Pengasingan elektrik	<input type="checkbox"/>
Equipment Depressurized Peralatan yang ada tekanan	<input type="checkbox"/>
Equipment Gas Free Peralatan yang tiada gas	<input type="checkbox"/>
Equipment Inserted Peralatan yang dimasukkan	<input type="checkbox"/>
Equipment Ventilated Peralatan pengudaraan	<input type="checkbox"/>
Area Clear of Combustibles Kawasan bebas dari bahan terbakar	<input type="checkbox"/>
Fire Watcher Present Kawalan Api Bertugas	<input type="checkbox"/>
Equipment Fully Drained Peralatan yang sepenuhnya disalurkan	<input type="checkbox"/>
Gas Checks Completed Alat pengesan gas yang siap	<input type="checkbox"/>

REVALIDATION: DIBARUHI:

Date Tarikh	From (Hrs) Dari	To (Hrs) Kepada	Permit Applicant Signature: [Signature]	Issuing Authority Signature: [Signature]
<b>15/11/21</b>	<b>12:00</b>	<b>24:00</b>		

ISSUING AUTHORITY  
BARGE SUPT / CONSTRUCTION MANAGERName: **[Signature]**  
Signature: **[Signature]**  
Date: **15/11/21** Time: **11:30**

CHIEF ENGINEER:

Name: **[Signature]**  
Signature: **[Signature]**

DIVING SUPERVISORS

Name: **[Signature]**  
Signature: **[Signature]**

I hereby declare that the work detailed in this permit has been completed/stopped in a safe condition and all personnel assigned to the job have been withdrawn. The equipment is/is not in a condition to be returned to service with the exception of Saya dengan ini mengaku bahawa kerja-kerja yang terperinci dalam permit ini telah siap/berhenti dalam keadaan yang selamat dan semua kakitangan yang diperuntukkan tugas tersebut telah ditarik balik. Peralatan adalah/tidak berada dalam keadaan yang akan diserahkan kepada perkhidmatan dengan pengecualian

PERMIT APPLICANT (RESPONSIBLE SUPERVISOR) PENYELIA YANG BERTANGGUNGJAWAB

ACKNOWLEDGEMENT BY ISSUING AUTHORITY PERAKUAN OLEH PIHAK BERKUASA YANG MENGELUARKAN

Name Nama Date Time Signature

IMPORTANT: Electrical, Mechanical, Instrument Isolation or Radiography Certificates may be required to operate in conjunction with this Permit. Elektrik, mekanikal, alat pengasingan atau Sijil radiografi mungkin diperlukan untuk beroperasi bersama-sama dengan permit ini.

NOTE: This PTW is for DLB working outside 500 M radius from existing facility. Nota: PTW ini adalah bagi DLB yang bekerja di luar 500 M radius dari kemudahan sedia ada.

Original Copy - Displayed at Worksite Salinan asal - dipaparkan di worksite

Yellow Copy - Safety Office Salinan Kuning - Pejabat keselamatan

Green Copy - Barge Superintendent's Office Salinan Hijau - Pejabat Barge Superintendent

Blue Copy - SSHE-O Department (Nippon Steel Engineering Co., Ltd - Singapore) Salinan Biru - Department SSHE-O (Nippon Steel Engineering Co., Ltd - Singapore)







5



# COMPLEMENTARY PERMIT FOR RADIOGRAPHY

 Serial No.: **R 00050**

 Main Work Permit No.: **02361**

## SECTION 1: LOCATION/GENERAL INFORMATION

Barge Name: <b>K2</b>	Location: <b>WPS 17</b>	Supervisor Name: <b>H6</b>
Type of Radiation: <b>X-ray</b>	Type of Radioactive Source: <b>X-ray</b>	Equipment Serial No.: <b>CR 00038</b>
Activity (GBq or Ci): <b>1</b>	Safety Distance at 7.5 $\mu$ SV/hour: <b>12</b> meters	
Performing Authority Name: <b>Khalid Fadiy</b>	Department: <b>HOT</b>	Date: <b>13/11/21</b>

## SECTION 2: PURPOSE/WORK DESCRIPTION

 Purpose of Activity: **X-ray / UT / MT**

## SECTION 3: REQUIRED DOCUMENTS/PRECAUTIONS TO BE TAKEN

Required Documents:	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Work Procedure approved and in place	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Emergency Procedure approved and in place	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Calibration Certificate of Radiation Meter	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Calibration Certificate of Dosimeter/Dose Badge	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Radiation Technician's Legal Certificate	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Radiological Protection Advisor's Legal Certificate	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Decay Chart for Source	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Certificate of Radiation Equipment	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Other: _____	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Precautions To Be Taken:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Radiation survey meter/Dose badge	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Radioactive material emergency recovery tools	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Only certified persons in control area	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Clear off unauthorized person from vicinity of work	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Public Announcement by PA system before & after work	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Barrier tape/Signage/Flashing Light to be deployed	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Radio Communication: VHF/UHF: Channel: _____	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Other: _____	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
Other: _____	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A

## SECTION 4: EXECUTION

(To be ticked by Task Supervisor as acknowledgement that required document and precautions are compiled and established)

## SECTION 5: APPROVAL & VALIDATION

Applicant:		
Safety Authority Name:		
Issuing Authority Name:		
Additional Safety Precautions/Remarks:		

**CLOSED**

  
 Date: -

To be signed by designated person i.e. Task Supervisor, Safety Officer &amp; Approving Authority (Construction Manager or Barge Superintendent)

## SECTION 6. COMPLETION OF WORK

(Performing authority to ensure that he has checked that the work has been properly completed, all equipment and apparatus and anything temporary requirement for safety has been returned and normal operations may be safely resumed)

	Name	Date	Signature
Performing Authority/Supervisor Name		<b>16/11/21</b>	
Approving Authority Name		<b>16/11/21</b>	

This complementary permit form and/or CY forms shall be issued when working within 500 meter radius of existing facility.

 Original: Displayed at Worksite  
 Green Copy: Barge Superintendent's Office

 Yellow Copy: Safety Office  
 Blue Copy: SSHE-Q Department (Nippon Steel Engineering Co., Ltd - Singapore)



**MAIN PERMIT TO WORK FORM  
(PERMIT UTAMA UNTUK BORANG KERJA)**

WORK PERMIT NO.: **WP 02616**

**REVALIDATE PERMIT BEFORE STARTING EACH SHIFT  
DIBARUHI PERMIT SEBELUM MEMULAKAN SETIAP SYIF**

<input checked="" type="checkbox"/> HOT WORK (KERJA DENGAN API)	<input type="checkbox"/> ELECTRICAL WORK (KERJA ELEKTRIK)	<input type="checkbox"/> CONFINED SPACE ENTRY (MASUK RUANG TERKURUNG)	<input type="checkbox"/> CRITICAL LIFTING (MENGANGKAT KRITIKAL)
<input checked="" type="checkbox"/> COLD WORK (KERJA TANPA API)	<input type="checkbox"/> RADIOGRAPHY (RADIOGRAFI)	<input type="checkbox"/> DIVING ACTIVITIES (AKTIVITI MENYELAM)	

CONTINUATION OF  
PERMIT NO: **02344**  
Date: **12/11/2021**

AREA/LOCATION KAWASAN/LOKASI: **K2 - WPS17** PROJ. NO: \_\_\_\_\_

PERMIT APPLICATION  
PERMOHONAN  
PERMIT

**DESCRIPTION OF WORK TO BE PERFORMED: PERIHAL KERJA YANG PERLU DILAKUKAN:**  
**ALONG SIDE - RELEASE MATERIAL BARGE, DECK BARGE**  
**- JKT BARGE - VESSEL**

**EQUIPMENT TO BE WORKED ON: PERALATAN UNTUK BEKERJA PADA:**  
**AHT**

**Permit Validity**

Date: (DD/MM/YY) **12/11/21** Time: **11:30** TO Date: (DD/MM/YY) **1/1** Time: \_\_\_\_\_

Permit yang Sah dari:

**SCAFFOLDING REQUIRED? PERANCAH YANG DIPERLUKAN?**

☐ YES

☒ NO

**HAZARDS IDENTIFIED: BAHAYA YANG DIKENAL PASTI:**

**Fire or Explosion: Kebakaran atau Letupan:**

Explosion/Fire of Platform Gas Letupan/kebakaran pelantar gas  
Explosion/Fire of Stored Flammables Letupan/Api yang berkumpul yang mudah terbakar  
Fire of Materials Around Work Site Bahan-bahan kebakaran di kawasan kerja  
Explosion/Fire of Flame Cutting Gas Letupan/kebakaran api dari pemotongan gas  
Explosives Letupan

Naked Flame Api  
Flying Particle Sparks Api kecil yang berterbangan  
Electricity Bekalan Elektrik  
Moving Machinery Jentera Bergerak  
Lifting Operations Operasi Mengangkat  
Radiation Risk Risiko radiasi

**Isolation of Critical Safety Pengasingan Keselamatan kritikal System Required: Sistem diperlukan:**

Weather/Sea State Cuaca/Kedadaan Laut  
Working Over Water Berkerja atas air/laut  
Confined Space Ruang Terkurung  
Danger of Falling Bahaya dari terjatuh  
Equipment Under Pressure Peralatan dibawa tekanan

Fire/Gas Detection Api / Gas Pengesanan  
Fire Water Api Air  
Fixed F/F System Sistem F/F Tetap  
Life Saving Appliances Peralatan penyelamat nyawa  
Alarm P.A. System Sistem Bunyi Suara  
Escape Route Blocked Laluan melarikan diri yang disekat

Others: \_\_\_\_\_

**PRECAUTIONS TO BE TAKEN:**

Eye Protection Perlindungan Mata  
Hearing Protection Perlindungan Pendengaran  
Chemical Handling Clothing Pakaian untuk mengendalikan kimia  
Fire Watchman Stand-By Pemerhatian Kebakaran yang bertugas  
Overside Working Stand-By Yang berkerja ditepi barge  
Harness/Line Baju penyelamat/Tali  
Lift Jacket/Work Vest Jaket Keselamatan /vest kerja  
Respiratory Protection Perlindungan Pernafasan  
Scaffolding Barriers Perancah halangan  
H<sub>2</sub>S Trained Personnel Only Kakitangan H<sub>2</sub>S yang tauilah saja  
Escape Sets as Stand-By Set melarikan diri sebagai siap sedia  
Full BA to be Worn BA yang cukup untuk dipakai

Limitation of Access Had capaian  
Fire Extinguisher Alat Pemadaman Api  
Fire Hose Run Out Hos Api pendek  
Warning Notices & Barriers Notis Amaran & Halangan  
Additional Lighting Lampu Tambahan  
Radio Communication Channel Saluran komunikasi radio  
Foam Protection Perlindungan Buih  
Gas Detection Requirement Kebutuhan pengesanan gas  
Clear Combustible Materials Bahan-bahan mudah terbakar yang jelas  
Wear Gloves Memakai sarung tangan  
Wear Full Face Visor Pakai Visor penuh muka  
Use Non Ferric Menggunakan alat-alat yang lazimnya bebas

**COMPLIMENTARY SOKONGAN  
CERT SIJIL/SUP DOC TAMBAHAN**

**JSA-TPE-010**

I, Permit Applicant (the Responsible Supervisor) understand the precautions to be undertaken and fully accept the responsibility to carry out the job in the safest manner and that this permit is valid only as long as the terms and conditions are maintained. Saya, penyelia bertanggungjawab memahami langkah berjaga-jaga diambil dan menerima sepenuhnya tanggungjawab untuk menjalankan kerja dengan cara yang paling selamat dan permit ini sah hanya selagi terma dan syarat akan dikekalkan.

**PERMIT APPLICANT  
(RESPONSIBLE SUPERVISOR)  
PENYELIA YANG BERTANGGUNG JAWAB**

Name: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: **12/11/21** Time: **11:30**

**GAS TEST: UJIAN GAS:**

Gas Test is Required Ujian gas yang diperlukan

Gas Test is Not Required Ujian gas tak diperlukan

% LEL	O <sub>2</sub>	Testers Name Nama Tester	Signature Tandatangan	Time Waktu

**HSE OFFICER**

Name: **T**  
Signature: \_\_\_\_\_  
Date: **12/11/21** Time: **11:30**

**PLANT STATUS REQUIRED:  
STATUS LOJI YANG DIPERLUKAN:**

Mechanical Isolation Pengasingan mekanikal  
Equipment Spaded/Blinded Peralatan spaded/blinded  
Electrical Isolation Pengasingan elektrik  
Equipment Depressurized Peralatan yang ada tekanan  
Equipment Gas Free Peralatan yang tiada gas  
Equipment Inserted Peralatan yang dimasukkan  
Equipment Ventilated Peralatan pengudaraan  
Area Clear of Combustibles Kawasan bebas dari bahan terbakar  
Fire Watcher Present Kawalan Api Bertugas  
Equipment Fully Drained Peralatan yang sepenuhnya disalurkan  
Gas Checks Completed Alat pengesan gas yang siap

**REVALIDATION: DIBARUHI:**

Date Tarikh	From (Hrs) Dari	To (Hrs) Kepada	Permit Applicant Signature:	Issuing Authority Signature:
12/11/21	12.00	24.00		
13/11/21	00.00	12.00		
13/11/21	12.00	24.00		
14/11/21	00.00	12.00		
14/11/21	12.00	24.00		
15/11/21	00.00	12.00		
15/11/21	12.00	24.00		

**ISSUING AUTHORITY**

**BARGE SUPT / CONSTRUCTION MANAGER**

Name: \_\_\_\_\_  
Signature: \_\_\_\_\_

**CHIEF ENGINEER:**

Name: \_\_\_\_\_  
Signature: \_\_\_\_\_

**DIVING SUPERVISORS**

Name: \_\_\_\_\_  
Signature: \_\_\_\_\_

WORK COMPLETION  
KERJA YANG SELESAI

I hereby declare that the work detailed in this permit has been completed/stopped in a safe condition and all personnel assigned to the job have been withdrawn. The equipment is/is not in a condition to be returned to service with the exception of Saya dengan ini mengaku bahawa kerja-kerja yang terperinci dalam permit ini telah siap/berhenti dalam keadaan yang selamat dan semua kakitangan yang diperuntukkan tugas tersebut telah ditarik balik. Peralatan adalah/tidak berada dalam keadaan yang akan diserahkan kepada perkhidmatan dengan pengecualian

**PERMIT APPLICANT (RESPONSIBLE SUPERVISOR) PENYELIA YANG BERTANGGUNGJAWAB**

**ACKNOWLEDGEMENT BY ISSUING AUTHORITY PERAKUAN OLEH PIHAK BERKUASA YANG MENGELUARKAN**

Name Nama	Date	Time	Signature
	16/11/21	08:00	
	15/11/21	23:30	

**IMPORTANT: Electrical, Mechanical, Instrument Isolation or Radiography Certificates may be required to operate in conjunction with this Permit. Elektrik, mekanikal, alat pengasingan atau Sijil radiografi mungkin diperlukan untuk beroperasi bersama-sama dengan permit ini.**

NOTE: This PTW is for DLB working outside 500 M radius from existing facility. Nota: PTW ini adalah bagi DLB yang bekerja di luar 500 M radius dari kemudahan sedia ada.  
Original Copy - Displayed at Worksite Salinan asal - dipaparkan di worksite  
Green Copy - Barge Superintendent's Office Salinan Hijau - Pejabat Barge Superintendent  
Blue Copy - SSHE-Q Department (Nippon Steel Engineering Co., Ltd - Singapore) Salinan Biru - Department SSHE-Q (Nippon Steel Engineering Co., Ltd - Singapore)



# MAIN PERMIT (PERMIT UTAMA UNTUK BORANG KERJA)

WP 02615

REVALIDATE PERMIT BEFORE STARTING EACH SHIFT  
DIBARUHI PERMIT SEBELUM MEMULAKAN SETIAP SYIF

CONTINUATION OF

NIPPON STEEL  
ENGINEERING

HOT WORK (KERJA DENGAN API)  
COLD WORK (KERJA TANPA API)

ELECTRICAL WORK (KERJA ELEKTRIK)  
RADIOGRAPHY (RADIOGRAFI)

CONFINED SPACE ENTRY (MASUK RUANG TERKURUNG)  
DIVING ACTIVITIES (AKTIVITI MENYELAM)

CRITICAL LIFTING (MENGANGKAT KRITIKAL)

PERMIT NO: 02602

AREA/LOCATION KAWASAN/LOKASI: K-2 Dock

PROJ. NO:

Date: 12/11/2021

PERMIT APPLICATION  
PERMOHONAN  
PERMIT

DESCRIPTION OF WORK TO BE PERFORMED: PERIHAL KERJA YANG PERLU DILAKUKAN:

EQUIPMENT TO BE WORKED ON: PERALATAN UNTUK BEKERJA PADA:

Permit Validity

Date: (DD/MM/YY) 12/11/21 Time: 2:00 TO Date: (DD/MM/YY) 1/1/22 Time: 00:00

Permit yang Sah dari:

SCAFFOLDING REQUIRED? PERANCAH YANG DIPERLUKAN?

YES

NO

HAZARDS IDENTIFIED: BAHAYA YANG DIKENAL PASTI:

Fire or Explosion: Kebakaran atau Letupan:

Explosion/Fire of Platform Gas Letupan/kebakaran pelantar gas  
Explosion/Fire of Stored Flammables Letupan/Api yang berkumpul yang mudah terbakar  
Fire of Materials Around Work Site Bahan-bahan kebakaran di kawasan kerja  
Explosion/Fire of Flame Cutting Gas Letupan/kebakaran api dari pemotongan gas  
Explosives Letupan

Naked Flame Api  
Flying Particle Sparks Api kecil yang berterbangan  
Electricity Bekalan Elektrik  
Moving Machinery Jentera Bergerak  
Lifting Operations Operasi Mengangkat  
Radiation Risk Risiko radiasi

Isolation of Critical Safety Pengasingan Keselamatan kritikal  
System Required: Sistem diperlukan:

Weather/Sea State Cuaca/Kedaaan Laut  
Working Over Water Berkerja atas air/laut  
Confined Space Ruang Terkurung  
Danger of Falling Bahaya dari terjatuh  
Equipment Under Pressure Peralatan dibawa tekanan

Fire/Gas Detection Api / Gas Pengesanan  
Fire Water Api Air  
Fixed F/F System Sistem F/F Tetap  
Life Saving Appliances Peralatan penyelamat nyawa  
Alarm P.A. System Sistem Bunyi Suara  
Escape Route Blocked Laluan melarikan diri yang disekat

Others:

PRECAUTIONS TO BE TAKEN:

Eye Protection Perlindungan Mata  
Hearing Protection Perlindungan Pendengaran  
Chemical Handling Clothing Pakaian untuk mengendalikan kimia  
Fire Watchman Stand-By Pemerhatian Kebakaran yang petugas  
Overside Working Stand-By Pemerhatian petugas Yang berkerja dilepi barge  
Harness/Line Baju penyelamat/Tali  
Lift Jacket/Work Vest Jacket Keselamatan /vest kerja  
Respiratory Protection Perlindungan Pernafasan  
Scaffolding Barriers Perancah halangan  
H2S Trained Personnel Only Kakitangan H2S yang tauliah saja  
Escape Sets as Stand-By Set melarikan diri sebagai siap sedia  
Full BA to be Worn BA yang cukup untuk dipakai

Limitation of Access Had capaian  
Fire Extinguisher Alat Pemadaman Api  
Fire Hose Run Out Hos Api pendek  
Warning Notices & Barriers Notis Amaran & Halangan  
Additional Lighting Lampu Tambahan  
Radio Communication Channel Saluran komunikasi radio  
Foam Protection Perlindungan Buih  
Gas Detection Requirement Keperluan pengesanan gas  
Clear Combustible Materials Bahan-bahan mudah terbakar yang jelas  
Wear Gloves Memakai sarung tangan  
Wear Full Face Visor Pakai Visor penuh muka  
Use Non Ferric Menggunakan alat-alat yang lazimnya bebas

COMPLIMENTARY SOKONGAN  
CERT SIJIL/SUP DOC TAMBAHAN

USA # 001

I, Permit Applicant (the Responsible Supervisor) understand the precautions to be undertaken and fully accept the responsibility to carry out the job in the safest manner and that this permit is valid only as long as the terms and conditions are maintained. Saya, penyalia bertanggungjawab memahami langkah berjaga-jaga diambil dan menerima sepenuhnya tanggungjawab untuk menjalankan kerja dengan cara yang paling selamat dan permit ini sah hanya selagi terma dan syarat akan dikekalkan.

PERMIT APPLICANT  
(RESPONSIBLE SUPERVISOR)  
PENYELIA YANG BERTANGGUNG  
JAWAB

Name:

Signature:

Date:

GAS TEST: UJIAN GAS:

Gas Test is Required Ujian gas yang diperlukan

Gas Test is Not Required Ujian gas tak diperlukan

% LEL	O <sub>2</sub>	Testers Name Nama Tester	Signature Tandatangan	Time Waktu

HSE OFFICER

Name:

Signature:

Date:

PLANT STATUS REQUIRED:  
STATUS LOJI YANG DIPERLUKAN:

Mechanical Isolation Pengasingan mekanikal  
Equipment Spaded/Blinded Perlatan spaded/tajam  
Electrical Isolation Pengasingan elektrik  
Equipment Depressurized Peralatan yang ada tekanan  
Equipment Gas Free Peralatan yang tiada gas  
Equipment Inserted Perlatan yang dimasukkan  
Equipment Ventilated Peralatan pengudaraan  
Area Clear of Combustibles Kawasan bebas dari bahan terbakar  
Fire Watcher Present Kawalan Api Bertugas  
Equipment Fully Drained Peralatan yang sepenuhnya disalurkan  
Gas Checks Completed Alat pengesan gas yang siap

REVALIDATION: DIBARUHI:

Date Tarikh	From (Hrs) Dari	To (Hrs) Kepada	Permit Applicant Signature:	Issuing Authority Signature:
12-11-21	12.00	00.00		
13-11-21	00.00	12.00		
14-11-21	12.00	00.00		
14/11-21	00.00	12.00		
14/11-21	12.00	00.00		
15/11-21	00.00	12.00		
15/11-21	12.00	00.00		

ISSUING AUTHORITY

BARGE SUPT / CONSTRUCTION MANAGER

Name:

Signature:

CHIEF

Name:

Signature:

DIVING SUPERVISORS

Name:

Signature:

WORK COMPLETION  
KERJA YANG SELESAI

I hereby declare that the work detailed in this permit has been completed/stopped in a safe condition and all personnel assigned to the job have been withdrawn. The equipment is/is not in a condition to be returned to service with the exception of Saya dengan ini mengaku bahawa kerja-kerja yang terperinci dalam permit ini telah siap/berhenti dalam keadaan yang selamat dan semua kakitangan yang diperuntukkan tugas tersebut telah ditarik balik. Peralatan adalah/tidak berada dalam keadaan yang akan diserahkan kepada perkhidmatan dengan pengecualian

PERMIT APPLICANT (RESPONSIBLE SUPERVISOR) PENYELIA YANG BERTANGGUNGJAWAB

ACKNOWLEDGEMENT BY ISSUING AUTHORITY PERAKUAN OLEH PIHAK BERKUASA YANG MENGELUARKAN

Name Nama Date Time Signature

IMPORTANT: Electrical, Mechanical, Instrument Isolation or Radiography Certificates may be required to operate in conjunction with this Permit. Elektrik, mekanikal, alat pengasingan atau Sijil radiografi mungkin diperlukan untuk beroperasi bersama-sama dengan permit ini.

NOTE: This PTW is for DLB working outside 500 M radius from existing facility. Nota: PTW ini adalah bagi DLB yang bekerja di luar 500 M radius dari kemudahan sedia ada. Original Copy - Displayed at Worksite Salinan asal - dipaparkan di worksite Yellow Copy - Safety Office Salinan Kuning - Pejabat keselamatan

Green Copy - Barge Superintendent's Office Salinan Hijau - Pejabat Barge Superintendent

Blue Copy - SSHE-Q Department (Nippon Steel Engineering Co., Ltd - Singapore) Salinan Biru - Department SSHE-Q (Nippon Steel Engineering Co., Ltd - Singapore)



# MAIN PERMIT TO WORK FORM (PERMIT UTAMA UNTUK BORANG KERJA)

WP 02612

REVALIDATE PERMIT BEFORE STARTING EACH SHIFT  
DIBARUHI PERMIT SEBELUM MEMULAKAN SETIAP SYIF

CONTINUATION OF

PERMIT NO

02317

HOT WORK (KERJA DENGAN API)  
COLD WORK (KERJA TANPA API)

ELECTRICAL WORK (KERJA ELEKTRIK)  
RADIOGRAPHY (RADIOGRAFI)

CONFINED SPACE ENTRY (MASUK RUANG TERKURUNG)  
DIVING ACTIVITIES (AKTIVITI MENYELAM)

CRITICAL LIFTING (MENGANGKAT KRITIKAL)

PROJ. NO:

Date: 12 / 11 / 21

NIPPON STEEL  
ENGINEERING

AREA/LOCATION KAWASAN/LOKASI:

MAIN DECIC

DESCRIPTION OF WORK TO BE PERFORMED: PERIHAL KERJA YANG PERLU DILAKUKAN:

EQUIPMENT TO BE WORKED ON: PERALATAN UNTUK BEKERJA PADA:

Deployment of underwater equipment

USBL / CURRENT METER / SVP

Permit Validity

Date: (DD/MM/YY) 12 / 11 / 21 Time: TO Date: (DD/MM/YY) 1 / 1 Time:

Permit yang Sah dari:

SCAFFOLDING REQUIRED? PERANCAH YANG DIPERLUKAN?

YES

NO

HAZARDS IDENTIFIED: BAHAYA YANG DIKENAL PASTI:

Fire or Explosion: Kebakaran atau Letupan:

Explosion/Fire of Platform Gas Letupan/kebakaran pelantar gas  
Explosion/Fire of Stored Flammables Letupan/Api yang berkumpul yang mudah terbakar  
Fire of Materials Around Work Site Bahan-bahan kebakaran di kawasan kerja  
Explosion/Fire of Flame Cutting Gas Letupan/kebakaran api dari pemotongan gas  
Explosives Letupan

Naked Flame Api  
Flying Particle Sparks Api kecil yang berterbangan  
Electricity Bekalan Elektrik  
Moving Machinery Jentera Bergerak  
Lifting Operations Operasi Mengangkat  
Radiation Risk Risiko radiasi

Isolation of Critical Safety Pengasingan Keselamatan kritikal  
System Required: Sistem diperlukan:

Weather/Sea State Cuaca/Keadaan Laut  
Working Over Water Berkerja atas air/laut  
Confined Space Ruang Terkurung  
Danger of Falling Bahaya dari terjatuh  
Equipment Under Pressure Peralatan dibawa tekanan

Fire/Gas Detection Api / Gas Pengesanan  
Fire Water Api Air  
Fixed F/F System Sistem F/F Tetap  
Life Saving Appliances Peralatan penyelamat nyawa  
Alarm P.A. System Sistem Bunyi Suara  
Escape Route Blocked Laluan melarikan diri yang disekat

Others:

PRECAUTIONS TO BE TAKEN:

Eye Protection Perlindungan Mata  
Hearing Protection Perlindungan Pendengaran  
Chemical Handling Clothing Pakaian untuk mengendalikan kimia  
Fire Watchman Stand-By Pemerhatian Kebakaran yang petugas  
Overside Working Stand-By Pemerhatian petugas Yang berkerja ditepi barge  
Harness/Line Baju penyelamat/Tali  
Lift Jacket/Work Vest Jaket Keselamatan /vest kerja  
Respiratory Protection Perlindungan Pernafasan  
Scaffolding Barriers Perancah halangan  
H<sub>2</sub>S Trained Personnel Only Kakitangan H<sub>2</sub>S yang tauiah saja  
Escape Sets as Stand-By Set melarikan diri sebagai siap sedia  
Full BA to be Worn BA yang cukup untuk dipakai

Limitation of Access Had capaian  
Fire Extinguisher Alat Pemadaman Api  
Fire Hose Run Out Hos Api pendek  
Warning Notices & Barriers Notis Amaran & Halangan  
Additional Lighting Lampu Tambahan  
Radio Communication Channel Saluran komunikasi radio  
Foam Protection Perlindungan Buih  
Gas Detection Requirement Keperluan pengesanan gas  
Clear Combustible Materials Bahan-bahan mudah terbakar yang jelas  
Wear Gloves Memakai sarung tangan  
Wear Full Face Visor Pakai Visor penuh muka  
Use Non Ferric Menggunakan alat-alat yang lazimnya bebas

COMPLIMENTARY SOKONGAN  
CERT SIJIL/SUP DOC TAMBAHAN

JSA T&I - 005

I, Permit Applicant (the Responsible Supervisor) understand the precautions to be undertaken and fully accept the responsibility to carry out the job in the safest manner and that this permit is valid only as long as the terms and conditions are maintained. Saya, penyelia bertanggungjawab memahami langkah berjaga-jaga diambil dan menerima sepenuhnya tanggungjawab untuk menjalankan kerja dengan cara yang paling selamat dan permit ini sah hanya selagi terma dan syarat akan dikekalkan.

PERMIT APPLICANT  
(RESPONSIBLE SUPERVISOR)  
PENYELIA YANG BERTANGGUNG JAWAB

Name:

Signature:

Date:

HSES OFFICER

Name:

Signature:

Date:

ISSUING AUTHORITY

BARGE SUPERINTENDENT / CONSTRUCTION MANAGER

Name:

Signature:

CHIEF ENGINEER:

Name:

Signature:

DIVING SUPERVISORS

Name:

Signature:

PLANT STATUS REQUIRED:  
STATUS LOJI YANG DIPERLUKAN:

Mechanical Isolation Pengasingan mekanikal  
Equipment Spaded/Blinded Peralatan spaded/tajam  
Electrical Isolation Pengasingan elektrik  
Equipment Depressurized Peralatan yang ada tekanan  
Equipment Gas Free Peralatan yang tiada gas  
Equipment Inserted Peralatan yang dimasukkan  
Equipment Ventilated Peralatan pengudaraan  
Area Clear of Combustibles Kawasan bebas dari bahan terbakar  
Fire Watcher Present Kawalan Api Bertugas  
Equipment Fully Drained Peralatan yang sepenuhnya disalurkan  
Gas Checks Completed Alat pengesan gas yang siap

REVALIDATION: DIBARUHI:

Date Tarikh	From (Hrs) Dari	To (Hrs) Kepada	Permit Applicant Signature:	Issuing Authority Signature:
12/11/21	0000	1200		
12/11/21	1200	0000		
13/11/21	0000	1200		
13/11/21	1200	0000		
14/11/21	0000	1200		
14/11/21	1200	0000		
15/11/21	0000	1200		

I hereby declare that the work detailed in this permit has been completed/stopped in a safe condition and all personnel assigned to the job have been withdrawn. The equipment is/is not in a condition to be returned to service with the exception of. Saya dengan ini mengaku bahawa kerja-kerja yang terperinci dalam permit ini telah siap/berhenti dalam keadaan yang selamat dan semua kakitangan yang diperuntukkan tugas tersebut telah ditarik balik. Peralatan adalah/tidak berada dalam keadaan yang akan diserahkan kepada perkhidmatan dengan pengecualian

Name Nama

Date

Time

Signature

PERMIT APPLICANT (RESPONSIBLE SUPERVISOR) PENYELIA YANG BERTANGGUNGJAWAB

ACKNOWLEDGEMENT BY ISSUING AUTHORITY PERAKUAN OLEH PIHAK BERKUASA YANG MENGELOUARKAN

IMPORTANT: Electrical, Mechanical, Instrument Isolation or Radiography Certificates may be required to operate in conjunction with this Permit. Elektrik, mekanikal, alat pengasingan atau Sijil radiografi mungkin diperlukan untuk beroperasi bersama-sama dengan permit ini.

