

<u>Central Market Redevelopment – Retail Podium & Basement Carparks</u>	Contract No: C21004
	REF. No:
<u>Method Statement For Souk Fire Pump Interfacing with Sprinkler System of Retail</u>	Rev. No : 0
	Date :
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Method Statement for Souk Fire Pump Interfacing with Sprinkler System of Retail



Date / Revision	Commissioning Engineer		Commissioning Manager	
	Name	Signature	Name	Signature
	Antimony Lapuz			

 ACC ARABIAN CONSTRUCTION CO.	<u>Main Contractor</u> <u>ARABIAN CONSTRUCTION Co. (ACC)</u>	 THERMO ثيرمو L.L.C. ذ.م.م
	<u>MEP Contractor</u> <u>THERMO L.L.C.</u>	

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1. Scope and Purpose

- ❖ This Method Statement is to provide guidance in carrying out the testing and commissioning of Fire Fighting Sprinkler and Pre Action System for the Central Market Redevelopment—Retail Podium and Carparks, in accordance with the approved Project Quality Plan, contract specifications and Commissioning plan. The Test Involves:
 - Testing of Sprinkler System
- ❖ Purpose of this Method Statement is to control and define the commissioning activities, procedures and other requirements that will be utilized to carrying out the Testing and Commissioning of the Sprinkler and Pre Action System of Retail in line with the Souk Fire Pump.

1.1. Abbreviations

CxA	: Commissioning Authority
CxM	: Commissioning Manager
CxT	: Commissioning Team
PM	: Project Manager
IV	: Isolating Valve
FACP	: Fire Alarm Control Panel
SE	: Health, Safety & Environment
PRV	: Pressure Reducing Valve
ZCV	: Zone Control Valve
FS	: Flow Switch

2. Reference & Related Standards

2.1. Project Quality Plan / Commissioning Plan



- ACC-DAR-5128

2.2. Project Technical Specification & Approved Method Statement

- Package 6200 MEP Specification Retail Volume 2-Mechanical Service
- ACC-DAR-5633 (Attached)

2.3. Approved Shop Drawings Schedule

- Thermo Letter with Ref. C21004/C4/11P1022 dated 11 September, 2011

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2.4. HSE Manual

- Safe Isolation and Energization Ref. ACC-DAR-5359

3. Responsibilities

3.1. Commissioning Manager / CxM

- CxM shall be responsible for entire Pre-commissioning and Commissioning of the Fire Fighting System (Sprinkler System). All necessary manpower, apparatus and instruments which are required for Pre-commissioning and commissioning activities shall be supplied by commissioning team.
- CxM leads, plans, schedules and coordinates the Commissioning team to implement the procedure for Fire Fighting System (Sprinkler System).

3.2. Commissioning Team/CxT.



- All Pre-Commissioning and Commissioning activities of Fire Fighting System to be followed by supplier under direct supervision or commissioning team.
- CxT shall check the Commissioning works prior to submission for inspection and approval.
- In case of failure in any test, the Commissioning team will rectify, and CxT to re-offer the test for re-inspection and approval.
- All Original Test reports witnessed and approved will be retained by the CxT. A copy of the final testing & Commissioning Report for Fire Fighting System will be forwarded to the CxA.

3.3. Specialist Sub-Contractors

- Dhabia/Naffco shall be responsible for conducting the testing and commissioning process of the Fire Fighting System (Sprinkler System, Pre Action System), which has been installed in Central Market Redevelopment— Retail Podium & Carparks, under the supervision of Thermo Commissioning Team and ATKINS.

3.4. Fire Fighting Project Engineer:

- Responsible for arranging the drawings, documents and coordinating with souk management, souk maintenance team and main contractor to implement the work.

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3.5. Fire Fighting Supervisor:

- Responsible for providing required tools and PPE's for the working team; and will supervise the work.

3.6. Souk Maintenance Supervisor:

- Will be available with the team and will provide all the required accessibility features to the souk fire fighting system and pumps.

3.7. The Souk Management Representative:

- Will provide the entire necessary permit to start the work.

3.8. Health & Safety Team

- All the safety requirements as per ACC HSE rules shall be strictly followed by every individuals in order to have a safe working environment and avoid hazards
- Safety permits to be prepared in advance and obtained approval as per the site safety requirements.
- Isolation of the area, and warning signs display if necessary, to be carried out for any testing and energizing. Ensure all concerned personnel shall use PPE and all other safety items as required.

4. Instruments & Tools

- ❖ Valve operating keys.
- ❖ Calibrated Pressure Gauges
- ❖ Ladders
- ❖ Scaffoldings

5. Work Sequence

5.1. Pressurizing the Retail Sprinkler System

- 5.1.1. Ensure that only part of the retail system / pipe work of which installation have been completed, inspected and pressure tested witnessed are included for hookin up with Souk System. Rest of the system / pipe work in retails which are incomplete / not tested shall be isolated.

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- 5.1.2. Flushing of the retail system shall be completed prior to hooking up with Souk system.
- 5.1.3. Make Sure the pipe has no leak and all alarm valve station is operational.
- 5.1.4. The Retail Sprinkler system should be pressurized to match the Souk System maintaining working pressure or 1 bar higher but does not **exceed 12.1 bar** to avoid any unnecessary alarm when the main valve connecting the Retail to souk sprinkler system will be opened.
- 5.1.5. Ensure that a pressure gauge is installed in the Main Valve to monitor the pressure of both side of the system (Retail and Souk).

5.2. Opening the Main Valve Connecting Souk Sprinkler System and Retail Sprinkler System

- 5.2.1. Ensure that all Zone Control Valves are Open for all the zones in carparks and the retails.
- 5.2.2. Ensure that all Sprinkler heads are installed and operational.
- 5.2.3. Before opening the Main Valve connecting to the Souk make sure all necessary arrangement and coordination with the Souk management has been done.
- 5.2.4. When the Main Valve is open and the system is already in line with the Souk Pump, Ensure that the following details has been arranged:
- The Souk Fire pump is operational and in Auto mode.
 - The **Auto call** to alarm Civil defense has to be disabled. **Attached is the schedule of the testing including the program.**
 - The Sounders, buzzers and alarm bell for the souk has to be silenced not to alarm the personnel or buyers in the Souk.
 - A **constant communication** between the Fire Alarm Control Panel personnel and the Retail Fire Alarm Control Panel personnel has to be established prior to start of Commissioning Activities to ensure that the alarm system on both area is being monitored and controlled.
- 5.2.5. The following test will be done:

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- a) The Alarm Valve Station with PRV will be set according to the required pressure (8 stations).
- b) All ZCV will be tested (approximately 305 units) by closing and opening the valve.
- c) All Flow Switch will be tested (approximately 305 Units) by opening and closing the drain line of the ZCV station.
- d) Each Test will be coordinated with the Retail Fire Alarm Room Station for functional and monitoring interfacing. 100 % Test will be done for ZCV and FS.
- e) These activities will be done repeatedly until all system is satisfactorily tested.
- f) **Attached the program for T&C of ZCV.**

Note: A personnel should be 100% focus on the Fire alarm station and site roaming to monitor the activities of both Souk and Retail to identify which is testing alarm and legitimate alarm.

6. Health, Safety & Environmental Management:

- 6.1. Fire Fighting Supervisor to check and ensure the Fire Fighting technicians are competent to work with Fire Fighting system.
- 6.2. PTW (permit to work) system to be followed for works.
- 6.3. Examine the areas to execute the work and conditions under which the work shall be performed. Identify detrimental or unsafe conditions for the proper and timely completion of the work. Do not proceed until unsatisfactory or unsafe conditions have been corrected.
- 6.4. Work will commence as per safety regulations laid down in the contract specification and project HSE plan.
- 6.5. Detailed risk assessment as per ACC-DAR 5186(Attached).
- 6.6. All personal protective equipment shall be used as appropriate according to the nature of the job.
- 6.7. All Scaffoldings shall be checked by competent person and should carry green tags "safe to use", prior to use for working purpose.
- 6.8. Method Statement / Risk Assessments to be briefed to all concerned personnel.

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7. **Attachment:**

- 7.1. Risk Assessment
- 7.2. Approved Flood Plan
- 7.3. Schedule of Testing and Commissioning

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7.1

RISK ASSESSMENT

HAZARD IDENTIFICATION AND RISK ASSESSMENT SHEET

Hazard Identification & Risk Assessment Sheet for			Souk Fire Pump Interfacing with Sprinkler System of Retail						
Project: CENTRAL MARKET REDEVELOPMENT – RETAIL AND KHALIFA BRIDGE									
Item	Process	Hazard	Risk Assessment (No Control)			Controls	Risk Assessment With Controls		
			P	S	R		P	S	R
1.	Souk Fire Pump Interfacing with Sprinkler System of Retail	<ul style="list-style-type: none"> ➤ Fall from heights (Men and Materials) ➤ Slips Trips and falls. ➤ False Alarm 	2	2	B	<ul style="list-style-type: none"> ➤ Only the competent Testing and Commissioning team with Specialist Subcontractor operatives will be allowed to carry out the testing. ➤ Toolbox talk must be conducted to the team before the start of work by the engineer in charge. ➤ Preliminary Checks must be made to ensure a safe working environment and also Visual inspects for cleanliness and confirms that there are no other apparent hazards by the supervisor in charge. ➤ Only the competent Operatives from the Specialist subcontractor will be allowed to alter any changes and it must be done in collaboration with the testing team and as per the approved design and manufacture instructions. ➤ Proper checks should be made on all the joints to that they are tied firmly before process begins. ➤ Supporting documents must be provided to prove the competency of the operatives, inspection of plant and equipments and calibration of the gauges and other testing equipments to Thermo and ACC Safety Department prior to start the work. ➤ Isolation of the area, and warning signs display if necessary to be carried out for any testing and energizing. Ensure all concerned personal shall use PPE and all other safety items as required. ➤ Arrange sufficient lighting and provide task light and keeps the leads and cables off the ground to prevent risk of tripping and falling. ➤ Scaffolds must be erect by a competent scaffolder and inspected by a 	1	1	C

8.0 HAZARD IDENTIFICATION AND RISK ASSESSMENT SHEET

Hazard Identification & Risk Assessment Sheet for			Souk Fire Pump Interfacing with Sprinkler System of Retail						
Project: CENTRAL MARKET REDEVELOPMENT – RETAIL AND KHALIFA BRIDGE									
Item	Process	Hazard	Risk Assessment (No Control)			Controls	Risk Assessment With Controls		
			P	S	R		P	S	R
						<p>competent scaffold inspector with a green tag on it.</p> <ul style="list-style-type: none"> ➤ Areas where ladders will be used; the ladders should be inspected by the competent inspector and it should be color coded, kept on a firm surface and while working don't climb on to the top most three steps. ➤ All hand tools should be tied with a rope and hook to the wrist or a rigid point to reduce the risk of falling objects. ➤ Before accessing the platform the operatives must put on a full body harness and hook up the lanyard to a rigid point. ➤ Conduct a special training and explain to all the operatives involved regarding the hazards and emergency procedure. ➤ Before starting the testing evacuate all other workers, materials and unwanted tools from that area. ➤ For energizing the fire fighting pumps for testing the sprinkler system; the testing commissioning team must follow the approved Lockout/ Tag out Procedures (Ref. No: C21004/TH/LOTO/01) without fail. ➤ Isolate all the electrical devices which are not necessary through the Thermo lock out tag out procedures. ➤ Provide adequate information to others working nearby and display warning tapes and signage's like (Testing going on; Keep Away, No Unauthorized entry, etc...) that particular areas and keep one watchman standby outside (24/7) to stop all unauthorized entry to the area. ➤ Maintain good housekeeping throughout the testing activity. ➤ Responsible Site Engineer must be present at all times in the testing area to ensure the testing is being carried out safely. 			

