KAHRAMAA كهرماء

المؤسسة العامة القطرية للكهرباء والماء
Qatar General Electricity & Water Corporation

CONTRACT No GTC 626/2014A

CONSTRUCTION OF MEGA RESERVOIR PRPSs (PACKAGE A - UMM BIRKA)

CONTRACT DOCUMENTS (VOLUME 17 OF 19)

CONSOLIDATED CONTRACTORS GROUP S.A.L. (OFFSHORE) (CCC) &
TEYSEER CONTRACTING COMPANY W.L.L.
JOINT VENTURE

TABLE OF CONTENTS

ANNEXURE (13) OUTLINE HEALTH, SAFETY and ENVIRONMENT (HSE) Plan

CONTRACTOR provides the proposed HSE plan for this CONTRACT (including company generic and site specific procedures). The HSE Plan shall include the following as minimum requirements:

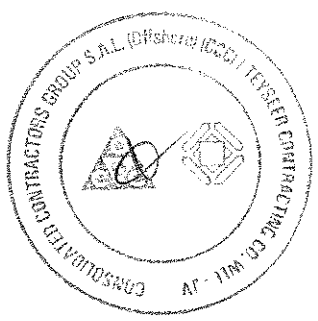
1. Scope.
2. HSE Organization chart.
3. Responsibilities of key personnel.
4. Outline of contractor's HSE System and its principles.
5. Management Responsibility.
6. Proposals in relation to Kahramaa requirements (Appendix J)
7. HSE management of Sub-contractors
8. Site specific rules
9. Emergency response plan
10. Accident investigation and reporting

Please find enclosed herein the following HSE Documentation:

1. HSE Policy Statement
2. Environment Policy Statement
3. Security Policy Statement
4. ISO 14001-2004 Certificate
5. OHSAS 18001-2007 Certificate
6. HSE List of Deliverables
7. Proposed Project Health, Safety and Environment Plan (PP701-HSE)
8. