- 4.0 HAZARD IDENTIFICATION, RISK ASSESSMENT AND DETERMINING CONTROL
 - 4.1 HAZARD IDENTIFICATION, RISK ASSESSMENT AND DETERMINING CONTROL PROCEDURE
 - 4.2 HAZARD IDENTIFICATION AND RISK ASSESSMENT

4.1 HAZARD IDENTIFICATION, RISK ASSESSMENT AND DETERMINING CONTROL PROCEDURE

1.0 PURPOSE

To define the principle and practice of OHS Hazard Identification and the importance of Risk Assessment and Determining Control.

2.0 SCOPE

This procedure applies to all workplaces (sites, premises, offices, premises of client/customer including personnel who are travelling or in transit) of WCT Berhad.

3.0 RESPONSIBILITIES

Safety & Health Committee (SHC) is responsible to

- ensure HIRAC activities and facilities are documented.
- consult with everyone concerned, to identify the potential hazards within the relevant workplaces.
- plan to eliminate or reduce the intolerable risk to an acceptable level.

4.0 PROCEDURES

4.1 General

Effective Risk Assessment shall consists of the following steps:

- 1. classify the work activities mapping out of work activities.
- 2. conduct hazard identification
- 3. determine the risk level
- 4. prepare risk control action plan for high risk activities
- 5. periodically review the adequacy and effectiveness of action plan (at least once in three (3) months).

4.2 Classify Work Activities

As preliminary to carry out risk assessment, Head of Department (HOD)/ HSSE Officer shall prepare a list of activities to identify the work activities, to group them in a rational and manageable way, and to gather necessary information about them. This shall include routine and non-routine activities. Possible ways of classifying work activities include:

- geographical areas within/ outside the workplaces.
- stages in the HIRAC activities and facilities (infrastructure, equipment, material).
- human behavior, capabilities and other human factors
- hazards originating outside the workplace
- changes or proposed changes in the company, management system, its activities, or materials
- planned and reactive work (maintenance, etc).
- emergencies (flood, electricity blackout, fire, etc).

PSP-WCT REV: 0

4.3 Conduct Hazard Identification

The SHC and respective personnel shall review the overall work activities and then verify on-site. For each verified work activity, SHC shall consult with respective process owner to identify the potential hazards and then record in a Hazard Identification & Risk Assessment Form.

4.4 Determine the Risk Level

The SHC shall review the identified hazards and evaluate the severity and probability/ likelihood of risk. From the identified activities with the highest hazardous score, the SHC will expand the activities into successive steps (routine & non-routine) to investigate, analyze the effects of the potential hazards and assess the level of risk using the risk level table defined under the followings.

Guide to Determine Risk Level

The risk level is established by assessing the severity of the risk and its probability/likelihood of occurring.

Severity

Level	Descriptor	Description
1	Negligible	First aid cases, low financial loss (≤RM 25,000.00)
2	Minor injuries	Medical treatment required and medical leave given by medical practisioner, medium financial loss (RM 25,000.00 < x ≤ RM 50,000.00)
3	Major injuries	Medical treatment required, loss of any of the parts or body or medical leave more than 1 month, high financial loss (RM $50,000.00 < x \le RM 100,000.00$)
4	Fatality	Death, huge financial loss (> RM 100,000.00)

Probability/Likelihood

Level	Descriptor	Description
1	Highly unlikely	Happen but probably never will (yearly)
2	Unlikely	Happen but only rarely (6 months once)
3	Likely	Occasionally (3 months once)
4	Very likely	Frequently (monthly)

Risk Level

Camananana	-	Likeli	hood	, <u>,</u>
Consequences	Very likely (4)	Likely	Unlikely	Highly Unlikely
Fatality (4)	High (16)	High (12)	High (8)	Medium (4)
Major Injuries (3)	High (12)	High (9)	Medium (6)	Medium (3)
Minor Injuries (2)	High (8)	Medium (6)	Medium (4)	Low (2)
Negligible (1)	Medium (4)	Medium (3)	Low (2)	Low (1)

1-2 = Low risk (no action required)

3-6 = Medium risk (additional control required)

7-16 = High risk (work should not be started until the risk has been reduced and all additional control are taken)

PSP-WCT REV: 0

4.5 Prepare Control Action Plan

The SHC shall work out an action plan by using Control Action Plan (CAP) to record any recommendation control actions, programme implementation and operational procedures when the risk is identified as unacceptable/ substantial. The acceptable/ substantial risk is defined as the risk that has been reduced to a level that can be endured by the organization having regard to its legal obligations and the company's OHS policy.

When determining controls, or considering changes to existing controls, consideration shall be given to reducing risks according to the following hierarchy:

- a) elimination
- b) substitution
- c) engineering controls
- d) signage/ warnings and/ or administrative controls
- e) personal protective equipment

4.6 Review of Action Plan

The hazards identification and risk assessment processes should be carried out continuously whenever there is significant threat and there is uncertainty in the effectiveness on the existing/ planned controls. Where possible, the action plan shall be reviewed once in three month or when there is any incident happened.

5.0 DOCUMENTATION

a) Hazard Identification & Risk Assessment form.

PSP-WCT REV: 0

4.2 HAZARD IDENTIFICATION AND RISK ASSESSMENT

<u>Civil Work</u>
Project Name:

HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

	•	IDENTIFY			ASSESS		ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	Risk	Actions & Recommendations			· cs
Tueinies, Equipment		·			RATING PRO SEV	:	PIC	DUE	STATUS

PRELIMINARY W	ORKS		· · · · · · · · · · · · · · · · · · ·	*							
SITE POSSESSION	N _.										
- Inspection	- Open Pit / Manhole of existing Structure - Existing Services : a) Electrical b) Water pipes	- Injury - Fatal - Biological Hazard	- PPE including long sleeve clothing's and boots	- FMA 24	4	1	4	N/A	N/A	N/A	N/A
	c) Sewerage - Traffic Accident - Animal / Insect Bites										
- Traveling from HQ to Site vice- versa & Site to HQ	- Motor vehicle accident.	- Injury - Fatal	- Crush Helmet - Observe road transport rules - Driving license - Vehicle maintenance	- Road Traffic Regulation (Highway code 46 and 51) - Road Traffic Act 26	4	1	4	N/A	N/A	N/A	N/A

Civil Work

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	-	IDENTIFY			. <i>A</i>	ASSES	S	C	ONTROL	- :	
Activities/ Process/	Hazard	Effect	Current Risk Control	Legal		Risk		Actions &		1	
Facilities/ Equipment	÷		• •	Requirement			<u></u>	Recommendations			ST
					SEV	PRO	RISK RATING		. PIC	DUE	STATUS
					<	.0	R A				S
		. <u></u>		·	1	1					L
SITE POSSESSION	(Cont'd)			•			•			•	
- Workers coming	- Contact disease	- Fatal	- Supervisors to	- OSHA Sec	4	1	4	N/A	N/A	N/A	N/A
in to work	- Hazard causes by	- Injury	ensure and check all	15							
·	others	- Disease	workers are free	. ,			!		·	,	٠.
;			form the influent of					•			
	,		drug, alcohol and		•					1 .	
			disease								
			- ERP for spread of	. "		١.					
			Disease								·
			·							1	
CALDA MAY AND AND		•	<u> </u>			<u> </u>					<u> </u>
SURVEY WORKS	- Animal / Insect	T-i	- Induction	- OSHA Sec	4	1 1	4	N/A	N/A	N/A	N/A
i)Clearing site for	Bites	- Injury - Fatal	- Tool box talks	15	⁴ .	. 1	"	IN/A	11/74	14/24	. 17/7
access way ii)Establish the	- Fall into manhole or	- raiai	- PPE	- FMA Sec					ļ		
station			-rre	24 Road	}						
iii)Establish the	pit - Trip			Traffic			.				
block.	- Sharp Edge			Act 26							
iv)Establish TBM	- Traffic Accident		,	ACI 20				••			
v)Establish OGL	- Hanne Accident										

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Date : 01/12/2009

		IDENTIFY			. 1	ASSES	S		ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	.,	Risk		Actions & Recommendations			ι co
					SEV	PRO	RISK RATING	•	PIC	DUE	STATUS
CIMPIC OF PLATA AND											
SITE CLEARANCI		T E 4.1	1 (4 - 3 (L OCITA C	ı i	1 1		3T/A		7-37/4	N/A
- Mobilization of workers	- Hysteria - Biological Hazard	- Fatal - Contact Disease	- Stress Management - Medical Check-Up	- OSHA Sec 15	4		4	N/A	N/A	N/A	N/A
- Mobilize Machinery	- Machine Topple	- Injury	- Induction - Toolbox talks - PPE (Safety Boots) - Competent Operator	- OSHA Sec 15 - FMA Sec 19, 24	. 2	1	2	N/A	N/A	N/A	N/A
- Remove trees & bushes	- Tree felling - Overhead cable / underground services - Machine collision - Noise / vibration	- Injury - Fatal - Hearing damages - Carpal Tunnel Syndrome	- Competent Operator - Supervision - Safe Operating Procedure - PPE	- OSHA Sec 15 - FMA Sec 19, 24		1	4	N/A	N/A	N/A	N/A
- Construct Access	- Machine Topple - Dust	- Injury - Fatal - Respiratory Disease	- Competent operator - Supervision / SOP - PPE	- OSHA Sec 15 - FMA Sec 19	4	1	4	N/A	N/A	N/A	N/A
- Delivering debris away from site	- Machine topple - Tree trunk fall on road	- Injury - Public Injury - Vehicle	- Competent Operator - Tool box talks - Supervision	- OSHA Sec 15 - FMA Sec 19	2	1	2	· · · · · N/A	N/A	N/A	N/A

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		DENTIFY			A	SSES	S	C	ONTROL	,	. "
Activities/ Process/	Hazard	Effect	Current Risk Control	Legal		Risk		Actions &			
Facilities/ Equipment		•	·	Requirement	ļ			Recommendations			ςγ
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	•			•						 ,	
OFFICE CONSTR	UCTION							,			
i)Mobilization of cabin / container	- Slip, Trip and Fall - Sling Snap	- Injury - Cabin damages	- Induction - Tool box talks - Trained operator - Supervision / PPE	- OSHA Sec 15 - FMA Sec 19	2	1	2	N/A	N/A	Ņ/Ψ `	N/A
ii)Unload and arranging container	- Crane topple - Sling Snap	- Injury - Fatal	- Crane PMA / Sling Inspection - Competent Operator - Signalman - Supervision	- FM (Notificati- on Cert of Fitness & Inspection) Reg. 10 - OSHA Sec 15 - FMA 19	4	1	4	N/A	N/A	N/A	N/A
iii)Roof work	- Falling from height - Sharp object / edges - Heat	- Injury - Stress	- Induction - Tool box talks - Safe working platform - Drinking water - PPE (Safety Harness)	- OSHA Sec 15	2	1	2	N/A	N/A	N/A	N/A

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		IDENTIFY				ASSES	S	C	CONTROL			
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations			S	
					SEV	PRO	RISK RATING		PIC	DUE	STATUS	
OFFICE CONSTRU						,		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			
iv)Construct Office	- Sharp object / edges - Chemical (glue/ thinner)	- Injury - Respiratory Disease	- Tool box talks - Supervision - Proper PPE (Mask)	- FMA 24	2	1	2	N/A	N/A	N/A	N/A	
v)Screeding	- Cement contact	- Skin Disease	- Tool box talks - PPE (Glove)	- FMA 24	2	1	2	N/A	N/A	N/A	· N/A	
vi)Office utility works	- Electrocution - Sharp object / edges - Fall from height - Short circuit / fire - Flying particles	- Injury - Fatal - Eye damages	- Inspection of tools - Concealed wiring - Safe work platform - Earthing with proper DB & ELCB - Fire Extinguisher - PPE (Goggles)	- FM (BOWEC) PART XVI - FMA 24 - FM (BOWEC) 24 - FM (PIC) 19, 20 - FM (SHW) 22	2	1	2	N/A	N/A	N/A	N/A	
vii)Sanitary & Sewerage works	- Sharp object / edges - Fall into pit	- Injury	- Barricade work area - Proper PPE	- FM (SHW) 8 - FMA 24	2	1	2	N/A	N/A	N/A	N/A	

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		IDENTIFY			AS	SESS	C	ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard .	Effect	Current Risk Control	Legal Requirement	SEV	RISK RATING PRO	Actions & Recommendations	PIC	. DUE	STATUS
					;			· · · · · · · · · · · · · · · · · · ·		

			,								
OFFICE CONSTR	UCTION (Cont'd)							1			
viii)Arrangement of office equipments and furniture	- Ergonomic	- Musculo- skeletal Disorder	- Tool box talks - Safe Work Procedure - Supervision - PPE	- OSHA Sec 15	2	1	2	N/A	N/A	N/A	N/A
	·										
ix)Site entrance / Drop gate / Swinging gate	- Sharp object / edges - Falling object - Fire (Spark cause by welding works - Electrocution	- Injury	- Induction - Toolbox talks - Hot Work Permit - Warning Signage's - Safety barricade - Fire Extinguisher - Electrical tools inspection - Supervision - Proper PPE	- OSHA Sec 15 - FMA 24 - FM (SHW) 8	2	1	2	N/A	N/A	N/A	N/A
x)Site Leveling	- Dust - Heat	- Respiratory Disease - Stress	- Dewatering - Proper PPE - Drinking water	- FMA 24	2	1	. 2	N/A	N/A	N/A	N/A
-					<u></u>				· · · · · ·	<u> </u>	<u> </u>

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		IDENTIFY		•		ASSES	S		CONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations			· s
2 Johnson 2 July 1990					SEV	PRO	RATING		PIC	DUE	STATUS
TIO A TOTAL OF THE	NOTAC	<u> </u>	······································				,,				1.
HOARDING & FE		Terisana	Industion	- OSHA Sec	2	1	1	N/A	N/A	N/A	N/A
i)Material delivery	- Material slip - Sharp object / edges	- Injury	- Induction - Tool box talks	15	2		2	IN/A	in/A.	IVA	18/7

HOARDING & FE	NCING	-1			,			•			
i)Material delivery	- Material slip - Sharp object / edges	- Injury	- Induction - Tool box talks - PPE	- OSHA Sec 15	2	1	2	N/A	N/A	N/A	N/A
ii)Erection of pre- fabricated steel column	- Material slip - Sharp object - Skin irritation - Fire (due welding work)	- Injury	- Tool box talks - Safety barricade - Warning signage's - Hot Work Permit - Fire Extinguisher - Tools inspections - Proper PPE	- FM (SHW) 8 - OSHA Sec 15 - FMA 24 & 26 - FM (BOWEC) PART XVI	2	1	2	N/A	N/A	N/A	N/A
iii)Fastening horizontal bars / braces for column	- Material Slip - Sharp object - Electrocution	- Injury	- Tool box talks - Warning signage's - Tools inspections - Proper PPE	- FMA 24 & 26 - FM (BOWEC) PART XVI	2	1	2	N/A	N/A	N/A	N/A

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	•	IDENTIFY			ASSESS	C	CONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	Risk	Actions & Recommendations			S
Tuenties, Equipment				Requirement	RISK RATING PRO SEV	rocommondations	PIC	DUE	STATUS

HOARDING & FE	NCING (Cont'd)		·	٠.				,			
iv)Installation of metal cladding to hoarding horizontal by bolting into column	- Falling object - Material Slip - Sharp object	- Injury	- Induction - Tool box talks - Proper PPE	- OSHA Sec 15 - FMA 24	2	. 1	2	N/A	N/A	N/A	N/A
v)Utility works	- Electrocution - Sharp object / edges - Falling from height - Short circuit / Fire - Flying particles	- Injury	- Tool box talks - Tools inspection - Safe working platform - Concealed wiring - Fire Extinguisher - Earthing with proper DB & ELCB - Proper PPE	- FM (BOWEC) PART XVI - FMA 24 - FM (BOWEC) 86 - FM (PIC) 19, 20 - FM (SHW) 21 - FMA 24	2	1	2	N/A	N/A	N/A	N/A
vi)Sanitary & Sewerage works	- Sharp object / edges - Fall into pit	- Injury	- Barricade work area - Proper PPE	- FM SHW Reg. 8 - FMA 24	2	1	2	N/A	N/A	N/A	N/A

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		IDENTIFY			I	ASSES			CONTROL		
Activities/ Process/ Facilities/ Equipment	.Hazard	Effect	Current Risk Control	Legal Requirement		Risk	, ' '	Actions & Recommendations			S
					SEV	PRO	RISK RATING		PIC	DUE	STATUS
PESTICIDE CONT			γ							· · · · · ·	,
- Fogging /	- Contact with	- Respiratory	- Induction	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
Larvaciding	Chemical	Disease	- PPE (Mask)	15			1 .				
	- Noise		- Fogging machine	- FMA 24	ļ.						
•	- Fire	:	maintenance	- FM (PIC)	25	·					
	·		- Proper storage	Reg. 19 &		,					1
			- Personnel Exposure	20			٠ .				
			Monitoring	- USECHH		•	, '				
•			- Fire Extinguisher	2000							į
	,	-		- CPL			·				
			·	- Pestiside							
	·			Act							•
		· · · · · · · · · · · · · · · · · · ·									
SECURITY						:					
i)Vehicles	- Hit by vehicle	- Injury	- Induction	- OSHA Sec	2	. 1	2.	, N/A	N/A	N/A	N/A
checking	- Dust	- Respiratory	- PPE	15			.				
•	·	Disease		- FMA 24				•		· .	
-					.:						
ii)Patrolling	- Fall into excavation	- Injury	- Warning Signage's	- FM (SHW)	2	1	2	N/A	N/A	N/A	N/A
, 5	area	-57	- Safety Barricade	Reg. 8	-	_				- " - "	
				- OSHA Sec	,		•			1.	
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Date : 01/12/2009

		DENTIFY			A	SSES	S	· · · C	ONTROL .		
Activities/ Process/	. Hazard	Effect	Current Risk Control	Legal	:	Risk	-	Actions &			
Facilities/ Equipment				Requirement			···	Recommendations			S
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CANTEEN & STO	RAGE YARD									·	
i)Leveling	- Dust	- Respiratory Disease	- Dewatering - Proper PPE	- OSHA Sec 15 - FMA 24	2	1	2	N/A	N/A	N/A	N/A
ii)Mobilization, setting up, Loading, Unloading, Laying & Arrangement	- Crane Topple - Caught in between - Sharp object - Heat - Ergonomic	- Injury - Fatal - Stress - Musculo -skeletal Disorder	 Induction Tool box talks PPE Drinking water Firm base for crane PMA and lifting gears inspection Competent Crane operator Crane Signalman 	- FMA Sec 24, 26 - FM (SHW) 7 - FM (PIC) 19, 20	4	1		 Use scaffold if any roof work is being carried out. Support the purlin with scaffold 	N/A	N/A	N/A
iii)Cooking & Heating	- Gas Leakage - Gas Explosion - Burn - Electrocution - Fire - Suffocation - Biological Hazard	- Injury - Fatal - Ill health	- Gas hose & tank, electrical appliances & cable in good condition - Adequate of fire extinguisher - Proper ventilation - Injection of typhoid - Provision of clean canteen operator	- OSHA Sec	4	1	4	N/A	N/A	N/A	N/A

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		DENTIFY			ASSESS	· C	ONTROL		
Activities/ Process/	Hazard	Effect	Current Risk Control	Legal	Risk	Actions &			
Facilities/ Equipment				Requirement		Recommendations	ļ ⁻ .		က္ခ
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CANTEEN & STO	RAGE YARD (Cont'd)										
iv)Storage platform	- Material collapse	- Injury	- Proper stacking of	- FMA 24, 26	3	1	3	N/A	N/A	N/A	N/A
timber or steel	- Slip, Trip & Fall		material								·
raised platform	- Penetration of sharp		- Control stacking			,		• : •			
material stacking	object		height			ĺ					
storage access			- Drum to be in								
			upright position					•			
•			- Proper drainage					•••	•		
			- Keep storage yard /						•	,	
		!	floor dry & oil free.								
	:	· ·	- Warning signage								
			- Housekeeping						2077		2711
v)Storage of	- Spillage	- Injury	- PPE	- FMA 24	. 3	1	3	N/A	· N/A	N/A	N/A
Chemical	- Fire	- Respiratory	- Proper stacking of	- CPL 1997		:					
	- Fumes	- Disease	material	- USECHH	٠.						
		- Skin	- Adequate	2000							
		Disease	ventilation								
			- Segregate storage			. •				٠,	
			- Classification		٠.,		·	,			
			- Packaging								
		· ·	- Labeling - Warning signage		, i						
1		•	- Fire Extinguisher								
			- CHRA, CSDS,								٠.
		*	MSDS								
			- Housekeeping								
L			110dbollooping				لـــــــــا				

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		IDENTIFY			ASSESS	C	ONTROL		
Activities/ Process/	Hazard	Effect	Current Risk Control	Legal	Risk	Actions & Recommendations			
Facilities/ Equipment				Requirement		Recommendations	PIC	טמ	TATS
					TING TING PRO		:	trī	. SD.
							<u></u>	<u> </u>	<u> </u>

FABRICATION YA	ARDS										
i)Leveling	- Dust	- Respiratory Disease	- Dewatering - Proper PPE	- OSHA Sec 15 - FMA 24	2	1	2	N/A	N/A	N/A	N/A
ii)Construct Timber Hut	- Sharp object - Falling object - Fall from height	- Injury	- Tool box Talks - Proper PPE	- OSHA Sec 15 - FMA 24	2	1	2	N/A	N/A	N/A	N/A
iii)Prefabrication of rebar / formwork		- Injury - Eye damages	- Tool box talks - Proper PPE - Safety Guard for expose area	- OSHA Sec 15 - FMA 24 & 26 - FM (FM&S) 1970 Reg. 4	2		2	N/A	N/A	N/A	N/A

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	IDENTIFY			ASSESS	S	C	ONTROL		
Activities/ Process/ Hazard Facilities/ Equipment	Effect	Current Risk Control	Legal Requirement	Risk PRO SEV	RISK RATING	Actions & Recommendations	PIC	DUE .	STATUS

GENERATOR SE	Γ.										
- Loading/ unloading and placement of the generator set	- Sling Snap	- Injury - Fatal	- Toolbox talks - Sling / Crane inspection - Competent crane operator - PPE	- OSHA Sec 15 - FMA 24 & 26 - FM (Notification Cert of Fitness & Inspection) 1970 Reg.10	4	1	4	N/A	N/A	N/A	N/A
- Use of generator set	- Smoke emission - Sharp object - Oil spillage - Electrocution - Suffocation - Noise	- Injury - Respiratory Disease - Hearing damages	- Oil Tray - Earthing - Adequate ventilation - Warning signage's - Inspection and Maintenance - Fire Extinguisher - PPE	- OSHA Sec 15 - FMA 24 - FM (BOWEC) 16 - FM (SHW) 22 - FM (PIC) 19, 20	2	1	2	N/A	N/A	N/A	N/A

Civil Work

HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM

Project Name: Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan. Package EW01 – Site Preparation, Earthworks and Main Drainage.

		DENTIFY		<u>, , , , , , , , , , , , , , , , , , , </u>	ASSE	SS	C	ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	Risi PRO SEV		Actions & Recommendations	PIC	DUE	STATUS

	<u> </u>			<u> </u>		٠.	-				
AIR COMPRESSO											т ::::::
- Loading/	- Sling Snap	- Injury	- Induction	- OSHA Sec	4	1	4 .	N/A	N/A	N/A	N/A
unloading and	- Tripped in between	- Fatal	- Tool box talks	15	ŀ						[
placement of the			- Sling / Crane	- FMA 24 &							
air compressor			inspection	26		,					
			- Competent crane	- FM							
•			operator	(Notificati-			.				l
			- PPE	on Cert of		i .		•			•
				Fitness &							
				Inspection)			. i				
		•		1970			,	•			
				Reg.10 - FMA 19				•	ļ.		
				- LIMIA 13					1	1.	
- Use of air	- Oil spillage	- Injury	- Drip Tray	- OSHA Sec	2	. 1	2	N/A	N/A	N/A	N/A
compressor	- Suffocation	- Hearing	- Inspection and	15		1	-	1447	1,117	1 - "	
Compressor	- Noise	damages	maintenance	- FMA 24		<u> </u>					
	- Hose & Coupling		- Valid PMT	- FM			·	•			
	failure		- PPE	(BOWEC)			l i		. ,		
İ	- Hose & Clamp			16	٠,				٠.		ŀ
	failure			- FM (SHW)				,	,		
	,			Reg. 22			ŀ	· ·			1
]	'		- FM (PIC)			' '	÷			
				19, 20						<u> </u>	

Civil Work

HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM

Project Name: Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan. Package EW01 – Site Preparation, Earthworks and Main Drainage.

Date

		DENTIFY			ASSESS		ONTROL		
Activities/ Process/	Hazard	Effect	Current Risk Control	Legal	Risk	Actions &			
Facilities/ Equipment	,			Requirement	 	Recommendations	. ,		٠ <u>۲</u> ۲
							PIC	פר	F A
				·	PRO ATT		1.0	Ę,	SOL
					^ ㅇ 줘지				0'
			<u> </u>				<u> </u>		

HEAVY EARTHW	VORK MACHINERIE	S			•						
- Delivery to site	- Traffic accident	- Injury	- Competent operator	- FMA 19	.2	1	2	N/A	N/A	Ν̈́ΛΑ	N/A
- Operation at site	- Overload - High Speed - Hydraulic failure - Collision	- Injury	- Induction - Tool box talks - Regular inspection and maintenance - Trained operator	- OSHA Sec 15 - FM (PIC) 19, 20	2	1	2	N/A	N/A	N/A	N/A
			- Supervision - Preventive maintenance				٠,				

Civil Work

HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM

Project Name: Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan. Package EW01 – Site Preparation, Earthworks and Main Drainage.

Date

		DENTIFY			ASSI	CSS	C	ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	Ris	k	Actions & Recommendations			S
		•			SE PR	RIS RATI		PIC	DUE	TATU
					¥ 0	NG X				S

TEMPORARY WO	ORKS						٠.				
- Edge Protection	- Falling object	- Fatal	- Induction	- OSHA Sec	4	1	4	N/A	N/A	N/A	N/A
(Installing &	- Fall from height		- Tool box talks	15				•			
Maintenance)	- Sharp edges / object		- Housekeeping	- FMA 24 &.			1	•			
			- Warning Signage's	26						,	•
			- Inspection &	- FM (SHW)	,	ļ			1		
	,		maintenance	23				• •			1
			- Proper PPE	- FM	,	,		,			
				(BOWEC)			1 . : .		1		
				55		:		· · · · · · · ·			
- Lighting	- Falling object	- Injury	- Induction	- OSHA Sec	4	/ 1	4	N/A	N/A	N/A	N/A
(Installing &	- Fall from height	- Fatal	- Tool box talks	15			1 .	•			
Maintenance)	- Electrocuted	- Musculo-	- Inspection &	- FMA 24 &							
	- Ergonomic	skeletal	maintenance	26		٠,	'				
		Disorder	- Ladder	~ FM				•			1
				(BOWEC)			i			,	
				PART IX							

Civil Work
Project Name:

HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

IDENTIFY			ASSESS	<u> </u>	CONTROL		
Effect	Current Risk Control	Legal	Risk	Actions &		•	
	•	Requirement	 	Recommendations			ς,
			਼ਰੀ ਜ਼ ਨੂਜ਼		PIC	DG	I A
			EV RC TH			17	S: I
	. •	```	` ~ ස් ^				
			Effect Current Risk Control Legal	Effect Current Risk Control Legal Risk Requirement SEV PRO RISK	Effect Current Risk Control Legal Risk Actions & Recommendations SEV PRO RATION	Effect Current Risk Control Legal Risk Actions & Recommendations SEV PRO	Effect Current Risk Control Legal Risk Actions & Requirement SEV PRO RECOmmendations PIC DEFINITION OF THE PROPERTY OF THE PR

							•	•			
TEMPORARY V	VORKS (Cont'd)				•		•				
- Temporary	- Falling object	- Injury	- Induction	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
Signage's	- Fall from height		- Tool box talks	15	•						
(Installation &	- Sharp edges / object	1	- Inspection &	- FMA 26		•	,				ļ
Maintenance)	- Slip, Trip		maintenance	• •	·					<u> </u>	
			- Proper PPE					•			
- Housekeeping	- Slip & Trip	- Injury	- Induction	- OSHA Sec	2	. 1	2	N/A	N/A	N/A	N/A
	- Fall from height	- Respiratory	- Tool box talks	15]	
	- Fire	Disease	- PPE (Mask)	- FMA 24 &		, ,]	
	- Sharp edges/object	1	- Warning Signage's	26]	
	- Falling object		- Railing / Barricade	- FM (SHW)				,			•
	- Dust	ŀ	- Fire Extinguisher	8 & 22		1			ļ	ĺ	
i ·			- Personnel Exposure			., .		,	.		
•			Monitoring				. ,	·			