NOTE: This PTW is for DLB working outside 500 M radius from existing facility. Nota: PTW ini adalah bagi DLB yang bekerja di luar 500 M radius dari kemudahan sedia ada. Original Copy - Displayed at Worksite Salinan asal - dipaparkan di worksite  
Green Copy - Barge Superintendent's Office Salinan Hijau - Pejabat Barge Superintendent  
Blue Copy - SSHE-Q Department (Nippon Steel Engineering Co., Ltd - Singapore) Salinan Biru - Department SSHE-Q (Nippon Steel Engineering Co., Ltd - Singapore)



## เอกสารแนบที่ 103

ตัวอย่างป้ายเตือนการสวมใส่ PPE ในพื้นที่ปฏิบัติงาน



ภาพถ่ายตัวอย่างการติดป้ายเตือนการสวมใส่ PPE ในพื้นที่ปฏิบัติงาน  
บนเรือที่ใช้ในการก่อสร้างและติดตั้งโครงสร้างในทะเลของโครงการฯ



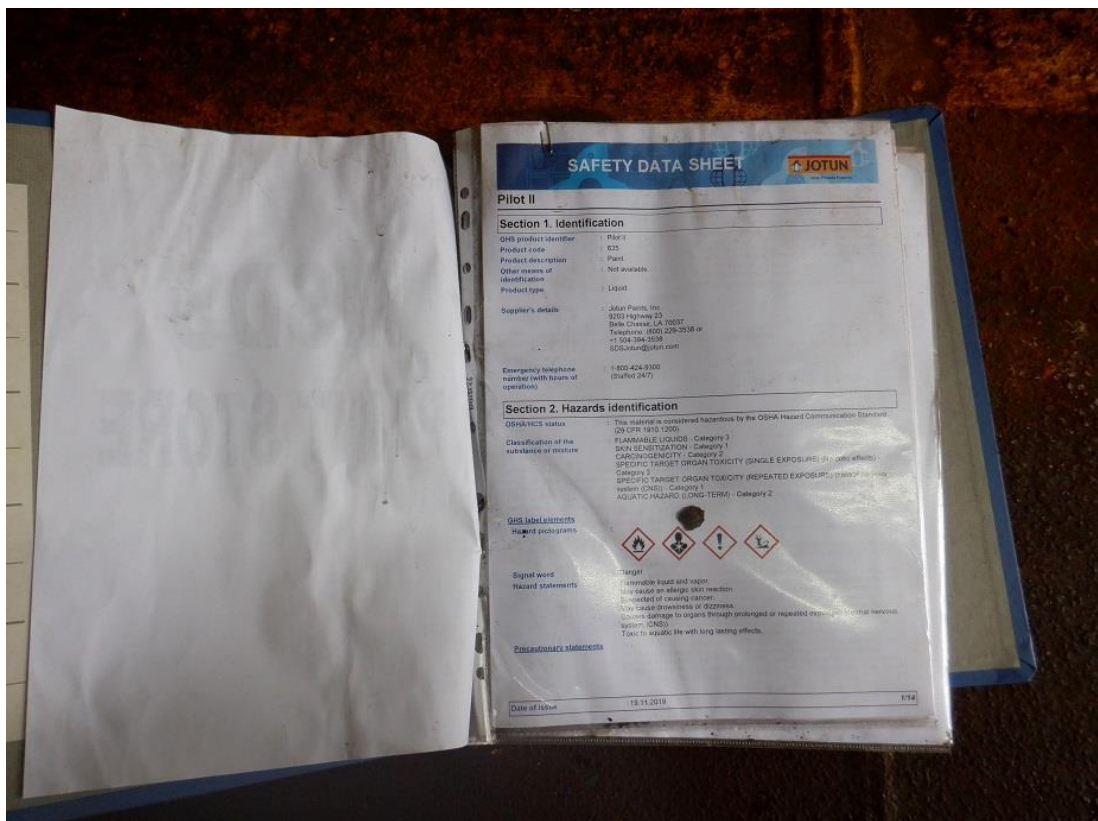
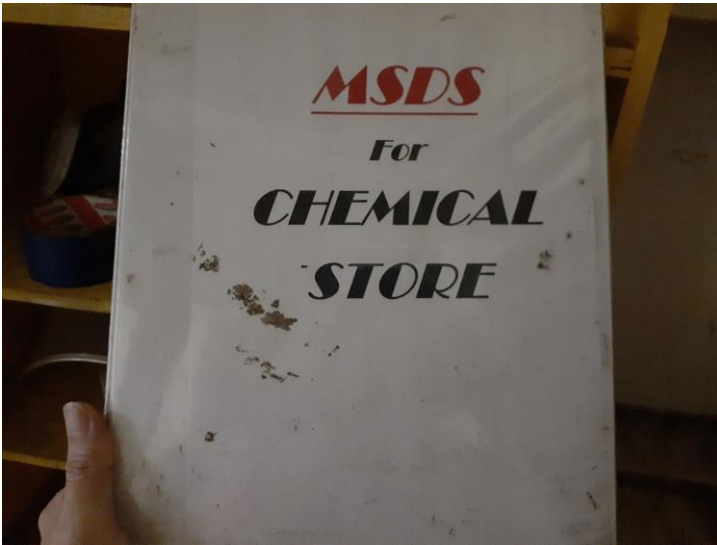


## เอกสารแนบที่ 104

ภาพถ่ายพื้นที่จัดเก็บและใช้งานสารเคมี



ภาพถ่ายพื้นที่จัดเก็บและใช้งานสารเคมี บนเรือที่ใช้ในการก่อสร้างและติดตั้งโครงสร้างในทะเลของโครงการฯ





ภาพถ่ายพื้นที่จัดเก็บและใช้งานสารเคมี บนเรือที่ใช้ในการก่อสร้างและติดตั้งโครงสร้างในทะเลของโครงการฯ





## เอกสารแนบที่ 105

ตัวอย่างรายงานการฝึกซ้อมตามแผน (Emergency Drill Report)





PTTEP G1/61 PROJECT PHASE 1A 2021  
S-SHE-Q Department  
OFFSHORE EMERGENCY DRILL RECORD



## COMBINED FIRE RESCUE & STRETCHER DRILL REPORT

DRILL TYPE : Combined Fire Rescue & Stretcher Drill  
VESSEL : DLB Kuroshio II  
DATE/TIME : 05<sup>th</sup> November 2021 @ 14:30hrs  
LOCATION : Port Bow Windlass Room

### Objective:

- 1) To determine preparedness of ER Team members during emergency situation.
- 2) To enhance effective chain of command & communication
- 3) To further refresh/trained ERT on extinguish the fire & first aid application. Familiar with different type of firefighting equipment.

### SCENARIO:

Tower Operator received fire emergency call from crew.

Tower Operator (TO) then called Barge Superintendent (BS) and in return instructed tower operator make public announcement (PA).

Tower Operator (TO) notified SSHE Officer (SO) and Barge Doctor (BD). Simultaneously he notified Barge Engineer (BE-Engine Room) on the situation.

Barge Superintendent (BS) instructs Barge Foreman (DCT Leader) to immediately organize and assemble Fire Fighter and Rescue Teams.

Barge Superintendent (BS) notified Construction Manager (CM) and then Construction Manager informed CY CSR onboard via telephone.

Once ready, ER team with full gear proceeds to the scene lead by DCT Leader. DCT Leader and Chief Barge Engineer make assessment on the nature of the fire occurs. Firefighter and Rescue Members donned complete fireman suit and SCBA, as the area filled with smoke.

After the fire extinguish, the rescue team recover the IP out from the scene and hand over to the stretcher team. Barge Doctor/Medic immediately checks condition of the IP before transfer to Barge Clinic for further monitoring.

Simultaneously, DCT Leader instructs Fire Fighter's team to cool down the location with fire hose. Then Barge Doctor informs Barge Superintendent the IP status and no need for medical evacuation.

### ***DRILL STAND DOWN.***





**PTTEP G1/61 PROJECT PHASE 1A 2021  
S-SHE-Q Department  
OFFSHORE EMERGENCY DRILL RECORD**



**Key persons with terms used:**

Shimpei Kasamatsu	- Barge Superintendent	- BS
Sasaki Shigeta	- Construction Manager	- CM
Okauchi Fumihiko	- Chief Barge Engineer	- CBE
Martin L.	- Chief Mechanic	- CHM
Witoo Soraphetpisai	- Company Site Representative	- CSR
Rattawut Chandapradit	- CY SSHE	- CY SSHE
Angga	- Barge Foreman	- BF/ERT Leader
Welson/ Richard	- Tower Operator	- TO
On Duty SO	- On Shift / Duty	- SSHE
Dr. Bernard	- Barge Doctor	- Doctor
Dummy	- Injured Person	- IP
Rigger Foreman	- Observer	- Achun

**ERT Attendees:**

Fire Fighters (FiFi):		Rescuer/SCBA:	
Jubelee Dominike Telly Agon Francis	Fire Fighter / Fire Hose Men	Kudi Baring	Rescuer with SCBA
Stretcher Team:		Assistant & Back-up:	
Lukman Irvani Eko Hadi Kusnadi Wisnu		On site personnel	
Fire Water Pump/ Monitor			
Martin L.			

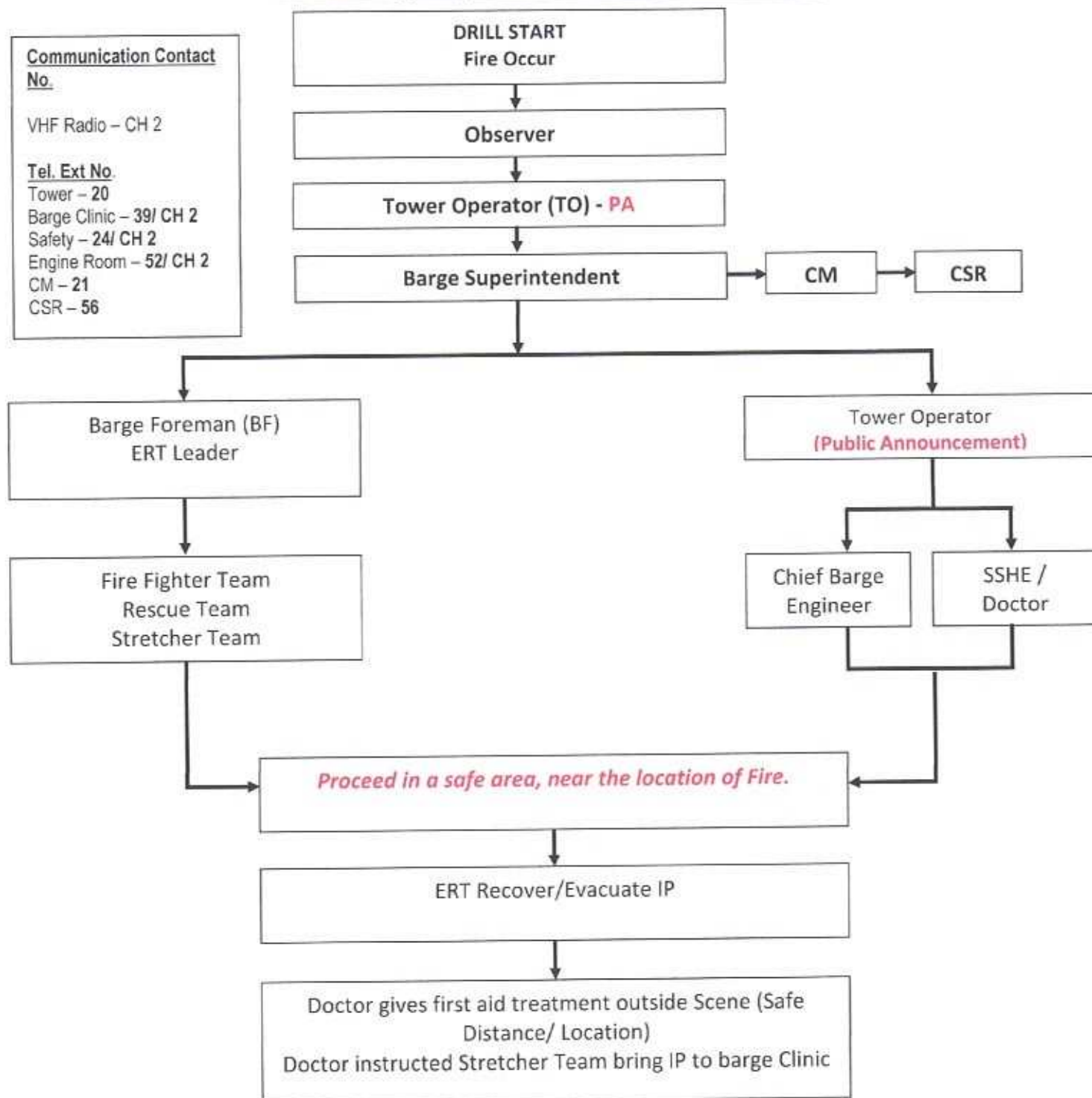




PTTEP G1/61 PROJECT PHASE 1A 2021  
S-SHE-Q Department  
OFFSHORE EMERGENCY DRILL RECORD



## Fire Emergency Communication Flow Chart







**PTTEP G1/61 PROJECT PHASE 1A 2021**  
**S-SHE-Q Department**  
**OFFSHORE EMERGENCY DRILL RECORD**



**Drill Sequence:**

Time	Description
14:30 Hrs	<ul style="list-style-type: none"><li>Pre-drill briefing was conducted to ERT team and all involved parties at Rigger Coffee Shop</li></ul>
14:40 Hrs	<p>Drill Commenced</p> <ul style="list-style-type: none"><li>An observer notices the smoke coming out from Port bow windlass room.</li><li>He approached to the scene for checking situation and found one man laid unconscious on the floor with small fire in the compartment.</li><li>He immediately notifies tower via VHF-radio.</li></ul>
14:41 Hrs	<ul style="list-style-type: none"><li>Tower operator immediately informed Barge Superintendent (BS)</li><li>Tower operator carried out PA announcement onboard then inform the Towing tugs.</li><li>Tower Operator notified Safety, Barge Doctor and Engine Control Room on the situation</li><li>BS notified ERT Leader (BF) on the situation and instructed BF to gather the ERT team.</li><li>BS then informed Construction Manager (CM) and CM contacted CY CSR onboard on the situation.</li></ul>
14:42 Hrs	<ul style="list-style-type: none"><li>Barge Chief Engineer instructed Engine watch to standby Fire pump and isolate electricity in Fire area.</li></ul>
14:43 Hrs	<ul style="list-style-type: none"><li>ERT members arrived at the ERT assembly area, then proceed to prepare Fire hoses and gears for Fire Fighters near the scene led by ERT Leader.</li></ul>
14:45 Hrs	<ul style="list-style-type: none"><li>Firefighters with Firemen outfit arrived the scene.</li><li>LRT Leader instructed Firefighter to use spray water to control the fire and smokes from outside the windlass room.</li><li>Stretcher Team also arrived and prepared their stretcher lead by Barge Doctor.</li></ul>
14:46 Hrs	<ul style="list-style-type: none"><li>Rescuers with Firemen outfit and SCBA arrived the scene.</li><li>ERT Leader instructed Rescuers enter to Windlass room for rescuing the IP.</li></ul>
14:47 Hrs	<ul style="list-style-type: none"><li>The unconscious IP rescued from the windlass room to safe area and handed over to medical team, ERT Leader reported to BS.</li><li>Stretcher team lead by Barge Doctor received the IP from rescue team and carried out necessary check and first aid treatment.</li><li>ERT Leader then instructed Firefighters to fully extinguish the fire.</li><li>Meanwhile ERT Leader made a constant communication with the BS about the situation.</li></ul>
14:49 Hrs	<ul style="list-style-type: none"><li>Casualty brought to barge clinic by stretcher and in stable condition and acknowledged by commander</li><li>Meanwhile ERT Leader confirmed the fire was completely extinguished and BS was immediately notified.</li><li>Barge Doctor report to BS that the Casualty is in safe condition MEDEVAC is not required.</li></ul>
14:50 Hrs	<ul style="list-style-type: none"><li>DRILL STAND DOWN - Drill debriefing</li></ul>





PTTEP G1/61 PROJECT PHASE 1A 2021  
S-SHE-Q Department  
OFFSHORE EMERGENCY DRILL RECORD



**Pictorial**



Pre-Drill briefing before start the drill



Firemen donning Firemen Outfit



An IP laid unconscious inside windlass room



Fire team preparing Fire hose & Nozzle near the Fire scene



ERT instructed team to extinguish the Fire near casualty



Rescuer entered compartment and rescuing a casualty





**PTTEP G1/61 PROJECT PHASE 1A 2021  
S-SHE-Q Department  
OFFSHORE EMERGENCY DRILL RECORD**



Medical/Stretchers team attending to the Casualty



Firemen extinguishing the fire



Medical/Stretchers team brought casualty to Clinic



Debriefing conducted after drill standdown

**Comments:**

The drill was carried out successfully; all sequences were performed accordingly to the briefed scenario and emergency response plan. Good communication and good commands are observed throughout the drill.

Prepared by: - 	Reviewed by: - 	Verified by: - 	Acknowledged by: - 
SSHE Lead	Construction Manager	Barge Superintendent	PTTEP CSR





## เอกสารแนบที่ 106

Accommodation, Food Handling and Welfare Procedure



# EPCI FOR AWP-39, ARTHIT PHASE 3D, G1/61 PHASE 1A & G2/61 PHASE 1A

## ACCOMMODATION, FOOD HANDLING AND WELFARE PROCEDURES




 <b>PTTEP</b> EPCI of AWP-39 Wellhead Platform, Associated Pipelines, and Tie-ins	
<input checked="" type="checkbox"/> 1. APPROVED <input type="checkbox"/> 2. APPROVED (Proceed to AFC) <input type="checkbox"/> 3. APPROVED with comments <input type="checkbox"/> 4. APPROVED with comments (Proceed to AFC) <input type="checkbox"/> 5. Not APPROVED	
<small>COMPANY'S APPROVAL shall not release CONTRACTOR from his obligation under the CONTRACT.          COMPANY'S failure not to comment or only partially comment any CONTRACT DOCUMENT shall not be          construed as an acceptance of the content of the documents.</small>	
Signed: 	Somsak Boonthien PROJECT ENGINEER

CY-BKK response by THC14-5258-PTTEP-NSENGI-A3D-T-20-1873, received on 1-Oct-2020

C1	28-Sep-20	RH	Approved for Construction (AFC)	JC	TH		
A1	28-Aug-20	RH	Issued for Review (IFR)	JC	TH		
REV	DATE	BY	DESCRIPTION	CHECK.	APPR	CHECK.	APPR
				CONTRACTOR APPROVAL		COMPANY APPROVAL	

REVISION CODE: A = Issued for Review, B = Issued for Approval, C = Approved for Construction, 00 = As-built

TOTAL OR PARTIAL REPRODUCTION AND/OR UTILIZATION OF THIS DOCUMENT ARE FORBIDDEN  
WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE OWNER

	PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED AND PTTEP INTERNATIONAL LIMITED PTTEP ENERGY DEVELOPMENT COMPANY LIMITED		 
	EPCI FOR AWP-39, ARTHIT PHASE 3D, G1/61 PHASE 1A & G2/61 PHASE 1A		
	TH-ART-3C-AWP39-SSHE-PDR-6125 TH-ART-3D-GEN-SSHE-PDR-6125 TH-G1-61-1A-GEN-SSHE-PDR-6125 TH-G2-61-1A-GEN-SSHE-PDR-6125	REVISION C1 C1 C1 C1	



### TABULATION OF REVISED PAGES

SHT. No.	REVISIONS								SHT. No.	REVISIONS							
	A1	C1															
1	X	X							51								
2	X	X							52								
3	X								53								
4	X								54								
5	X								55								
6	X								56								
7	X								57								
8	X								58								
9	X								59								
10	X								60								
11	X								61								
12	X								62								
13	X								63								
14	X								64								
15	X								65								
16	X								66								
17	X								67								
18	X								68								
19	X								69								
20									70								
21									71								
22									72								
23									73								
24									74								
25									75								
26									76								
27									77								
28									78								
29									79								
30									80								
31									81								
32									82								
33									83								
34									84								
35									85								
36									86								
37									87								
38									88								
39									89								
40									90								
41									91								
42									92								
43									93								
44									94								
45									95								
46									96								
47									97								
48									98								
49									99								
50									100								



---

**TABLE OF CONTENTS**

1. INTRODUCTION	4
1.1 Synopsis and General Requirements	4
1.2 Action Required	4
2. DEFINITIONS	4
3. REQUIREMENTS	6
4. RESPONSIBILITIES	18



## 1. INTRODUCTION

### 1.1 Synopsis and General Requirements

SP Food Services Co. Ltd., hereinafter referred to as SP Food, provide welfare food catering & accommodation upkeeping services for clients, customers and visitors via several locations and methods: offshore locations for construction barges. When implemented effectively, food safety programs provide effective controls and management systems to prevent food borne illness. This Environment, Health and Safety (EHS) Standard Operating Procedure (SOP) defines the minimum requirements for SP Food safety programs.

### 1.2 Action Required

Sites will implement and follow a written food safety plan based on internationally recognized hygiene best practice- GHP, HACCP (Hazard Analysis Critical Control Point) and the principles that addresses specific procedures and responsibilities for the following:

- Regulatory analysis
- Welfare Food service supplier qualification and contracting
- Performance management of food service suppliers
- Food borne illness reporting, investigation and management
- Regular program review
- Accommodation up keeping
- Defined responsibilities and training

## 2. DEFINITIONS

Terminology	Description
AWB	HUC Accommodation Work Barge
COMPANY	PTT Exploration and Production Public COMPANY Limited (PTTEP)
CONTRACTOR	Nippon Steel Engineering Co., Ltd. (NSE)
Food	All food or drink that may be consumed
Food Borne Illness	A sickness caused by food/water contaminated with microorganisms' chemicals, or other substances hazardous to human health.
Food Safety Hazard	Any biological, chemical, or physical property that may cause a food/water to become unfit for human consumption.
Food Safety Plan	A comprehensive written document that addresses site food safety management processes and requirements.
Food Handling/Preparation Areas	Location/area where food is handled, prepared, cooked and/or served.



Food Storage Area	Location where food is stored prior to being moved to a Food Handling/Preparation area.
Food Services	Functions, equipment and facilities concerned with the preparation and distribution of ready-to-eat food, including but not limited to onsite cafeterias; onsite catering; onsite vending machine access; and offsite company-sponsored events.
Food Supplier	Individuals or organizations that provide raw, frozen, cooked or ready to eat food to the food service providers
HACCP	Hazard Analysis Critical Control Point
Onsite Food Service Manager/Supervisor	The employee responsible for food safety and services at the site.
Outbreak	An incident in which two or more persons experience a similar illness resulting from the ingestion of a common food. See food borne illness incident.
Potentially Hazardous Food	Individuals or organizations that provide raw, frozen, cooked or ready to eat food to the food service providers.
SP Food	SP Food Services Co., Ltd.
SSHE	Security, Safety, Health and Environment
SUB-CONTRACTOR	Thai Nippon Steel Engineering & Construction Corp. Co., Ltd. (TNS)
SOP	Standard Operating Procedure
T&I Barge	Transportation & Installation Barge

#### a) Local Law-Thailand Legislation

Public Health Act 1992	Ministry of Public Health
Food Act 1979	The Food & Drug Administration <a href="http://www/fda/moph.go.th">http://www/fda/moph.go.th</a>
Food Hygiene Guideline for School Canteen (1999)	Ministry of Public Health Contact <a href="http://www/moph.go.th">http://www/moph.go.th</a>

#### b) International Law-UK Legislation

Assured Safe Catering	Department of Health Distribution Centre
Industry Guide to Good Hygiene Practice: Catering Guide (1997)	Chadwick House Group Ltd
Industry Guide to Good Hygiene Practice: Retail Guide (1997)	Chadwick House Group Ltd
Food Safety First Principles (1998)	Chadwick House Group Ltd



### 3. REQUIREMENTS

This Food Safety System and Hygiene Policy will be implemented onboard T&I Barges, HUC Accommodation Barge. The food safety plan that ensures that the necessary controls to provide safe food through any food service supplied by SP Food.

The procedure is adapted to address specific procedures and responsibilities of the site's food safety management system and the requirements of SOP including the following areas:

- Regulatory analysis, Company's Requirements and Best Practice.
- Supplier qualification and contracting
- Food borne illness reporting and investigation procedures.
- Company and client inspections and audits
- Training
- Program Review
- Responsibilities

A food safety regulatory review must be conducted, documented and updated annually or whenever new regulations are promulgated, and commencement of new contract, to ensure the site fully understands and complies with client and company requirements. All identified requirements must be addressed in the site's written plan or contract.

Where required, the site must register with and/or obtain all permits required by regulatory authorities.

#### Onsite Food Service

- a) The site must meet all regulatory requirements and SP Foods requirements for onsite food services set forth in: Onsite Food Services Performance Requirements; Onsite Food Services Facilities Requirements, HACCP Food Safety Management System.
- b) Contracts for Food Suppliers must meet company requirements
- c) Company management will assign responsibility for compliance with all requirements and management of the Food Services an SP Food employee knowledgeable in food safety and food service management. For the purposes of this SOP, this role will be referred to as the Onsite Food Services Manager or Supervisor. This person will liaise with the client's appointed representative on a day to day operational basis. In case of dispute any issues or queries relating to matters relating to agreed terms of contract must be referred to SP Foods senior management.



- d) Procedures are to be established and implemented to regularly monitor, audit and review compliance with all requirements.
- e) A company Food Safety or HACCP Management team must be established and will be responsible to the Managing Director for implementing and maintaining the requirements of this SOP.
- f) Each site will have a HACCP Management team as an adjunct to the Food Services Manager or Supervisor to provide monitoring of performance and required corrective actions.
- g) The SP Onsite Food Services Audit form must be used during regularly scheduled audits of the Onsite Welfare Food Services Provider and facilities.
- h) Control procedures must be established to restrict unauthorized individuals from entering food-handling areas.
- i) A program for regular inspection and preventative maintenance of food preparation and facilities equipment must be implemented that meets or exceeds the SP Onsite Food Services Facility Requirements.

#### **Food Incident Complaint and Illness Reporting and Investigation.**

For the purposes of this Food Safety program a Food Incident or Non-Conformance is when there are concerns about actual or suspected threats to the safety or quality of food or feed, including when food or feed does not meet legal requirements. (The UK Food Standards Agency 2007).

All reported incidents also known as Non-Conformances must be investigated to maintain high standards of hygiene and to prevent or reduce the risk of recurrence by identifying causation and by implementing appropriate preventative and corrective actions as follows:

- a) Procedures for reporting potential food related incidents and Non-Conformances must be recorded in Daily Diary together with Corrective Actions.
- b) Investigations must be conducted by personnel trained in food safety and incident investigation principles.
- c) If the incident involves a complaint rather than an illness, the Food Services Manager or Supervisor will conduct the investigation. Sources, immediate and root causes and corrective actions that address immediate and root causes must be reported to the Operations Manager and EHS for review and approval. The Food Service Manager or



Supervisor will lead the implementation of corrective actions assigned in the Corrective Action plan, and the Food Service Provider will lead the implementation of all other corrective actions.

- d) If the incident involves a potential food borne illness Food Service Manager or Supervisor must complete the "Investigation of Food borne Illness" form. Every co-operation must be given to Client's EHS representative. Use the information on the form to determine if this is a potential food borne illness incident by identifying if the complaint is potentially SP Food food-related.
- e) All complaints or incidents case must be reported, including any food borne illness incident, to the Managing Director at SP Food's Head Office.
- f) Classify the incident as whether the likely causation is biological, chemical or physical. If available conduct any food sampling or swab sampling required by the local regulatory authority or appropriate to the type of incident. Collect available relevant food samples in sealed containers and store in a refrigerator.
- g) Analyze data and identify causation. Obtain external qualified technical support as needed.
- h) Based on the causes identified in the previous step, identify and implement appropriate corrective and preventative measures.

### **Food borne Illness Case Management**

Identified cases of food borne illness will be managed according to the following:

### **Inspections and Audits**

- a) All food related inspectors or auditors must be accompanied by a SP Foods individual knowledgeable in food safety at all times.
- b) Photographs and split samples must be taken as appropriate at the time of the inspection. Any split samples must be analyzed by a qualified laboratory.
- c) A debriefing session will be held at the end of each inspection unless not possible under local regulations.
- d) Inspection and Audit records must be documented and kept on file at Head Office for a period of 2 years.
- e) Violations and findings must be reviewed by appropriate site personnel and corrective actions identified and implemented as soon as possible.



Sample of HACCP and Food Hygiene Audit Checklist

## SP FOOD SERVICES

## HACCP AND FOOD HYGIENE AUDIT CHECK LIST

**PREMISES**

	Fully Compliant	*Partially Compliant	Not Compliant	Describe Non-compliance for Action Check on plan
1 <b>Location</b> Consideration shall be given to any external factors which may contaminate products.	x			
2 <b>Perimeter and Grounds</b> External areas shall be maintained in good order and drainage shall be adequate and effective.	x			
3 <b>Hand Washing Facilities</b> Suitable and sufficient hand cleaning facilities shall be provided		x		Must have supply of liquid soap for hand washing and disposable paper towels.
4 <b>Equipment Cleaning Facilities</b> Facilities for tray and utensil washing and general purpose cleaning shall, where appropriate, be adequately segregated from product handling and storage.	x			
5 <b>Location of Toilets and Staff Facilities</b> Toilets shall not open directly into handling or storage areas.	x			
6 <b>Condition of Building Structure and Services</b> The premises and services shall be fit for purpose and be maintained to ensure product safety and legality.	x			

\* Indicate with IMP if the requirement is for Improvement or 'A' for Action



Sample of Accommodation cleaning checklist

## DAILY ROOM CLEANING &amp; BED SHEET RECORDS

ROOM NO.....

MONTH OF

No.	Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	<b>Daily Cleaning</b>																														
1	Door / ประตู																														
2	Wall & Floor / ผนังและพื้น																														
3	Mirror / กระจก																														
4	Air Condition /  에어컨																														

No.	Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	<b>Change &amp; Cleaning</b>																														
1	Bed Sheet / ผ้าปูที่นอน																														
2	Cover Pillow / ปลอกหมอน																														
3	Blanket / ผ้าห่ม																														

Clean by : Room Service

Check by : Camp Boss



CHECK LIST FOR ROOM CLEANING																															
MONTH :		DAILY																													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
TABLE / โต๊ะ																															
TV/DVD / โทรทัศน์																															
CHAIRS / เก้าอี้																															
LOCKER / ตู้เก็บของ																															
FLOOR / พื้น																															
RUBBISH BIN / ถังขยะ																															
SHOWER ROOM / ห้องอาบน้ำ																															
NAME																															
WEEKLY																															
DOOR / ประตู																															
WALL / ฝาผนัง																															
WINDOW / หน้าต่าง																															
CURTAIN / ผ้าห่ม																															
REFRIGERATION / ตู้เย็น																															
NAME																															
CLEANING																															
ROOM NUMBER		175	176	177	178	179																									



HACCP Food Safety Management System

**SP FOOD SERVICES CO., LTD  
THAILAND  
FOOD SAFETY PROGRAM**

Food Safety

DATE:Rev. December 2014

PAGE: 1 of 24

**STANDARD OPERATING PROCEDURES****REVISION RECORD**

Rev	Description	Prepared By	Date
1.0	Approved by	Porn Suttisattabut –Managing Director	December 2014
	Approved by	General Manager – HACCP Team Leader	December 2014
	Drafted By	Richard Bradford-Knox- RBK Consultants	December 2014
	Revised and Updated By	Richard Bradford-Knox for SP	December 2014

**SP FOOD SERVICES CO.,LTD.****FOOD HYGIENE POLICY**

It is the Policy of SP Food Services Ltd. its Directors and Senior Management to prepare and serve safe, wholesome food of high quality in accordance with the legal requirements of the Kingdom of Thailand and internationally recognised best practice as recommended by the World Health Organization.

In order to achieve this SP Foods is dedicated to upholding the highest standards of Food Hygiene and practices of a Food Safety Management system that meets the Principles of Codex HACCP.

RBK CONSULTANTS 2014

1



**SP FOOD SERVICES CO., LTD  
THAILAND  
FOOD SAFETY PROGRAM**

Food Safety

DATE: Rev. December 2014

PAGE: 2 of 24

**STANDARD OPERATING PROCEDURES****1.0 Synopsis and General Requirements**

SP Food Services Co. Ltd., hereinafter referred to as SP Food, provide food services for clients, customers and visitors via several locations and methods: offshore locations for oil companies, contractors on production platforms, drilling rigs, and construction barges. When implemented effectively, food safety programs provide effective controls and management systems to prevent food borne illness. This Environment, Health and Safety (EHS) Standard Operating Procedure (SOP) defines the minimum requirements for SP Food safety programs.

**Action Required**

Sites will implement and follow a written food safety plan based on internationally recognized hygiene best practice- GHP, HACCP (Hazard Analysis Critical Control Point) and the principles that addresses specific procedures and responsibilities for the following:

- Regulatory analysis
- Food service supplier qualification and contracting
- Performance management of food service suppliers
- Food borne illness reporting, investigation and management
- Regular program review
- Defined responsibilities and training

**Applicability**



This SOP applies to all SP Food locations and client premises where one or more food services are provided for clients and customers as well as its own supply bases and operations. Where local regulations e.g. Client or Legal Requirements demand more stringent control measures, the latter requirements must be fulfilled in addition to those of this SOP.

**2.0 Requirements**

- 2.1 This Food Safety System and Hygiene Policy will be implemented at every onshore and offshore location. The food safety plan that ensures that the necessary controls to provide safe food through any food service supplied by SP Food.








## Sample of Health &amp; Welfare Management checklist

PTTEP EWP Project Rev. 0		 <b>Health &amp; Welfare Management Checklist</b> <b>Health, Safety &amp; Environment Assessment Program</b>			
<p><i>Note: Intensity of the inspection is dependent upon the facility size, operation and whether a first or follow up inspection</i></p> <p>The scoring for each question can range 0 to 5, using 0.5 decimal points where applicable i.e 3.5 (maximum score is 5)</p> <p>Individual score guidelines are : 0.5 to 1.0= Very Poor; 1.5 to 2= Poor; 2.5 to 3= Below Average; 3.5 to 4= Average; 4.5 to 5= Acceptable</p> <p>Items not checked to be marked N/A.</p> <p>Critical Areas of Concern (CAC) shall be detailed on this first page with photographs and raised at Weekly SSHE Meetings and if significant risk present direct intervention shall be taken</p> <p>Distribution: Bn / SSHE Engineer, CTR Representatives, CST Manager, SSHE Team, CTR SSHE team, Media, Camp Boss</p>					
<b>General HSE Management details:</b>				<b>Tick (X)</b>	<b>Comment</b>
Last Pest Control Certificate available				X	Last Pest control certificate 6 July 2018
HACCP System available/ Personnel Trained				X	
ERP Plan & Systems in place, well communication				X	
Copy of current food handling & hygiene certificates for catering personnel				X	
Records of Health, Hygiene Incident Investigations and Reporting System available				X	
Records & Statistics Reports Generated for ill health, communicable diseases, food poisoning etc				X	
Safety Induction & Training Records available for Hygiene personnel				X	
<b>TARGET 90 - 95%</b>					
<b>Audit Leader Name:</b> Dr. Bernard Simatupang, Masaya Yamauchi (CM), Taufik (SSHE), Sompong (Campboss) <b>Date:</b> 26 Jul 2018				<b>Score</b> <b>96.88%</b>	<b>Points Awarded</b> <b>707</b>
<b>Vessel / Barge:</b> DLB Kuroshio <b>CPY / PTTEP:</b> Rein F. Mohede (SSHE Rep.) <b>Witoo Soraphetphaisal (CSR)</b>					
<b>A General Camp / Rooms Sanitation &amp; Welfare</b>				<b>Target</b>	<b>Actual</b>
1 Camp Operating Organisation in place & Camp Boss Approved by Company				5	5
2 Documented Hygiene program (Cleaning Schedule in place posted, recorded and audited)				5	5
3 Cleaning Activities are recorded				5	5
4 Written Cleaning procedures are developed & communicated to personnel				5	5
5 Personal Protective Equipment Available / Used by Personnel				5	5
6 Toilets and Showers in Good Condition (well maintained & clean)				5	5
7 No Food Stuffs in Cabins, designated smoking areas, smoke & fire detectors in place, regular tests being carried out				5	5
8 Maximum Capacity of Cabins being adhered to				5	5
9 Linen (bedding), Towels laundry program in place and adequate				5	5
10 Adequate storage & Security for personnel belongings				5	5
11 Towels, Changing/ Washing Consumables (soap) available				5	5
12 Hot Water available for showering and washing (signs indicating "hot water" displayed or temp. controlled to reduce risk of burns)				5	5
13 Adequate access and provision of drinking water also adequate maintained water for washing & showering				5	5
14 Effective Housekeeping System applied on site, including segregation of general & hazardous wastes				5	5
15 Facility Procedures / Systems Program established for Vermin & Mosquito Prevention (fogging), self closing doors, window mesh, water pools				0	N/A
16 Sanitation systems for Sewage shall be contained and propagate no foul odours				5	5
17 Emergency Lighting, Muster location defined & directional signs, Emergency Concess available, Emergency Vehicles, Site layout plans				5	5
18 Access to and from the site is secure, cables have secure personal effects storage cabinets, warehousing is secure and controlled access				5	5
19 Site Services, Waste Streams & Layout available and Current				5	5
<b>POSSIBLE POINTS AWARDED</b>				<b>55</b>	<b>55</b>
					<b>100.00%</b>
<b>B Personnel Provisions, Welfare</b>				<b>Target</b>	<b>Actual</b>
1 Personnel are provided with adequate PPE				5	5
2 Personnel have adequate access to washing and cleaning facilities				5	5
3 Personnel at facility have been instructed on hazards of heat stress (DSS) & Records available				5	5
4 Personnel are provided with adequate recreational facilities (TV/ Games/ Reading material, common rooms, Fitness, phones)				5	5
5 Smoking areas / ashtrays in place well designated (position/ signs) maintained in consideration of fire risks/ health risks to non-smokers				5	5
6 Lighting in facilities Adequate, no flickering				5	5
7 Air Conditioning is available in all offices, mess, galley, laundry, common rooms and cabins, and shall be serviced & contain no CFC's				5	5
8 Induction carried out for personnel using Camp and Visitors attending the facility				5	5
9 Information & Communications provided in English and other languages as necessary if personnel do not speak English				5	5
<b>POSSIBLE POINTS AWARDED</b>				<b>45</b>	<b>45</b>
					<b>100.00%</b>
<b>C Water Quality</b>				<b>Target</b>	<b>Actual</b>
1 Internal water analysis (Coli form) completed & report issued to PTTEP Monthly				5	5
2 Drinking Water dispensers in good condition & cleaned regularly with disinfectant				5	5
3 Ice maker tested (Coli form)				5	5
4 Water Maker unit in Good Condition, Cleaned & Maintained, Disinfecting & tests legionella - (service & maintenance records)				5	5
5 Storage Tanks, Hoses, ball & valve in good condition				5	5
6 Bottled drinking water storage & volume of water adequate for camp residents and 1 weeks stock (in case of water maker break down)				5	5
7 Bottled drinking water storage & volume of water adequate for off camp / field work				5	5
8 Bottled water is available for 3rd parties and Sub-Contractors				5	5
<b>POSSIBLE POINTS AWARDED</b>				<b>40</b>	<b>40</b>
					<b>100.00%</b>
<b>D Dry Stores</b>				<b>Target</b>	<b>Actual</b>
1 All food items (i.e. Flour, Sugar, Dry Beans) stored properly on shelves				5	5
2 All food items stable on shelves and are shelves clean				5	5
3 All food items within dating requirements				5	5
4 All damaged containers discarded				5	5
5 All Food containers closed				5	5
6 No Evidence of insect / rodent infestation, smoking in or around the facility				5	5
7 Ventilation intakes and exhausts clean free of dust				5	5
8 Proper room temperatures and ventilation maintained				5	5
9 Fire fighting equipment, Smoke/ Fire Detector in vicinity				5	5
10 All cleaning supplies segregated from food storage areas				5	5
11 Drumb water / elevator cleanliness/ condition acceptable				0	N/A
12 No signs of vermin/ vermin management in place				5	5
<b>POSSIBLE POINTS AWARDED</b>				<b>55</b>	<b>55</b>
					<b>100.00%</b>
<b>E Cold /Room Chiller Room/ Freezer: Meats, Fish Other Stores/</b>				<b>Target</b>	<b>Actual</b>
1 Good ventilation to prevent CO2 buildup				5	5
2 Ventilation intakes and exhaust free of dust				5	5
3 Proper storage of food items on shelves (not on floors) and in where applicable appropriate colour coded containers				5	5
4 All Spoiled/Rotten/Overdue produce discarded				5	5
5 All left over's properly covered and dated (no items over 26 hours to be retained, such items have stickers indicating "use by date")				5	5
6 All products in date and system in place to track products				5	5
7 Interior door lock, alarm, and thermometer in good working order & records maintained				5	5
8 Door seal clean and in good working order				5	5
9 All items raised off of floor/stored on pallets				5	5
10 Evidence of mold/mildew removed from area				5	5
11 Floors, Walls, Ceiling in good condition				5	5
12 Stock Management & Expiry Management System in place				5	5
13 Temperature checks taken periodically and recorded				5	5
<b>POSSIBLE POINTS AWARDED</b>				<b>65</b>	<b>65</b>
					<b>100.00%</b>



F Galley / Scullery Area				
1	Housekeeping and overall cleanliness			
2	Dishwashing machine in good condition (minimum of 185° F)			
4	Mixer machine properly anchored and clean			
5	Range and ovens clean and in good repair	5	4.5	
6	Range hoods, ventilation intakes, and exhaust free of grease and dust	5	5	
7	Can opener secured and clean	5	5	
8	Mop floor clean	5	5	
9	Pots & Pans stored clean and stable, areas of storage items secured, furniture secured	5	5	
10	Emergency fire fighting equipment/sprinkler systems/markets available	5	5	
11	Fire / Smoke Detection Available & tested regularly and in clean condition	5	5	
12	Floors free from slip and trip, oil residues hazards	5	5	
13	Cabinets and Drawers clean and orderly	5	5	
14	No Evidence of insect / rodent infestation, smoking in or around the facility	5	5	
15	Proper trash/waste disposal in line with Waste Management system	5	4.5	
16	Potable water filters changed regularly	5	5	
17	Knives and cutting boards separated / coloured coded for different food stuffs	5	5	
18	Foods being refrigerated are separated i.e. Meats, Vegetables, Dairy Products	5	5	
19	Food Samples retained in the event of suspected food poisoning	5	5	
20	Food Handling Instructions Displayed	5	5	
21	Temperature logs of Hot & Cold Food, refrigerated being completed and recorded	5	5	
22	Personnel's Cleanliness & hygiene being observed & checked regularly - No Hand to mouth / nose actions	5	5	
23	Separate sinks for wash foods, hands, equipment all in clean condition & Leak Free	5	5	
24	Sops, Nail Brush and Clean Hand Towels Available	5	4.5	
25	Personnel Provided with PPE, Hair Cover/Cap, Whites or other uniform in good condition & clean	5	5	
26	No Waste Materials under cabinets, cupboards etc	5	5	
27	Records of Inspections and Cleaning Programs Implemented	5	5	
28	Cleaning & other Chemicals stored separately and securely	5	5	
29	Food Management system in place i.e. Sell by Dates, stored & refrigerated dates, (maximum storage time)	5	5	
30	Personnel training in PPE and what to do in the event of fire or emergency	5	5	
31	Training certificates, & medical PTW Certificates available (8 monthly for food handling personnel)	5	5	
32	Fryer Fat Oil changed regularly to reduce health and fire risk	5	5	
33	Fryers have a thermostat cut out installed to reduce risk of overheating and fire	5	5	
34	Chain Mail Glove available for cutting meats etc	5	5	
35	Camp loss checks cleanliness of personnel daily and monitors with Camp Doctor personnel for consumable diseases/ illness	5	5	
36	Electrical equipment free from damage and cables/ connections in good condition	5	5	
POSSIBLE POINTS AWARDED		175	173.5	99.14%
G Mess Area				
1	Housekeeping and general cleanliness acceptable			
2	Tables and chairs/benches clean and in serviceable & Safe condition	5	4.5	
3	Any out of date food items / Consumables in use	5	5	
4	Storage rack and bins for silverware, plates, cups, glasses, etc clean	5	5	
5	Toaster and microwave oven clean	5	3	No different word of poster above Microwave
6	Mix cabinet free of frost build up, clean, has functional door gasket	5	5	
7	Thermometer present (interior temp between 24°-41° F)	5	5	
8	Drink mess stocked and clean	5	5	
9	Dirty Clothing (boots & coveralls removed), hand washing mandated	5	5	
10	Ice dispensers / Drink machine clean	5	5	
11	FPI & Fire Detector/ Smoke present & test program in place/ Clear emergency Egress	5	5	
12	Records of inspections & cleaning maintained	5	5	
13	Signs indicating Drinks not permitted to heat in Microwaves	5	5	
14	Electrical equipment free from damage and cables/ connections in good condition	5	5	
15	Other/Personnel (person) given to be removed from camp and to ensure that on with receive good rating on next delivery	5	3	Refuse drinking water Galden.
POSSIBLE POINTS AWARDED		75	70.5	94.00%
H Laundry				
1	Washing machine clean and free of excessive soap build up	5	5	
2	Dryer list traps functional and regularly cleaned to reduce risk of fire	5	5	
3	Area free of clutter and first build up	5	5	
4	Laundry supplies properly stored	5	5	
5	Emergency fire equipment in place, inspected and tested	5	5	
6	Attendant present at all times when facilities utilized	5	5	
7	Attendant understands laundry fire response duties	5	5	
8	Facility is Air Conditioned, & Heat Extraction in place	5	5	
9	Chemicals stored safely, MSDS available and attendant trained on safe handling	5	5	
10	Flooring Slip Free, adequate drain capacity to reduce water build up (slip & stagnant water hazard)	5	5	
11	Electrical equipment free from damage and cables/ connections in good condition	5	5	
12	Wash Water (sew) directed to adequate drain system	5	5	
13	Others: protruding sharp object on protector of washing machine	5	3	sharp object on protector of washing machines
POSSIBLE POINTS AWARDED		65	63	96.92%
I Medical Facilities				
1	Adequate Medical Supplies / Consumables available & inventory maintained	5	5	
2	Response & Treatment Procedures available inc. Medevac aligned with PTTEPI local Procedures	5	5	
3	Camp R&T manned by qualified Medic or Dr (refer to P&H R&T Medical RMR standards to be utilised in MEDIVAC & HSE Plan later)	5	5	
4	Records of medical supplies kept to prevent stocking of expired medicines, (at least monthly)	5	5	
5	Equipment Available: Adequate First Aid Boxes, Content AED, Saws, Medical Crutch Kit	5	5	
6	First Aid Kit must be on board/available 1-90 mins if High Risk, i.e. 1st Aid Kit must have First Aid Kit on Camp	5	5	
7	Medical RPT Trained carried out how to handle a Sepsis & RPT of patients, Certificates of First Aid Personnel & Details of Medical Drills	5	5	
8	Procedures Established for MEDIVAC, CASEVAC, First Aid / Medical treatment Cases (for Project to be approved)	5	5	
9	Oxygen Resuscitation Equipment Available and Personnel Trained	5	5	
10	Snake Venom Treatment available / Personnel trained adequately on what to do in the event of snake bite	0	N/A	
11	System in place in deal with Mosquito Borne Diseases/ Illness	0	N/A	
12	Others:			
POSSIBLE POINTS AWARDED		45	45	100.00%
J Other - Camp Operation				
1	HSE Handbooks/ Information/ Posters covering General Emergency & General Rules available e.g. "Camp Golden Rules"	5	5	
2	Camp Specific ERP, RPT and Layouts available, current and tested frequently, smoke & fire detectors in place, FPI, hydrants	5	5	
3	Master Points defined, Emergency Exits clear, Emergency Lighting available, Master direction signs, Master Checkers trained	5	5	
4	Approved PPE - Drink and Drug Policies are displayed and communicated, strict controls in place on Alcohol	5	5	
5	Medical Fit to Work (FTW) certificates records/updated (Medic & Dr, Catering & monthly other validity <60 years 3 year, <65 1 year)	5	5	
6	Health Program in place and effective and reports on personnel's Health, Treatments and the program status provided weekly to PTTEPI	5	5	
7	Security Personnel & Program in place, adequate procedures / training, Control System	5	5	
8	Effective Lighting in place in the camp boundaries and access ways that avoid dazzle to persons & drivers, but aid safety and security	0	N/A	
9	Temporary Generators are bonded & Fuel Tanks (TSTs) Containment, and have emergency Shut down and Fire Fighting Provision	0	N/A	
10	Spill Kits available near all fluid waste and hazardous substance streams & storage facilities	5	5	
11	Road, turning, parking and walk ways are effectively marked out and signposted, speed and crossing controls to avoid conflict	5	5	
12	Signs Displayed are of pictogram type & languages in the Work team languages/ Living Areas demarcation from Work areas	0	N/A	
13	Safety Policy, Zero Tolerance Policies, Project and Camp "Golden" Rules displayed in prominent locations in appropriate languages	5	5	
14	System for dust & noise minimisation and working hours in place	5	5	
15	Facility tested to reduce spread of wildlife, Personnel trained "what to do" if dangerous animals are identified or persons are bitten	0	N/A	
16	Adequate Security Control, Access Control, Procedures for personnel, adequate lighting, Visitor/ Vehicle Control & Checks	0	N/A	
POSSIBLE POINTS AWARDED		55	55	100.00%
TOTAL POSSIBLE POINTS AWARDED		715		
ACTUAL POINTS AWARDED		707		98.88%



COMMENTS & ACTION ITEMS				RESP. PERSON	REF ITEM	CORRECTED
1	(New Finding - Messroom): Noticed water Gallon is rotten. Recommendation: To ensure that we will receive good (water) gallon on next drinking water delivery. Status : <b>On going</b>		Campboss	G-15		
2	(New Finding - Messroom): Observed no "positive/different" word on poster above microwave Action: To be posted additional notice " use only ceramic bowl for cooking inside microwave" Status : <b>Closed</b>		Campboss	G-5		
3	(New Finding - Laundry room): Found sharp object on protector of washing machine. Action: To be rectified. Status : <b>Closed</b>		Barge Maintenance	H-13		

Assessment Summary			
Total Score Assessment Ratings: 95 % - 100 % - Excellent : 90 % - 94 % - Good 85 % - 89 % - Fair : 70 % - 84 % - Lacking 50 % - 70 % - Poor : 0 % - 50 % - Very Poor			
Audit Leader Name: Dr. Bernard Simatupang, Masaya Yamauchi (CM), Taufik (SSHE), Sompong (Campboss) Date: 26 Jul 2018 Vessel / Barge: DLB Kuroshio CPY / PTTEP: Rein F. Mohede (SSHE Rep.) Witoo Soraphetphisal (CSR)			Score <b>98.88%</b>
A	General Camp / Rooms Sanitation & Welfare	95	100.0%
B	Personnel Provisions, Welfare	45	100.0%
C	Water Quality	40	100.0%
D	Dry Stores	55	100.0%
E	Cold /Room Chiller Room/ Freezer: Meats, Fish Other Stores/	65	100.0%
F	Galley / Scullery Area	173	99.1%
G	Mess Area	75	94.0%
H	Laundry	65	96.9%
I	Medical Facilities	45	100.0%
J	Other	55	100.0%
TOTAL		715	98.88%



## Training

- a) Food safety training programs that address the training needs of all impacted employees. Examples are training needs are found in the following table.
- b) Food safety related training must be conducted by properly accredited professional trainers, for example instructors registered with the Chartered Institute of Environmental Health (CIEH), the Royal Society for the Promotion of Health (RSPH) or other internationally recognized body.
- c) At a minimum, training programs must meet local regulatory standards. Sample training programs are found in the following Attachments.

Function	Training
All employees	<ul style="list-style-type: none"> <li>• Awareness of the dangers of food borne hazards, illnesses and causes.</li> <li>• Importance of Personal Hygiene</li> <li>• Illness and Complaints reporting procedures.</li> </ul>
Supervisors	<ul style="list-style-type: none"> <li>• Awareness of the dangers of food borne hazards, illnesses and causes.</li> <li>• Personal Hygiene &amp; Cleaning Procedures</li> <li>• Food Sampling Procedures</li> <li>• Complaint &amp; Incident Reporting Procedures</li> <li>• Quality Control, Temperature Checking Procedures.</li> <li>• Rules for visitors to food premises</li> </ul>
Operations and Base Managers	<ul style="list-style-type: none"> <li>• Requirements of this SOP</li> <li>• Awareness of food borne hazards, illnesses and causes.</li> <li>• Food Safety Legal Requirements</li> <li>• Food Safety Inspection and Auditing Procedures</li> <li>• Food Safety Control Systems</li> <li>• Balanced Menu Planning – Healthy Eating</li> <li>• Facilities Requirements</li> </ul>
Purchasing	<ul style="list-style-type: none"> <li>• Requirements of this SOP</li> <li>• Catering Contract Requirements</li> <li>• Food Safety Legal Requirements</li> <li>• Food Service Requirements</li> <li>• Facilities Requirements</li> </ul>
Facilities	<ul style="list-style-type: none"> <li>• Awareness of Food Borne Illnesses and causes</li> <li>• Safe practice for visitors to food premises</li> <li>• Kitchen Layout, Equipment &amp; Design in relation to food safety</li> </ul>
HACCP Team (where present)	<ul style="list-style-type: none"> <li>• Requirements of this SOP</li> <li>• Awareness of Food Borne Hazards, Illnesses and causes</li> <li>• Complaints and Incidents reporting &amp; investigation procedures</li> <li>• Menu Planning / Healthy Eating</li> <li>• Auditing / Inspection Procedures &amp; Surveys</li> </ul>
Site OH resources	<ul style="list-style-type: none"> <li>• Specialized knowledge of food borne hazards, illnesses and causes.</li> <li>• Food Sampling and testing procedures</li> <li>• Suspected food borne illness reporting procedures</li> </ul>



Function	Training
	<ul style="list-style-type: none"><li>• Food borne incident reporting and investigation</li></ul>
Site HSE Department	<ul style="list-style-type: none"><li>• Knowledge of Food borne Hazards, Illnesses and causes</li><li>• Complaints and Incidents reporting &amp; investigation procedures</li><li>• Safe work practices in Food Premises including PPE</li></ul>

The company must conduct an annual and update the plan and any relevant documents based on findings review of the food safety program: -

- When there are changes to food service requirements required by contractual or legal obligations.
- Prior to commencement of a new project or project.
- Opening of new Supply Base.
- Annually.

The elements to be reviewed must include, at a minimum:

- a) Regulatory requirements to identify any proposed or final regulations
- b) Written food safety plan and its elements
- c) Evaluation of food-related illness reports to determine if adequate preventive measures have been implemented
- d) Internal and external inspection and audit results to confirm that all findings have been addressed
- e) Identification of gaps between written documents and other plan elements and their implementation.



#### 4. RESPONSIBILITIES

Manager/Department	Responsibility
SP FOOD – The Company	<ul style="list-style-type: none"> <li>- Provide healthy and wholesome food as meets client's requirements.</li> <li>- Meet all contractual responsibilities and minimum Food Services Performance Requirements.</li> <li>- Integrate food safety plans with the Client's Food Safety Plan</li> <li>- Address employees' non-compliance with food safety and other standard operating procedures.</li> <li>- Participate in the investigation of allegations of food borne illness.</li> <li>- Liaise with Government bodies to ensure local laws and regulations are met.</li> </ul>
SITE MANAGEMENT	<ul style="list-style-type: none"> <li>- Overall responsibility for the food safety program</li> <li>- Assure that all food safety related tasks are assigned to appropriate personnel/committees including responsibility for the onsite random catering and offsite catering programs and for food safety related training and internal audits.</li> </ul>
ONSITE FOOD SERVICES MANAGER OR SUPERVISOR	<ul style="list-style-type: none"> <li>- Manage the food safety plan for onsite food services</li> <li>- Work with purchasing to identify appropriate suppliers that meet SP Foods requirements.</li> <li>- Conduct annual regulatory review</li> <li>- Lead the annual program review and update plan as appropriate.</li> </ul>
HACCP Team	<ul style="list-style-type: none"> <li>- Work in partnership with the Onsite Food Services Manager and complete assigned tasks.</li> <li>- Attend scheduled meetings</li> <li>- Conduct Food Safety Plan Reviews under leadership of Operations Manager.</li> </ul>
Purchasing	Work with the Onsite Food Services Manager to address Food Supplier quality problems.
<b>Facilities/Engineering Departments</b> <b>NOTE: -Normally the responsibility of the Client.</b>	<ul style="list-style-type: none"> <li>- Develop and implement planned preventative maintenance programs for food preparation and serving equipment.</li> <li>- Maintain all fridges &amp; chillers to operate at specified temperature at all times</li> <li>- Train all engineers to follow strict hygiene controls.</li> <li>- Liaise with Onsite Food Services Manager on food safety issues as necessary.</li> </ul>
Site EHS Department <b>NOTE: - These are usually Client Company Responsibilities</b>	<ul style="list-style-type: none"> <li>- Support the Onsite Food Service Manager, the site Food Safety Committee and the food safety program as necessary.</li> <li>- Participate in the investigation of all food-related illnesses and the implementation of appropriate corrective measures.</li> <li>- Conduct periodic audits and inspection of the food</li> </ul>



---

Manager/Department	Responsibility
	safety program.
Managers and Supervisors	<ul style="list-style-type: none"><li>- Understand symptoms of food borne illness.</li><li>- Initiate reporting when an incident occurs.</li><li>- Participate in the investigation process.</li><li>- Follow requirements related to illness management.</li></ul>
Employees	<ul style="list-style-type: none"><li>- Understand symptoms of food borne illness</li><li>- Report all incidents as soon as they occur.</li><li>- Participate in the investigation process.</li><li>- Follow requirements related to illness management</li></ul>




## เอกสารแนบที่ 107

Offshore Health, Welfare and Hygiene Programme



# EPCI FOR AWP-39, ARTHIT PHASE 3D, G1/61 PHASE 1A & G2/61 PHASE 1A




## OFFSHORE HEALTH, WELFARE AND HYGIENE PROGRAM

PTTEP	
EPCI of AWP-39 Wellhead Platform, Associated Pipelines, and Tie-ins	
<input checked="" type="checkbox"/>	1. APPROVED
<input type="checkbox"/>	2. APPROVED (Proceed to AFC)
<input type="checkbox"/>	3. APPROVED with comments
<input type="checkbox"/>	4. APPROVED with comments (Proceed to AFC)
<input type="checkbox"/>	5. Not APPROVED
<small>COMPANY'S APPROVAL shall not relieve CONTRACTOR from his obligation under the CONTRACT. COMPANY'S failure to comment or only partially comment any CONTRACT DOCUMENT shall not be interpreted as an acceptance of the content of the document.</small>	
Signed: 	Somsak Boonthiang Project Engineer

C1	28-Sep-20	RH	Approved for Construction (AFC)	JC	TH		
A1	26-Aug-20	RH	Issued for Review (IFR)	JC	TH		
REV	DATE	By	DESCRIPTION	CHECK	APPR.	CHECK	APPR.
				CONTRACTOR APPROVAL		COMPANY APPROVAL	

REVISION CODE: A = Issued for Review, B = Issued for Approval, C = Approved for Construction, 00 = As-built

TOTAL OR PARTIAL REPRODUCTION AND/OR UTILIZATION OF THIS DOCUMENT ARE FORBIDDEN  
WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE OWNER

	PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED AND PTTEP INTERNATIONAL LIMITED PTTEP ENERGY DEVELOPMENT COMPANY LIMITED		 
	EPCI FOR AWP-39, ARTHIT PHASE 3D, G1/61 PHASE 1A & G2/61 PHASE 1A		
		REVISION	
	TH-ART-3C-AWP39-SSHE-PDR-6119	C1	
	TH-ART-3D-GEN-SSHE-PDR-6119	C1	
	TH-G1-61-1A-GEN-SSHE-PDR-6119	C1	
	TH-G2-61-1A-GEN-SSHE-PDR-6119	C1	



TABULATION OF REVISED PAGES																	
PAGE	REVISIONS								PAGE	REVISIONS							
	A1	C1															
1	X	X							51								
2	X	X							52								
3	X								53								
4	X								54								
5	X								55								
6	X								56								
7	X								57								
8	X								58								
9	X								59								
10	X								60								
11	X							Appendix 1	61								
12	X								62								
13	X								63								
14	X							Appendix 2	64								
15	X								65								
16	X								66								
17	X								67								
18	X								68								
19	X								69								
20	X							Appendix 3	70								
21	X								71								
22	X								72								
23	X								73								
24	X								74								
25	X								75								
26	X								76								
27	X							Appendix 4	77								
28	X								78								
29	X								79								
30	X								80								
31	X							Appendix 5	81								
32	X								82								
33	X								83								
34	X								84								
35	X							Appendix 6	85								
36	X								86								
37	X								87								
38									88								
39									89								
40									90								
41									91								
42									92								
43									93								
44									94								
45									95								
46									96								
47									97								
48									98								
49									99								
50									100								



## Table of Contents

<b>1. PURPOSE .....</b>	<b>4</b>
<b>2. SCOPE .....</b>	<b>4</b>
<b>3. DEFINITION AND ACRONYMS .....</b>	<b>4</b>
<b>4. REFERENCES DOCUMENTS .....</b>	<b>5</b>
<b>5. ROLES AND RESPONSIBILITIES .....</b>	<b>6</b>
5.1. Project Manager (PM).....	6
5.2. Installation Manager (IM) .....	6
5.3. Construction Manager (CM).....	6
5.4. Project SSHE Manager .....	6
5.5. Deputy SSHE Manager / SSHE Coordinator.....	6
5.6. Barge Doctor / Medic .....	6
<b>6. OFFSHORE HEALTH AND HYGIENE PROGRAM.....</b>	<b>7</b>
6.1. Medical Assessment of Employees .....	7
6.2. Planned Hygiene Inspections .....	8
6.3. Health Promotion .....	8
6.4. Medical Facilities and First Aid.....	9
6.5. Control of Substances Hazardous to Health (COSHH) .....	9
<b>7. APPENDIXES .....</b>	<b>10</b>



## 1. PURPOSE

The purpose of the Offshore Health, Welfare and Hygiene Program is to provide and ensure that all offshore personnel have a healthy work environment and to protecting the health of all personnel working at offshore. By providing Health and Hygiene are the key element to achieve the goals of SSHE implementation during the project works.