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Hazard Identification & Risk Assessment Sheet for			Souk Fire Pump Interfacing with Sprinkler System of Retail						
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Item	Process	Hazard	Risk Assessment (No Control)			Controls	Risk Assessment With Controls		
			P	S	R		P	S	R
						<ul style="list-style-type: none"> ➤ Fire Fighting Supervisor Responsible for providing required tools and PPEs for the working team and will supervised the work. ➤ Make sure the pipe has no leak and all alarm valve station is operational. ➤ Ensure that a pressure gauge is installed in the Main Valve to monitor the pressure of both side of the system (Retail &Souk). ➤ Ensure that all Sprinkler heads are installed and operational. ➤ Before opening the main valve connecting to the Souk make sure all necessary arrangement and coordination with the Souk management has been done. ➤ The Souk Fire pump is operational and in Auto mode. ➤ The Auto call to alarm Civil defense has to be disabled. ➤ The Sounders, buzzers and alarm bell for the souk has to be silenced not to alarm the personnel or buyers in the Souk. ➤ A person should be 100% focus on the Fire alarm station and site roaming to monitor the activities of both Souk and Retail to identify which is testing alarm and legitimate alarm. ➤ Fire Fighting Supervisor to check and ensure the Fire Fighting technician are competent to work with Fire Fighting system. ➤ PTW(permit to work) system to be followed for work. ➤ Work will commence as per safety regulations laid down in the contract specification and project HSE plan. ➤ Detailed risk assessment attached for work. Method Statement/Risk Assessments to be briefed to all concerned personnel's. 			


8.0 HAZARD IDENTIFICATION AND RISK ASSESSMENT SHEET

Hazard Identification & Risk Assessment Sheet for	Souk Fire Pump Interfacing with Sprinkler System of Retail
Project: CENTRAL MARKET REDEVELOPMENT – RETAIL AND KHALIFA BRIDGE	

Item	Process	Hazard	Risk Assessment (No Control)			Controls	Risk Assessment With Controls		
			P	S	R		P	S	R
						<ul style="list-style-type: none"> ➤ All accidents, incidents and near misses should be reported to the Thermo safety team immediately. ➤ All to take reasonable care always while working and to comply with all safe system of work and procedures. 			

When completing this Performa you must take due consideration of local conditions, including adjacent operations and premises.

Person Responsible for Reviewing the Risk Assessment:

Name	Ajeesh A Nair	Position	Safety Manager		
Signature		Date	15/01/2013	Review Date	14/01/2014

Probability (P) X Severity (S) = Risk

1 = Unlikely	1 = Negligible
2 = Low	2 = Minor Injury
3 = Medium	3 = Severe Injury
4 = High	4 = Fatal

	Risk Level (P/S)			
	S1	S2	S3	S4
P1	X	X	D	C
P2	X	D	C	B
P3	D	C	B	A
P4	D	B	A	A

Conclusions:

- A** = Hazard **MUST** be avoided (or level of risk reduced significantly & reliably by controls)
- B** = Hazard **SHOULD** be avoided (or level of risk reduced significantly & reliably by controls)
- C** = Risk to be controlled as far as reasonably practicable
- D** = Risk is controlled as far as reasonably practicable
- X** = Normal PPE to be worn as dictated by ACC policy

7.2

FLOOD PLAN

Project: Central Market Abu Dhabi
 General Submittal - Thermo: 827
 Revision: 0
 Title: ACC-DAR-5633-REV.01 - PG - FLOOD PLAN

General Submittal - Thermo

Document Designation:

No.	Description/Title	Document No./Revision	No of Copies	Status			
1	FLOOD PLAN	25-PL-MS-PG-0186-R1	1	<input checked="" type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> E
				<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> E
				<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> E
				<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> E
				<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> E
				<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> E
				<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> E
				<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> E
				<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> E
				<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> E

Comments:

Please refer to BDSP and WSA comment.

WSA comment:

No comments.