Civil Work
Project Name: HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

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1	Ë	ST.
	PIC	PIC DUE

			 		·						
TEMPORARY W	ORKS (Cont'd)			·			·	. ·			
- Diesel Skid	- Penetration by sharp	- Injury	- Induction	- FMA 24, 26	2 .	-1	2	N/A	· N/A	N/A	N/A
i) Leveling &	object / edges	- Skin	- Tool box talks		·				1		
compaction of	- Chemical Hazard	Disease	- Compactor operated			,		•		·.	
Skid Tank	- Ergonomic	- Musculo-	by skilled personnel					•	:		
base, side	- Heat	skeletal	- PPE					,			
formwork,		Disorder	- Drinking water								
Reinforcement		- Stress	- Supervision								
of Skid Tank			- CSDS								
base,									·		
Brickwork /		,	"								
plastering			•			٠,					
SEN TOTAL	Falling Object	- Injury	- Induction	- FMA 24, 26	1	1	4	N/A	N/A	N/A	N/A
ii) Plinth (Concrete	Falling ObjectCrane topple	- Fatal	- Tool box talks	- FM (SHW)	4.	. 1	4	N/A	18/7	14/12	17/7
block)	- Slings & Shackle	- Palai	- Compactor operated	7				·	i		
installation,	failure		by skilled personnel	- FM (PIC)							
lifting, placing	Tarruro		- PPE	19, 20							
, paomy			- Inspection of lifting	15,20					A		
	,		appliances				٠.				
,			- Valid PMA &							,	
			competent operator	٠. ٠.							
					, ,			1			

Civil Work
Project Name: HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

Date

		IDENTIFY	•		· A	ASSES	<u>S</u>	. · · · · · · · · · · · · · · · · · · ·	ONTROL	•	
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	,	Risk		Actions & Recommendations			· S
					SEV	PRO	RISK		PIC	DUE	STATUS
TEMPORARY W	ORKS (Cont'd)				·	,					
iii) Roofing and Shade	- Fall from height - Falling object - Penetration of sharp object / edges	- Injury - Fatal - Stress	- Induction - Tool box talks - PPE - Drinking water	- FMA 24, 26 - FM (SHW) 7 -FM (PIC)	4	1	4	N/A	N/A	N/A	N/A
	- Heat		- Proper hand tools - Proper access	19, 20	-						

Civil Work
Project Name: HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

Date : 01/12/2009

		IDENTIFY.		· · · · · · · · · · · · · · · · · · ·	ASSESS		ONTROL		
Activities/ Process/	Hazard	Effect	Current Risk Control	Legal	Risk	Actions & Recommendations]
Facilities/ Equipment		•		Requirement	77	Recommendations	PIC	DI	STA
					RISK ATIN PRO PRO SEV		Pic	35	SUT
			,						

SILT TRAP & SED	IMENT BASIN			• • • • • • • • • • • • • • • • • • • •							
- Excavation,	- Existing Services:	- Injury	- Induction	- FMA 24, 26	2	1	2	N/A	N/A	N/A	N/A
leveling &	(a) Electrical	- Carpal	- Tool box Talks	- FM (SHW)							
compacting of	(b) Water pipes	Tunnel	- PPE / SOP	7				,			
base	(c) Sewerage	Syndrome	- Competent Machine	,	j	İ					
	- Struck by	•	Operator							-	
	machinery		- Keep away from								ŀ
	- Vibration	ŀ	swing area		٠.			•		1	
			- Supervision						·		
	- 1 1		T 1 1	777 64 04 06		. 1		DY/A:	DI/A	N/A	N/A
- Forming earth	- Struck by	- Injury	- Induction	- FMA 24, 26	. 2	1 1	2	N/A	N/A	IN/A	14/A
bund & perimeter earth drain	machinery		- Tool box Talks	- FM (SHW) 7						Ì	
earth drain			- Competent Machine	'						· ·	
			Operator		٠,		,				
			Operator	·			:		,		
- Maintenance of	- Struck by	- Injury	- Skilled machine	- FMA 24, 26	· 2 .	1	2 .	N/A	N/A	N/A	N/A
Sediment pond /	machinery		operator	- FM (SHW)							
Silt Trap	•		- Supervision	7							
	·						<u> </u>	,			<u> </u>

Civil Work
Project Name: Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

Date : 01/12/2009

Date '

		DENTIFY				ASSES	s	C	CONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations			S
гасинея Едириси		,	· .	Requirement	SEV	PRO	RISK RATING	Recommendations	PIC	DUE	STATUS
MACHINERY WO	RKSHOP & MAINTE	NANCE AREA	· · · · · · · · · · · · · · · · · · ·		•					•	
- Spare part storage	- Falling object	- Injury	- Induction	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
	- Sharp edges / object		- Tool box talks	15							
			- PPE	- FMA 24 &							
			 Supervision 	26		ł					

- Spare part storage	- Falling object	- Injury	- Induction	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
	- Sharp edges / object		- Tool box talks	15							
		i	- PPE	- FMA 24 &							
			- Supervision	26							
- Welding and	- Heat	- Injury	- Induction	- OSHA Sec	2	1	.2 -	N/A	N/A	N/A	N/A
Cutting .	- Fire	- Eye	- Tool box talks	15	'			. ·			
_	- Glare	damages	- Hot Work Permit	- FMA 24 &	· .	٠.					
	- Fumes	-Musculo-	- Fire Extinguisher	26	ľ						
	- Ergonomic	skeletal	- Warning Signage's	- FM (SHW)	l			'			
		Disorder	- Drinking water	8	1					1	
•			- Proper PPE	- FM (SHW)							
				22		<u> </u>					
- Maintenance	- Air pressure	- Injury	- Proper material	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
Works	- Ergonomic	- Musculo-	stacking	15	Į.						
 Tyre changing 		skeletal	- Administrative	- FMA 24 &		ŀ		•			
services		Disorder	control	26	ľ						
		- Back Injury			'					Ì	
										1	
	·				-			, ,			

Civil Work

HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM

Project Name: Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan. Package EW01 – Site Preparation, Earthworks and Main Drainage.

Date : 01/12/2009

		DENTIFY			ASSESS	C	ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	Risk	Actions & Recommendations			S
Taomacs, Equipment					RISK RATING PRO SEV		PIC	DUE	STATUS

Maintenance	- Heat	- Injury	- Proper material	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
Works	- Fire spark	25-7	stacking	15					,		
• Engine	- Caught in between	1 .	- Supervision	- FMA 24 &						٠,	
8			- PPE	26							
	·	,	- Fire Extinguisher	- FM							
				(BOWEC)	. '				,		
•				119				. '			
				- FM						4	
			·	(BOWEC)			,				
				148	,] .	
				- FM (SHW)		,		,		1	
				22	<u> </u>				27/1	1 2771	3.7/4
Maintenance	- Heat	- Injury	- Proper material	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
works	- Fire spark	1	stacking	15			•		•		
Change of	- Caught in between		- Supervision	- FMA 24 &							
chains, roller,			- PPE	26			•			1	
buckets, etc			- Fire Extinguisher	- FM							
		1	,	(BOWEC) 119							
•		1	,	- FM						} .	
		İ		(BOWEC)							
•				148		_					
				- FM (SHW)		,	1				
				22	1	1				,	

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Project Name:

HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

Date

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		IDENTIFY			A	SSES	S ·		ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations	. :		ςý
					SEV	PRO	RISK RATING		PIC	DUE	STATUS
	,										
MOBILE MACHIN	ERY WORKSHOP &	MAINTENAN	CE AREA								
- Mobile	- Vehicle overturned	- Injury	- Induction	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
maintenance	- Chemical	- Respiratory	- Tool box talks	15					Į	-	
		Disease	- PPE / MSDS /	- FMA 24 &		, .					1
		- Skin	CSDS	26							
	İ	Disease '	- Supervision	- FM				·			
			- Proper material	(BOWEC)	٠ ،			•			
			stacking / hand	119	·						
			tools	- FM		'					
			- Fire Extinguisher	(BOWEC)	· · ·						
				148			٠.				
•		·		- FM (SHW)					·		
	·			22							٠
- Diesel	- Spillage	- Injury	- Induction	- OSHA Sec	. 2	1	2	N/A	N/A	N/A	N/A
 Unloading from 	- Fire	- Respiratory	- Tool box talks	15		٠.					
. external	- Fumes	- Disease	- PPE / MSDS /	- FMA 24 &				,			
transporters	- Chemical	- Skin Irritant	CSDS	26	,						
(E.g. Petronas)			- Supervision	- FM (SHW)				-			
,			- Fire Extinguisher	22			; '				

Civil Work
Project Name: HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

Date

	-	IDENTIFY		· · · ·	A	SSES		C	ONTROL	·	
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	. Current Risk Control	Legal Requirement		Risk	ή-	Actions & Recommendations		·	S
					SEV	PRO	RISK RATING		PIC	DÚE .	STATUS
			,								
MOBILE MACHIN	VERY WORKSHOP &	MAINTENAN	CE AREA (Cont'd)								
Diesel Unloading to vehicles	- Spillage - Fire - Fumes	- Injury - Respiratory - Disease	- Induction - Tool box talks - PPE / MSDS /	- OSHA Sec 15 - FMA 24 &	2	1	2	N/A	N/A	N/A	N/A
	- Chemical	- Skin Irritant	CSDS - Supervision - Fire Extinguisher	26 - FM (SHW) 22						, .	
						, • , . ,					
	MACHINERY (Backl					, Rol					
Delivery to site	- Machine topple	- Injury	- Induction - Toolbox talks - PPE - Supervision	- OSHA Sec 15 - FMA 24 & 26	2	1	2	N/A	N/A	N/A	N/A
			- Supervision	- FM (BOWEC) 119							
			• •	- FM (BOWEC) 148 - FM (SHW)		•					

Civil Work
Project Name: HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

Date

		IDENTIFY	,	1.44	ASSESS	5	C	ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	Risk		Actions & Recommendations			S
					SE PR	RIS RAT!		PIC	DUE	TATUS
	, .		Α.		V 0	Z Z				

TRANSPORTING	MACHINERY (Back	khoe, Excavato	r, Dump Truck, Lorry	, Back pusher, Bu	lldozer,	Roll	er, Cı	rane, Motor Grade	r) (Cont'd)		
- Unloading heavy	- Machine topple	- Injury	- Induction	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
machine.			- Tool box talks	15							
			- PPE	- FMA 24 &					j.		
			- Supervision	26	.						
	,			- FM	.					1	l
				(BOWEC)	.].						ŀ
•				119				· ,	, ,		1
			,	- FM		.				1	·
				(BOWEC)		.,				1.	
			,	148	1 1	,,		• • •			
				-FM (SHW)	1"]	}			1		
				22							