## 2. SCOPE

This procedure shall be applied throughout PTTEP EPCI AWP-39, ARTHIT PHASE 3D, G1/61 PHASE 1A & G2/61 PHASE 1A offshore Project for offshore transportation and installation work.

## 3. DEFINITION AND ACRONYMS

The following terms and abbreviations are also used in this document:

**Shall, Will or Must** indicates mandatory action

**Should** indicates preferred action

**May or Can** indicates possible action

Terminology	Description
COMPANY	PTT Exploration and Production Public Company Limited
CONTRACTOR	Nippon Steel Engineering Company Limited
CM	Construction Manager
CSR	Company Site Representative
COSHH	Control of Substances Hazardous to Health
FTW	Fit To Work
HSEMS	Health, Safety & Environment Management System
HSE	SSHE/HSES/SHE
HSES	Health, Safety and Environment and Security
MSDS	Material Safety Data Sheet
MEDEVAC	Medical Evacuation
SUB-CONTRACTOR	Thai Nippon Steel Engineering & Construction Corporation Ltd. (TNS)
UDAT	Urine Drug and Alcohol Test



#### 4. REFERENCES DOCUMENTS

##### Local Legislations:

References	Title
Thailand Labour Protection Act 1998	BE 2541
Thailand Labour Protection Act 2011	BE 2554

##### International Regulations, Codes and Standards:

References	Title
MARPOL 73/78 Consolidated Edition 2006 Annex V	Regulations for the Prevention of Pollution by Garbage from Ships.
SOLAS 1974 – 2010 Edition	Safety Of Life at Sea
International Safety Management (ISM) Codes 2014 Edition	International Management Code for the Safe Operation of Ships and for prevention of pollution.
International Ship & Port Facility Security	ISPS Code 2012
International Marine Contractors Association (IMCA)	IMCA guideline for Offshore Marine Operations

##### CONTRACTOR HSE Documents;

HSE-MS-01	Health, Safety and Environment (HSE) Manual, 2014
TNS-HSE Procedures , version 2014	
DLB KUROSHIO & DLB KUROSHIO II-Barge Operations	Occupational Health & Safety Manual for Marine Operations Rev_0

##### PTTEP HSE Documents:

Reference	Title
PTTEP HSE Requirements	Exhibit L
SSHE – 106 – STD – 560	Occupational Health Management Standard
SSHE-106-GDL – 563	Site Medical Health Care Services Guideline
SSHE-106-GDL-601	Occupational Illness Cases Identification Guideline



SSHE-106-GDL- 561	Fitness To Work Guideline
SSHE – 106 – GDL – 564	PTTEP Drugs and Alcohol Guideline
SP.PHS.011/---R0	PTTEP Substance Abuse Procedure
SSHE – 106 – STD – 520	Environmental management Standard

## 5. ROLES AND RESPONSIBILITIES

### 5.1. Project Manager (PM)

- Ensuring that all work activities are taken in a healthy and safe working condition

### 5.2. Installation Manager (IM)

- Shall ensure that offshore health, welfare and hygiene program is established and implemented.

### 5.3. Construction Manager (CM)

- Shall ensure that Offshore Health, Welfare and hygiene program implemented
- Shall ensure the deficiencies are highlighted and communicate with Barge management and Barge Doctor.

### 5.4. Project SSHE Manager

- Shall monitor status implementation of Offshore Health, Welfare and Hygiene Program.
- Shall communicate Offshore Health, Welfare and Hygiene Program with respective parties for the effectiveness the program.

### 5.5. Deputy SSHE Manager / SSHE Coordinator

- Together with Barge Doctor to ensure implementation of Offshore Health, welfare and Hygiene program including any inspection. .
- Shall Report to respective Construction Manager on site, COMPANY Site Representative (CSR) and Project SSHE manager.

### 5.6. Barge Doctor / Medic

- Advising the employee that the examination is required
- Ensuring that all medical equipment and required medicine are strictly controlled including maintaining the inventory log.
- Disposal of medical wastes shall be strictly controlled



## เอกสารแนบที่ 108

K2 Working Area Inspection



**Nippon Steel Engineering Co., Ltd**

DLB Kuroshio II IMO 8757336

S-SHEQ Department

PTTEP BUNDLED PHASES 2 PROJECT 2021

**WEEKLY CHECKLIST FOR WORKPLACE HOUSEKEEPING**

Date of Inspection : 8 Oct 2021 Department : Digging  
 Time of Inspection : 1500 Location : Main deck  
 Inspected By: Anggn Juluk (safety Officer/Foreman / Lead)

This checklist provides the basic requirements for workplace housekeeping. Should a "No" be recorded for any of the below checklist items, immediate follow-up action is necessary to remove the unsafe condition to prevent its reoccurrence. This checklist is non-exhaustive, and users are recommended to make the necessary customization to suit your work processes and conditions at the workplace.

No.	Items		Remarks
1	Work area is clean, tidy and clutter-free. / Area kerja bersih, rapi dan tidak berantakan.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2	There are no unnecessary items in the work area. / Tidak ada barang yang tidak perlu di area kerja	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3	There are no food and drinks in the work area. / Tidak ada makanan dan minuman di area kerja.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
4	Aisles, walkways, stairways and exits are unobstructed. / Lorong, jalan, tangga, dan pintu keluar tidak terhalang.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5	There are no objects protruding into aisles and walkways. / Tidak ada benda yang menonjol ke Lorong dan jalan.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
6	No item is placed around emergency equipment (e.g., fire extinguishers, first aid kits). / Tidak ada barang yang ditempatkan di sekitar peralatan darurat (misalnya, alat pemadam kebakaran, kotak Kit Kecemasan).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
7	Floors (e.g., tiles, boards and carpets) are in good condition. / Lantai (misalnya ubin, papan, dan karpet) dalam kondisi baik.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
8	Floors are dry and free from accumulated dust, broken glass and leaks or spills (e.g., oil or water). / Lantai kering dan bebas dari debu yang menumpuk, pecahan kaca dan kebocoran atau tumpahan (misalnya minyak atau air).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
9	Floor markings are highly visible and not faded. / Marka atau tanda lantai sangat terlihat dan tidak pudar.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10	Floor openings or holes are guarded by a cover, grating or guardrail on all sides (except at entrances to stairways or ladders). / Bukaan atau lubang lantai dilindungi oleh penutup, kisi atau pagar pembatas di semua sisi (kecuali di pintu masuk ke tangga atau tangga).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
11	Lamps or light sources are clean and provide adequate illumination for working. / Lampu atau sumber cahaya bersih dan memberikan penerangan yang memadai untuk bekerja.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
12	Warning signs are in good condition and can be clearly seen from afar. / Tanda-tanda peringatan yang dalam kondisi baik dan dapat dilihat dengan jelas dari jauh.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
13	Cords, cables and hoses are bundled up when not in use. / Tali, kabel dan selang yang terbungkus jika tidak digunakan.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
14	Machine and equipment guards are in place and secure. / Pelindung mesin dan peralatan berada di tempatnya dan aman.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
15	Tools are in good condition and in their designated location. / Alat dalam kondisi baik dan di lokasi yang ditentukan.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
16	Storage areas are clean, tidy and organized. / Area penyimpanan bersih, rapi dan teratur.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	



**Nippon Steel Engineering Co., Ltd**

DLB Kuroshio II IMO 8757336

S-SHEQ Department

PTTEP BUNDLED PHASES 2 PROJECT 2021



17	Stacked materials are placed on a flat and firm foundation. / <i>Bahan yang ditumpuk ditempatkan di atas fondasi yang rata dan kokoh.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
18	Storage racks used are adequate for the task and in good condition. / <i>Rak penyimpanan yang digunakan memadai untuk tugas dan dalam kondisi baik.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
19	Heavier and bulkier items are placed on the lower shelves of a storage rack. / <i>Barang yang lebih berat dan lebih besar ditempatkan di rak bawah rak penyimpanan.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
20	Hazardous substances (e.g., flammable materials, toxic substances) are stored in compatible containers, stored under appropriate conditions and affixed with GHS labels. / <i>Zat-zat berbahaya (misalnya, bahan yang mudah terbakar, zat beracun) disimpan dalam wadah yang kompatibel, disimpan di bawah kondisi yang sesuai dan ditempel dengan label GHS.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
21	Physical barriers and warnings signs are installed around workplace hazards (e.g., sharp objects, protruding objects, a hot surface, a floor opening). / <i>Penghalang fisik dan tanda peringatan dipasang di sekitar bahaya di tempat kerja (misalnya, benda tajam, benda yang menonjol, permukaan yang panas, lantai terbuka).</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
22	Proper waste bins for general waste, recyclable waste, hazardous waste, and so on are provided at work areas to facilitate responsible disposal. / <i>Tempat sampah yang tepat untuk sampah umum, sampah yang dapat didaur ulang, limbah berbahaya, dan sebagainya disediakan di area kerja untuk memfasilitasi pembuangan yang bertanggung jawab.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
23	Combustible waste is properly disposed of. For example, oily rags are disposed in closed metal waste bins. / <i>Limbah yang mudah terbakar dibuang dengan benar. Misalnya, kain lap berminyak dibuang ke tempat sampah logam tertutup.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
24	Waste (including hazardous waste) is collected regularly so that there is no unnecessary accumulation of waste. / <i>Sampah (termasuk limbah berbahaya) dikumpulkan secara teratur sehingga tidak ada akumulasi yang tidak perlu limbah.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
25	A predetermined disposal area has been designated for situations where waste materials (e.g., bulky waste, toxic waste) need to be accumulated till the next waste collection date. / <i>Area pembuangan yang telah ditentukan telah dirancang untuk situasi di mana bahan limbah (misalnya, limbah besar, limbah beracun) perlu dikumpulkan hingga tanggal pengumpulan limbah berikutnya.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Inspected by:

Witnessed by:

Verified by:

Acknowledged by:

Barge Foreman

SSHE Officer

Construction Manager

Barge Superintendent





No item is placed around emergency equipment (e.g., fire extinguishers, first aid kits).



Aisles, walkways, stairways and exits are unobstructed.



Cords, cables and hoses are bundled up when not in use.



Warning signs are in good condition and can be clearly seen from afar.



Machine and equipment guards are in place and secure.



Proper waste bins for general waste, recyclable waste, hazardous waste.



## เอกสารแนบที่ 109

สรุปจำนวนผู้ปฏิบัติงานของเรือที่ใช้ในการปฏิบัติงาน



## SPECIFICATION OF DLB KUROSHIO II



### DERRICK/ LAY BARGE "KUROSHIO II"

#### 1. GENERAL

Name	:	KUROSHIO II
Type	:	Non-propelled, steel flat bottom type Derrick & Lay Barge center ramp
Year of Construction	:	February 1976 Year 1995 (Accommodation Upgrade) Year 2000 (Helideck Modification) Year 2003 (Accommodation Upgrade) Year 2011 (Diesel Generator Replacement) Year 2013 (Accommodation Upgrade)
Condition of Barge	:	Good
Classification	:	ABS Maltese Cross † A1-E
Gross tonnage	:	13,518 tons
Length	:	460 ft (140 m)
Width	:	112 ft (34 m)
Depth	:	31.2 ft (9.5 m)
Towing Draft	:	about 15 ft (about 4.6 m)
Operating Draft	:	about 14 ft - 18 ft (about 4.3 m – 5.5 m)
Displacement	:	24,000 tons
Accommodations	:	Air-conditioned quarters for 316 men
Galley	:	All necessary messing facilities to support 316 men
Hospital	:	An attendant and equipped clinic for immediate first aid (2 beds)
Helideck	:	73 ft x 73 ft (22 m x 22 m) with loading capacity for SIKORSKY S-61N class
F.O. Storage Capacity	:	1,717 m <sup>3</sup>
F.W. Storage Capacity	:	2,242 m <sup>3</sup>
Ballast Capacity	:	11,736 tons
Fresh Water Maker	:	60 tons/day x 3 sets
Deck Storage	:	1,907 m <sup>2</sup> 6.0 -13.0 tons/m <sup>2</sup>





## MINUTES OF MEETING

**Subject** : DLB Kuroshio 2 – Daily Progress Meeting  
**Project** : PTTEP 2021 Campaign  
**Reference** : PTTEP-2021-DLBK2-MOM126  
**Date** : 19-Oct-2021  
**Time** : 0830hrs  
**Venue** : Conference Room (2<sup>nd</sup> Floor)

Attendees: PTTEP			Attendees: NSE				
1	Somsak Boonthiang – CSR		1	Kasamatsu Shimpei – Barge Superintendent			
2	Prasertsak Charoensap – SSHE Rep		2	Unozawa Kunitaka – Asst. Barge Superintendent			
3	Choochat Srisura – Marine Rep		3	Sasaki Shigeta – Construction Manager			
			4	Eko Budi Prasetyo – QA / QC Supervisor			
			5	Ujang Nyigang – SSHE Lead			
			6	Aurupong Hongthong - MWS			
			7	Sawongchai Pansuwan – Barge Doctor			
			8	Raymie – Barge Admin			
Item	Matters					Action	
1.0	<b>1.1 HSE Statistics (as of last 24 hours)</b>	<b>Yesterday</b>	<b>Accumulated</b>	<b>Remarks</b>		INFO	
	Lost Time Injury (LTI)	0	0				
	Hazard Report Card (HRC)	0	2	24.07 – Defective Padeye 23.08 – Crew under suspended load			
	Incident (HIPO)	0	0				
	Near Miss	0	1	30.09 – Barrier Tape Scalded			
	Medical Treatment Case (MTC)	0	1	11.09 – Left Eye Injury			
	Restricted Work Case (RWC)	0	0				
	First Aid Case (FAC)	0	4	25.06 – Middle finger laceration 12.07 – Fell down from Ladder 09.08 – Left Leg Calf wounded 21.09 – Abrasion Wound at Head			
	Medevac	0	0				
	Property Damage / Property Loss	0	2	23.06 – Tugger wire parted 11.07 – Tugger Holding line parted			
	No of days without LTI	1	152	From 20 <sup>th</sup> May			
	Drill Conducted	0	23				
	POB – DLBK2 (NSE)	270	347				
	POB – DLBK2 (PTTEP)	7					
	Grand Total POB DLBK2 (NSE+PTTEP)	277					
	POB – Marine Support Vessel	70					
	G/Total Man-hrs. (NSE+TNS+Marine Spread+PTTEP)	4164	604560				
	<b>1.2 ACT Breakdown (as of last 24 hours)</b>	<b>Yesterday</b>		<b>Accumulated</b>			
		<b>CY</b>	<b>CTR</b>	<b>CY</b>	<b>CTR</b>		
	Unsafe Condition	1	9	21	1087		
	Unsafe Act	0	10	29	908		
	Safe Observation	0	23	42	1629		
	Total	1	42	91	3624		
	ACT Status	Open	0	Closed	3617		
	ACT Submission – Top Three Category	1. Tool and Equipment, 2. PPE, 3. Others					
	<b>1.3 Health Matters (as of last 24 hours)</b>	<b>Yesterday</b>	<b>Previous</b>	<b>Accumulated</b>			
	Random UDAT	1	69	70			
	Medical Attendee	8	1188	1196			
	Medical Cases	Ear Disease (1), Skin Disease (1), Gastrointestinal (1), Eye Irritation (3), Muscle pain (1), Misc (1)					
	Quarantine in Isolation Room	New=0	Total Now=0	Accumulated=6			
	Health Awareness	0	99	99			
	Weekly Hygiene Inspection	0	21	21			
	Safety Moment: Environmental and Housekeeping (Presented by Kasamatsu san)						
	1.4 SSHE Program 19 <sup>th</sup> Oct: Safety awareness “Dedicated & Hard Work” from 18 <sup>th</sup> ~ 24 <sup>th</sup> October. Personnel Transfer Basket inspection LSI compliance inspection, Work vest and Body harness inspection, Vessel inspection for Ena Griffin & Ena Treasure @0930hrs.						
	1.5 The next water sampling will be taken on 22 <sup>nd</sup> Oct. CTR will improve filtering of water and sampling environment next time.						

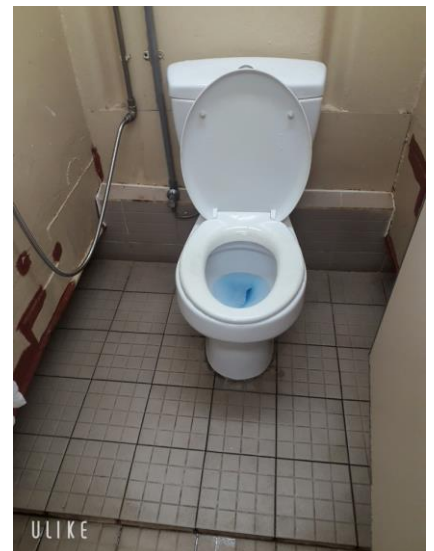
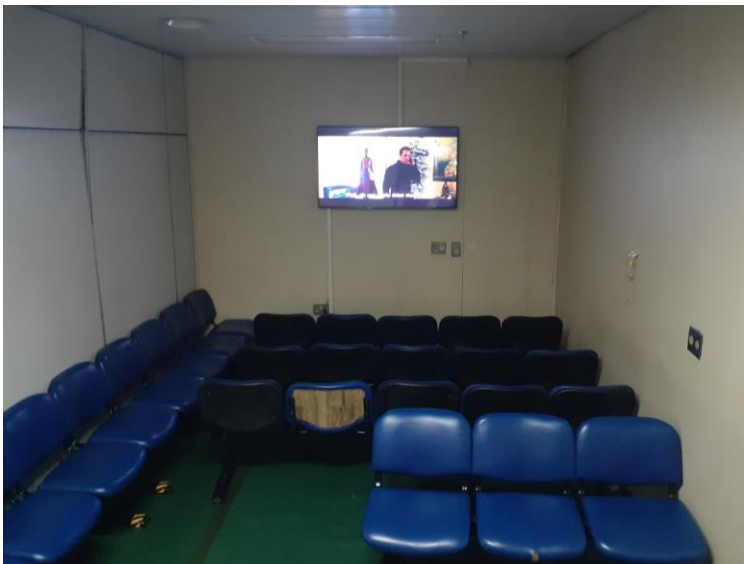
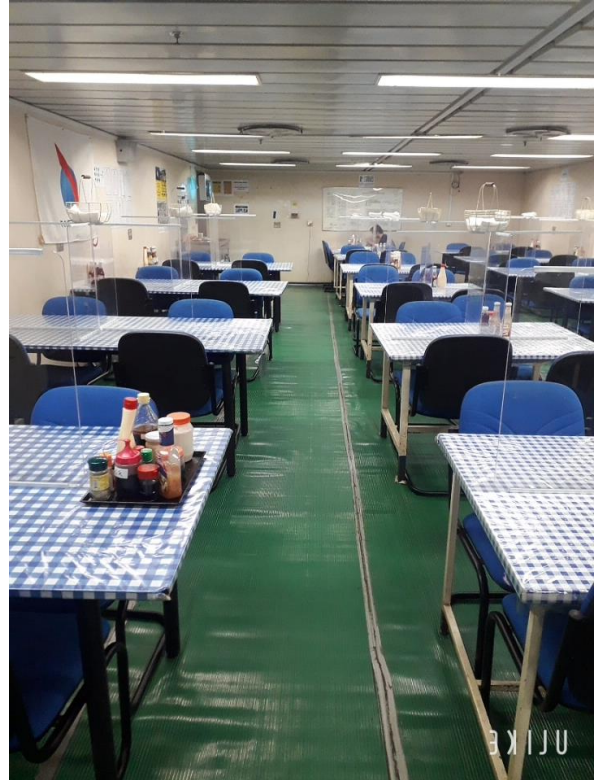


## เอกสารแนบที่ 110

ภาพถ่ายพื้นที่ส่วนพักอาศัยบนเรือที่ใช้ในการปฏิบัติงาน



ภาพถ่ายพื้นที่พักอาศัยบนเรือที่ใช้ในการก่อสร้างและติดตั้งโครงสร้างในทะเลของโครงการฯ





## เอกสารแนบที่ 111

ตัวอย่างบันทึกสถิติการเกิดอุบัติเหตุที่เกิดขึ้นในระหว่างการปฏิบัติงานโครงการฯ



### Record of Incident Cases in G2/61

Date	Description of Incident	Incident Classification	Remark
21 Sep' 2021	Catering crew got abrasion wound at head while using the elevator to kitchen area at K2	First Aid Case (FAC)	G2/61 during SL47 installation
30 Sep'2021	Small fire flash at barrier tape while doing grinding work at K2	Near Miss Case (NMC)	G2/61 during WP47 installation



## เอกสารแนบที่ 112

ตัวอย่างบันทึกบันทึกสถิติการเจ็บป่วย หรือได้รับบาดเจ็บของพนักงาน  
โดยระบุสาเหตุ อาการ และวิธีการรักษา





A3D Project 2021

# WEEKLY MEDICAL REPORT

Period ; 6 - 12 September 2021

## CONTENT

Weekly Medical Report Summary  
Weekly Medical Statistic  
Weekly Medicines Consumption  
Daily Clinic Visit





**SUMMARY WEEKLY MEDICAL REPORT**  
**Period : 6 - 12 September 2021**  
**Bundled 2 A3D Project 2021**



**TOTAL VISIT**

Number of Visit	68	Number of Medical Evacuation	0
Number of Referral	0	Number of Inpatient	0
Number of Accident	0	Average POB	306
Number of Sick Leave			

OFS/NSE	SUBCON	CATERING	Divers	CPY/PTTEP	VISITOR	TOTAL	VISIT RATE %	
1st Vst	F UP	1st Vst	F UP	1st Vst	F UP	1st Vst	F UP	
35	1	26	0	4	1	0	0	0
36	26	5	0	1	0	68		
							OFS/NSC	52.94%
							SUBCON	38.24%
							CATERING	7.35%
							DIVERS	0.00%
							CPY/PTTEP	1.47%
							VISITOR	0.00%

**TOP FIVE DISEASES**

NO	DIAGNOSIS	NUMBER	PERCENTAGE
1	Respiratory disorder	28	41.18%
2	Others or specific diseases	13	19.12%
3	Skin disease	6	8.82%
4	Musculoskeletal disorder	6	8.82%
5	Mouth and tooth	4	5.88%

**ACCIDENT CASE**

NO	COMPANY	ACCIDENT CLASSIFICATION					TOTAL	REMARKS
		FAC	MTC	RWC	LTI	FAT		
1	SP Food	1	0	0	0	0	1	Subconjunctival hemorrhage
TOTAL								

**OTHER MEDICAL ACTIVITIES**

Weekly hygiene inspection	8-Sep-21
First Aid box and Eye wash station inspection	10-Sep-21
ERT team training	N/A
First Aid box and Eye wash station inspection	N/A
UDAT PTTEP crew by Chopper	9-Sep-21
Random UDAT Bi-weekly for K-2 crew	N/A

Reported by,	Verified by,
Barge Doctor K-2	Barge Superintendent



# WEEKLY DIAGNOSTIC REPORT

Period : 6 - 12 September 2021

PTTEP Phase 2 A3D Bundled Project 2021

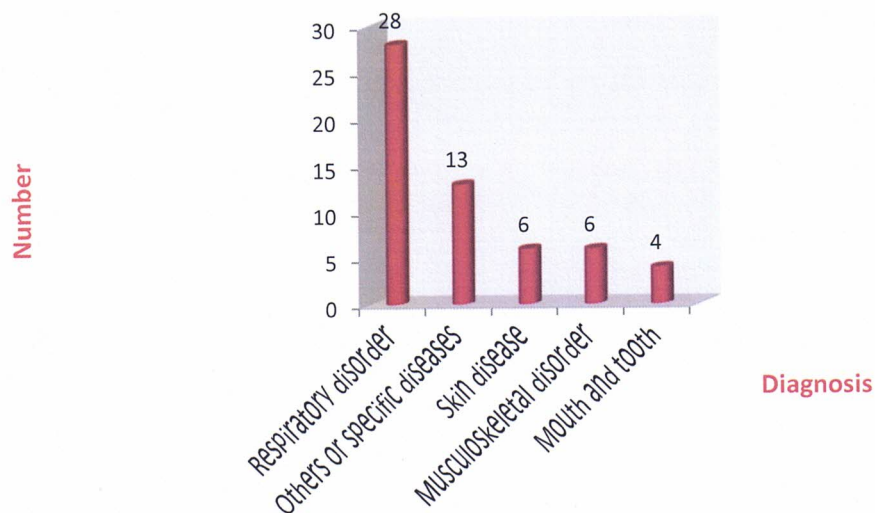
## CLASSIFICATION

NO	Classification of Diseases	NSE/OFS		SUBCON		CATERING		DIVERS		CPY/PTTEP		VISITOR		TOTAL	PERCENTAGE
		1st Vst	F Up	1st Vst	F Up	1st Vst	F Up	1st Vst	F Up	1st Vst	F Up	1st Vst	F Up		
1	Respiratory tract disorder	13	0	11	0	4	0	0	0	0	0	0	0	28	41.18%
2	Gastrointestinal disorders	3	0	0	0	0	0	0	0	0	0	0	0	3	4.41%
3	Genito-urinary diseases	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
4	Heart and hypertension	1	0	0	0	0	0	0	0	0	0	0	0	1	1.47%
5	Neurological	3	0	0	0	0	0	0	0	0	0	0	0	3	4.41%
6	Eye diseases	0	0	2	0	0	0	0	0	0	0	0	0	2	2.94%
7	Skin diseases	2	0	4	0	0	0	0	0	0	0	0	0	6	8.82%
8	Ear disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
9	Nose	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
10	Allergic disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
11	Headache	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
12	Musculoskeletal disorder	2	0	3	0	0	0	0	0	1	0	0	0	6	8.82%
13	Mouth and Tooth diseases	2	1	1	0	0	0	0	0	0	0	0	0	4	5.88%
14	Fever unknown origin	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
15	Observation(Daily dressing wound)	0	0	0	0	0	1	0	0	0	0	0	0	1	1.47%
16	Others or specific diseases(med request)	9	0	4	0	0	0	0	0	0	0	0	0	13	19.12%
17	Accident related to work	0	0	1	0	0	0	0	0	0	0	0	0	1	1.47%
TOTAL		35	1	26	0	4	1	0	0	1	0	0	0	68	100.00%

## TOP FIVE DISEASES

NO	DIAGNOSIS	NUMBER	PERCENTAGE
1	Respiratory disorder	28	41.18%
2	Others or specific diseases	13	19.12%
3	Skin disease	6	8.82%
4	Musculoskeletal disorder	6	8.82%
5	Mouth and tooth	4	5.88%

**Top Five Disease**







DAILY CLINIC VISIT  
DLB KUROSHIO  
6 - 12 September 2021

No	SYSTEM	Date							Total
		6-Sep	7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	
		Mon	Tue	Wed	Thu	Fri	Sat	Sun	
1	Respiratory tract disorder	6	4	4	2	6	4	2	28
2	Gastrointestinal disorders	0	0	2	0	1	0	0	3
3	Genito-urinary diseases	0	0	0	0	0	0	0	0
4	Heart and hypertension	1	0	0	0	0	0	0	1
5	Neurological	1	0	0	1	0	0	1	3
6	Eye diseases	0	0	0	0	1	1	0	2
7	Skin diseases	0	2	2	0	1	1	0	6
8	Ear disease	0	0	0	0	0	0	0	0
9	Nose disease	0	0	0	0	0	0	0	0
10	Allergic disease	0	0	0	0	0	0	0	0
11	Headache	0	0	0	0	0	0	0	0
12	Musculoskeletal disorder	0	1	1	1	1	1	1	6
13	Mouth and Tooth diseases	0	1	2	0	1	0	0	4
14	Fever unknown origin	0	0	0	0	0	0	0	0
15	Follow up	0	0	0	0	0	1	0	1
16	Others or specific diseases	3	5	1	1	0	1	2	13
17	Accident related to work	0	0	0	0	0	0	1	1
Total		11	13	12	5	11	9	7	68



## เอกสารแนบที่ 113

เอกสารผลการตรวจประเมินเรือที่ใช้ในการปฏิบัติงาน (DBL-K2)



## DOCUMENT COMMENTS RESPONSE SHEET

Project Title	ARTHIT PHASE 3D, AWP-39, G1/61 PHASE 1A & 62/61 PHASE 1A		
Document No / Title & Revision	System & Product (T&I) Pre-Mobilization DLB-K2 Audit Report TH-ART-3C-AWP39-PJM-RPT-0806 Rev.C1 TH-ART-3D-GEN-PJM-RPT-0806 Rev.C1 TH-G1-61-1A-GEN-PJM-RPT-0806 Rev.C1 TH-G2-61-1A-GEN-PJM-RPT-0806 Rev.C1		
Response by: MRY	Checked: HB	Date: 25-08-2021	Page 1 of 2

NO.	Clause with Page No.	COMPANY Comments	CTR Response 25.08.21	Remarks
1	Cover Page	<p>-There are many items in auditor verification input/output column mentioned that they still "open", please recheck and update accordingly.</p> <p>-Please update 2 OFIs whether they have been resolved or NOT. Please update.</p>	<p>- Auditor confirm that there is No Open Item in the checklist and all items are closed.</p> <p>The audit was carried out in 3 Stages.            1<sup>st</sup> Stage – 26<sup>th</sup> Apr to 28<sup>th</sup> Apr            2<sup>nd</sup> Stage – 14<sup>th</sup> May – 16<sup>th</sup> May            3<sup>rd</sup> Stage – 18<sup>th</sup> June &amp; 9<sup>th</sup> July.</p> <p>Auditor has separated as per the sections as such on the 3 stages which were closed in stages with the Document Information.</p> <p>Please refer to Audit checklist specifically as per below which are the checklist</p> <p>1<sup>st</sup> Stage – Pg. 21 – Pg. 44            2<sup>nd</sup> Stage – Pg. 521 – Pg. 542            3<sup>rd</sup> Stage – Pg. 592 – Pg. 613            3<sup>rd</sup> Stage (Final) – Pg. 614 - 635</p> <p>Auditor has since added in the <u>Tabulation of Revised Page</u> and put the Remarks to 1<sup>st</sup> – 3<sup>rd</sup> Stages Checklist (CL) i.e. 1<sup>st</sup> Stage CL, 2<sup>nd</sup> Stage CL, 3<sup>rd</sup> Stage CL &amp; 3<sup>rd</sup> Stage CL F (Final) for easier identification.</p> <p>- The 2 OFIs; Opportunity For Improvement stated in the audit report are only suggestions which S/C may look for further future improvements. As such, no further action from S/C are required.</p> <p>For example, for 1<sup>st</sup> OFI's Item; If there exist consistent equipment breakdown which has resulted to actual project delays when auditor conducted future S/C audit then this will register</p>	