Status - A

Key) A - Proceed No Comments - B - Proceed with Comments - C - Rejected - E - For Information

Attachments

Title	Attached By	Status
ACC-DAR-PG-5633-REV.01.pdf	Shaheed Aboobacker	-
ACC-DAR-PG-5633-REV.01 DAR 186 R1 Flood Plan.pdf	Shaheed Aboobacker	-

Business Process Status



Title: ACC-DAR-5633-REV.01 - PG - FLOOD PLAN

Creator: Shaheed Aboobacker

Owner: Shaheed Aboobacker

Creator's Organization: ACC

Owner's Organization: ACC

Overall Due Date: 6/23/2012 04:37 PM

Creation Date: 6/12/2012 03:37 PM

Status of Current



Activities:



Status	Activity Name	Participant	Organization	Due Date	Action Required	Type
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Project: Central Market Abu Dhabi
General Submittal - Thermo: 827
Revision: 0
Title: ACC-DAR-5633-REV.01 - PG - FLOOD PLAN

<u>CENTRAL MARKET REDEVELOPMENT</u> <u>ABU DHABI, UNITED ARAB EMIRATES</u>	Contract No: C21004
	REF. No: 25-MS-PL-PG-0186
<u>Flood Plan</u>	Rev. No : 01
	Date: 30 May 2012
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Flood Plan

Date / Revision	Commissioning Engineer		Commissioning Manager	
	Name	Signature	Name	Signature
15 May 2012 / Rev. 0	Antimony Lapuz		Hussain Taher	
30 May 2012 / Rev. 1	Antimony Lapuz		Hussain Taher	

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	<u>MEP Contractor</u> <u>THERMO L.L.C.</u>	

**Consultant Comments
&
Reply to Consultant**

Public comments Details

ACC-DAR-PG-5633-REV.0 - FLOOD PLAN To: Allen Kenny Donadillo (W.S. Atkins)
Date: 05-28-2012 05:28 pm

From: Allen Kenny Donadillo (W.S. Atkins) Workflow Activity: Reviewer
Subject: ACC-DAR-PG-5633-REV.0 - FLOOD PLAN

Comments: WSA (Safety) comments

- ↳ 1, No ACC's safety manager's approval.
↳ 2, No risk assessment attached.
Status- C. Resubmit.

FW: ACC-DAR-PG-5633-REV.0 - FLOOD PLAN To: John Gitau (W.S. Atkins)
Date: 28/05/2012 01:48 PM

Made Public by: Allen Kenny Donadillo (W.S. Atkins) Workflow Activity: Reviewer
From: John Gitau (W.S. Atkins)

In Response to: Allen Kenny Donadillo (W.S. Atkins)
Sent: 28/05/2012 08:14 AM

Subject: FW: ACC-DAR-PG-5633-REV.0 - FLOOD PLAN

Note:

Reply: No comments

FW: ACC-DAR-PG-5633-REV.0 - FLOOD PLAN To: Carlos Clemente (W.S. Atkins)
Date: 27/05/2012 03:11 PM

Made Public by: Allen Kenny Donadillo (W.S. Atkins) Workflow Activity: Reviewer
From: Carlos Clemente (W.S. Atkins)

In Response to: Allen Kenny Donadillo (W.S. Atkins)
Sent: 26/05/2012 08:38 AM

Subject: FW: ACC-DAR-PG-5633-REV.0 - FLOOD PLAN

Note:

Reply: No comments

FW: ACC-DAR-PG-5633-REV.0 - FLOOD PLAN To: Dusan Mrdalj (BDSP Partnership)
Date: 27/05/2012 03:11 PM

Made Public by: Allen Kenny Donadillo (W.S. Atkins) Workflow Activity: Reviewer
From: Dusan Mrdalj (BDSP Partnership)

In Response to: Allen Kenny Donadillo (W.S. Atkins)
Sent: 27/05/2012 08:45 AM

Subject: FW: ACC-DAR-PG-5633-REV.0 - FLOOD PLAN

Note:

Reply: Submittal is received for information only.

BDSP status: E



Reply to Consultant Comments Sheet

Item Description:		Reference No: 25 -MS - PL - PG - 0186	
Flood Plan		Revision No: 1	
		Date: 31.05.2012	
Sl.No	Comments	Reply to Comments	Remarks
WSA (Mechanical) Comments:			
1	No comments	Noted	
WSA (Safety Team) Comments:			
1	No ACC's Safety manager's approval	Comply, this Flood Plan will not proceed without ACC approval	
2	No Risk Assessment attached	Comply: refer to section 6.1	
BDSP Comments:			
1	Submittal Received for information only Status E	Noted	

<u>CENTRAL MARKET REDEVELOPMENT</u> <u>ABU DHABI, UNITED ARAB EMIRATES</u>	Contract No: C21004
	REF. No: 25-MS-PL-PG-0186
<u>Flood Plan</u>	Rev. No : 01
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	<u>MEP Contractor</u> THERMO L.L.C.	

6.1

Risk Assessment Sheet

HAZARD IDENTIFICATION AND RISK ASSESSMENT SHEET

Hazard Identification & Risk Assessment Sheet for			Flood Plan						
Project: CENTRAL MARKET REDEVELOPMENT – RETAIL AND KHALIFA BRIDGE					Ref: 25 – MS – PL – PG -				
No	Process	Hazard	Risk Assessment (No Control)			Controls	Risk Assessment With Controls		
			P	S	R		P	S	R
1.	Installation of the Submergible Pumps on to the sump pits located in Grid 45-46/H-J, 37-38/J-L & 27-28/J-L and PVC Drain line from all these sump pits to the Main Pit located in Grid 18-19/J-L.	<ul style="list-style-type: none"> ➤ Low lighting (Slips Trips and fall). ➤ Fall Hazards to the pit (Men and Material's). ➤ Electrical Hazards. ➤ Use of Chemical's. 	4	4	A	<ul style="list-style-type: none"> ➤ Competent Testing and Commissioning team are only allowed to carry out the installation of the Sump Pump and PVC distribution line. ➤ Preliminary Checks to ensure a safe working environment: Visually inspect the power tools for the damages, work area for sufficient lighting, safe access (ladder or scaffold platform) and free from other apparent hazards. ➤ Get a written permit to work (Restricted Access Permit) from the ACC Engineer through Thermo HSE Department. ➤ Ensure the areas are free from dust and construction debris. ➤ Scaffold platform must be erected and inspected by trained competent employees only. ➤ Competent Operatives from the T & C Team will only allowed making the appropriate connections to the Sump Pumps and to the PVC Line. ➤ Arrange sufficient lighting (provide task light). ➤ Conduct a special training and explain all the employees regarding the hazards, precautions and emergency procedures. ➤ Before start doing the testing evacuate all other workers, combustible Materials and Unwanted Tools from the work area. ➤ Ensure an adequate power supply through isolating devices RCD's: ELCB/GFCI. ➤ Maintain housekeeping throughout the work activity. ➤ Responsible Site Engineer must be present at all the work area to ensure the work being conducted safely as low as reasonably practicable. ➤ Take Reasonable Care always while working and if there is any potential for a significant risk of injury/ property damage then do not continue the work until it get resolved safely. ➤ Segregate the work area with sufficient number of warning signs and waning tapes. 	1	4	C

HAZARD IDENTIFICATION AND RISK ASSESSMENT SHEET

Hazard Identification & Risk Assessment Sheet for			Flood Plan						
Project: CENTRAL MARKET REDEVELOPMENT – RETAIL AND KHALIFA BRIDGE					Ref: 25 – MS – PL – PG -				
No	Process	Hazard	Risk Assessment (No Control)			Controls	Risk Assessment With Controls		
			P	S	R		P	S	R
						<ul style="list-style-type: none"> ➤ Leather hand gloves shall be used while installing the sump pumps. ➤ Do not drop down the sump pumps through the access ladder. ➤ Use Face Mask and Transparent Safety Goggles while using the power tools and using the chemicals. ➤ Follow the safe working procedures that are mentioned in the approved CoSHH Assessment of ABS PVC Cement (Ref. No: CMR/CoSHH/08) while using it for jointing the PVC Pipes. ➤ Display suitable numbers of Emergency Contact Numbers on the remote locations as necessary. ➤ Any spillage in the work area shall be cleared immediately. ➤ Inform all accidents and near misses to the safety team immediately. 			
2.	Disposal of the Waste Water from different Testing and Commissioning Activities to the Municipality Storm Water Line through Sump Pit in Basement Five to control the flooding the Water Flooding.	<ul style="list-style-type: none"> ➤ Waste Water Leakages. ➤ Slips Trips and Falls. ➤ Electrical Hazards. 	3	3	B	<ul style="list-style-type: none"> ➤ Ensure the PVC joints are correctly fitted. ➤ Keep off all the electrical cable from the ground. ➤ Display warning signs and barricade the distribution line to avoid trip and fall hazards. ➤ Maintain housekeeping and dispose all the waste and scrap materials from the work area. 	1	3	C

When completing this Performa you must take due consideration of local conditions including adjacent operations and premises.

Person Responsible for Reviewing the Risk Assessment:

HAZARD IDENTIFICATION AND RISK ASSESSMENT SHEET

Hazard Identification & Risk Assessment Sheet for			Flood Plan						
Project: CENTRAL MARKET REDEVELOPMENT – RETAIL AND KHALIFA BRIDGE				Ref: 25 – MS – PL – PG -					
No	Process	Hazard	Risk Assessment (No Control)			Controls	Risk Assessment With Controls		
			P	S	R		P	S	R
Name	Shamnas P Sherieff				Position	HSE Manager			
Signature					Date	30 th May 2012	Review Date	29 th May 2013	

Probability (P) X Severity (S) = Risk

1 = Unlikely	1 = Negligible
2 = Low	2 = Minor Injury
3 = Medium	3 = Severe Injury
4 = High	4 = Fatal

	Risk Level (P/S)			
	S1	S2	S3	S4
P1	X	X	D	C
P2	X	D	C	B
P3	D	C	B	A
P4	D	B	A	A

Conclusions:

A = Hazard **MUST** be avoided (or level of risk reduced significantly & reliably by controls)

B = Hazard **SHOULD** be avoided (or level of risk reduced significantly & reliably by controls)

C = Risk to be controlled as far as reasonably practicable

D = Risk is controlled as far as reasonably practicable

X = Normal PPE to be worn as dictated by ACC policy



Product Name	ABS Cement	Assessment No.	CMR/COSHH/08
Description of Substance	Solvent Cement jointing PVC Pipes applied by brush.	Safety Data Sheet Attached	Yes
Workplace Exposure Limits	NA	Assessed by	Shamnas P Sherieff
Task / Activity	Installation of PVC Pipe Line	Date	06 th May 2012
Suppliers contact details	RS Component PVT Limited	Review Date	05 th May 2013

SUBSTANCE PROPERTIES

							
YES	NO	NO	NO	NO	YES	YES	YES

Route of Exposure		Persons at Risk			
Skin	√	Users of Products	√	Members of Public	NO
Ingestion	√	Other Workers	√ (In the same location)	Young Persons	√ (In the same location)
Eyes	√	Visitors	√ (In the same location)		
Cuts / Abrasions	√				
Inhalation	√				
Injection	NO				

PPE REQUIREMENTS

						
YES: Goggles with side shields	YES: Respirator Mask	NA	YES	YES: Butyl Rubber Gloves/ Polyethylene Gloves	YES: on a Weekly Basis	YES: in case of working in basements

ADDITIONAL CONTROL MEASURES


General Precautions & Control Measures

Keep away from ignition sources. Hot work is not allowed near the installation area. Use respirator mask. Eye wash kit is kept ready against splash

Keep it into cool and dry place. Use in fresh air ventilated area. Keep container sealed when not in use to prevent curing of product. Keep it away from foodstuff and beverages. Do not keep it horizontally on the floor. Do not expose to naked flames, hot works, and direct sunlight. Protect it from falling objects.

First Aid / Hygiene Arrangements	Fire Precautions
Eye: Immediately flush with low pressure water for 15 minutes. Holding the eyes open and Obtain medical assistance	Extinguishing Media: Foam, DCP, Carbon Dioxide and Water Spray or frog- for Large Fires Only.
Skin: wash with water. Solvent is not allowed to remove stains and washing. Launder contaminated clothing before reuse. Obtain medical assistance.	Wear full protective clothing in the case of fire fighting. A NIOSH approved self continued breathing apparatus should be worn when fighting fires involving chemicals.
Inhalation: if the symptoms occur move to fresh air and seek medical advice.	Store in cool dry place, tightly sealed away from direct sunlight and extremes of heat and cold.
Swallowed: do not induce vomiting, if vomiting occurs lean the patient foreword or place on left side (head-down position if possible) to maintain open airway and prevent aspiration. Observe patient carefully. Never give any liquid to victim showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.	
LEV Requirements	Monitoring Requirements
Ensure good ventilation/exhaustion at the work place and store.	Active monitoring must be carried out by the works supervisor/store man to ensure safe usage of product and its storage.
Transport Arrangements	Storage Requirements
Proper shipping name: ABS Cement – ADHESIVES containing flammable liquid ADHESIVES.	Store only in the original packaging at temperatures 0°C to 40°C Prevent from excessive heat and cold. Unused cylinders must sent back to COSHH store.
Spillage Procedures	Disposal Requirements
Spills can wash by water and contaminated water is collected into suitable waste skips. Soak up with inert absorbent or contain and remove by best available means e.g. sand and earth.	Dispose all hazardous waste to the Hazardous waste Skip provided by the ACC and according to consultation of local or federal agencies or the corporate firm which comply the local and federal safety health and environmental regulation.
COMMENTS	

Are hazards to health adequately controlled with all control measures in place? Yes No

Assessment Prepared by	
Name	Shamnas P Sherieff
Signature	
Date	06 th May 2012

7.3

Testing and Commissioning Schedule for Fire Fighting Sprinkler System

Fire Fighting Sprinkler System Testing and Commissioning Schedule

SN	Location	Level	Date to Start	Date to Finish	Time to Start (Daily)	Time to Stop (Daily)	Remarks
1	Carpark	Basement 5	26-Jan-2013	28-Jan-2013	8:00 AM	5:00 PM	
2	Carpark	Basement 4			8:00 AM	5:00 PM	
3	Carpark	Basement 3			8:00 AM	5:00 PM	
4	Carpark	Basement 2			8:00 AM	5:00 PM	
5	Carpark	Basement 1			8:00 AM	5:00 PM	
6	Carpark	Basement Mezzanine			8:00 AM	5:00 PM	
7	Retail	Basement 1	28-Jan-2013	28-Jan-2013	8:00 AM	5:00 PM	
8	Retail	Basement Mezzanine			8:00 AM	5:00 PM	
9	Retail	Ground Floor	21-Jan-2013	15-Feb-2013	8:00 AM	5:00 PM	
10	Retail	Level 01			8:00 AM	5:00 PM	
11	Retail	Level 02			8:00 AM	5:00 PM	
12	Retail	Level 02 Mezzanine			8:00 AM	5:00 PM	
13	Retail	Level 03			8:00 AM	5:00 PM	
14	Retail	Level 04			8:00 AM	5:00 PM	
15	Retail	Level 05			8:00 AM	5:00 PM	
16	Retail	Level 06			8:00 AM	5:00 PM	
17	Retail	Level 07			8:00 AM	5:00 PM	

NOTE: The Fire alarm will still create false alarms in the souk until the handing over to civil defense for retail and accordingly, disabling auto call to civil defense and monitoring the system to silence any false alarm must be maintained until handing over the project to civil defense / client.