Civil Work
Project Name: HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

Date

		IDENTIFY		• ; • •	I	ASSES	S.	C	ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations		b	ST,
					SEV	PRO	RISK		PIC	рив	STATUS
LABORATORY A	CTIVITY							· · · · · · · · · · · · · · · · · · ·			
Field Test	- Animal / Insect bites - Hit by vehicle - Hit by tools	- Injury - Respiratory - Disease - Skin	- Induction - MSDS / CSDS - Tool box talks - Proper PPE	- OSHA Sec 15 - FMA 24 & 26	2	1	2	N/A	N/A	N/A	N/A
	- Chemical - Heat	Disease - Stress	- Supervision - Drinking water	- FM (BOWEC) 148			•				
Laboratory Test	- Cube crushing - Wrong tools - Fire (Oven)	- Injury - Equipment damages	- Induction - Tool box talks - PPE / SOP - Supervision - Proper material stacking - Proper hand tools - Fire Extinguisher	- OSHA Sec 15 - FMA 24 & 26 - FM (BOWEC) 119 - FM (BOWEC)	2	1.		N/A	N/A	N/A	N/A
:				148 - FM (SHW)						1	ļ

Project Name: Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

	:										
		IDENTIFY				ASSES	SS		ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations			co.
		·			SEV	PRO	RISK RATING		PIC	DUE	STATUS
RIVER DIVERSIO	N					.				·	
- Diversion & clearing of river excavation	- Drowning - Soil collapse - Existing underground services - Excavator mechanical failure	- Fatal	- Induction - Tool box talks - Supervision - Proper PPE - Warning signage's - Inspection & maintenance	- OSHA Sec 15 - FMA 24 & 26 - FMA 19 - FM (PIC) 19, 20	4	1	4	N/A	N/A	N/A	N/A
ROCK BLASTING					· .				· · · · · · · · · · · · · · · · · · ·		· · · · ·
- Delivery of explosive material	- Vehicle collision - Explosion	- Fatal	- Induction - Tool box talks - Designated person - Proper PPE - Warning signage's	- OSHA Sec 15 - FM (BOWEC) 135 - FMA 26	:	1	4	N/A	. N/A	N/A	N/A

Civil Work

HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM

Project Name: Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan. Package EW01 – Site Preparation, Earthworks and Main Drainage.

		IDENTIFY			ASSESS			CONTROL				
Activities/ Process/ Facilities/ Equipment	Hazard	Effect Current	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations	PIC		[[a	
					SEV	PRO	RISK RATING			and	STATUS	
			-		7 /	:	٠,	· .		• .		
ROCK BLASTING	(Cont'd)								,	•		
- Storage	- Explosion	- Fatal	- Induction - Tool box talks - Designated person	- OSHA Sec 15 - FM	4	1	4	N/A	N/A	N/A	N/A	
			& storage area - Proper PPE - Warning signage's	(BOWEC) 135 - FMA 26		· .						
].							
- Drilling works	- Dust - Noise - Silica - Vibration	- Respiratory Disease - Hearing damages	- Induction - Tool box talks - Safety barricade - Proper PPE	- OSHA Sec 15 - FMA 24 & 26	2	1	2	N/A	N/A	N/A	N/A	
	- Heat	- Carpal Tunnel Syndrome - Stress	- Warning signage's - Supervision	- FM (SHW) 8								
- Setting of explosive	- Explosion	- Fatal	- Induction - Tool box talks - Proper PPE	- OSHA Sec 15 - FMA 26	4.	1	4	N/A	N/A	N/A	N/A	
	. ,		- Warning signage's - Supervision	- FM (BOWEC)	• :				·.			

Civil Work

HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM

Project Name: Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan. Package EW01 – Site Preparation, Earthworks and Main Drainage.

į	ч		IDENTIFY			ASSESS	C	CONTROL		
	Activities/ Process/	Hazard	Effect	Current Risk Control	Legal	Risk	Actions &			
	Facilities/ Equipment			•	Requirement		Recommendations			\cdot \cdot
					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	▎▁▕▝▁		PIC	본	P
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						~ ° 16 ~			1	1 0,
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				•			•			

						·	·				
EARTHWORK											
- Top soil removal	- Existing	- Injury	- Induction	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
-	underground	- Respiratory	- Tool box talks	15			• '				
	services	Disease	- Supervision	- FMA 24 &		l	! .				
	- Soil collapse		- PPE (Mask)	26							
	- Excavator		- Warning signage's	- FM (SHW)	.**				1		
	mechanical failure		- Safety barricade	8		,	1 .				
	- Dust		- Shoring / safe slope	FM							
•		•	gradient / approved	(BOWEC)			,			· ·	
•	·	. `	shoring design.	112							
,			- Inspection &	- FMA 19							
	·		maintenance	- FM (PIC)					i		
			- Dewatering	19, 20							}
- Excavation	- Soil collapse	- Injury	- Tool box talks	- OSHA Sec	2	.1	2	N/A	N/A	N/A	N/A
	- Machine topple	- Hearing	- Supervision	15						· ·	
	- Fall into pit	damages	- Proper PPE	- FMA 24 &		• :					
	- Mechanical failure	- Respiratory	- Warning signage's	26					·		
	- Dust	Disease	- Safety barricade	- FM (SHW)							
	- Noise	- Stress	- Excavation Permit	8			j '		•		
	- Heat		- Competent operator	- FMA 19			ļ.			!	
			- Inspection &	- FM (PIC)			1			·	
			maintenance	19, 20				;		ļ	
			- Dewatering						1		}
		;	- Drinking water			ļ.				:	Ì
•							/: .		, "		
]				•			,		

<u>Civil Work</u>
Project Name:

HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

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		ASSESS		CONTROL						
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	. SEV	Risk RATING PRO	Actions & Recommendations	PIC	DUE .	STATUS
EARTHWORK (Cont	t'd)				<u> </u>					

EARTHWORK (C - Material	- Vehicle collision	- Fatal	- Tool box talks	- OSHA Sec	1	1	4	N/A	N/A	N/A	N/A
transportation &	- Vehicle overturn	- Respiratory	- Proper PPE	15	T.	. 1	"	IWIL,	1777.	1,11,1	1071
unloading	- Dust	Disease	- Slope & stability	- FMA 19 &	: .		-				
mnoading		- Musculo-	1 -	24				• • •			
	- Soil spillage		- Competent operator	1 '					1		
	- Ergonomic	skeletal	- Vehicle inspection	- FM (PIC)			.				
		Disorder	& maintenance	19, 20		,			ļ.		
Earth leveling	- Vehicle collision	- Injury	- Induction	- OSHA Sec	2	1	2	N/A	. N/A	. N/A	N/A
(Motor Grader)	- Dust	- Respiratory	- Tool box talks	15.			1				
(17.0101 0.11.001)	- Vibration	- Disease	- Proper PPE	- FMA 19, 24			.				
	- Heat	- Carpal	- Supervision	& 26					· .	ŀ	
		Tunnel	- Competent operator	- FM (PIC)					• `		
		Syndrome	- Vehicle	19, 20				·			
	,	- Stress	maintenance &						,		
		1	inspection								•
			- Drinking water						·		`
Earth compaction	- Noise	- Hearing	- Tool box talks	- OSHA Sec	2	· 1	2	N/A	N/A	N/A	N/A
	- Vibration	damages	- Proper PPE	15						,	
	- Dust	- Carpal	- Competent operator	- FMA 19, 24					Ì		
·	- Heat	Tunnel	- Supervision	& 26	,	,					
		Syndrome	- Vehicle inspection	- FM (PIC)	. '						
		- Respiratory	& maintenance	19, 20				•			
		Disease	- Drinking water		.:			•			
		- Stress							1		

Date

: 01/12/2009

		IDENTIFY			I	ASSES	S	C	CONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations			S
					SEV	PRO	RISK RATING		PIC .	DUE	TATUS
ROCK BLASTING	G (Cont'd)										
- Blasting	- Falling object	- Fatal	- Induction	- OSHA Sec	4	1	4	N/A	N/A	N/A	N/A
-	- Flying rock	- Respiratory	- Tool box talks	15					,		
	- Dust	Disease	- Proper PPE	-FM			·				
	- Noise	- Hearing	- Designated person	(BOWEC)		•	-				
	- Vibration	damages	(short firer licensed)	PART XV	,						
	•	- Carpal	- Warning signage's	- FMA 24 &				•	· .		
		Tunnel	- Supervision	26		•	,		i .	l .	
		Syndrome	- SOP	- FM (SHW)	٠	٠					
			- Safety barricade	8		·		•			
			- Evacuation				,				

Page 31

Date

		IDENTIFY			I	SSES	S		CONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations			50
					SEV	PRO	RISK		PIC	DUE	STATUS
								1			
DRAINAGE WOR	KS (Pre - Cast) - Box o	culvert, U-drain	, RCP								
- Establish the	- Trip	- Injury	- Induction	- OSHA Sec	2	. 1	. 2	N/A	N/A	N/A	N/A
station & point	- Sharp edges		- Tool box talks	15						1	
1			- Proper PPE	- FMA 24	,						
			- Supervision				,· .				
- Trench Excavation	- Existing	- Fatal	- Induction	- OSHA Sec	4.	1	4	N/A	N/A	N/A	N/A
,	underground	- Respiratory	- Tool box talks	15						}	
•	services	Disease	- Warning signage's	- FMA 24 &						l	•
·	- Soil collapse	- Eye	- Safety barricade	26			1				
	- Excavator	damagés	- Shoring/Safe slope	- FM (SHW)	,						
	mechanical failure	. ,	gradient/Approved	8	•			·			
	- Dust		shoring design	- FM		•		•			
•			- Excavation permit	(BOWEC)							
			- Competent operator	112	İ			: · ·			-
·			- Inspection &	- FMA 19	٠,		. "				
			maintenance	- FM (PIC)							
			- Proper PPE	19, 20						[}

Civil Work
Project Name: HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

Activities/ Process/ Hazard Effect Current Risk Control L				ONTROL		
1 1 1 1	egal irement	Risk	Actions & Recommendations			ν.
	VBV	RISK RATING PRO	·	PIC	DUE	STATUS _.

	RKS (Pre - Cast) - Box			····					·	Υ	
Storage for Pre	- Material collapse	- Injury	- Induction	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
Cast			- Tool box talks	15							,
			- Safety barricade	- FMA 24 &			ļ ·				
			- Proper stacking	26							
	•	.]	method	- FM (SHW)	'						-
•			- Supervision	8		}		,			Ì
•			- PPE	- FM (SHW)							1
			i	20			,	İ			
					'						
Lifting	- Sling snap	- Fatal	- Induction	- OSHA Sec	4	1	4	N/A	N/A	N/A	N/A
	- Crane topple		- Toolbox talks	15							
•	- Overload		- Supervision	- FMA 24 &							
	- Hit by object		- Competent crane	26		• • • •	• •				
•	- Material lifted fall		operator	- FM	·						
	·		- Valid PMA	(Notificati-							
			- Sling / lifting	on Cert of							ļ
			appliances	Fitness &	l					1	İ
	1		inspection	Insp. 1970							
•			- Warning signage's	Reg. 10				,			
	,		- PPE	. 5 .							
•		[

Civil Work
Project Name: HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

Date : 01/12/2009

	<u>-</u> -		DENTIFY		•	ASSE	SS	C	ONTROL		
	Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	Risk	· .	Actions & Recommendations			S
!						PRO SEV	RISK		PIC	DUE	TATUS

N/A	N/A	N/A	2	1	2	-FMA 19 &	- Crane inspection	- Injury	- Sharp object / edges	Installation
1,47.	1071	1,711	-	^	~	26		- Stress	- Sling snap	mstananon
:	. :].		· .	- FM	Competent operator	- 500053	- Heat	
			.	· ·	.	(Notificati-	- Signalman		- Heat	
			· · ·		[on Cert of	- Supervision		4	
			.		··	Fitness &	- PPE			•
]		.			Insp. 1970	- Drinking water	1		
		·	,		ŀ	Reg. 10	- Diffiking water			•
				.	.					
		•				- FM (PIC)				
						19, 20				
N/A	N/A	N/A	2	1 .	2:	- FMA 19 &	/ - Supervision	- Injury	- Soil collapse	Backfilling
			_	1	·	26	· -	- Respirato	- Dust	Бионинь
			ľ	.		- FM (PIC)		Disease	2 430	
}			.	1	·	19, 20	- Inspection &	- Eye		
	•		i		ŀ			damages		
			· · · .	- 1			- PPE			
		· *		٠. ا	ŀ					
							- PPE			·

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Project Name: HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

Date

		IDENTIFY		•	· A	SSES	S		CONTROL		-
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	<u>`</u>	Risk		Actions & Recommendations			S
					SEV	PRO	RISK RATING		PIC	DUE	STATUS
DRAINAGE WOR	KS (Cast Insitu) – Berr	n Drain, Cascac	le Drain, Toe Drain, Ro	ad Side Drain.	Box C	nlveri					
- Establish the	- Trip	- Injury	- Induction	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
station & point	- Sharp edges		- Tool box talks - Proper PPE - Supervision	15 - FMA 24			_				
٠			- Super vision					_			
- Trench Excavation	- Existing underground services - Soil collapse - Excavator mechanical failure - Dust	- Fatal - Respiratory Disease - Eye damages	- Induction - Tool box talks - Warning signage's - Safety barricade - Shoring/Safe slope gradient/Approved shoring design - Excavation permit - Competent operator - Inspection & maintenance - Proper PPE	- OSHA Sec 15 - FMA 24 & 26 - FM (SHW) 8 - FM (BOWEC) 112 - FMA 19 - FM (PIC) 19, 20	4	.1	4	N/A	N/A	N/A	N/A

Civil Work
Project Name:

HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Project Name:
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

		DENTIFY			ASSESS		ONTROL		
Activities/ Process/	Hazard	Effect	Current Risk Control	Legal	Risk	Actions &			
Facilities/ Equipment				Requirement		Recommendations			S
		٠		ŕ	₹_	, i	PIC	בכ	Ā
}					PR ATT		110	7	SU
					<u> </u>				03
			· `;	<u> </u>					

				· · · · · · · · · · · · · · · · · · ·	<u>```</u>						
DRAINAGE WOR	KS (Cast Insitu) – Berr	n Drain, Casca	de Drain, Toe Drain, R	oad Side Drain,	Box C	ulver	t (Con	ıt'd)		•	
Material delivery	- Falling object	- Injury	- Induction	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
	- Material slip		- Tool box talks	15							
	- Sharp object		- Proper PPE	- FMA 24	Ĭ .						
	1 7		'			'				,	
				' '			,				
	· ·		,	,	1			· ·		· .	
	•		,] .				
Lifting	- Sling snap	- Fatal	- Induction	- OSHA Sec	4	1	4	N/A	N/A	N/A	N/A
	- Crane topple		- Tool box talks	15			1				
	- Overload	· .	- Supervision	- FMA 24 &	ŀ						1
	- Hit by object		- Competent crane	26		1					
	- Material lifted fall		operator	-FM	1		1				
•			- Valid PMA	(Notificati-		١.					Ì
	·	·	- Sling / lifting	on Cert of	1						
			appliances	Fitness &							
•			inspection	Insp. 1970			1			,	
	j·		- Warning signage's	Reg. 10	[]		1			1	
			- PPE				•.				
	,					,					·

		DENTIFY			ASS	ESS		ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	Ris	sk	Actions & Recommendations			S
	·				SEV			PIC	DUE	TATUS
						Ω.				

Lean concrete	- Chemical	- Injury	- Induction	- OSHA Sec	4	1	4	N/A	N/A	N/A	N/A
	- Collision	- Fatal	- Tool box talks	15		ľ				,	
	- Sling snap	- Musculo-	- Supervision	- FMA 24] -	,			,
	- Struck by concrete	skeletal	- Warning signage's	- FM				•			
	bucket	Disorder	- Crane PMA &	(Notificati-							į
	- Awkward postures	- Back injury	competent operator	on Cert of							
			- Proper PPE	Fitness &					1		
				Insp. 1970	,			,			
				Reg. 10							
				- FM (PIC)							
		•		19, 20							
- 15			T 1	COTTLO	_			37/4	37/4		
- Bar cutting /	- Sharp object	- Injury	- Induction	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
bending	- Slip, Trip & fall	- Eyé /	- Tool box talks	15		ļ	1 .				
(installation	- Flying particles	Hearing	- Suitable working	- FMA 24							
of rebar)	- Heat - Noise	damages	table / platform	- FM (SHW)							
	1	- Stress - Musculo-	- Drinking water - PPE	23	l ·		-			· ·.	
	- Ergonomic	skeletal]	·						
		Disorder									
• .		12:30:400	Ì .		2 .	, .				,	

		IDENTIFY			ASSESS	C	ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	Risk	Actions & Recommendations			S
					RIS RATI PR		PIC	ana	TATU
					NG NG				SZ

- Install formwork	- Sharp object	- Injury	le Drain, Toe Drain, Ro	- OSHA Sec	2	1	1 2	N/A	N/A	N/A	N/A
- Mistair formwork	- Work platform		- Tool box talks	15	-	'	-		1 1// 1	- 1	"""
	collapse		- Supervision	- FMA 24		١. ١	ļ				
	- Fall from height		- Housekeeping	- FM (SHW)			,			•	•
	- Falling object		- Safe access way	7							
•	2 3 3		- PPE			'					1
				• •						-	1
- Concreting	- Chemical	- Skin	- Induction	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
	- Dust	Disease	- Tool box talks	15 👙	٠.			į			
		- Respiratory	- Personnel exposure	- FMA 24			,		,		
,		Disease	monitoring	- FM (SHW)				,			
			- Housekeeping	7	· .			, ,	•		1
			- Safe access way	- FM (SHW)	ŀ					Ĭ	
· · · · · · · · · · · · · · · · · · ·			- PPE	23		<u> </u>				<u> </u>	
 Strike formwork 	- Sharp object	- Injury	- Induction	- OSHA Sec	2	1	2	N/A	N/A	N/A	N/A
	- Falling object	- Hearing	- Tool box talks	15							
	- Work platform	damages	- Supervision	- FMA 24	ļ		1	••			
	collapse	- Respiratory	- PPE	- FM (SHW)	٠,						
	 Cement dust 	Disease	- Housekeeping	23	·	•	1 :		•		
	- Ergonomic	- Musculo-	- Safe work platform	- FM		٠.		·			ĺ
	- Noise	skeletal	- Safe access way	(BOWEC)		١.		·			
		disorder	- Personnel exposure	86		`					
•		- Stress	monitoring	- FM (SHW)	٠.		'				
			- CHRA	7	·	<u> </u>	.1.				L

Date

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		IDENTIFY			A	SSES	S	· ·	CONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	· · · · · ·	Risk		Actions & Recommendations			نې
					PRO SEV	RISK		PIC	DUE	TATUS	
SEWERAGE WOR	RKS										
- Establish the station & point	- Trip - Sbarp edges	- Injury	InductionTool box talks	- OSHA Sec	2	. 1	2	N/A	N/A	N/A	N/A

SEWERAGE WOR	KS							<u> </u>			
- Establish the	- Trip	- Injury	- Induction	- OSHA Sec	2	. 1	2	N/A	· N/A	N/A	N/A
station & point	- Sbarp edges		- Tool box talks	15			• • •				
;			- Proper PPE	-FMA 24	. ".		1			ĺ	
			- Supervision					• •		 	,
- Excavation	- Existing	- Fatal	- Induction	- OSHA Sec	4	1	4	N/A	N/A	N/A	N/A
Distraction .	underground	- Respiratory	- Tool box talks	15		,					
	services	Disease	- Warning signage's	- FMA 24 &							
	- Soil collapse	- Eye	- Safety barricade	26							
	- Excavator machine	damages	- Shoring/Safe slope	- FM (SHW)		ļ · ·					
	failure		gradient/Approved	8					٠.		
	- Dust		shoring design	- FM			١.		· · · · · ·		
			- Excavation permit	(BOWEC)			1		,		
,	·		- Competent operator	112			٠.				
			- Inspection &	-FMA 19	ľ						
			maintenance	- FM (PIC)							
			- Proper PPE	19, 20	2			·			
- Material delivery	- Traffic accident	- Injury	- Induction	- OSHA Sec	2	. 1	2	N/A	N/A	N/A	N/A
	- Dust	- Fatal	- Tool box talks	15							
		- Respiratory	- Proper PPE	- FMA 24							
		Disease									

Civil Work

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Project Name: Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan. Package EW01 – Site Preparation, Earthworks and Main Drainage.