## DOCUMENT COMMENTS RESPONSE SHEET

Project Title	ARTHIT PHASE 3D, AWP-39, G1/61 PHASE 1A & 62/61 PHASE 1A		
Document No / Title & Revision	System & Product (T&I) Pre-Mobilization DLB-K2 Audit Report TH-ART-3C-AWP39-PJM-RPT-0806 Rev.C1 TH-ART-3D-GEN-PJM-RPT-0806 Rev.C1 TH-G1-61-1A-GEN-PJM-RPT-0806 Rev.C1 TH-G2-61-1A-GEN-PJM-RPT-0806 Rev.C1		
Response by: MRY	Checked: HB	Date: 25-08-2021	Page 2 of 2

NO.	Clause with Page No.	COMPANY Comments	CTR Response 25.08.21	Remarks
			<p>as NC's or Major findings since it has been suggested before to S/C to take actions, but S/C chose not to.</p> <p>Auditors will carry out further probing and if found there were no clear indication of function tests schedule being prepared and function test perform as per the plan, this will then be registered as NC due to breakdown in the S/C processes despite auditor previous recommendations.</p> <p>For the 2<sup>nd</sup> OFI's Item prior to start of specific work scope during the project, related procedure has been found to have been approved and therefore closed. If found in the next pre-mob audit delay that any work delays may have been cause by procedure not approved, then this will register as immediate NC or major findings.</p> <p>At the moment no follow up are needed by S/C as auditor are satisfied with the audit outcome found in all the 3 Stages.</p>	



# EPCI FOR AWP-39, ARTHIT PHASE 3D, G1/61 PHASE 1A & G2/61 PHASE 1A


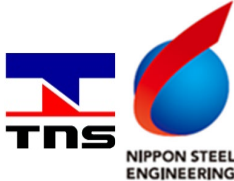
## System & Product (T&I) Pre-Mobilization DLB-K2 Audit Report

CY-BKK response (Finished system workflow) via THC14-5258-PTTEP-NSENGI-A3D-T-21-1601, 8-Sep-21

C2	26-Aug-21		Issued for Information				
C1	16-Jul-21	MRY	Issued for Information	HB	ST		
REV	DATE	By	DESCRIPTION	CHECK	APPR.	CHECK	APPR.
				CONTRACTOR APPROVAL		COMPANY APPROVAL	

REVISION CODE: A = Issued for Review, B = Issued for Approval, C = Approved for Construction, 00 = As-built

TOTAL OR PARTIAL REPRODUCTION AND/OR UTILIZATION OF THIS DOCUMENT ARE FORBIDDEN  
WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE OWNER

	PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED PTTEP INTERNATIONAL LIMITED PTTEP ENERGY DEVELOPMENT COMPANY LIMITED		
	EPCI FOR AWP-39, ARTHIT PHASE 3D, G1/61 PHASE 1A & G2/61 PHASE 1A		
	TH-ART-3C-AWP39-PJM-RPT-0806	REVISION C2	
	TH-ART-3D-GEN-PJM-RPT-0806	C2	
	TH-G1-61-1A-GEN-PJM-RPT-0806	C2	
	TH-G2-61-1A-GEN-PJM-RPT-0806	C2	



**REVISION STATUS / SUMMARY OF CHANGES**

REV	REVISED PAGES/SECTIONS	REVISION DESCRIPTION	REASON FOR REVISION
C1	-	Issued for Information	-
C2	Page 2,7,8 & 9,	Issued for Information	Revise as per CPY's Comment (Page 2,7, & 8) Add missing Revision Status/ Summary of Changes page (Page 9)



## **System & Product (T&I) Pre-Mobilization DLB-K2 Audit Report**

<b>Project Title</b>	: Bundled Phases 2 EPCI Of Wellhead Platforms, Pipelines And Tie-Ins (BUN2-A3D, AWP-39 G1 & G2)	
<b>Audit Type</b>	: System & Product DLB K2 (T&I) Pre-Mobilization Audit	
<b>Audit Report No.</b>	: PTTEP-BUN2 A3D/AWP39/G1/G2-AB2-033	
<b>Audit Report Date</b>	: <b><u>16<sup>th</sup> July 2021</u></b>	
<b>Audit Criteria</b>	: <b>ISO 9001: 2015</b> Requirements & BUN2 Phase Project Requirements	
<b>Audit Locations</b>	: <b>1<sup>st</sup> Stage:</b> Remote Audit via Microsoft Teams : <b>2<sup>nd</sup> Stage:</b> Audit onboard DLB K2 @ NS Batam : <b>3<sup>rd</sup> Stage:</b> Offshore Audit – SOMESHA & Others	
<b>Audit Dates</b>	: <b>1<sup>st</sup> Stage:</b> 26 <sup>th</sup> April to 28 <sup>th</sup> April : <b>2<sup>nd</sup> Stage:</b> 14 <sup>th</sup> May to 16 <sup>th</sup> May : <b>3<sup>rd</sup> Stage:</b> 9 <sup>th</sup> July	
<b>Audit Time</b>	: <b>1<sup>st</sup> Stage:</b> 0930hrs – 1700hrs : <b>2<sup>nd</sup> Stage:</b> 0800hrs – 1500hrs : <b>3<sup>rd</sup> Stage:</b> 0800hrs – 1500hrs	
<b>Audit Team/s</b>	: <b>NIPPON STEEL ENGINEERING (NSE)</b>	
<b>Auditors</b>	Mr. Rizal Yusoff Mr. Hari Baskar Mr. Kannan Mr. Dani Ivan Mr Agus Firmansyah	Lead Auditor (1 <sup>st</sup> Stage) Auditor (1 <sup>st</sup> Stage) Auditor (1 <sup>st</sup> Stage) Auditor (2 <sup>nd</sup> & 3 <sup>rd</sup> Stage) Auditor (2 <sup>nd</sup> & 3 <sup>rd</sup> Stage)
<b>Observers</b>	: <b>PTTEP</b>  Mr. Chakrit Mr. Nunthawat	  Company Representative Company Representative
<b>Auditees</b>	: <b>NSE</b> Mr. Ogura H Mr. Ross Hussein Mr. Eko Budi Mr. Yamada Mr. Takeuchi  <b>Sub- Contractors</b> Mr. Joshua Mr. Sugama Mr. Ho Chee Leng / Mr. Clifton Mr. Adam Harika Mr. Villaruel Mark / Mr. Bala Mr. Manoj / Ms. Mae Chin	<b>(1<sup>st</sup> Stage &amp; 2<sup>nd</sup> Stage)</b> Const. Manager SSHE Manager Offshore QC Field Engineer Chief Engineer  <b>(1<sup>st</sup> Stage)</b> Pageo – ROV OWA - Diving OTI – Welding RAE OJS – FJC Fugro – Survey Somesha



**Sub- Contractors**

Mr. Ho Chee Leng  
Mr. Yumirzon  
Mr. Villaruel Mark

**Sub- Contractors**

Mr. Sugama  
Mr. Manoj  
Mr. Joshua

**(2<sup>nd</sup> Stage)**

OTI – Welding  
RAE OJS – FJC  
Fugro – Survey

**(3<sup>rd</sup> Stage)**

OWA - Diving  
Somesha  
Pageo - ROV

**Prepared by:**

Auditor

**Prepared by:**

Auditor

**Reviewed by:**

Lead Auditor



## 1. **Audit Objective**

The objectives for the Audit are: -

- a) To determine the readiness of Project Requirement for DLB-K2 during PTTEP BUN 2 Arthit 3D, G2/Phase 1A & AWP-39 prior to start of transportation & installation,
- b) To confirm that NSE Project Management Team & sub-contractors have effectively implemented and has been continuing in maintaining its planned arrangements as per ISO9001:2015 requirements, client's and project specifications,
- c) To conform with the pre-mobilization audit that DLB-K2 has proper controls & records of its' critical operating system, equipment which are suitable for the project,
- d) To conform with the pre-mobilization audit that DLB-K2 has proper controls & records of its' critical operating system, equipment which are suitable for the project,
- e) To confirm that NSE's DLB K2 is capable of achieving the project quality objectives and target set,
- f) To provide suggestions and recommendations to the auditee/s (NSE Project Management Team) & Sub-contractors,
- g) To confirm that vendors are capable of achieving the project quality objectives and target set,
- h) To conform on the Risk Analysis & Management are carried out prior to the start of the project installation from both the Project Team & all sub-contractors
- i) To provide information of the audit results to the COMPANY,
- j) To consistently capable to meet customer's requirement & expectations.

## 2. **Audit Scope**

The scope in conducting the audit is as follows: -

- a) Quality Management System Requirements
- b) Context of the Organization
- c) Leadership
- d) Planning
- e) Support
- f) Operation – K2 Major Offshore Equipment
- g) Operation – Sea Line
- h) Operation – Pipe Lay Station & Welding Station
- i) Operation – Offshore QC
- j) Operation – Health & Safety
- k) Operation – Sub Contractor
- l) Operation – Customer Set Up
- m) Operation – NDE Equipment (OTI)
- n) Operation – Coating Equipment & Material (RAE)
- o) Operation – ROV (Pageo)
- p) Operation – Diving (OWA)
- q) Operation – Survey & Positioning (FUGRO)
- r) Operation – Pile Monitoring (SOMESHA)
- s) Improvement

## 3. **Audit Criteria/s**

Below is Audit Criteria/s carried out during the Audit: -

- a) Offshore Installation Works – QC Plan:
  - TH-ART-3D-GEN-TNI-PDR-8101 Rev-C1



- TH-ART-3C-AWP39-TNI-PDR-8101 Rev-C2
- TH-G1-61-1A-GEN-TNI-PDR-8101 Rev-C1
- TH-G2-61-1A-GEN-TNI-PDR-8101 Rev-C1
- b) Offshore Inspection and Test Plan
  - TH-ART-3D-GEN-QAC-PDR-8304 Rev-C1
  - TH-ART-3C-AWP39-QAC-PDR-8304 Rev-C2
  - TH-G1-61-1A-QAC-PDR-8304 Rev-C1
  - TH-G2-61-1A-GEN-PDR-8304 Rev-C1
- c) Quality Control Plan for Pipeline Installation Engineering
  - TH-ART-3D-GEN-TNI-PDR-8051 Rev-C1
  - TH-ART-3C-AWP39-TNI-PDR-8051 Rev-C1
  - TH-G1-61-1A-GEN-PDR-8051 Rev-C1
  - TH-G2-61-1A-GEN-PDR-8051 Rev-C1
- d) Quality Control Plan for Platform Installation Engineering
  - TH-ART-3D-GEN-TNI-PDR-8001 Rev-C1
  - TH-ART-3C-AWP39-TNI-PDR-8001 Rev-C1
  - TH-G1-61-1A-GEN-TNI-PDR-8001 Rev-C1
  - TH-G2-61-1A-GEN-TNI-PDR-8001 Rev-C1
- e) Applicable Project specific Procedures and Drawings
- f) Applicable Contract terms & Conditions.
- g) Installation Related Procedures.

#### 4. Management Summary

Pre-Mobilization Audit for DLB-K2 was planned ahead in 3 Stages comprising of 1<sup>st</sup> Stage which is to Review and Interview auditees and verify of project related documents which were conducted using Remote Audit via Microsoft Teams. This is to accommodate for project convenience to all, in a safe manner and without disruptions to the project preparation especially during the difficult pandemic period. 2<sup>nd</sup> Stage Audit was conducted when DLB K2 is at Nippon Steel Batam (NSB) located at Batam, Indonesia. Available sub-contractors and crews present during Stage 2 Audit were audited and interviewed at site and to evaluate on the readiness. The 3<sup>rd</sup> Stage audit was conducted when DLB K2 was located at Songkhla, Thailand. Likewise, available sub-contractors whom joined at Songkhla were audited and interviewed. The 3<sup>rd</sup> Stage audit is schedule to allow for Pile Monitoring Sub-contractor – SOMESHA whom joined in the later stage during the early stage of installation. PTTEP (Company) representatives were present during the 1<sup>st</sup> Stage Remote Audit to observe the audit and Company participation is highly appreciated. Whilst 2<sup>nd</sup> Stage & 3<sup>rd</sup> Stage Audit conducted whilst in the presence of PTTEP representatives on board or has been informed before hand prior to start of the audit. Picture representation were included as Documentation Information (DI).

1<sup>st</sup> Stage Audit started with opening meeting at 0930hrs – 1000hrs on the 26<sup>th</sup> April using Remote Audit via Microsoft Teams. The audit started from 1000hrs onwards with 2 Audit Teams engaging auditees held for the 3 days audit using Audit Checklist during the audit. Closing Meeting was carried out on 28<sup>th</sup> April and informed during the closing meeting of the audit status which stands at **57% of 153 Audit Items** Checklist have been closed with DI verified.

During the 2<sup>nd</sup> Stage Audit a further total of **78% of 153 Audit Items** were further closed. Likewise similar during Stage 1 Audit, opening meeting was carried out on 14<sup>th</sup> May and closing meeting was carried out on 16<sup>th</sup> May onboard DLB K2 located at NSB.



The remaining 22% were closed in further 2 Stages during 3<sup>rd</sup> Stage Audit. Onboard auditors had engaged respective auditees comprising of sub-contractors when they've joined DLB-K2 at Songkhla respectively on the 18<sup>th</sup> June & 9<sup>th</sup> July. The further split of 3<sup>rd</sup> Stage audit was due to adjoining crews mobilize to DLB-K2 in different stages and to relieve them without disruption to their project obligation at once after their audit completed. 3<sup>rd</sup> Stage Audit on 18<sup>th</sup> June had closed a further **97% of 153 Audit Items**. Whilst on 9<sup>th</sup> July the **100% of 153 Audit Items** were all closed which concluded when Pile Monitoring sub-contractor SOMESHA joined DLB K2.

## 5. **Audit Conclusion/s**

The audit was concluded with **2 Opportunity for Improvements (OFIs)** & **3 Positive Findings** shared with the Auditee/s during the 1<sup>st</sup> Stage closing meeting. No further findings were registered during the 2<sup>nd</sup> & 3<sup>rd</sup> Stage Audits. There were no Non-Conformance found during the 3 Stages Audits. As informed during the closing meeting for consecutive audit stages, failure to provide requested DI may result in Non-Conformance.

A Risk Management System as required in ISO 9001:2015 requirement has been reviewed during the audit and available generated by both NSE PMT Project Team and sub-contractors involved in the projects.

The audit team has therefore concluded that from the **DLB-K2's** pre-mobilization audit, auditors has found that the QMS processes are visibly and evidently established and the project team has maintained its management system in line with the requirement of the ISO 9001:2015 standards and demonstrated the ability within the system to systematically achieve agreed requirements within the project scope and the organization's policy and objectives.

Audit Team has recommended to the auditee during the closing meeting to implement & continue to improve as per the recommendation listed as per **Item 5.1 Opportunity for Improvement (OFI)** & has mentioned as per **Item 5.2 Positive Findings during the audit.**

### 5.1 **Opportunity For Improvement (OFI)**

**Below are 2 (Two) OFI during the Audit: -**

1. For any equipment which will be use prior to the start of project, whenever any function test on an equipment is required S/C is to plan & put into a plan schedule for auditor to keep track.
2. Can look further to ensure in the future, S/C procedures should be approved in a timely manner.

### 5.2 **Positive Findings**

**Below are 3 (Three) Positive Findings during the Audit: -**

1. All S/C has lesson learnt log sheet which has emphasized on Zero production downtime.
2. S/C has conducted periodic check over the inventory list and made the proper follow up due diligently.
3. Participation and cooperation by auditees have shown a strong commitment in ensuring the audit and upcoming project will be a success.



**Attachments**

<b>Attachment 1:</b>	Attendance List (1 <sup>st</sup> Stage & 2 <sup>nd</sup> Stage)	<b>4 Pages</b>
<b>Attachment 2:</b>	Audit Checklist & DI - 1 <sup>st</sup> Stage	<b>461 Pages</b>
	Audit Checklist & DI – 2 <sup>nd</sup> Stage	<b>71 Pages</b>
	Audit Checklist & DI – 3 <sup>rd</sup> Stage	<b>58 Pages</b>
<b>Attachment 3:</b>	Audit Pictures on 14 <sup>th</sup> May – 16 <sup>th</sup> May - 2 <sup>nd</sup> Stage	<b>8 Pages</b>
	Audit Pictures on 18 <sup>th</sup> June – 3 <sup>rd</sup> Stage	<b>3 Pages</b>
	Audit Pictures on 9 <sup>th</sup> July – 3 <sup>rd</sup> Stage	<b>2 Pages</b>

-----END-----



## เอกสารแนบที่ 114

เอกสารกำหนดวันทำงานของผู้ปฏิบัติงานบนเรือของบริษัทผู้รับเหมา





**NIPPON STEEL ENGINEERING CO. LTD.**

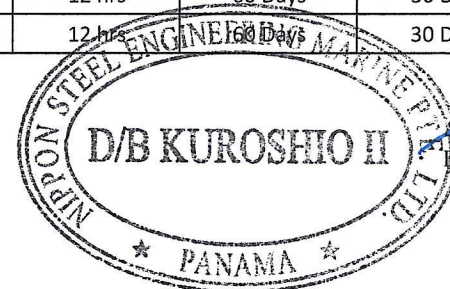
**DLB KUROSHIO II**

**IMO 8757336**

**CREW WORK ARRANGEMENTS PLAN (YEAR 2021)**

No	Position/ Rank	Daily Working Hours - Onshore			Daily Working Hours - Offshore			Day Sign On Onboard- Offshore	Off day - Onshore	Remarks
		From (HRS)	To (HRS)	Total Rest Hrs	From (HRS)	To (HRS)	Total Rest Hrs			
1	Barge Superintendent (BS)	07:00	17:00	14 hrs	07:00	19:00	12 hrs	60 Days	30 Days	
2	Assistant Barge Superintendent (ABS)	07:00	17:00	14 hrs	19:00	07:00	12 hrs	60 Days	30 Days	
3	Barge Chief Engineer (BCE)	07:00	17:00	14 hrs	07:00	19:00	12 hrs	60 Days	30 Days	
4	Barge Engineer (BE)	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
5	Construction Manager (CM)	07:00	17:00	14 hrs	07:00	19:00	12 hrs	60 Days	30 Days	
6	Project Engineer (PE)/ Field Engineer (FE)	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
7	Barge Operation Engineer (BOE)	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
8	Barge Foreman (BF)	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
9	Chief Mechanic/ Electrician	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
10	Barge Admin	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
11	Radio Operator	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
12	Barge Doctor/Medic	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
13	SSHE Lead	07:00	17:00	14 hrs	07:00	19:00	12 hrs	60 Days	30 Days	
14	SSHE Officer	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
15	ISM/ISPS Officer	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
16	Crane Operator	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
17	Tower Operator	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
18	Welder Foreman	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
19	Fitter Foreman	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
20	Rigging Crew	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
21	Welding Crew	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
22	Engine Room Crew	07:00 / 19:00	19:00 / 07:00	12 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
23	QA/QC Personnel	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	
24	Camp Boss	07:00	17:00	14 hrs	07:00	19:00	12 hrs	60 Days	30 Days	
25	Catering Crew	07:00	17:00	14 hrs	07:00 / 19:00	19:00 / 07:00	12 hrs	60 Days	30 Days	
26	Sub-Contractor	07:00	17:00	14 hrs	00:00 / 12:00	12:00 / 00:00	12 hrs	60 Days	30 Days	

Date:- June 2021



Barge Superintendent  
DLB Kuroshio II





## เอกสารแนบที่ 115

Typhoon Response สำหรับการดำเนินงานของผู้รับเหมาในพื้นที่โครงการฯ






# EPCI FOR AWP-39, ARTHIT PHASE 3D, G1/61 PHASE 1A & G2/61 PHASE 1A

## TYPHOON RESPONSE

 <b>PTTEP</b> EPCI of AWP-39 Wellhead Platform, Associated Pipelines, and Tie-ins	
<input checked="" type="checkbox"/> 1. APPROVED <input type="checkbox"/> 2. APPROVED (Proceed to AFC) <input type="checkbox"/> 3. APPROVED with comments <input type="checkbox"/> 4. APPROVED with comments (Proceed to AFC) <input type="checkbox"/> 5. Not APPROVED	
<small>           COMPANY'S APPROVAL shall not relieve CONTRACTOR from his obligation under the CONTRACT.            CONTRACTOR takes full responsibility for the content of any CONTRACT DOCUMENT and shall be            responsible as an acceptance of the content of the documents.         </small>	
Signed: 	Somsak Boonthiang Project Engineer

CY-BKK response by THC14-5258-PTTEP-NSENGI-A3D-T-20-1873, received on 1-Oct-2020

C1	28-Sep-20	RH	Approved for Construction (AFC)	JC	TH		
A1	27-Aug-20	RH	Issued for Review (IFR)	JC	TH		
REV	DATE	By	DESCRIPTION	CHECK	APPR.	CHECK	APPR.
				CONTRACTOR APROVAL		COMPANY APPROVAL	
REVISION CODE: A = Issued for Review, B = Issued for Approval, C = Approved for Construction, 00 = As-built							
TOTAL OR PARTIAL REPRODUCTION AND/OR UTILIZATION OF THIS DOCUMENT ARE FORBIDDEN WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE OWNER							
	PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED AND PTTEP INTERNATIONAL LIMITED PTTEP ENERGY DEVELOPMENT COMPANY LIMITED					 	
	EPCI FOR AWP-39, ARTHIT PHASE 3D, G1/61 PHASE 1A & G2/61 PHASE 1A						
				REVISION			
	TH-ART-3C-AWP39-SSHE-PDR-6123			C1			
	TH-ART-3D-GEN-SSHE-PDR-6123			C1			
	TH-G1-61-1A-GEN-SSHE-PDR-6123			C1			
	TH-G2-61-1A-GEN-SSHE-PDR-6123			C1			



## TABULATION OF REVISED PAGES

SHT. No.	REVISIONS							REMARK	SHT. No.	REVISIONS							REMARK
	A1	C1															
1	X	X							51								
2	X	X							52								
3	X								53								
4	X								54								
5	X								55								
6	X								56								
7	X								57								
8	X								58								
9	X								59								
10	X								60								
11	X								61								
12	X								62								
13	X								63								
14	X								64								
15	X								65								
16	X								66								
17	X								67								
18	X								68								
19	X								69								
20	X								70								
21	X								71								
22	X								72								
23	X								73								
24	X								74								
25	X							Appendix 1	75								
26	X							Appendix 2	76								
27	X							Appendix 3	77								
28	X							Appendix 4	78								
29	X								79								
30	X								80								
31	X								81								
32	X								82								
33	X								83								
34	X								84								
35	X								85								
36	X								86								
37	X								87								
38	X								88								
39	X								89								
40	X								90								
41	X								91								
42	X								92								
43	X								93								
44									94								
45									95								
46									96								
47									97								
48									98								
49									99								
50									100								



## TABLE OF CONTENTS

<b>1. INTRODUCTION .....</b>	<b>4</b>
1.1. PROPOSE .....	4
1.2. SCOPE.....	4
<b>2. DEFINITION .....</b>	<b>5</b>
<b>3. REFERENCE DOCUMENTS.....</b>	<b>6</b>
3.1. COMPANY Specification and Procedure.....	6
3.2. Project Specification and Procedure.....	6
3.3. Duties and Responsibilities.....	7
<b>4. TYPHOON EVACUATION PLAN.....</b>	<b>8</b>
4.1. Tropical Storms.....	8
4.2. Weather Watch Procedures.....	9
4.3. Typhoon Track Assessment Calculation .....	10
4.4. Action Prior to Starting and During Typhoon .....	11
4.5. Communication .....	<b>Error! Bookmark not defined.</b>
4.6. Typhoon Evacuation Phase Actions .....	13
4.7. PTTEP Alert & Action Zones.....	13
4.8. Typhoon Avoidance Considerations .....	20
4.9. Safe Area and Shelter Location Option .....	21
4.10. Typhoon Evacuation Guide for Vessel.....	22
4.11. Evacuation Personnel Recommendation.....	23
4.12. Personnel On Board Demobilization.....	24
<b>APPENDIX .....</b>	<b>24</b>
APPENDIX 1 - FIELDS LAYOUT MAP .....	25
APPENDIX 2 - OFFSHORE EMERGENCY COMMUNICATION NETWORKS .....	27
APPENDIX 3 – EXAMPLE BARGE EMERGENCY BARGE PULL-OUT PROCEDURE.....	29
APPENDIX 4 – EXAMPLE BARGE EMERGENCY BARGE TOWING PROCEDURE.....	32



## 1. INTRODUCTION

PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED (hereinafter referred to as COMPANY), acting on behalf of a Consortium, is presently producing from the Arthit Field Development and Bongkot Field Development in the Gulf of Thailand.

### 1.1. PROPOSE

The purpose of the Typhoon Evacuation Plan (TRS) is to ensure the safety of all employee and subcontractors personnel during abnormal weather situations and to provide guidance for the planning and orderly evacuation and remobilization of offshore personnel and vessels when considered necessary.

The procedure is intended to promote effective co-ordination between TNS/ NSE and her clients and sub-contractor (ship provider) when an incoming abnormal weather or Tropical Storm could threaten the operation field work carried out.

### 1.2. SCOPE

This Typhoon Evacuation plan provides roles and responsibilities, procedural guides, referenced information related to the weather watch and response action required for abnormal and inclement weather situations.

The role of vessels which engaged in this project is described as follows:

- AWB is a self-propelled vessel and engaged as Accommodation Vessel during execution of existing platform modification for all platforms.
- TMS is engaged as Crew boat during re-instatement work for new and existing platforms.
- Lewek Lark (TBA) is engaged as Anchor Handling tug boat.
- INSTALLATION BARGE is engaged for Transportation and Installation Scope with (2) two AHT's for INSTALLATION BARGE movement.

*Note: As of AWB is a self-propelled vessel and is able to self manoeuvre. With this vessel specification, second AHTs and towing operation are not required refer to PTTEP GMI. However Emergency towing procedure will be documented for emergency situation refer to Appendix 5.*



## 2. DEFINITION

Terminology	Description
A3D	Arthit 3D Platform
AHT	Anchor Handling Tug
BARGE	Accommodation Vessel
B3P	Bongkot North 3 Platform
BKT	Bongkot Field
COMPANY	PTT Exploration and Production Public Company Limited (PTTEP)
CONTRACTOR	Nippon Steel Engineering Co. Ltd. (NSE)
AWB	Accommodation Work Barge (Hook Up Brown Field)
CPP	Central Processing Platform
CSR	Company Site Representative
DPA	Designated Person Ashore (Logistic Support)
Emergency Response	Define as Are the basic plans indicating action to be taken in event of an emergency; and are a set of rule that provide communication protocol, a list of actions and their priorities
ERP	Emergency Response Plan
Emergency Response Team (ERT)	A group of persons who is being nominated by line management and responsible for managing and controlling a fire and another emergency situations that will occur in TNS/ NSE
Emergency Situations	Unexpected condition resulting in fire, explosion, oil and/or chemical spill, gas escape, serious injury or fatality, structure damage, total evacuation, severe electrical storm, aircraft or vehicle crash, vessel collision or sinking, deliberate act of arson or sabotage etc., all of which require prompt action.
GBN	Great Bongkot North Field
GBS	Great Bongkot South Field
GMI	General Marine Instruction
PMT	Project Management Team
PSB	Petroleum Support Base
OIM	Offshore Installation Manager



Terminology	Description
CH.	Channel
Installation Barge	T & I Barge
POB	Personnel on Board
SBB	Single-Sideband Modulation
SKL	Songkhla province, Thailand
SSB	Single Site Band
SSHE	Security, Health, Safety and Environment
SUBCONTRACTOR	Thai Nippon Steel Engineering & Construction Corp. Ltd. (TNS/NSE)
T & I Barge	Transportation and Installation Barge
TRS	Typhoon Evacuation Plan
VHF	Very High Frequency
VSAT	Very Small Aperture Terminal

### 3. REFERENCE DOCUMENTS

#### 3.1. COMPANY Specification and Procedure

Document Number	Document Title
10011-PDR-SSHE-501/07-R16 (October 2018)	Tropical Cyclone Plan for Gulf of Thailand
GMI 10009-OLG-WIA-4101 Rev 1 (12 March 2020)	PTTEP General Marine Instruction for Great Navamindra Field

#### 3.2. Project Specification and Procedure

References	Document Title
TH-BUN2-XX-GEN-SAF-PRC-1313	Emergency Response Plan Procedure
TH-G1-61-1A-GEN-SSHE-PDR-6114	Offshore ERP, MERP and Contingency Plan

Remark: The document number mentioned above refers to the document number at the time of review or approval of this document. The number could be revised or updated when there is change or revision of the document



### 3.3 Duties and Responsibilities

#### 3.3.1 Project Manager (PM)

- To contribute related section to maintain the Emergency, Medical Emergency Response Plan (MERP) and Responsibilities and report the status.
- Ensure adequately Emergency command is cascaded to principally persons in charge sub-contractors.
- Consult and distribute the useful information to all teams.
- Liaise with Company & Designated Logistic/Support in Songkhla

#### 3.3.2 Construction Manager (CM)/Hook up Manager

- Ensure promotion and support to SSHE Team, and actively participate in Emergency Response Plan, MERP, etc.
- Cascade the requirements of the Typhoon Response Plan and ensure **socialisation** and compliance.
- Ensure the Competency of Emergency Response Team
- Adequate emergency equipment and system in place and tested
- Liaise with CSR/Barge Master/Superintendent and Onshore Support Team (Songkhla)

#### 3.3.3 Project SSHE Manager

- Reporting to Project Manager for communicating and implementing the Typhoon Response Plan.
- Ensure the Emergency Roles and Responsibilities are communicated effectively to all key and relevant personnel.
- Monitor the compliance and performance, Audit in relation to the Project Typhoon Response Plan.

#### 3.3.4 Barge Superintendent / Barge Master

- To distribute to all SPREAD units in the vicinity, such information/forecasts and to keep them informed of any declaration of STORM plans at the work site.
- To liaise with Construction Manager / CSR and Onshore Support Team
- Securing / Ship safe/ demob unessential personnel
- Daily meeting with CSR and Barge Team to assess actions and status and issue up revved action plan
- Increased distribution of POB Report



- Designate duties to key functions
- Safe Haven Route assessment
- Weather / Storm Tracking

### 3.3.5 Barge Foreman / Deck Foreman

- Familiar with Typhoon evacuation plan. Coordinate, advice and acts as necessary in case o evacuation plan executed.
- Keep close watch on moorings and weather conditions to ensure that operations are stopped before onset of weather conditions and to ensure that barge maintains safe position. Ensure to advise Barge Superintendent/Barge Master to follow SOPs and standoff criteria.
- To assist Barge Superintendent/Barge Master in communication and distribute all information to all barge crew and ensure that all crew are aware of Typhoon Response.

### 3.3.6 Onshore Support Team (Songkhla)

- To provide full support in preparation for all crew accommodation and transportation at onshore in case any demobilized due to typhoon affect.
- Back up accommodation established in other cities as necessary
- To liaise with Construction Manager / Barge Superintendent CIQ support,
- Health, Medical and funds support of personnel
- Issue a Daily Onshore POB Report to Project Management and Field Logistics Representatives

## 4. TYPHOON EVACUATION PLAN

### 4.1. Tropical Storms

Tropical Storms are migratory low-pressure systems, which form over tropical or sub-tropical oceans and they are sub-divided into the following classifications, base upon the Maximum sustained one minute mean wind speed near the core:

1	<b>Tropical Depression</b>	Maximum sustained wind speeds less than 33 knots.
2	<b>Tropical Storm</b>	Maximum sustained wind speeds between 34 and 47 knots.
3	<b>Severe Tropical Storm</b>	Maximum sustained wind speeds between 48 and 63 knots.
4	<b>Typhoon</b>	Maximum sustained wind speed between 64 and 129 knots.



5	<b>Super Typhoon</b>	Maximum sustained wind speed greater than 130 knots
6	<b>Dissipation</b>	Decay rapidly

**A Tropical Disturbance** is a tropical low-pressure area with definite organized convection, but without closed isobars. All tropical storms form initially from Tropical Disturbance, but not all Tropical Disturbance will develop into Tropical Storm.

#### 4.2. Weather Watch Procedures

Vessel will be provided with the **Day to Day Weather Monitoring**, Minimum five days advance forecast weather and gathering weather information along with advising spread vessels and shore team when a weather situation is developing via by e-mail or phone.

The weather forecasters shall be proposed to Company for Approval:

On announcement of a Tropical Disturbance, Contractor will issue a Storm Watch Notification to make key personnel aware that the weather situation may be the potential to escalate. Contractor will also monitor and follow PTTEP weather forecast/alerts. Two weather forecasters will be appointed and report widely distributed.

A Tropical Disturbance Watch will be announced and Main Barge Master/Barge Superintendent will inform the Marine spreads that a tropical disturbance has the potential to develop, within the Green boundary area of the Typhoon Tracking Map or TRS Plotting Chart.

TNS/ NSE Barge Master/Superintendent shall notify to CSR and PTTEP Asset OIM on situation immediately and shall prepare as per Section 0 Typhoon Evacuation Phase Actions.

Barge Master/Superintendent and Construction Manager will notify all and alert appropriate departments that a tropical disturbance watch has been announced, to discuss the severity of the weather, the speed and direction of the potential Storm's path and the proximity to vessel operations.

TNS/ NSE offshore superintendent/Master will discuss with PTTEP CSR together with BARGE Master and review the situation, emergency procedure and what future action plan throughout the Tropical Disturbance Watch and further phases of the storm development.

Based on the advice, Construction Manager/Hook up Manager **will announce what phase of the Typhoon Evacuation Procedures should be implemented to key personnel, including vessel**. All notification shall be done verbally to ensure they are received with a follow-up by e-mail.

When the Tropical Disturbance has dissipated as established by weather report, the Construction Manager/Hook up Manager will notify all parties that the threat is over and will confirm the stand down to key personnel and vessel by verbal or e-mail.



### 4.3. Typhoon Track Assessment Calculation

Normally, any alert phase radius is given in expected hours and not as a distance before the Typhoon reaches into the vessel operation area, because it varies with the vortex's velocity and forward speed of the front.

In all case, the Typhoon shall be monitored using the “**Critical Path Calculation**” to determine the distance of the storm front when secure and evacuating operations should begin.

The formula of critical path calculation can be made by:

$$M = (S + E + C) \times V$$

<b>M</b>	Distance in NM from Typhoon center to operation area, where the critical path is reached and Typhoon Evacuation Procedures Commenced
<b>S</b>	Secure operating time, number of hours to finish secure operations in progress
<b>E</b>	Evacuation time, number of hours to complete evacuation from offshore operation area to shelter location or shore base in weather conditions which allow safe operations for the transfer of personnel
<b>C</b>	Contingency time, number of hours for increase typhoon forward speed movement, for delays in securing the operation, equipment failure (Based on 10% contingency on the Secure operating time and evacuation time)
<b>V</b>	Velocity of the Typhoon, in NM per hour, expected maximum forward speed of the front and can vary up to 15 Knots

This calculation will allow the Master to deal with the situation based on predicted information.

Worst Case Scenario Example;

<b>S</b>	2 hours. Secure Operating Time based on discussions with Captain, Sub-contractor superintendant, onboard CY Marine and CSR
<b>E</b>	18 hours. Base on the vessels enroute sailing time to Shelter location in bad weather condition;
<b>C</b>	2.7 hours. Base on 10% contingency on the above Secure Operating and Evacuation Time
<b>V</b>	15 Knots. Base on the maximum anticipated speed of Typhoon movement
<b>M</b>	$(2 + 18 + 2.7) \times 15$

This calculation is based on worst case scenario; for vessel speed of 9 knots. It is critically important to understand that once “Operation Alert” is called, that the Critical Path Calculation formula will need be to constantly updated and re-evaluated in line with changing weather conditions, as this will be a direct effect on the speed of the vessel to reach the shore or Shelter location.



#### 4.4. Action Prior to Starting and During Typhoon

The following action with responsibilities assigned must be taken before the start of and during typhoon or monsoon season (1<sup>st</sup> October - end of February).

Action	By
1. Typhoon exercise (Table top) on board BARGE includes Support Vessels will be conducted within 2 months before typhoon season (August-September)	CSR / TNS/ NSE Superintendent/Master/Hook up Manager/Construction Manager
2. Readiness to receive PTTEP's official announcement of Typhoon season notification and wait for instruction	As above
3. To attend briefing and exercise from PTTEP if request. At least superintendent or barge admin/master or HSE.	Barge Admin / as above
4. To brief Typhoon evacuation procedure to all POB	Barge Admin/BARGE Master
5. Inspect of anchor handling tug, supply and BARGE to ensure state of readiness, all equipment secured. Water tight integrity of the vessel is inspected.	BARGE, AHT, Crew boat master
6. To prepare daily POB report of the marine spread	Barge Admin

In addition, the following actions are not included in PTTEP GMI but recommended by PTTEP EWP SSHE. TNS/ NSE & Barge Superintendent/ Master shall:

1. Assess and ensure all vessel equipments and systems are operating properly especially propulsions, navigation and communication items.
2. Arrange and complete maintenance and repair of any equipment or systems needing repair or that has been giving problems.
3. Ensure that all life safety equipments for max POB are in good serviceable condition.
4. Ensure adequate food supply onboard – one (1) month sustenance.
5. Ensure adequate bunker onboard – 70% of barge capacity; approximate 280,000 liters.
6. Brief Typhoon Evacuation Phase Actions to all POB.
7. Check and Ensure that all typhoon evacuation supplies are on hand and packed for vessel:
  - Sea sick pills



- Bottled drinking water
- Snacks / Halal Food suitable for all
- Rain coats
- Ear plugs
- Blankets / sleeping bags / pillows
- First aid supplies

#### 4.5 Communication

##### Radio

All offshore units and vessels in B3P keep a permanent watch on VHF international Marine Channel 8 (156.750 Mhz), 6 (156.300 MHz), 9 (156.450) MHz) respectively.

Drilling rigs and boats use HF/SSB when out of any Bongkot and Arthit VHF range (approximately 20 NM). PTTEP Phase 2 HF/SSB stations:

- On GBN Central Complex
- At Petroleum Support Base

PTTEP HF/SSB frequencies used are:

Hours	Frequency (KHz)	Remark
0000 - 2400	4,595	24 Hrs – Stand by frequency
0000 - 2400	3,785	Arthit Back up frequency
0000 - 2400	6,455	GBN Back up frequency
0000 - 2400	7,835	GBS Back up frequency

*Note: During TRS alert HF/SSB between GBN/GBS/ Arthit and Songkhla should be checked hourly.*

Aeronautical VHF/AM radio frequency in GBN, GBS and Arthit field is 129.450 KHz. Chevron has HF/SSB stations at Bangkok, Songkhla, Erawan, Satun, Funan and Platong.

Chevron frequencies are:

Hours	Primary Frequency (KHz)	Secondary Frequency (KHz)
0700 - 1700	8319	4400 / 4945 / 8711 / 8804.5
1700 - 0700	4400	8319 45 / 8711 / 8804.5



#### 4.6 Typhoon Evacuation Phase Actions

When Operation Alert has been declared, Construction Manager/Hook up Manager shall ensure that key personnel and all onboard the vessel are kept informed of the Typhoon Response Decisions made by PTTEP, Construction Manager/Hook up Manager and Vessel Master. The four condition Typhoon Operation Alert system is used.

These decisions shall be based upon:

- Local offshore weather and sea conditions that could prevent smooth operation
- The distance from the nearest offshore vessel operation, direction and path, severity and speed of the storm centre.
- The activities that are in progress at the time and the estimated time to secure prior evacuation.
- Information received from other vessels and offshore platforms.

#### 4.7 PTTEP Alert & Action Zones

Typhoon Operation Alert is signaled when the Typhoon Center reaches at the trigger point of the PTTEP TRS Plotting Chart (in Gulf of Thailand) Ring of each phase. Each condition of Typhoon Operation Alert is indicated by a colour Green, Yellow, Orange and Red.

PTTEP Alert Zone has been established on the basis of the estimated length of time required to safely implement adequate action (suspending well being drilled personnel evacuation, and vessel sail-away etc) The Alert Zones are as defined in table below.

Alert Zone	Nautical Miles From Offshore Asset	TC Travel Time to Offshore Asset (hours-days)		
		At 5 Knots	At 10 Knots	At 15 Knots
Grey (Pre-Alert)	960	192 (8 days)	96 (4 days)	64 (2.7 days)
Green	660	132 (5.5 days)	66 (2.8 days)	44 (1.8 days)
Yellow	560	112 (4.7 days)	56 (2.3 days)	37.3 (1.6 days)
Orange	460	92 (4 days)	46 (1.9 days)	30.6 (1.3 days)
Red	310	62 (2.6 days)	31 (1.3 days)	20.6 (0.9 days)

The recommended shelter location for supporting vessel/barge etc. is located between Pulau Perhentian Besar and Pulau Redang at Latitude 050 52' N Longitude 1020 53' E, or NORTH SHELTER: Koa Kut (Thailand), Latitude 110 38.0'N, Longitude 1020 32.0'E refer to B.A. Chart 3542.

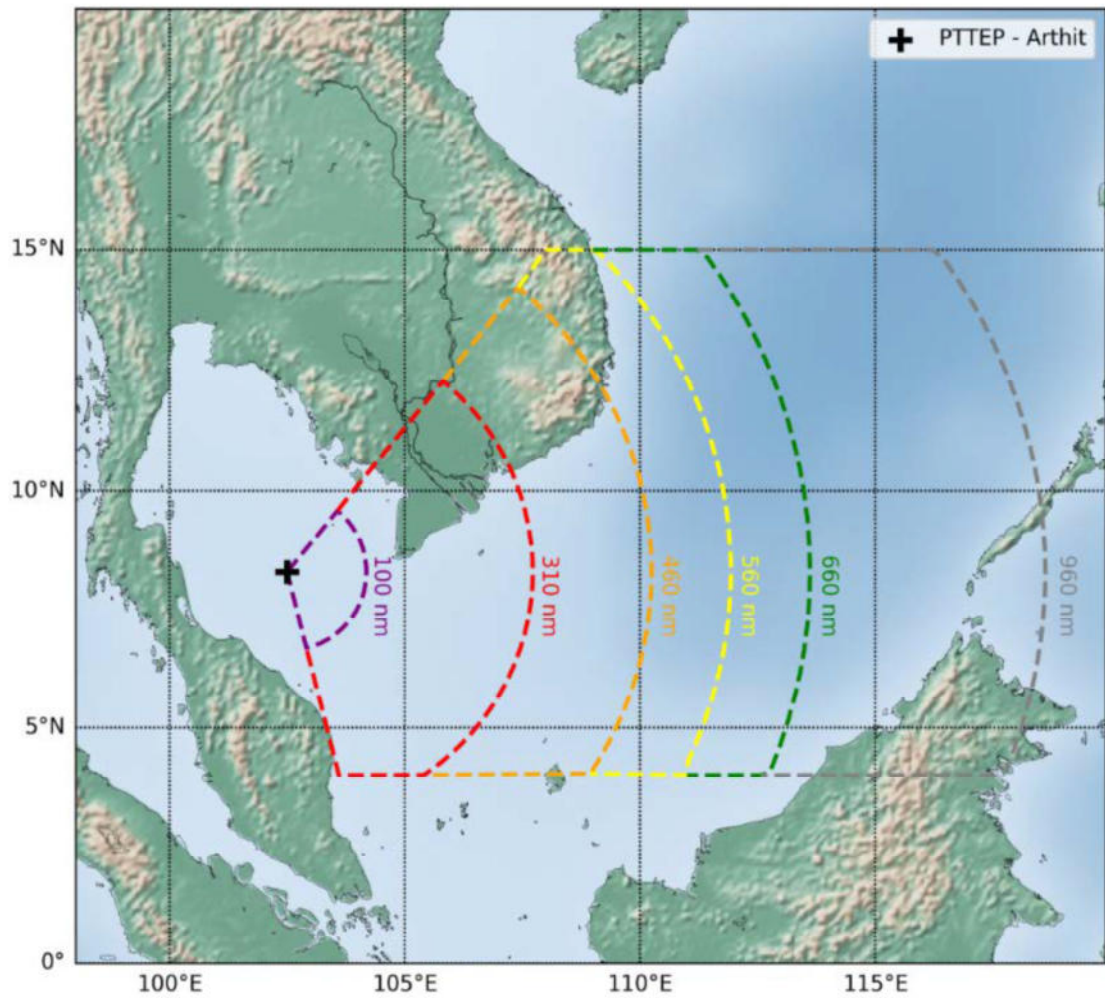


While sail away, regular reporting (3 hourly) of position and weather conditions should be made back to B3P and Songkhla by single site band (SSB).

*Note: Typhoon Evacuation Phase Actions to be published on board with prominent language Thailand and Bahasa.*



PTTEP TC Plotting Chart for Gulf of Thailand





**Grey (Pre-Alert) (960 NM)**

Grey (Pre-Alert) signal is the Tropical Cyclone located within 960 nautical miles of Arthit Field.

- Remain normal operations and keep monitoring weather forecast update/advice from Tropical Cyclone Advisor.
- Assess weather forecast at site/operation locations and allowable window to perform normal operations safely.
- Plan operations activities ahead in case of impact from the possible tropical cyclone
- Ensure POB list is up-to-date
- Consider to manage POB e.g. limit offshore traveling for visitors
- Notify all marine support vessels to be prepared and ready upon further update/advice.
- Begin/plan/prepare to implement specific site/facility Tropical Cyclone Plans e.g. securing works, clear deck space etc. as appropriate.
- Prepare well securing plan and drilling operations.

**GREEN ALERT (660 NM)**

Green Alert signal is the Tropical Disturbance or Depression that could develop into a Typhoon or Typhoon Centre reaches the minimum of the trigger point at 650 NM of the vessel operation location.

- POB issuance & increase frequency action update.
- Postpone planned work activities construction, maintenance, inspection
- Stop any works on remote wellhead platforms
- TNS / NSE offshore superintendant call meeting with CSR, Barge Master/Superintendent, AHT and crew boat.
- Issue meeting/action report (time-line based on distance time to potential impact) to agreed distribution list i.e. CSR, PTTEP EWP SSHE, PTTEP Typhoon Coordinator, Master of vessel TNS/ NSE SKL DPA (Logistic Support),
- Initial BARGE passage plan for shelter location and safe anchorage as defined in Section 0.
- Keep update the situation and close contact with CONSTRUCTION/HOOK UP MANAGER, CSR, PTTEP EWP SSHE, PTTEP Production Asset OIM, PTTEP Typhoon Coordinator, Master of vessel, TNS / NSE SKL DPA (Logistic Support), regarding preparation for adverse weather condition
- Typhoon tracking and weather updates are distributed with increased frequency, consistent with the Typhoon threat



- Re-evaluate the Critical Path Formula and to be constantly updated on the information derived.
- BARGE Master, Chief Officer onboard to ensure vessel and equipment is stowed corrected in anticipation of worsening sea conditions.
- All POB are briefed and prepared for possible Typhoon evacuation and are notified the group of demobbing.
- To preparation and confirm start evacuation/demobbing non-essential personnel (S Group).
- BARGE Master will closely monitor the weather and work being carried out and ensure it is safe to continue to do so.
- All equipment secured, not need onboard for work during the storm season is sent to ashore.
- Water tight integrity of the vessel is inspected.
- For BARGE and other vessels start securing barge and works.
- Consider both helicopter and crew boats for transportation of personnel ashore.
- BARGE, AHT and Crew boat Master to prepare sufficient food/drinking water and fuel.
- AHT prepare to assist BARGE for Emergency towing operation, if necessary and prepare for next alert level.
- TNS / NSE SKL DPA to prepare accommodation as recommended hotel in Section 4.11.1, transportation from jetty to hotel, Food & water & money, medical care.
- TNS / NSE BKK DPA to liaise with TNS/ NSE SKL DPA on additional resources mobilizing, if necessary.

#### **YELLOW ALERT (560 NM)**

Yellow Alert signal is the Tropical Disturbance or Depression that could develop into a Typhoon or Typhoon Centre reaches the minimum of the trigger point at 560 NM of the vessel operation location.

- POB issuance & increase frequency action update.
- Stop construction work activities
- Keep update the situation and close contact with CONSTRUCTION/HOOK UP MANAGER, CSR, PTTEP EWP SSHE, PTTEP Production Asset OIM, PTTEP Typhoon Coordinator Master of vessel, TNS/ NSE SKL DPA, TNS / NSE BKK DPA



- Initial BARGE passage plan for shelter location and safe anchorage which is defined in Section 0.
- Continue evacuation/demobbing Non-essential personnel (A Group) to Songkhla province
- Typhoon tracking and weather updates to be reviewed every 4 hours (minimum) and to increase frequency of updating consistent with the Typhoon's threat.
- Keep update the situation and close contact with CONSTRUCTION/HOOK UP MANAGER, CSR, PTTEP EWP SSHE, PTTEP Production Asset OIM, PTTEP Typhoon Coordinator, Master of vessel, TNS / NSE SKL DPA, TNS / NSE BKK DPA.
- Re-evaluate the Critical Path Formula and to be constantly updated on the information derived.
- Consider both helicopter and crew boats for transportation of personnel ashore.
- BARGE, AHT and Crew boat Master to prepare sufficient food/drinking water and fuel.
- AHT prepare to assist BARGE for Emergency towing operation, if necessary and prepare for next alert level.
- TNS / NSE SKL DPA to prepare accommodation as recommended hotel in Section 4.11.1, transportation from jetty to hotel, Food & water & money, medical care.
- TNS / NSE BKK DPA to liaise with TNS/ NSE SKL DPA on additional resources mobilizing, if necessary.

#### ORANGE ALERT (460 NM)

Orange Alert signal is the Tropical Disturbance or Depression that could develop into a Typhoon or Typhoon Centre reaches the minimum of the trigger point at 460 NM of the vessel operation location.

- POB issuance & increase frequency action update.
- Keep update the situation and close contact with CONSTRUCTION/HOOK UP MANAGER, CSR, PTTEP EWP SSHE, PTTEP Production Asset OIM, PTTEP Typhoon Coordinator Master of vessel, TNS/ NSE SKL DPA, TNS/ NSE BKK DPA.
- Maintain BARGE passage to safe area/ shelter location which is defined in Section 0.
- Continue evacuate/demob essential personnel (B group) to Songkhla province
- Radio, communications and equipment re-checked.
- Typhoon tracking and weather updates to be reviewed every 1 hour and to increase frequency of updating consistent with the Typhoon's threat.



- Re-evaluate the Critical Path Formula and to be constantly updated on the information derived.
- AHT prepare to assist BARGE for Emergency towing operation, if required and prepare for next alert level.
- TNS / NSE SKL DPA to prepare accommodation as recommended hotel in Section 4.11.1, transportation from jetty to hotel, Food & water & money, medical care.

TNS / NSE BKK DPA to liaise with TNS / NSE SKL DPA on additional resources mobilizing, if necessary.

### **RED ALERT (310 NM)**

Red Alert signal is the Tropical Disturbance or Depression that could develop into a Typhoon or Typhoon Centre reaches the minimum of the trigger point at 350 NM of the vessel operation location.

- POB issuance & increase frequency action update.
- Keep update the situation and close contact with CONSTRUCTION/HOOK UP MANAGER, CSR, PTTEP EWP SSHE, PTTEP Production Asset OIM, PTTEP Typhoon Coordinator Master of vessel, TNS / NSE SKL DPA, TNS / NSE BKK DPA.
- Maintain BARGE passage to safe area/ Shelter location which is defined in Section 0.
- If vessel is already in Shelter location, await further instruction before the Shelter location.
- Typhoon tracking and weather updates on a minimum hourly basis until Typhoon risk is over and stand-down is announced.
- Issuance of sea sick pills and extra safety equipment
- All equipment cranes, water tight doors, latches and vents are secured and sea fastened.
- Re-calculate vessel stability
- AHT prepare to assist BARGE for Emergency towing operation, if required.
- TNS / NSE SKL DPA to prepare accommodation as recommended hotel in Section 4.11.1, transportation from jetty to hotel, Food & water & money, medical care.
- TNS / NSE BKK DPA to liaise with TNS / NSE SKL DPA on additional resources mobilizing, if necessary.



#### 4.8 Typhoon Avoidance Considerations

In the event that a Typhoon approaches into the Gulf of Thailand, from the South China Sea, the following action should be taken by all vessels.

Moving to the North East under these conditions could put vessels into the Typhoon dangerous quadrant with heavy South Easterly swells with a long fetch to the South China Sea and strong North East winds at right angles to the swell.

The decision to deviate the vessel shall be made by Master in consultation with CSR, TNS/ NSE offshore superintendent, and CONSTRUCTION/HOOK UP MANAGER

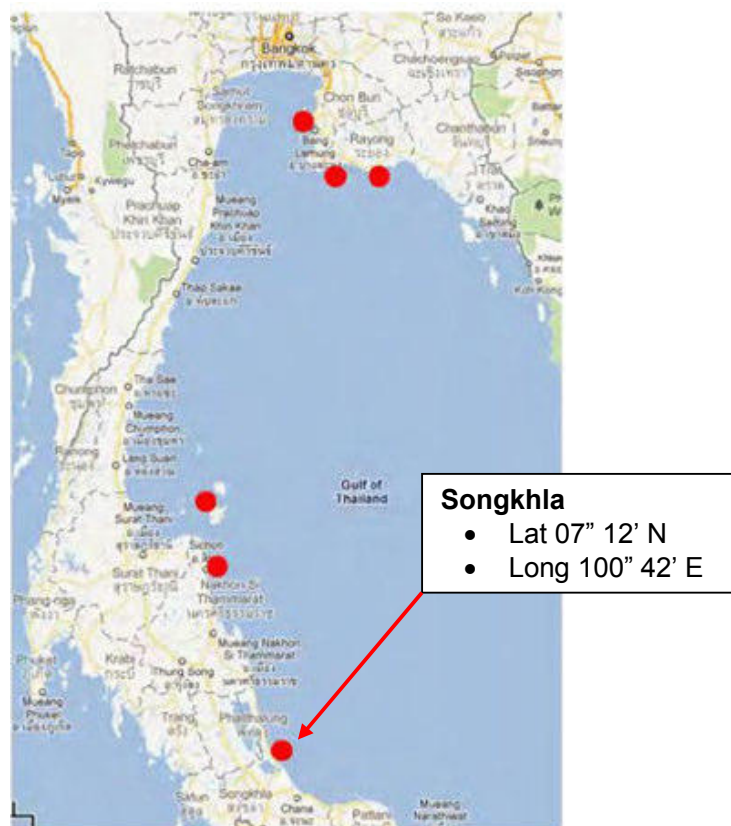
The basis of these decisions is:

- The South or left hand semi-circle of an approaching typhoon, in the northern hemisphere, is considered to be the navigable or safe semi-circle. Whereas the Northern or front right quadrant is considered to be the dangerous quadrant and should be avoided.
- By heading towards Songkhla, the winds/surface current should be assisting (astern and from the North).
- As the Typhoon approaches, these winds will 'back' to the WSW and assist vessel vessels moving down the coast towards Malaysia.
- Historically most Typhoons move in a W/WNW direction before recurring to the N/NE.
- By heading South, vessels will be moving out of danger.

The only exception to this course of action would be if a Typhoon or Tropical Storm was in such a position that it was between the vessel location area in the Gulf of Thailand and the proposed safe haven port of Songkhla. In this case, the vessels would move in a north easterly direction before turning south east to go round behind the Typhoon.



#### 4.9 Safe Area and Shelter Location Option



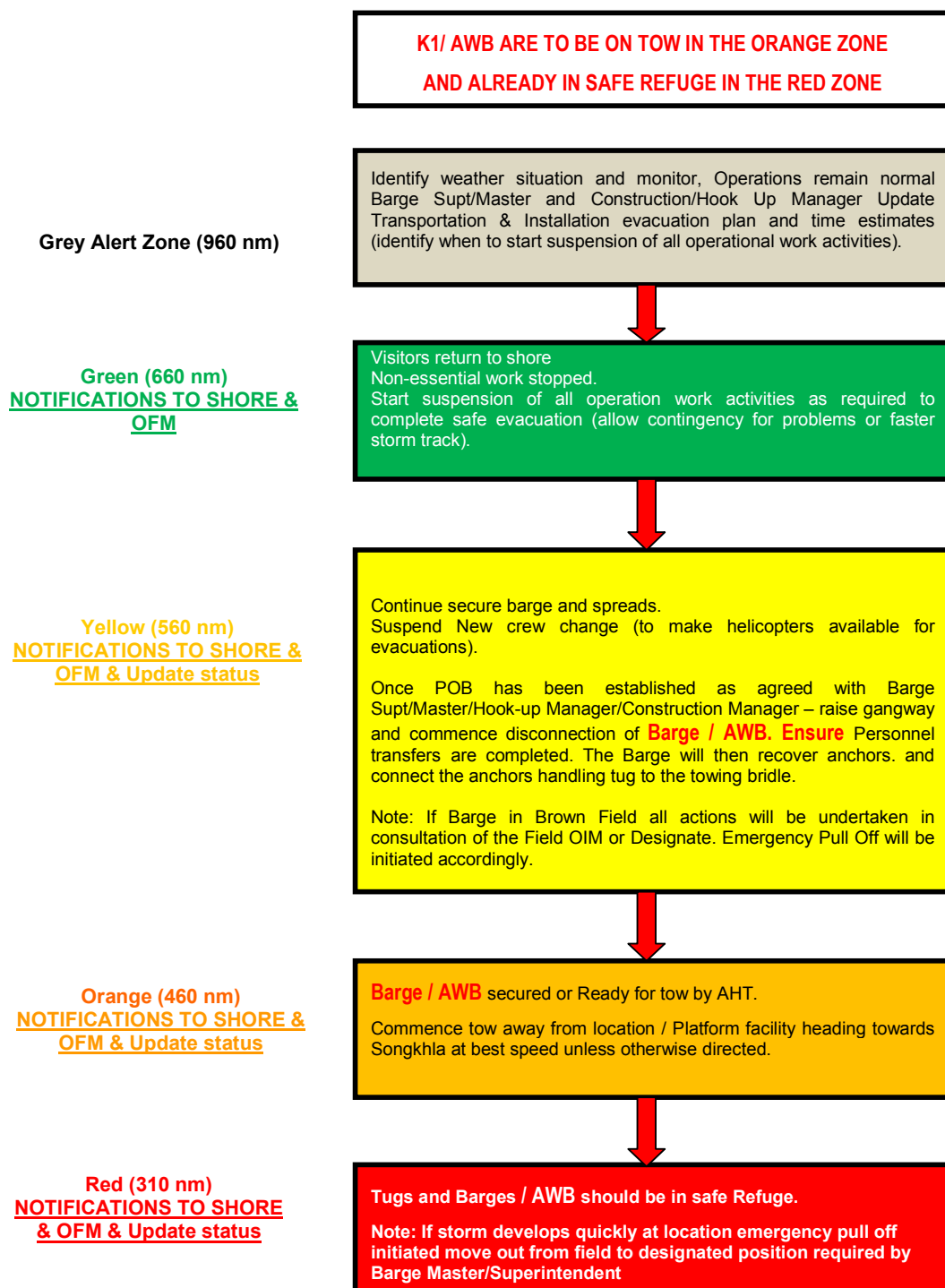
**Option 1:** All vessels will be demobilized to Songkhla province

**Option 2:** The recommended shelter location for supporting vessel/barge etc. is located between Pulau Perhentian Besar and Pulau Redang at Latitude 050 52' N Longitude 1020 53' E, or NORTH SHELTER: Koa Kut (Thailand), Latitude 110 38.0'N, Longitude 1020 32.0'E refer to B.A. Chart 3542.



#### 4.10 Typhoon Evacuation Guide for Vessel

##### TYPHOON EVACUATION GUIDE





## 4.11 Evacuation Personnel Recommendation

### 4.11.1 Accommodation

In case of personnel evacuated during Typhoon, TNS/ NSE prefer to arrange accommodation area at Songkhla as follows:

**First choice** - Pavilion Hotel Songkhla

17 Platha Road, Amphur Muang, Songkhla 90000 Thailand

Tel: +66(0)7444-1850 (up to 59)

Fax: +66(0)7432-3716

Email: songkhla@pavilionhotels.com

**Second choice** - Sun City Mansion

165/8 Talay Luang Road Bo Yang, Mueang Songkhla,  
Songkhla 90000 Thailand

Tel: +66(0) 7431-3888

Website: <http://www.suncityserviceapartmentsongkhla.com/>

**Third choice** - V Place Residence

251 Saiburi Rd., Boyang, Muang Songkhla, Mueang Songkhla,  
Songkhla, Thailand 90000

Tel: 074-311922 / 074-314090

Fax: 074-321678

E-mail: vplace.sk\_th@hotmail.com Attn K.Kesine

And another Hotel available in Songkhla area

- Green World Palace
- BP Samila Beach Hotel & Resort
- Haad Kaew Resort
- Hotels in Had Yai

*Note: If bed space is not sufficient due to other spreads and fields demobbing then TNS / NSE SKL DPA shall consult with TNS / NSE BKK DPA to source another Hotel or transport back to other cities.*



#### 4.12 Personnel On Board Demobilization

The following POB are recommended to demobilize as per Typhoon Evacuation Phase Actions, which can be consulted with CSR to replace/substitute person, if crew boat in field the demobilization will be considered.

##### A Group

1. Visitors
2. Construction crews

##### B Group

1. CSR
2. Safety officer
3. Logistic staff

The remaining personnel will be transferred together with BARGE to shelter location or demobilized to Songkhla province.

#### APPENDIX

APPENDIX 1 – FIELDS LAYOUT MAP

APPENDIX 2 – OFFSHORE EMERGENCY & TYPHOON COMMUNICATION NETWORKS

APPENDIX 3 – EMERGENCY BARGE PULL-OUT PROCEDURE

APPENDIX 4 – EMERGENCY BARGE TOWING PROCEDURE

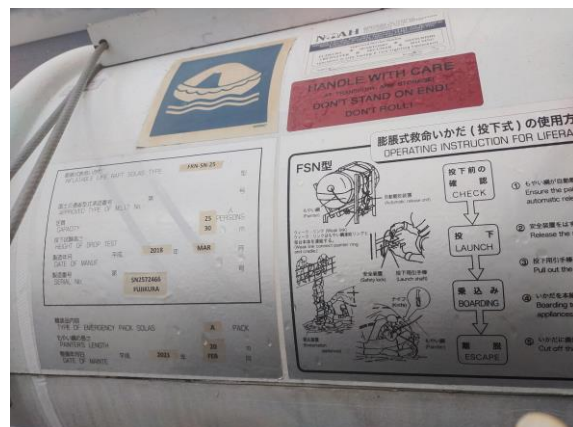


## เอกสารแนบที่ 116

ภาพถ่ายตัวอย่างอุปกรณ์ช่วยชีวิตที่ติดตั้งบนเรือที่ใช้ในการปฏิบัติงาน



ภาพถ่ายอุปกรณ์ช่วยชีวิตบนเรือที่ใช้ในการก่อสร้างและติดตั้งโครงสร้างในทะเลของโครงการฯ





## เอกสารแนบที่ 117

รายการตรวจสอบสภาพของอุปกรณ์ช่วยชีวิตที่ติดตั้งบนเรือที่ใช้ในการปฏิบัติงาน





**NIPPON STEEL ENGINEERING CO,LTD**  
S-SHE-Q DEPARTMENT  
DLB KUROSHIO-II  
IMO 8757336  
**LIFE RING/BOUY INSPECTION**

Date Inspected: November 2, 2021

**LIFE BOUY SMOKE AND SELF-IGNITING LIGHT**

NO	LOCATION	LINE	DATE MANUFACTURED	DATE EXPIRY	LOT NO.	Item No	REMARK
1	PORT SIDE MUSTER STATION	N/A	Oct-20	Apr-24	88	9537800	Good
2	STBD SIDE MUSTER STATION	N/A	Oct-20	Apr-24	88	9537800	Good

**LIFE BOUY WITH LINE AND SELF-IGNITING LIGHT**

NO	LOCATION	LINE	SELF-IGNITING LIGHT	Remark
1	PORT BOW	36 M	N/A	Good
2	PORT SIDE NEAR MAIN ENTRANCE DOOR	N/A	Visual Check	Good
3	PORT STERN	36 M	N/A	Good
4	STBD STERN	N/A	Visual Check	Good
5	STBD DECK NEAR CO2 ROOM	N/A	Visual Check	Good
6	STBD DECK NEAR F.O STATION	36 M	N/A	Good

Checked by :

ISM/ISPS Officer  
DLB Kuroshio II

Acknowledged by:

Barge Superintendent  
DLB Kuroshio II





**NIPPON STEEL ENGINEERING CO., LTD.**  
**DLB KUROSHIO II**  
**IMO 8757336**  
**S-SHE-Q DEPARTMENT**

**EMERGENCY ESCAPE BREATHING DEVICE (EEBD) INSPECTION**  
**For the Month of November 2021**

NO.	LOCATION	Tank Pressure Gauge Level	QUANTITY	NEXT REFILL
1	Engine Room (Port Side Staircase)	300bar (Full)	1	April 2022
2	Engine Room (Port Side Forward)	300bar (Full)	1	April 2022
3	Engine Room (Machinery Store)	300bar (Full)	1	April 2022
4	Engine Room (Panel Room)	300bar (Full)	1	April 2022

Date Inspected: **November 1, 2021**

Prepared & Inspected by:

Acknowledged by:

ISM/ISPS Officer  
DLB Kuroshio II

Barge Superintendent  
DLB Kuroshio II





**NIPPON STEEL ENGINEERING CO., LTD.**  
**DLB KUROSHIO II**  
**IMO 8757336**

**HELIDECK CRASH BOX INSPECTION**  
**For the Month of November 2021**

NO.	ITEM	QUANTITY	CONDITION
1	Fire Blanket	1 pc	Good
2	Sling with Eye and Hook	1 length	Good
3	Nylon Rope (30m)	1 length	Good
4	Axe with Long Handle	1 pc	Good
5	Axe with Insulated Handle	2 pcs	Good
6	Safety Harness	1 pc	Good
7	First Aid Kit	1 box	Good
8	Ear Muff	4 pcs	Good
9	Hacksaw Frame with blade	1 pc	Good
10	Hacksaw Spare Blades	6 pcs	Good
11	Bolt Cutter	1 pc	Good
12	Adjustable Wrench	1 pc	Good
13	Assorted Screw Drivers	1 set	Good
14	Cutting Plier	1 pc	Good
15	Emergency Torch Light	2 pcs	Good
16	Rope with Eye and Hook	1 length	Good
17	Crosby Shackle 2 tons	4 pcs	Good
18	Crosby Shackle 4.5 tons	3 pcs	Good
19	Crosby Shackle 6.5 tons	4 pcs	Good
20	Emergency grab Hook	1 pc	Good
21	Crow Bar	1 pc	Good
22	Fireman Suit	2 sets	Good
23	Helmet with Face Shield	2 sets	Good
24	Hand Gloves	2 pairs	Good
25	Rubber Boots	2 pairs	Good
26	Firefighting Hood	2 pairs	Good
27	Breathing Apparatus	1 set	Good
28	Emergency Access Ladder	2 pcs	Good
29	Ratchet Tie down with J hook (2"x 9.6m)	6 pcs	Good
30	Loader Vest	2 pcs	Good
31	Quick Release Knife	2 pcs	Good
32	Prohibit Landing Mark	2 pcs	Good

**Date Inspected: November 3, 2021**

*Breathing Apparatus Validity Date: April 2022*

Prepared & Inspected by:

Acknowledged by:

7

*ISM/ISPS Officer*  
*DLB Kuroshio II*

*Barge Superintendent*  
*DLB Kuroshio II*





**NIPPON STEEL ENGINEERING CO., LTD.**  
**DLB KUROSHIO II**  
**IMO 8757336**  
**S-SHE-Q DEPARTMENT**

**Firefighting Equipment Boxes Inspection**  
**For the Month of November 2021**

**LOCKER WITH FIREMAN'S OUTFIT (QUARTER DECK)**

NO.	ITEM	QUANTITY	CONDITION
1	Fireman Clothing ( Color Dark Blue )	2 sets	Good
2	Helmet With Face Shield	2 pcs	Good
3	Firefighting Hood	2 pcs	Good
4	Rubber Boots (New)	2 pairs	Good
5	Fireman's Hand glove	2 pairs	Good
6	Breathing Apparatus (BA) Sets	2 sets	Good
7	Axe (Short – Isolated Handle)	2 pcs.	Good
8	Axe (Long)	1 pc	Good
9	Crow bar	1 pc	Good
10	Flashlight	2 pcs	Good
11	Safety Rope	2 rolls (40m each)	Good

**LOCKER WITH FIREMAN'S OUTFIT (HOLD DECK)**

NO.	ITEM	QUANTITY	CONDITION
1	Fireman Clothing ( Color Dark Blue )	2 sets	Good
2	Helmet With Face Shield	2 pcs	Good
3	Firefighting Hood	2 pcs	Good
4	Rubber Boots (New)	2 pairs	Good
5	Fireman's Hand glove	2 pairs	Good
6	Breathing Apparatus (BA) Sets	2 sets	Good
7	Axe (Short – Isolated Handle)	2 pcs	Good
8	Crow bar	1 pc	Good
9	Axe (Long)	1 pc	Good
10	Flashlight	2 pcs	Good
11	Safety Rope	2 rolls (40m each)	Good

**LOCKER WITH FIREMAN'S OUTFIT (MAIN DECK)**

NO.	ITEM	QUANTITY	CONDITION
1	Fireman Clothing ( Color Dark Blue )	2 sets	Good
2	Helmet With Face Shield (New)	2 pcs	Good
3	Firefighting Hood	2 pcs	Good
4	Rubber Boots (New)	2 pairs	Good
5	Fireman's Hand glove	2 pairs	Good
6	Breathing Apparatus (BA) Sets	2 sets	Good
7	Axe (Short – Isolated Handle)	2 pcs	Good
8	Axe (Long)	1 pc	Good
9	Crow bar	1 pc	Good
10	Flashlight	2 pcs	Good
11	Safety Rope	2 rolls (40m each)	Good
12	Breathing Apparatus Cylinder (Spare)	7 cylinders	Good

**Date Inspected: November 2, 2021**

Prepared and Inspected by:

Acknowledged by: 

ISM/ISPS Officer

~~Sample Signature~~  
Barge Superintendent





**NIPPON STEEL ENGINEERING CO., LTD**  
**DLB KUROSHIO II**  
**IMO 8757336**  
**S-SHE-Q DEPARTMENT**

**FIRE HOSE INSPECTION**  
**For the Month November 2021**

NO.	LOCATION	HYDRANT	HOSE	NOZZLE	SPANNER	REMARKS	Date Inspected
1	Engine Room (Stbd side)	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021
2	Engine Room (Port side)	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021
3	A/C machine room	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021
4	FWD pump room	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021
5	Quarter deck FWD	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021
6	Quarter deck MID.	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021
7	Quarter deck AFT	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021
8	Winch Room PORT	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021
9	Winch Room STBD	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021
10	Rope Store	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021
11	Workshop	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021
12	Evaporator Room	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021
13	Port stern	2 outlet valves	2(2-1/2"x20m)	2	2	Good	1/Nov/2021
14	STBD Stern	2 outlet valves	2(2-1/2"x20m)	2	2	Good	1/Nov/2021
15	Tension Area	2 outlet valves	2(2-1/2"x20m)	2	2	Good	1/Nov/2021
16	Co2 Room	2 outlet valves	2(2-1/2"x20m)	2	2	Good	1/Nov/2021
17	Wire Store	2 out let valves	2(2-1/2"x20m)	2	2	Good	1/Nov/2021
18	Accomm. entrance	2 outlet valves	2(2-1/2"x20m)	2	2	Good	1/Nov/2021
19	Stbd Bow	2 outlet valves	2(2-1/2"x20m)	2	2	Good	1/Nov/2021
20	Port Bow	2 outlet valves	2(2-1/2"x20m)	2	2	Good	1/Nov/2021
21	A- deck	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021
22	B- deck	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021
23	Under Helideck	2 outlet valves	2(2-1/2"x20m)	2	2	Good	1/Nov/2021
24	Paint Store	2 outlet valves	2(1-1/2"x20m)	2	2	Good	1/Nov/2021

Prepared & Inspected by:

*ISM/ISPS Officer*  
*DLB Kuroshio II*

Acknowledged by:

*Barge Superintendent*  
*DLB Kuroshio II*





S-SHE-Q DEPARTMENT  
DLB KUROSHIO II  
IMO 8757336

## FIRE EXTINGUISHER INSPECTION

For the Month of November 2021

ID No.	LOCATION (code)	TYPE	Capacity	Service Date	Expiry Date	DOI
1	Derrick Crane 1 (DC 1)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
2	Derrick Crane 2 (DC 2)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
3	Derrick Crane 3 (DC 3)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
4	Derrick Crane 4 (DC 4)	ABC	5kg	Apr-21	Mar-22	1-Nov-21
5	Derrick Crane 5 (DC 5)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
6	Derrick Crane 6 (DC 6)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
7	Derrick Crane 6 (DC 6)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
8	D/ Crane Operator Seat (DCOS)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
9	Compressor Deck 1 (CD 1) - AFT side	ABC	4kg	Apr-21	Apr-22	1-Nov-21
10	Compressor Deck 2 (CD 2) - AFT side	ABC	4kg	Apr-21	Apr-22	1-Nov-21
11	Compressor Deck 3 (CD 3) - STBD side	ABC	4kg	Apr-21	Apr-22	1-Nov-21
12	Compressor Deck 4 (CD 4) - Bow A	ABC	4kg	Apr-21	Apr-22	1-Nov-21
13	Compressor Deck 5 (CD 5) - Bow B	ABC	4kg	Apr-21	Apr-22	1-Nov-21
14	Compressor Deck 6 (CD 6) PTSD side	ABC	4kg	Apr-21	Apr-22	1-Nov-21
15	Crane Tub Port Side (CTPS)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
16	Crane Tub Strbd Side (CTSS)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
17	Stinger Control Room (SCR)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
18	Port Side Main Deck 1 (PSMD 1)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
19	Port Side Main Deck 2 (PSMD 2)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
20	Port Side Main Deck 3 (PSMD 3)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
21	Main Battery Room (MBR)	ABC	5kg	Mar-21	Mar-22	1-Nov-21
22	Windlass Room (WR)	ABC	5kg	Mar-20	Mar-22	1-Nov-21
23	Deck Machinery Room 1 (DMR 1)	ABC	4kg	Apr-20	Apr-22	1-Nov-21
24	Deck machinery Room 2 (DMR 2)	ABC	25kg	Apr-21	Apr-22	1-Nov-21
25	Exit Door Port Stern (EDPS)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
26	Exit Door Strbd Stern (EDSS)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
27	Waste Disposal Room	ABC	5kg	Mar-21	Mar-22	1-Nov-21
28	Evaporator Room (ER)	ABC	5kg	Mar-21	Mar-22	1-Nov-21
29	Chemical Store (CS)	ABC	5kg	Mar-21	Mar-22	1-Nov-21
30	Work Shop	ABC	4kg	Apr-21	Apr-22	1-Nov-21
31	HPU	ABC	4kg	Apr-21	Apr-22	1-Nov-21
32	Winch Tunnel Port Side 1 (WTPS 1)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
33	Winch Tunnel Port Side 2 (WTPS 2)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
34	Winch Tunnel STBD Side 1 (WTPS 1)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
35	Winch Tunnel STBD Side 2 (WTPS 2)	ABC	4kg	Apr-21	Apr-22	1-Nov-21
36	Engine Room 1 (ER 1)	CO2	6.8kg	Apr-21	Apr-22	1-Nov-21



37	Engine Room 2 (ER 2)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
38	Engine Room 3 (ER 3)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
39	Engine Room 4 (ER 4) - Trolley Type		FOAM	45Liters	Apr-21	Apr-22	1-Nov-21
40	Engine Room 5 (ER 5)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
41	Engine Room 6 (ER 6)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
42	Engine Room 7 (ER 7)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
43	Engine Room 8 (ER 8)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
44	Engine Room 9 (ER 9)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
45	Hold Deck Passage 1 (HDP 1)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
46	Hold Deck Passage 2 (HDP 2)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
47	Hold Deck Passage 3 (HDP 3)		ABC	5kg	Mar-21	Mar-22	1-Nov-21
48	Hold Deck Passage 4 (HDP 4)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
49	Hold Deck Passage 5 (HDP 5)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
50	Fwd Pump Room (FPR)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
51	A/C Room 1 (A/CR 1)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
52	A/C Room 2 (A/CR 2)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
53	Clerk Store (CLERK S)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
54	Sewage Room (SR)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
55	Laundry Room		ABC	4kg	Apr-21	Apr-22	1-Nov-21
56	Galley 1 (G 1)		ABC	4 kg	Apr-21	Apr-22	1-Nov-21
57	Galley 2 (G 2)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
58	Galley 3 (G 3)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
59	Galley 4 (G 4)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
60	Galley 5 (G 5)		CO2	6.8kg	Apr-21	Apr-22	1-Nov-21
61	Mess Hall 1 (MH 1)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
62	Mess Hall 2 (MH 2)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
63	Accom. Passage Way 1 (APW 1)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
64	Accom. Passage Way 2 (APW 2)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
65	Accom. Passage Way 3 (APW 3)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
66	Accom. Passage Way 4 (APW 4)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
67	Accom. Passage Way 5 (APW 5)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
68	Passage Way A- Deck 1 (PWAD 1)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
69	Passage Way A- Deck 2 (PWAD 2)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
70	Conference Room (Conf R)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
71	Construction Managers Office (CMO )		ABC	4kg	Apr-21	Apr-22	1-Nov-21
72	Control Tower Room (CTR )		ABC	5kg	Mar-21	Mar-22	1-Nov-21
73	Below Helideck (BH)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
74	Fork Lift 1		ABC	4kg	Apr-21	Apr-22	1-Nov-21
75	Fork Lift 2		ABC	4kg	Apr-21	Apr-22	1-Nov-21
76	Zero Stage 1		ABC	5kg	Mar-21	Mar-22	1-Nov-21
77	Zero Stage 2		ABC	5kg	Mar-21	Mar-22	1-Nov-21
78	Zero Stage 3		ABC	5kg	Mar-21	Mar-22	1-Nov-21
79	Pipe Tunnel 1 (PT 1)		ABC	4kg	Apr-21	Apr-22	1-Nov-21



80	Pipe Tunnel 2 (PT 2)		ABC	5kg	Mar-21	Mar-22	1-Nov-21
81	Pipe Tunnel 3 (PT 3)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
82	Pipe Tunnel 4 (PT 4)		ABC	4kg	Apr-21	Apr-22	1-Nov-21
83	Pipe Tunnel 5 (PT 5)		ABC	5kg	Mar-21	Mar-22	1-Nov-21
84	Dark Room		ABC	4kg	Apr-21	Apr-22	1-Nov-21
85	Tensioner Area		ABC	5kg	Mar-21	Mar-22	1-Nov-21
86	Coating Station		ABC	5kg	Mar-21	Mar-22	1-Nov-21
87	Deck Store (1)		ABC	5kg	Mar-21	Mar-22	1-Nov-21
88	Deck Store (2)		ABC	5kg	Mar-21	Mar-22	1-Nov-21
89	Helideck 1 (HD1) - AFT Access		ABC	4kg	Apr-21	Apr-22	1-Nov-21
90	Helideck 2 (HD2) - AFT Access		ABC	4kg	Apr-21	Apr-22	1-Nov-21
91	Helideck 3 (HD3) - AFT Access		ABC	4kg	Apr-21	Apr-22	1-Nov-21
92	Helideck 4 (HD4) - Trolley Type - AFT Access		FOAM	45 Liters	Apr-21	Apr-22	1-Nov-21
93	Helideck 5 (HD5) - Trolley Type - AFT Access		ABC	25kg	Apr-21	Apr-22	1-Nov-21
94	Helideck 6 (HD6) - Trolley Type - AFT Access		ABC	50kg	Apr-21	Apr-22	1-Nov-21
95	Helideck 7 (HD7) - Bow Access		ABC	4kg	Apr-21	Apr-22	1-Nov-21
96	Helideck 8 (HD8) - Bow Access		ABC	4kg	Apr-21	Apr-22	1-Nov-21
97	Helideck 9 (HD9) - Bow Access		ABC	4kg	Apr-21	Apr-22	1-Nov-21
98	Helideck 10 (HD10) - Bow Access		FOAM	45 Liters	Apr-21	Apr-22	1-Nov-21
99	Helideck 11 (HD11) - Bow Access		ABC	25kg	Apr-21	Apr-22	1-Nov-21
100	Crawler Crane		ABC	4kg	Apr-21	Apr-22	1-Nov-21
101	Material Store		ABC	4kg	Apr-21	Apr-22	1-Nov-21
102	Viking Rescue Boat		ABC	4kg	Mar-21	Mar-22	1-Nov-21
103	KAMOME Work Boat		ABC	5kg	Mar-21	Mar-22	1-Nov-21
104	MHPU (1)		ABC	5kg	Mar-21	Mar-22	1-Nov-21
105	MHPU (2)		ABC	5kg	Mar-21	Mar-22	1-Nov-21
106	MHPU (3)		ABC	5kg	Mar-21	Mar-22	1-Nov-21
107	Dry Store		ABC	4kg	Mar-21	Mar-22	1-Nov-21
108	A Deck Sewage Room		ABC	4kg	Mar-21	Mar-22	1-Nov-21
FW01	Use Anywhere		ABC	4kg	Apr-21	Apr-22	1-Nov-21
FW02	Use Anywhere		ABC	4kg	Apr-21	Apr-22	1-Nov-21
FW03	Use Anywhere		ABC	4kg	Apr-21	Apr-22	1-Nov-21
FW04	Use Anywhere		ABC	4kg	Apr-21	Apr-22	1-Nov-21
FW05	Use Anywhere		ABC	4kg	Apr-21	Apr-22	1-Nov-21
FW06	Use Anywhere		ABC	4kg	Apr-21	Apr-22	1-Nov-21
FW07	Use Anywhere		ABC	4kg	Apr-21	Apr-22	1-Nov-21
FW08	Use Anywhere		ABC	4kg	Apr-21	Apr-22	1-Nov-21

TOTAL FIRE EXTINGUISHERS DEPLOYED

116

Prepared and Inspected by: 

Acknowledged by:



ISM/ISPS Officer

Barge Superintendent





**NIPPON STEEL ENGINEERING**  
S-SHE-Q Department  
DLB KUROSHIO II IMO 8757336

For the Month of November 2021

**MUSTER STATION LIFE JACKETS AND LIGHTS**

Date of Inspection: **November 5, 2021**

**PORT SIDE**

BOX NO.	QUANTITY	WHISTLE	LIGHT EXPIRY	REMARKS
1	26	OK	June 2023	Good
2	26	OK	June 2023	Good
3	26	OK	June 2023	Good
4	26	OK	June 2023	Good
5	26	OK	June 2023	Good

*Total Life Jacket with Lights*

**130**

**STARBOARD SIDE**


BOX NO.	QUANTITY	WHISTLE	LIGHT EXPIRY	REMARKS
6	25	OK	June 2023	Good
7	25	OK	June 2023	Good
8	26	OK	June 2023	Good
9	26	OK	June 2023	Good
10	26	OK	June 2023	Good

*Total Life Jacket with Lights*

**128**

Summary:

Port Side Muster Station	130
Starboard Side Muster Station	128
Diving Station (lights expiry-Year 2026)	28
Quarantine Rooms (lights expiry-Year 2026)	8
<b>Grand Total</b>	<b>294</b>

Prepared by: 

Acknowledged by: 

ISM/ISPS Officer

Barge Superintendent





# NIPPON STEEL ENGINEERING CO.LTD,

DLB KUROSHIO II

IMO NO 8757336

S-SHE-Q DEPARTMENT

## LIFE JACKET INSPECTION

For the Month of November 2021

Cabin No.	BUNK	No. of Life Jacket	Whistle	Light	Light Expiry Date
200	4	4	4	4	01-June-2023
201	4	4	4	4	01-June-2023
202	4	4	4	4	01-June-2023
203	4	4	4	4	01-June-2023
204	4	4	4	4	01-June-2023
205	4	4	4	4	01-June-2023
206	4	4	4	4	01-June-2023
207	4	4	4	4	01-June-2023
208	4	4	4	4	01-June-2023
209	4	4	4	4	01-June-2023
210	4	4	4	4	01-June-2023
211	4	4	4	4	01-June-2023
Cabin No.	BUNK	No. of Life Jacket	Whistle	Light	Light Expiry Date
212	4	4	4	4	01-June-2023
213	4	4	4	4	01-June-2023
214	4	4	4	4	01-June-2023
215	4	4	4	4	01-June-2023
216	4	4	4	4	01-June-2023
217	4	4	4	4	01-June-2023
218	4	4	4	4	01-June-2023
219	4	4	4	4	01-June-2023
220	4	4	4	4	01-June-2023
221	4	4	4	4	01-June-2023
222	4	4	4	4	01-June-2023
223	4	4	4	4	01-June-2023
224	4	4	4	4	01-June-2023
Cabin No.	BUNK	No. of Life Jacket	Whistle	Light	Light Expiry Date
225	4	4	4	4	01-June-2023
226	4	4	4	4	01-June-2023
227	4	4	4	4	01-June-2023
228	4	4	4	4	01-June-2023
229	4	4	4	4	01-June-2023
230	4	4	4	4	01-June-2023
231	4	4	4	4	01-June-2023
232	4	4	4	4	01-June-2023
233	4	4	4	4	01-June-2023
234	4	4	4	4	01-June-2023
Cabin No.	BUNK	No. of Life Jacket	Whistle	Light	Light Expiry Date
235	4	4	4	4	01-June-2023
236	4	4	4	4	01-June-2023
237	4	4	4	4	01-June-2023
238	4	4	4	4	01-June-2023
239	4	4	4	4	01-June-2023
240	4	4	4	4	01-June-2023
241	4	4	4	4	01-June-2023
242	4	4	4	4	01-June-2023
243	4	4	4	4	01-June-2023
244	4	4	4	4	01-June-2023
245	4	4	4	4	01-June-2023
Cabin No.	BUNK	No. of Life Jacket	Whistle	Light	Light Expiry Date
246	4	4	4	4	01-June-2023
247	4	4	4	4	01-June-2023
248	4	4	4	4	01-June-2023
249	4	4	4	4	01-June-2023
250	2	2	2	2	01-June-2023
251	2	2	2	2	01-June-2023
252	2	2	2	2	01-June-2023
253	4	4	4	4	01-June-2023
254	4	4	4	4	01-June-2023
255	4	4	4	4	01-June-2023
256	2	2	2	2	01-June-2023
257	2	2	2	2	01-June-2023



Cabin No.	BUNK	No. of Life Jacket	Whistle	Light	Light Expiry Date
258	2	2	2	2	01-June-2023
259	2	2	2	2	01-June-2023
260	2	2	2	2	01-June-2023
261	2	2	2	2	01-June-2023
262	2	2	2	2	01-June-2023
263	2	2	2	2	01-June-2023
264	1	1	1	1	01-June-2023
265	2	2	2	2	01-June-2023
266	2	2	2	2	01-June-2023
267	2	2	2	2	01-June-2023
268	2	2	2	2	01-June-2023
269	2	2	2	2	01-June-2023
270	2	2	2	2	01-June-2023
271	1	1	1	1	01-June-2023
272	1	1	1	1	01-June-2023
Cabin No.	BUNK	No. of Life Jacket	Whistle	Light	Light Expiry Date
101	4	4	4	4	01-June-2023
102	4	4	4	4	01-June-2023
103	4	4	4	4	01-June-2023
104	2	2	2	2	01-June-2023
105	4	4	4	4	01-June-2023
106	4	4	4	4	01-June-2023
107	4	4	4	4	01-June-2023
108	6	6	6	6	01-March-2026
A1	2	2	2	2	01-June-2023
A2	2	2	2	2	01-June-2023
A3	2	2	2	2	01-June-2023
A4	2	2	2	2	01-June-2023
B2	1	1	1	1	01-June-2023
B3	2	2	2	2	01-June-2023
B5	2	2	2	2	01-June-2023
B6	2	2	2	2	01-June-2023
Cabin No.	BUNK	No. of Life Jacket	Whistle	Light	Light Expiry Date
B7	4	4	4	4	01-June-2023
B8	4	4	4	4	01-June-2023
B9	4	4	4	4	01-June-2023
B10	4	4	4	4	01-June-2023
B11	4	4	4	4	01-June-2023
B12	4	4	4	4	01-June-2023
Location	Number Of Life Jacket		Whistle	Light	Light Expiry Date
Radio Room	4		4	4	01-June-2023
Engine Control	2		2	2	01-June-2023
Safety Office	6		6	8	01-June-2023
Engine Room	8		8	8	01-June-2023

Total No. of Life Jacket & Lights (CABIN)

**342**

Checked By:

Acknowledged by:

ISM/ISPS Officer

Barge Superintendent





# NIPPON STEEL ENGINEERING CO., LTD.

S-SHE-Q DEPARTMENT

DLB KUROSHIO 2

IMO 8757336

## PORT SIDE LIFERAFT

Inspected on: November 03, 2021

RAFT NO.	LOCATION	CAPACITY	SERIAL NUMBER	MANUFACTURER	DATE MANUFACTURED	PAINTER LENGTH	DROP HEIGHT	HAMMAR (HRU)	Valid until
1	Port Side	25 Persons	SN 2572645	FUJIKURA	Mar-18	20M	30M	2690/21	Apr-23
2	Port Side	25 Persons	SN 253017	FUJIKURA	Nov-08	20M	30M		
3	Port Side	25 Persons	SN 253012	FUJIKURA	Oct-08	20M	30M	2690/21	Apr-23
4	Port Side	25 Persons	SN 253659	FUJIKURA	Aug-09	20M	30M		
5	Port Side	25 Persons	SN 253323	FUJIKURA	Mar-09	20M	30M	2690/21	Apr-23
6	Port Side	25 Persons	SN 2572469	FUJIKURA	Mar-18	20M	30M		
7	Port Side	25 Persons	SN 251258	FUJIKURA	Aug-07	20M	30M	2690/21	Apr-23
8	Port Side	25 Persons	SN 2572466	FUJIKURA	Mar-18	20M	30M		
9	Port Side	25 Persons	SN 250447	FUJIKURA	Jun-06	20M	30M	2690/21	Apr-23
10	Port Side	25 Persons	SN 251261	FUJIKURA	Aug-07	20M	30M		
11	Port Side	25 Persons	SN 253014	FUJIKURA	Oct-08	20M	30M	2690/21	Apr-23
12	Port Side	25 Persons	SN 2572464	FUJIKURA	Mar-18	20M	30M		
13	Port Side	25 Persons	SN 2572468	FUJIKURA	Mar-18	20M	30M	2690/21	Apr-23

NEXT SERVICING FOR ALL LIFE RAFT IS SCHEDULED ON FEBRUARY 2022

Checked by :                     

ISM/ISPS Officer

Acknowledged by                     

Barge Superintendent





# NIPPON STEEL ENGINEERING CO., LTD.

S-SHE-Q DEPARTMENT

DLB KUROSHIO 2

IMO 8757336

## STARBOARD SIDE LIFERAFT

Inspected on: November 03, 2021

RAFT NO.	LOCATION	CAPACITY	SERIAL NUMBER	MANUFACTURER	DATE MANUFACTURED	PAINTER LENGTH	DROP HEIGHT	HAMMAR (HRU)	Valid until
14	STBD Side	25 Persons	SN 253015	FUJIKURA	Oct-08	20M	30M	2690/21	Apr-23
15	STBD Side	25 Persons	SN 250448	FUJIKURA	Jun-06	20M	30M		
16	STBD Side	25 Persons	SN 253013	FUJIKURA	Oct-08	20M	30M	2690/21	Apr-23
17	STBD Side	25 Persons	SN 250450	FUJIKURA	Jun-06	20M	30M		
18	STBD Side	25 Persons	SN 251259	FUJIKURA	Aug-07	20M	30M	2690/21	Apr-23
19	STBD Side	25 Persons	SN 257816	FUJIKURA	Dec-13	20M	30M		
20	STBD Side	25 Persons	SN 2572467	FUJIKURA	Mar-18	20M	30M	2690/21	Apr-23
21	STBD Side	25 Persons	SN 257815	FUJIKURA	Dec-13	20M	30M		
22	STBD Side	25 Persons	SN 253322	FUJIKURA	Mar-09	20M	30M	2690/21	Apr-23
23	STBD Side	25 Persons	SN 250451	FUJIKURA	Jun-06	20M	30M		
24	STBD Side	25 Persons	SN 250449	FUJIKURA	Jun-06	20M	30M	2690/21	Apr-23
25	STBD Side	25 Persons	SN 2572463	FUJIKURA	Mar-18	20M	30M		
26	STBD Side	25 Persons	SN 251260	FUJIKURA	Apr-07	20M	30M	2690/21	Apr-23

### Diver's Muster Station

27	Diver's Muster Station	25 Persons	SN 253324	FUJIKURA	Mar-09	20M	30M	N/A	N/A
----	------------------------	------------	-----------	----------	--------	-----	-----	-----	-----

NEXT SERVICING FOR ALL LIFE RAFT IS SCHEDULED ON FEB 2022

Checked by :                     