		IDENTIFY			ASSESS	C	ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	Risk	Actions & Recommendations			
racinites/ Equipment				ixequitement	RA. R	Recommendations	PIC	DG	STAT
					ATING PRO PRO SEV			H	SU
			·				L		

SEWERAGE WOR	RKS (Cont'd)					· .					
- Material stockpile	- Falling object - Material rolled over - Caught in between	- Injury	- Supervision - Proper PPE - Housekeeping - Proper stacked	- OSHA Sec 15 - FMA 24 - FM (SHW) 20 & 23	2	1	2	N/A	N/A	N/A	N/A
- Pipe laying	- Sling snap - Falling object - Ergonomic - Heat	- Injury - Musculo- skeletal Disorder - Stress	- Supervision - Tool box talks - Proper stacked - SOP - Drinking water - Proper PPE	- OSHA Sec 15 - FMA 24 - FM (SHW) 20 & 23	2	1	2	N/A	N/A	N/A	N/A
- Install formwork	- Sharp object - Work platform collapse - Fall from height - Falling object	- Injury	- Induction - Tool box talks - Supervision - Housekeeping - Safe access way - PPE	- OSHA Sec 15 - FMA 24 - FM (SHW) 7	2		2	N/A	N/A	N/A	N/A

Civil Work
Project Name: HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

Date : 01/12/2009

		IDENTIFY			" . A	SSES	S	C	CONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations			Si
		,			SEV	PRO	RISK RATIN		PIC	DUE	TATUS
							ଦି '				
					:	•					
SEWERAGE WORKS	(Cont'd)										

SEWERAGE WO	RKS (Cont'd)								-		
- Concreting	- Chemical	- Skin	- Induction	- OSHA Sec	2	1	. 2	N/A	N/A	N/A	N/A
	- Dust	Disease	- Toolbox talks	15			١.		-		
		- Respiratory	- Personnel exposure	- FMA 24							
		Disease	monitoring	- FM (SHW)							
			- Housekeeping	7		• .	1				
	,		- Safe access way	- FM (SHW)	. :						
			- PPE	23							
- Strike formwork	- Sharp object	- Injury	- Induction	- OSHA Sec-	2	1	2	N/A	N/A	N/A	N/A
	- Falling object	- Hearing	- Tool box talks	15	i '			`			
	- Work platform	damages	- Supervision	- FMA 24	ŀ						
	collapse	- Respiratory	- PPE	- FM (SHW)							
	- Cement dust	Disease	- Housekeeping	23	, ,						
	- Ergonomic	- Musculo-	- Safe work platform	- FM	· ·				-		
	- Noise	skeletal	- Safe access way	(BOWEC)					. •		
		Disorder	-Personnel exposure	86		:					
		- Stress	monitoring	- FM (SHW)							
			- CHRA	7							<u> </u>

Civil Work

HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM

Project Name: Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan. Package EW01 – Site Preparation, Earthworks and Main Drainage.

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	· · · · · · · · · · · · · · · · · · ·	IDENTIFY .	,		A	SSES	SS		ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations			ro
,					SEV	PRO	RISK RATING		. PIC	DUE	STATUS
SEWERAGE WOR	CKS (Cont'd)										
- Brick works	- Sling snap - Backhoe mechanical failure - Falling object - Sharp edges / object - Cement chemical - Dust - Ergonomic	- Injury - Dermatitis -Musculo- skeletal Disorder - Eye damages - Respiratory Disease	- Induction - Tool box talks - Supervision - Safe access way / work platform - Housekeeping - Proper PPE - CSDS / CHRA	- OSHA Sec 15 - FMA 24 - FM (SHW) 23 - FM (BOWEC) 86 - FM (SHW)	2		2	N/A	N/A	N/A	N/A

Date

	•	IDENTIFY		1		SSES	S		CONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations			S
·					SEV	PRO	RISK RATING		PIC	DUE	STATUS
WATER RETICUL	ATION							, .			 .
- Establish the station & point	- Trip - Sharp edges	- Injury	- Induction - Tool box talks - Proper PPE	- OSHA Sec 15 - FMA 24	2	. 1	2	N/A	N/A	N/A	N/A
	,		- Supervision								
- Trench Excavation	- Existing underground services - Soil collapse - Excavator mechanical failure - Dust	- Fatal - Respiratory Disease - Eye damages	- Induction - Tool box talks - Warning signage's - Safety barricade - Shoring/Safe slope gradient/Approved shoring design - Excavation permit - Competent operator - Inspection & maintenance - Proper PPE	- OSHA Sec 15 - FMA 24 & 26 - FM (SHW) 8 - FM (BOWEC) 112 - FMA 19 - FM (PIC) 19, 20	4	1	4	N/A	N/A	N/A	N/A

Civil Work

HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM

Project Name: Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan. Package EW01 – Site Preparation, Earthworks and Main Drainage.

		IDENTIFY		· · · · · · · · · · · · · · · · · · ·	·	ASSES			ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk	1	Actions & Recommendations			C)
	·				SEV	PRO ·	RISK RATING		PIC	DUE .	STATUS
WATER RETICUL	ATION (Cont'd)		. •	· · ·							
- Pipe laying	- Sling snap - Falling object - Ergonomic - Heat	- Injury - Musculo- skeletal Disorder - Stress	- Supervision - Tool box talks - Proper stacked - SOP - Drinking water - Proper PPE	- OSHA Sec 15 - FMA 24 - FM (SHW) 20 & 23	2	1	2	N/A	N/A	N/A	N/A
Pipe connection	- Fume - Heat - Gas cylinder explode - Metal fumes - Ergonomic	- Injury - Fatal - Eye damages -Musculo- skeletal Disorder	- Induction - Toolbox talks - Warning signage's - Safe barricade - Drinking water - Hot Work Permit - Fire extinguisher - Proper PPE	- OSHA Sec 15 - FM (SHW) 8 & 23 - FMA 24	4	1	4	N/A	N/A	N/A	· N/A
Install formwork	- Sharp object - Work platform collapse - Fall from height - Falling object	- Injury	- Induction - Tool box talks - Supervision - Housekeeping - Safe access way - PPE	- OSHA Sec 15 - FMA 24 - FM (SHW)	2	1	2	N/A	N/A	N/A	N/A

		DENTIFY			ASSESS	5	C	ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	Risk		Actions & Recommendations			
Lucinites, Equipment					PRO SEV	RISK RATING		PIC	DUE	TATUS

WATER RETICUI	ATION (Cont'd)					·	:	<i>*</i> ,			
- Concreting	- Chemical - Dust	- Skin Disease - Respiratory Disease	- Induction - Tool box talks - Personnel exposure monitoring - Housekeeping - Safe access way - PPE	- OSHA Sec 15 - FMA 24 - FM (SHW) 7 - FM (SHW) 23	2	1		N/A	N/A	N/A	N/A
	· .										
- Strike formwork	Sharp objectFalling objectWork platform collapse	- Injury - Hearing damages - Respiratory	- Induction - Tool box talks - Supervision - PPE	- OSHA Sec 15 - FMA 24 - FM (SHW)	2		2	N/A	N/A	N/A	N/A
	- Cement dust - Ergonomic - Noise	Disease - Musculo- skeletal disorder	- Housekeeping - Safe work platform - Safe access way - Personnel exposure	23 - FM (BOWEC) 86							
		- Stress	monitoring - CHRA	- FM (SHW)					,	<u>.</u>	
- Backfilling	- Soil collapse - Dust	- Injury - Respiratory Disease - Eye damages	- Supervision - Competent operator - Signalman - Inspection & maintenance	- FMA 19 & 26 - FM (PIC) 19, 20	2	1	2	N/A	N/A	N/A	N/A
		1	-			·	·				

Civil Work
Project Name: Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

Date

		DENTIFY			ASSESS		ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	Risk	Actions & Recommendations	_		S
raomues/ Equipment				Requirement	RISK RATIO PRO SEV		PIC	DUE	TATUS
					ਰ ਨਿ				

CONTROL DEL O	CATTONI ONI-A	T-1	fation Tylens Outle Cal	ala Cas Pina El	Satista	al Cal	hlo oto	<u> </u>			
- Establish the station & point	CATION – (Water pipe - Trip - Sharp edges	- Injury	- Induction - Tool box talks - Proper PPE - Supervision	- OSHA Sec 15 - FMA 24	2	1	2	N/A	N/A	N/A	N/A
- Piloting Works (Trail Pit)	- Life cables - Sharp edges / object - Heat - Ergonomic	- Fatal - Stress - Musculo- skeletal disorder	- Induction - Drinking water - Tool box talks - SOP - Proper PPE - Supervision	- OSHA Sec 15 - FMA 24 & 26	4	1	4	N/A	N/A	N/A	N/A
- Material delivery to site	- Falling object - Material rolled over - Caught in between	- Injury	- Induction - Tool box talks - Proper stacking - Proper PPE - Supervision	- OSHA Sec 15 - FMA 24 - FM (SHW) 20 & 23	2	1	2	N/A	N/A	N/A	N/A
- Material stockpile	- Falling object - Material rolled over - Caught in between	- Injury	- Supervision - Proper PPE - Housekeeping - Proper stacked	- OSHA Sec 15 - FMA 24 - FM (SHW) 20 & 23	2	1	2	N/A	N/A	N/A	N/A

		IDENTIFY			ASSESS	C	CONTROL	
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	Risk	Actions & Recommendations		
racinics/ Equipment				Requirement	RISK RATING PRO SEV	Recommendations	PIC DU	STATUS

SERVICES RELO	CATION - (Water nine	Telecommuni	cation. Fibre Optic Cab	le. Gas Pine. El	ectric	al Ca	hle etc	(Cont'd)			
- Excavation	- Existing underground services - Soil collapse - Excavator machine failure - Dust	- Fatal - Respiratory Disease - Eye damages	- Induction - Tool box talks - Warning signage's - Safety barricade - Shoring/Safe slope gradient/Approved shoring design - Excavation permit - Competent operator - Inspection & maintenance - Excavation Permit - Proper PPE	le, Gas Pipe, El - OSHA Sec 15 - FMA 24 & 26 - FM (SHW) 8 - FM (BOWEC) 112 - FMA 19 - FM (PIC) 19, 20	ectric 4	al Ca	ble etc	N/A	N/A	N/A	N/A
- Installing new utilities	- Sling snap - Falling object - Ergonomic	- Injury - Musculo- skeletal disorder	- Tool box talks - Housekeeping - Proper stacking - Proper pulling mechanism	- OSHA Sec 15 - FMA 24 - FM (SHW) 20 & 23	2	1	2	.N/A	N/A	N/A	N/A

Civil Work
Project Name:

HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

	,	IDENTIFY			ASSE	SS		CONTROL		
Activities/ Process/	Hazard	Effect	Current Risk Control	Legal	Risl	ζ .	Actions &			ļ
Facilities/ Equipment				Requirement		1	Recommendations	İ		∾.
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SERVICES RELO	OCATION - (Water pipe	, Telecommunic	cation, Fibre Optic Cab	le, Gas Pipe, El	ectric	al Cal	ole etc) (Cont'd)			
- New utilities	- Fume	- Injury	- Tool box talks	- OSHA Sec	2	1	2	N/A	' N/A	N/A	N/A
connection	- Heat	- Eye	- Warning signage's	15		,		• •			
	- Gas cylinder	damages	- Hot Work Permit	- FMA 24	· .		,	↓. : .			
	explode	- Stress	- Fire extinguisher	- FM (SHW)	. i.		·]
	- Ergonomic	- Respiratory	- Safety barricade	8 & 23							۱.
		Disease	- Supervision				,	· .			
		- Musculo-	- Proper PPE			ľ]
		skeletal						,			
		disorder					<u> </u>				
- Removal old	- Dust	- Fatal	- Supervision	- OSHA Sec	4	1	4	N/A	N/A	N/A	N/A
services	- Sharp object / edges	- Musculo-	- Proper pulling	15		'		,			
	- Electrocution	skeletal	mechanism	- FMA 24				, ,			ĺ
	- Ergonomic	disorder	- Proper PPE	- FM (SHW)	· :		٠.,′				}
		- Respiratory	- Electric isolation	23] .				ľ
•		Disease	permit				h		,		
- Backfilling	- Soil collapse	- Injury	- Supervision	- FMA 19 &	2	1	2	N/A	N/A	N/A	N/A
	- Dust	- Respiratory	- Competent operator	26			,			}	
		Disease	- Signalman	- FM (PIC)	· · · ·	· .	,		:		
		- Eye	- Inspection &	19, 20	. `	. '					
		damages	maintenance				l.				
			- PPE								
		٠						·			

Date

		IDENTIFY			. A	SSES	S	(CONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations			
					SEV	PRO	RISK RATING		PIC	DUE · ·	STATUS
											-
ROAD CROSSING											
- Erection of road	- Hit by vehicle	- Fatal	- Induction	- OSHA Sec	4	1	4	N/A	N/A	N/A	N/A
barrier			- Tool box talks	15.	٠. ا		ļ	٠ .			
			- Warning signage's	- FMA 24 &							-
			- Proper PPE	26	l		i .	, .		·	
	,		(reflective vest)	- FM (SHW)							
·			- Proper traffic	8 & 29	'						
			management			٠.				١.	٠.
			(Flagman + baton)				١. ١				
,			- Supervision	·						<u> </u>	<u></u>
 Construction 	- Vehicle collision	- Fatal	- Induction	- OSHA Sec	4	. 1	4	N/A	N/A	N/A	N/A
vehicle crossing	- Accident		- Tool box talks	15							
			- Warning signage's	- FMA 24 &			·		· `		
			- Proper PPE	26	'						
			(reflective vest)	- FM (SHW)	1 1					{.	
•			- Proper traffic	8 & 29							
			management					٠		ļ	
•			(Flagman + baton)		::		1		٠.	Į	
			- Supervision			•					
•		•			1 1				·		ļ

: 01/12/2009 Date

		IDENTIFY			· A	SSES	S		ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations			S
					SEV	PRO	RISK RATING		PIC	DUE	STATUS
		,									
ROAD CROSSING	(Existing Road) (Cont	'd)									
- Road cleaning /	- Vehicle collision	- Fatal	- Tool box talks	- OSHA Sec	. 4	1	4	N/A	N/A	N/A	N/A
Dust control /	- Dust	- Respiratory	- Warning signage's	15				,			
Watering	- Heat	Disease	- Proper PPE	- FMA 24 &	. ,				·		
		- Stress	(reflective vest)/	26	· .	•		,], `
			Drinking water	- FM (SHW)	· · ·					,	
		*	- Proper traffic	29	, '				· ·		
			management							,	
			(Flagman + baton)								
	,		- Supervision			٠.					
			- Personnel exposure monitoring			,					
- Filling water (New	- Hit by vehicle	- Fatal	- Induction	- OSHA Sec	4	1	4	N/A	N/A	.N/A	N/A
Jersey Barrier)	i introj vomete	. 1	- Tool box talks	15							
			- Warning signage's	-FMA 24 &				'	·		
			- Proper PPE	26	:'						
•			(reflective vest)	- FM (SHW)					·		
	·		- Proper traffic	8 & 29							
			management (Flagman + baton)				·		· .	<u>.</u>	
		,	La tagaina outon)		i .'	٠,	•		, ,		1

- Supervision

		IDENTIFY			A	SSES	S	C	ONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations			J.S.
					SEV	PRO	RISK RATING		PIC	DUE	TATUS
Lifting and Hoistin	g (Mobile Crane)					:			<u>-</u> ,		
- Entering to construction site (initial)	- Overturned - Accident - Hit by other vehicles	- Injury - Fatal	- Tool box talks - Safe Work Procedure - Proper PPE - Supervision	- OSHA Sec 15 - FMA 24 & 26	4	1	4	N/A	N/A	N/A	N/A

	construction site (initial)	- Accident - Hit by other vehicles	- Fatal	- Safe Work Procedure - Proper PPE - Supervision	15 - FMA 24 & 26			•			· .	
Ī	- Parking Basement	- Overturned	- Injury	- Tool box talks	- OSHA Sec	4	1	. 4	N/A	. N/A	N/A	N/A
	(Work Area)		- Fatal	- Safe Work	15.	,						· .
-				Procedure	- FMA 24 &		. '	l .				
				- Proper PPE	26	' ·			·	ļ		}
	•			- Supervision								
. [·					<u> </u>		,	
	- Extend Outrigger	- Crane Topple	- Injury	- Proper padding	- OSHA Sec	4	1	· 4	· N/A	N/A	N/A	N/A
1			- Fatal	- Competent operator	15							
				- Valid PMA	- FMA 24 &	٠.	.•	1	,	•]	
-				- Supervision	26				· · ·			
				: .			. ·			.:		
							- ,	: .				

Civil Work
Project Name: HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
Package EW01 – Site Preparation, Earthworks and Main Drainage.

		IDENTIFY				ASSES	S	. (CONTROL	•	
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement	. <u>·</u>	Risk		Actions & Recommendations			S
					SEV	PRO	RISK RATING		PIC	DUE	STATUS
									-		·
Lifting and Hoisting	g (Mobile Crane) (Cont	'd)				•			:		
- Hooking	- Slip wire - Hand nip - Hoist block strike	- Injury - Fatal	- Inspection on safety latch - Crane inspection	- OSHA Sec 15 - FMA 24 &	4	1	4	N/A	N/A	N/A	N/A
	head	·	- Supervision - Proper PPE	26	·. ·			· · · · · · · · · · · · · · · · · · ·			
- Strapping wire rope load	- Hand nip - Wire rope damage - Unbalance load	- Injury - Fatal	- Trained rigger - Padding wire rope - Very low trial lift - Crane inspection - Supervision	- OSHA Sec 15 - FMA 24 & 26	4	1	4.	N/A	N/A	N/A	N/A
- Lifting the load	- Load dropped - Swaying truck - Shackle failure - Sling broken	- Injury - Fatal	- Proper PPE - Trained rigger - Shackle balance - Very low trial lift - Crane inspection - Supervision - Proper PPE	- OSHA Sec 15 - FMA 24 & 26	4	1	4	N/A	N/A	N/A	N/A

Civil Work
Project Name: HAZARD IDENTIFICATION AND RISK ASSESSMENT FORM
Proposed Development of New LCC Terminal and Associated Works at KL International Airport, Sepang, Selangor Darul Ehsan.
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Date

		IDENTIFY.			A	SSES	S .		CONTROL		
Activities/ Process/ Facilities/ Equipment	Hazard	Effect	Current Risk Control	Legal Requirement		Risk		Actions & Recommendations			ς,
					SEV	PRO .	RISK RATING		PIC	DUE	STATUS
Lifting and Hoisting	g (Mobile Crane) (Cont	.'d)					•				
Swing load	- Striking to the	- Injury	- Competence	- OSHA Sec	<u> </u> 4	1	4	N/A	· N/A	N/A	N/A
	nearest object	- Fatal	Operator	15 - FMA 24 & 26							
Lowering the load	- Swaying - Load turning - Injury	- Injury - Fatal	- Barricade the work area - Supervision - PPE	- OSHA Sec 15 - FMA 24 & 26	4	1	4	N/A	N/A	N/A	N/A
Release the load	- Sling wire struck	- Injury	- Supervision - PPE	- OSHA Sec 15 - FMA 24 & 26	2	1	2	N/A	N/A	N/A	N/A