ISM/ISPS Officer

Acknowledged by                     

Barge Superintendent





# NIPPON STEEL ENGINEERING CO., LTD.

DLB KUROSHIO 2 IMO 8757336

## SAFETY CRITICAL EQUIPMENT MONITORING

As of November 2021

No	Item			Manufacture Date / Serial Number	Equipment Expiry	Location	Quantity	Certificate Expiry
1	Hand Flare (Ikaros) Lot No. 2117011, Ref No. 34 15 00			Oct-17	Oct-21	Bridge	6 pcs	July 3, 2024
2	Life Smoke MK9 (PainsWessex) Lot No. 146, Item No. 953700 Floating Distress Signal when Aircraft/Vessel Sighted ( Daytime Use Only)			Jul-20	Jan-24	Bridge	2 pcs	May 18, 2022
3	Red Hand Flare MK8 (PainsWessex) Lot No. 800, Item No. 9529000			Sep-20	Mar-24	Bridge	6 pcs	May 18, 2022
4	Line Thrower 250 (PainsWessex) Lot no. 249, Item No. container + line only 9500700			Oct-20	Apr-24	Bridge	4 pcs	May 18, 2022
5	Man Overboard Light & Smoke (MOB) MK9 PainsWessex Lot No.088, Item No. 9537800			Oct-20	Apr-24	Portside LR Station	1 pc	April 1, 2024
						Starboard LR Station	1 pc	
6	PARA RED ROCKET MK8A (Pains Wessex) Lot No.1238, Item No. 9506720 Hand Held Rocket Propelled Red Flare Distress Signal For Day or Night Use			Dec-20	Jun-24	Bridge	12 pcs	May 18, 2022
7	Hand Held Parachute Flare (Ikaros) Lot No. 200181, Ref. No. 34 01 00			Sep-20	Sep-24	Bridge	12 pcs	July 3, 2024
8	SART (Search and Rescue Transponder) Pathfinder Pro		SN: 09134717	Battery Expiry: January 2023		Bridge	2 pcs	September 21, 2025
			SN: 1893717					
9	EPIRB (Emergency Position Indicating Radio Beacon)		Global Fix Pro 406 MHZ GPS M/N RLB-37 Cat. I, FCC ID: B66ACR-RLB36, IC: 1322A-ACRRLB36E1, HRU Expiry: April 2023	N/A	Jan-25	Bridge	1 pc	October 21, 2024
			Global FIX V4 406 GPS Satellite UIN: 2C042D6900FFBFF Country : PANAMA (352)-MMSI: 093000/0 S/N: 349 Model: RLB-41 P/N: 2830.62	Dec-17	Battery Expiry: December 2027	Bridge	1 pc	January 1, 2025
10	Life Rafts <u>Portside:</u> 1. SN 2572645, 2. SN 253017, 3. SN 253012, 4. SN 253659, 5. SN 253323, 6.SN 2572469, 7. SN 251258, 8. SN 2572466, 9. SN 250447, 10. SN 251261, 11. SN 253014, 12. SN 2572464, 13. SN 2572468 <u>Starboard Side:</u> 14. SN 253015, 15. SN 250448, 16. SN 253013, 17. SN 250450, 18. SN 251259, 19. SN 257816 , 20. SN 2572467, 21. SN 257815, 22. SN 253322, 23. SN 250451 , 24. SN 250449, 25. SN 2572463, 26. SN 251260 <u>Diver's Station:</u> 27. SN 253324			N/A		Portside Muster Station	13 pcs	February 2022
						Starboard Muster Station	13 pcs	
						Diver's Station	1 pc	
11	SCBA ( Self Contained Breathing Apparatus)	Color Yellow 1.) 202167 UT, 2.) 218364 UT, 3.) 218347 UT, 4.) 218335 UT		Fenzy	N/A	Fireman's Equipment Boxes, Helideck Crash Box	4 pcs	March 18, 2022
		Color Gray/Black 1.) Q15489 UT; 2.) Q15474 UT; 3.) Q15445 UT; 4.) Q15233 UT; 5.) Q15206 UT; 6.) Q15498 UT; 7.) Q15424 UT; 8.) Q15486 UT; 9.) Q15251 UT; 10.) Q15434 UT; 11.) Q15429 UT		Spasciani Brand			11 pcs	April 15, 2022
12	Fire Extinguishers				N/A	refer to ISM report	141 pcs	March/April 2022
13	Emergency Escape Breathing Device (EEBD) SK 1203 Spasciani-300 Bar. 1.)JUL 4378, 2.)4488, 3.)JUL 4441 UT, 4.)JUL 4348			Mar-20	Mar-25	Engine Room	4 pcs	Year 2022
14	La Lizas Life Jackets with Lights					Muster Stations, Cabin Rooms & K2 Store	636 pcs	Lights Expiry: June 2023 & 2026
	Muster Stations 256 pcs	Cabin Room & Offices 336 pcs	Diving Station 28 pcs					

Prepared By:

Acknowledged by:

ISM/ISPS Officer  
DLB Kuroshio II

Barge Superintendent  
DLB Kuroshio II



## **เอกสารแนบที่ 118**

Gangway Design, Installation, Lifting and Management Procedure



# EPCI FOR AWP-39, ARTHIT PHASE 3D, G1/61 PHASE 1A & G2/61 PHASE 1A




## GANGWAY DESIGN, INSTALLATION, LIFTING AND MANAGEMENT PROCEDURE

Wellhead Platform Construction Project	
<input checked="" type="checkbox"/>	1. APPROVED
<input type="checkbox"/>	2. APPROVED (Proceed to AFC)
<input type="checkbox"/>	3. APPROVED with comments
<input type="checkbox"/>	4. APPROVED with comments (Proceed to AFC)
<input type="checkbox"/>	5. Not APPROVED
<small>COMPANY'S APPROVAL shall not relieve CONTRACTOR from his obligation under the CONTRACT. COMPANY's failure to comment or only partially comment any CONTRACT DOCUMENT shall not be considered as an acceptance of the content of the documents.</small>	
Signed: <i>Wuttipong P.</i>	Wuttipong Pongthip Project Engineer

C2	1-Jun-21	RH	Approved for Construction (AFC)	JC	TH		
C1	28-Sep-20	RH	Approved for Construction (AFC)	JC	TH		
A1	26-Aug-20	RH	Issued for Review (IFR)	JC	TH		
REV	DATE	By	DESCRIPTION	CHECK	APPR.	CHECK	APPR.
				CONTRACTOR APPROVAL		COMPANY APPROVAL	

REVISION CODE: A = Issued for Review, B = Issued for Approval, C = Approved for Construction, 00 = As-built

TOTAL OR PARTIAL REPRODUCTION AND/OR UTILIZATION OF THIS DOCUMENT ARE FORBIDDEN  
WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE OWNER

	PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED AND PTTEP INTERNATIONAL LIMITED PTTEP ENERGY DEVELOPMENT COMPANY LIMITED		 
	EPCI FOR AWP-39, ARTHIT PHASE 3D, G1/61 PHASE 1A & G2/61 PHASE 1A		
	TH-ART-3C-AWP39-SSHE-PDR-6121	REVISION C2	
	TH-ART-3D-GEN-SSHE-PDR-6121	C2	
	TH-G1-61-1A-GEN-SSHE-PDR-6121	C2	
	TH-G2-61-1A-GEN-SSHE-PDR-6121	C2	



## TABULATION OF REVISED PAGES

SHT. No.	REVISIONS							REMARK	SHT. No.	REVISIONS							REMARK
	A1	C1	C2							A1	C1	C2					
1	X	X							51			X					
2	X	X							52			X					
3	X								53			X					
4	X								54			X					
5	X								55			X					
6	X								56								
7	X								57								
8	X								58								
9	X								59								
10	X								60								
11	X							Attachment	61								
12	X							Attachment	62								
13	X							Attachment	63								
14	X								64								
15	X								65								
16	X								66								
17	X								67								
18	X								68								
19	X								69								
20	X							Attachment	70								
21	X								71								
22	X								72								
23	X							Attachment	73								
24	X								74								
25	X							Attachment	75								
26	X								76								
27	X		X						77								
28	X		X						78								
29	X		X					Attachment	79								
30	X		X					Attachment	80								
31	X		X						81								
32	X		X					Attachment	82								
33	X		X						83								
34	X		X						84								
35	X		X					Attachment	85								
36	X		X						86								
37	X		X						87								
38	X		X						88								
39	X		X						89								
40	X		X						90								
41	X		X						91								
42	X		X					Attachment	92								
43	X		X					Attachment	93								
44	X		X					Attachment	94								
45	X		X					Attachment	95								
46	X		X						96								
47			X						97								
48			X						98								
49			X						99								
50			X						100								



## TABLE OF CONTENTS

	Page
<b>1. PURPOSE .....</b>	<b>4</b>
<b>2. SCOPE .....</b>	<b>4</b>
<b>3. DEFINITION AND ACRONYM.....</b>	<b>4</b>
<b>4. REFERENCE DOCUMENTS .....</b>	<b>5</b>
COMPANY Specification and Procedure .....	5
Project Specification and Procedure .....	5
<b>5. GENERAL GANGWAY PROCEDURE .....</b>	<b>6</b>
Design 6	
Lifting 6	
Installation .....	6
Management.....	7
<b>6. RESPONSIBILITIES.....</b>	<b>7</b>
a. Construction / HUC Manager.....	7
b. Barge Foreman / Construction HUC Superintendent .....	7
c. Gangway Watcher .....	8
<b>7. WEATHER LIMITATION .....</b>	<b>9</b>
<b>8. GANGWAY ARRANGEMENT PROCESS.....</b>	<b>9</b>
<b>9. ATTACHMENTS.....</b>	<b>10</b>
Attachment 1: Gangway T&I Daily Inspection Checklists .....	11
Attachment 2: Gangway T&I Arrangement Lifting Arrangement .....	12
Attachment 3: Gangway T&I Calculation .....	13
Attachment 4: Gangway T&I Design Drawing .....	20
Attachment 5: Gangway T&I Installation Pictures.....	23
Attachment 6: Gangway T&I Certificates.....	25
Attachment 7: Gangway T&I Man-riding winch Drawing.....	29
Attachment 8: Gangway T&I man-riding winch Certificate.....	30
Attachment 9: Gangway HUC Arrangement Lifting Arrangement.....	32
Attachment 10: Gangway HUC Calculation.....	35
Attachment 11: Gangway HUC Design Drawing .....	42
Attachment 12: Gangway HUC Certificate .....	43
Attachment 13: Gangway HUC Pictures .....	44
Attachment 14: Go-No-Go Checklist Gangway Installation .....	45

□



**1. PURPOSE**

This procedure will define the requirements and application for Design, Installation, of Gangway at offshore.

**2. SCOPE**

This procedure is to be implemented for Green field (New platform) and Brownfield modification works (Existing Platform) applicable for PTTEP EPCI AWP-39, ARTHIT PHASE 3D, G1/61 PHASE 1A & G2/61 PHASE 1A offshore Project to comply with regulation to Install Gang way on offshore platforms.

**3. DEFINITION AND ACRONYM**

Terminology	Description
AHT	Anchor Handling Tug
AWB	Accommodation Work Barge
COMPANY	PTT Exploration and Production Public Company Limited (PTTEP)
CONTRACTOR	Nippon Steel Engineering Co. Ltd. (NSE)
AWB	Accommodation Work Barge (Hook Up Brown Field)
CPP	Central Processing Platform
CSR	Company Site Representative
Emergency Response	Define as Are the basic plans indicating action to be taken in event of an emergency; and are a set of rule that provide communication protocol, a list of actions and their priorities
FRC	Fast Rescue Craft
ERP	Emergency Response Plan
Emergency Situations	Unexpected condition resulting in fire, explosion, oil and/or chemical spill, gas escape, serious injury of fatality, structure damage, total evacuation, severe electrical storm, aircraft or vehicle crash, vessel collision or sinking, deliberate act of arson or sabotage etc., all of which require prompt action.
Installation Barge	T & I Barge
Man-riding	Suitable and third party certified for Personnel lifting
OIM	Offshore Installation Manager
PAR	Passenger Access Route
POB	Personnel on Board



Terminology	Description
SSHE	Security, Health, Safety and Environment
SUBCONTRACTOR	Thai Nippon Steel Engineering & Construction Corp. Ltd. (TNS)

#### 4. REFERENCE DOCUMENTS

##### COMPANY Specification and Procedure

Document Number	Document Title
PTTEP Corporate Standard	PTTEP Exhibit L: SSHE Requirement
SSHE-106-PDR-310	SSHE Contractor Management Procedure
SSHE-106-PRD-541	Lifting Operation Procedure
12147-GDL-SSHE-411-013-R02	Hazard Identification (HAZARD) Study Guidelines
11038-STD-SSHE-595-013-R01	Life Saving Rules
SSHE-106-STD-540	Operational Safety Management Standard

##### Project Specification and Procedure

References	Document Title
TH-G1-61-1A-GEN-SSHE-PDR-6114	Offshore ERP, MERP and Contingency Plan
TH-G1-61-1A-GEN-SSHE-PDR-6105	Offshore Project SSHE Rules
TH-G1-61-1A-GEN-SSHE-PDR-6112	Permit To Work and LOTO Procedures (Offshore)
TH-G1-61-1A-GEN-SSHE-PDR-6123	Typhoon Response (Offshore)
TH-G1-61-1A-GEN-SSHE-PDR-6118	Offshore Equipment Inspection, Certification and Maintenance Procedure
TH-G1-61-1A-GEN-SSHE-PDR-6124	SIMOPS Plan and Matrix (Offshore)

Remark: The document number mentioned above refers to the document number at the time of review or approval of this document. The number could be revised or updated when there is change or revision of the document



## 5. GENERAL GANGWAY PROCEDURE

### Design

Design is work instruction to install Gangway. The working instruction shall be included by Installation sequence, Lifting arrangement, Lifting Analysis, Reference document and HAZID mitigation subject by following content

#### Inbound of gangway overlap at swing rope landing area.

- Safety net to be install.
- Life Buoy positioned in the water with sufficient tether to compensate for tidal changes.
- Gap distance of gangway and landing area shall suit to person step or swing
- Gap shall be in good in board to be landing platform if floating into Platform and float over the landing area and be in board by 1 meter to 2meters at no time shall be there be a gap between the gangway and landing platform which is directly over water, at all times the GW / PAR shall be inboard of the vessel or a landing platform.
- Design shall be assessed considering the relevant mooring system of the vessel or barge, where applicable BUT shall ensure that the requirements of this procedure is applied at all times.
- The GW/ PAR shall not be modified or operation system changed without a formal management of change agreement with COMPANY.
- Proper Pre-site survey shall be undertaken by competent Rigger and structural Field Engineer. NSE of structural members undertaken as necessary.
- Safety sling installed in the event of lifting slings or winch wire slings fail

### Lifting

The lifting equipment shall be followed by Lifting arrangement as identify in work instruction subject by following content.

- Valid certified 3rd party Certificate lifting gear only as color code following PTTEP system.
- Valid certified 3rd party of certificate of Gangway (4 year load test and 6 monthly visual inspection) to "Offshore" standard
- Pad Eyes and lifting points to be machine cut, engineer designed, NDE cleared and third party certified.

### Installation

The gangway shall be installed at clear working area and should not be placed where cargo or other suspended loads may pass overhead or adequate safety controls established where may occur. After installation of the gangway, the gangway will be utilized as a main access from barge to work area and shall be as per the Approved Design.



A safety net should be mounted in way of the gangway where it is possible that a person may fall from the gangway. Such as the interface to landing platform. The end of the gangway shall be floating over the landing area or in board and a mobile scaffold shall be used to compensate for movements Gangway installation shall be performed as following the Installation sequence in work instruction. The T&I gangway which is fixed to the barge side will include certified man-riding winch.

The following personnel will be assigned during gangway installation to ensure compliance with the WI, SSHE Rule and lifting plan .

- Experience supervisor and concern persons
- Certified crane operator
- Certified riggers and crane signalman
- Certified scaffolder
- WOW Watcher

WOW watcher for work over water operations while installation / activities and adhere to SSHE Rule No. 20

### Management

After gangway installation. The gangway shall be manage in application of the following:

- Compliance with the Approved Work Instruction, Lifting Plan and JSA.
- Ensure trained gangway watcher is established for GW/PAR usage
- Unsafe condition and stop work policy implementation
- Go-No-Go checklist gangway Installation for Non Fixed type of gangway
- Monthly formal maintenance and Inspection by Electrical Technician and Mechanic for which and associate operating controls.

## 6. RESPONSIBILITIES

### a. Construction / HUC Manager.

Ensure that Gangway is designed, installed and operated as per approved procedure

### b. Barge Foreman / Construction HUC Superintendent

Ensuring that all of equipment shall be inspected and used as following the work instruction.

Ensuring that all of manpower understand about step and sequence for Gangway installation, removal and operation including the PTW, WOW, JSA, Lifting , Emergency (fall overboard, Injury) and SSHE Rule requirements,

Ensuring that all of manpower work in full compliance with COMPANY / Project safety requirement and SSHE standard including LSA, set up arrangements and emergency provisions.



Ensure a shift inspection with Gangway watcher / Deck Foreman, assigned competent personnel to enable adjustment of the gangway and deck receiving team to assist personnel and remind them of T-Card, PPE, Usage requirements

Test emergency pull off, recover all personnel to barge / vessel side (Muster) and lift Gangway to be clear of the landing platform after personnel recovery must be achieved within 15 minutes.

Ensure wire safety sling is established between gangway and lifting gear main shackle in event of failure

**c. Deck Receiving Team**

- Assist personnel when transferring
- Adjust Gangway with Watcher
- Stop visitors, escort and register them
- Remind personnel for T-Card and PPE requirements
- Remind limit of personnel max up to 5 pax per crossing on the gangway

**d. Gangway Watcher**

The gangway shall be monitored by competent gangway watcher.

Adequate training for the gangway watcher shall be given by SSHE Team annually.

The gangway watcher shall be assigned by Barge Superintendent / HUC Superintendent

The gangway watcher shall be equipped with high-visibility vest, whistle and VHF radio in continuous contact with bridge / tower

The gangway watcher shall be responsible for monitoring the activities on and around the gangway at all times ensuring that users follow safe work practices (i.e. name tag system, use of PPE) and no lifting or suspended load is passed over the gangway area when in use.

The gangway watcher shall monitor at all times when connection of gangway to platform.

Gangway watcher shall test the man – riding winch manual emergency brake function prior to use.

The gangway watcher shall be responsible for monitoring the operation of the gangway and for inspection of the gangway and associated fittings, equipment (i.e. winch, davit, guide rope, others) and reporting if to be adjusted.

Gangway watcher shall complete the shift check list (APPENDIX 1) and ensure he/she is only relieved by another trained WOW watcher when leaving for breaks or other matters  
Watcher must in situ continuously



Maximum number of personnel at any one time in one direct is 3 unless in emergency situations.

## 7. WEATHER LIMITATION

Crossing the gangway shall be subjected to weather and sea conditions. The weather forecast and radar on the bridge shall be constantly monitored by the gangway watcher in order to decide the timely recovery of personnel in case of adverse weather conditions. The gangway operation shall be suspended if weather limitation wind speed 20 Knots / 1.8 M wave and/ or the FRC / Work Boat cannot be launched to recover personnel from water in such instances transfer operations shall be suspended. .

Movement of gangway or vessel due to weather shall be monitored by Trained gangway watcher and if required, to stop using the gangway, disconnect all attachments (i.e. hoses) and report to the Tower/ Bridge for vessel/ barge adjustment.

## 8. GANGWAY ARRANGEMENT PROCESS

Gangway arrangement shall follow below steps:

- FRC has been function tested on field arrival, prior to GW installation.
- Applying and submit permit to work (JSA-GEN-002 GANGWAY INSTALLATION AND REMOVAL (BROWN FIELD AND GREEN FIELD) ).
- Safety Tool Box Meeting (Toolbox meeting). JSA review, Scaffolding (Work at Height), WOW and Lifting SSHE Rules, PTW requirements applied
- Set up lifting equipment (Lifting gears, Safety Net, LSA etc.) on Gangway and platform.
- Weather and safety condition shall be confirmed and monitored all time during lifting installation.
- FRC has been function tested on field arrival.
- Lifting operation to transfer gangway to designate area.
- LSA established, Gangway end is positioned in board of the Landing area (platform side) or Vessel/ Barge side
- Once gangway is in position, Check list completed with Shift Barge Deck Foreman and Gangway Watcher and if satisfied; Personnel transfers may commence
- All work vest have been inspected and positioned accordingly, all fitted with water activating light.



## 9. ATTACHMENTS

Attachment 1:	Gangway T&I & HUC Daily Inspection Checklist
Attachment 2:	Gangway T&I Arrangement Lifting Plan
Attachment 3:	Gangway T&I Calculation
Attachment 4:	Gangway T&I Design Drawing
Attachment 5:	Gangway T&I Installation Pictures
Attachment 6:	Gangway T&I Certificate
Attachment 7:	Gangway T&I Man-riding Winch Drawing
Attachment 8:	Gangway T&I Man-riding Winch certificate
Attachment 9:	Gangway HUC Lifting Arrangement
Attachment 10:	Gangway HUC Calculation
Attachment 11:	Gangway HUC Design Calculation
Attachment 12:	Gangway HUC Certificate
Attachment 13:	Gangway HUC Pictures
Attachment 14:	Go-No-Go Checklist Gangway Installation



## เอกสารแนบที่ 119

ภาพถ่ายถังกักเก็บน้ำมันประเภทต่างๆ บนเรือ DLB-K2



ภาพถ่ายถังกักเก็บน้ำมันชนิดต่างๆ บนเรือที่ใช้ในการก่อสร้างและติดตั้งโครงสร้างในทะเล  
ของโครงการฯ

1





## เอกสารแนบที่ 120

รายงานผลการฝึกซ้อมตามแผนตอบสนองต่อกรณีการรั่วไหล





## **EMERGENCY OIL SPILL DRILL REPORT**

**DRILL TYPE : EMERGENCY OIL SPILL DRILL**  
**VESSEL : DLB KUROSHIO II**  
**DATE/TIME : 25<sup>th</sup> September 2021 @ 16:00 hrs**  
**LOCATION : Below Helideck**

### **Drill Objectives:**

- To test the plan, equipment, and capabilities of the response team
- Provide the opportunity to practice skill that will be required in an emergency
- Identify challenges in executing roles and responsibilities

### **Scenario:**

While patrolling, two mechanics notice that the fuel tank helideck fire pump leak and spilled onto the deck.

They tried to contain the spillage but come to no available because it's too much and may spill into the sea if not contain. One of the mechanics immediately informed tower operator about the situation and tower operator immediately notified Chief Barge engineer and SSHE Team. Chief Barge Engineer then deploys Oil Spill Team to the spill location.

Barge Superintendent notify by Chief Engineer with regards to the situation and then Barge Superintendent notify Barge Foreman to check the scene in case any assistant needed. Barge Superintendent then informed Construction Manager and CM inform CSR onboard.

Once arrived at the scene, they cordoned the area by barricade tape and simultaneously don their PPE and prepared the oil spill kits (SOPEP). Then they proceed to contain the fuel Oil spillage before it could drop down and contaminate the sea.

Fuel oil spillage successfully contains and used SOPEP equipment dispose inside plastic bag for proper disposal.

### **DRILL STAND DOWN**





**NIPPON STEEL ENGINEERING CO., LTD**  
**SSHE Department**  
**DLB KUROSHIO & DLB KUROSHIO II**  
**EMERGENCY PREPAREDENESS & TRAINING RECORD**

**Key persons with terms used:**

Barge Superintendent (BS)	-	<b>Shimomura Yoji</b>
Chief Barge Engineer (CBE)	-	<b>Takeuchi Tsuyoshi</b>
Construction Manager (CM)	-	<b>Sasaki Shigeta</b>
Chief Mechanic	-	<b>Martin Labasan</b>
CSR	-	<b>Wuttipong Pongthip</b>
Barge Foreman (B/F)	-	<b>Angga Jaluck</b>
Tower Operator (T/O)	-	<b>Welson</b>
Safety Officer/ Marine Officer	-	<b>On Duty SO/ ISM/ ISPS</b>

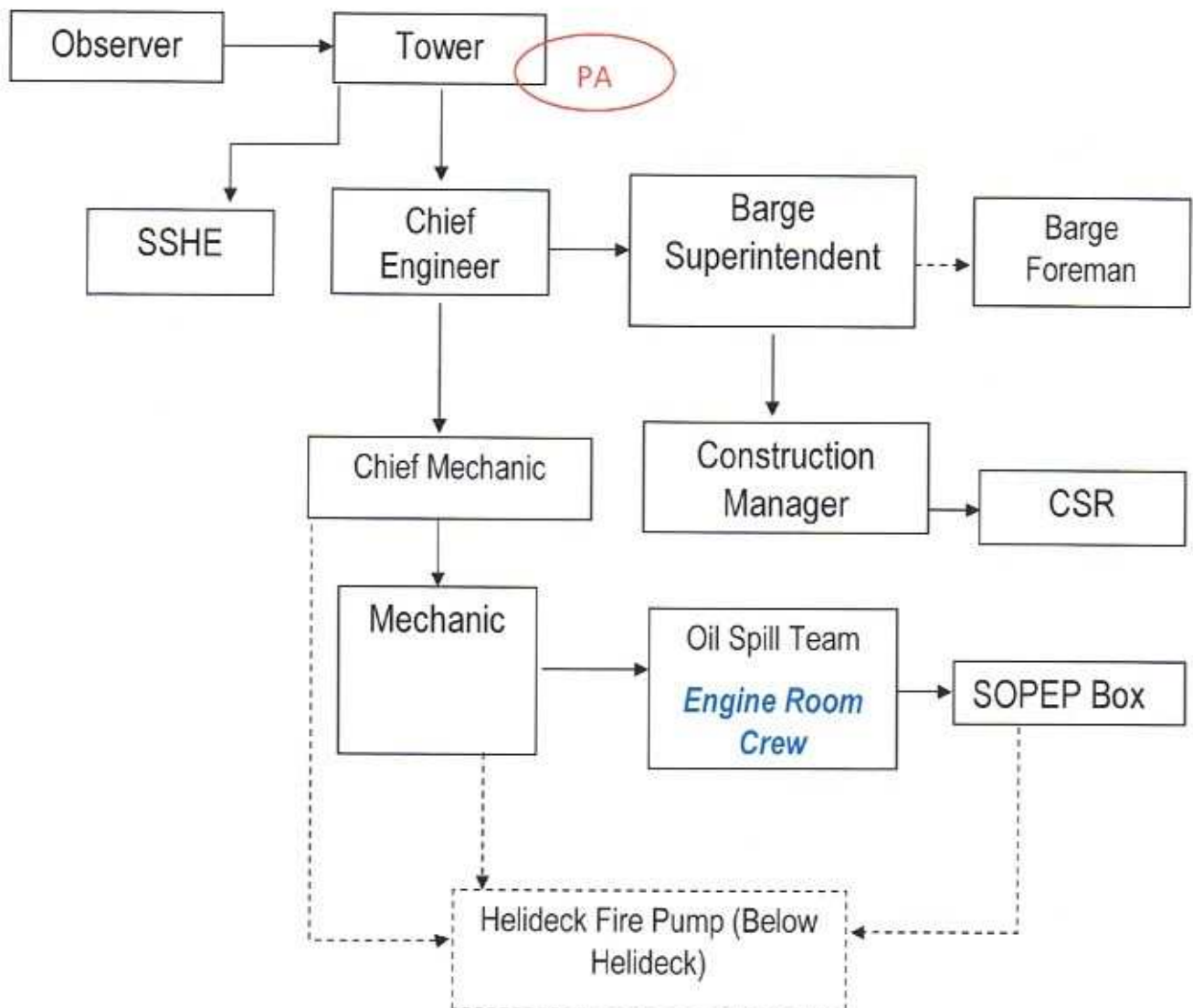
**OIL SPILL TEAM**

**Pylyn**  
**Eko Wijaksono**  
**Francisco R.**  
**Charles William**  
**Edwin Anyut**





### Oil Spill Drill Communication Flow Chart







NIPPON STEEL ENGINEERING CO., LTD  
SSHE Department  
DLB KUROSHIO & DLB KUROSHIO II  
EMERGENCY PREPAREDENESS & TRAINING RECORD

## **SEQUENCE OF EVENTS**

<b><u>Time</u></b>	<b><u>DESCRIPTION</u></b>
15:58 Hrs	<ul style="list-style-type: none"> <li>• Pre –drill briefing by SSHE personnel on the scenario</li> </ul>
16:04 Hrs	<ul style="list-style-type: none"> <li>• The drill commenced when the mechanics observed the helideck Fire pump fuel oil tank leaked and spilled onto deck.</li> <li>• One Mechanic tried to contain a spill but not success due to high amount of fuel oil.</li> <li>• One Mechanic immediately notified Tower Operator</li> <li>• Tower Operator notified Chief Barge Engineer &amp; SSHE Department and PA announcement carried out.</li> </ul>
16:05 Hrs	<ul style="list-style-type: none"> <li>• Chief Barge Engineer Informed Barge Engineer on the situation.</li> <li>• Chief Barge Engineer notified Barge Superintendent</li> <li>• Barge Foreman notified by Barge Superintendent.</li> <li>• Barge Superintendent informed Construction Manager</li> <li>• Construction Manager notified CSR onboard.</li> </ul>
16:06 Hrs	<ul style="list-style-type: none"> <li>• Barge Engineer together with Oil Spill Team members proceed to the scene.</li> <li>• Barge Engineer assess the situation and instructed his member cordoned the affected area.</li> </ul>
16:08 Hrs	<ul style="list-style-type: none"> <li>• Oil Spill Response Team donning spill response PPE</li> <li>• Oil Spill Response Team members started to recover the spill by using the oil absorbent pads and booms.</li> </ul>
16:12 Hrs	<ul style="list-style-type: none"> <li>• The spillage was completely cleaned and the used absorbent materials were properly disposed in tightly sealed into disposal bag.</li> </ul>
16:13 Hrs	<ul style="list-style-type: none"> <li>• Chief barge engineer notified barge superintendent and construction Manager that the situation is under control.</li> </ul>
16:13 Hrs	<ul style="list-style-type: none"> <li>• Drill Stand down, Debriefing session was held at the scene.</li> </ul>





NIPPON STEEL ENGINEERING CO., LTD  
SSHE Department  
DLB KUROSHIO & DLB KUROSHIO II  
EMERGENCY PREPAREDNESS & TRAINING RECORD

**Pictorial**



Pre-Drill briefing before start the drill



Observer report to the Control Tower



Oil Spill Response Team arrived the Scene



The spill response team deploy booms for containing a spill



Spill response team using absorbent pads to clean a spill



Spill response team using absorbent pads to clean a spill





**NIPPON STEEL ENGINEERING CO., LTD**  
**SSHE Department**  
**DLB KUROSHIO & DLB KUROSHIO II**  
**EMERGENCY PREPAREDENESS & TRAINING RECORD**





Used absorbent pads were disposed in sealed bags



Debriefing session conducted after the drill

**Comments:-**

- Excellent communication flow and immediate respond of the team were observed during Oil Spill Respond drill.
- The Spill Response Team well know how to mange and response the spill and know how to dispose the Hazardous waste.
- Spill response team to consider to close the nearest Smoking area and stop hot working (If any)

Prepared By :- 	Reviewed by :- 	Verified by :-	Acknowledged by :-
---	---	----------------	--------------------

<b>SSHE Lead</b> 	<b>Construction Manager</b>	<b>Barge Superintendent</b>	<b>PTTEP CSR</b>
---	-----------------------------	-----------------------------	------------------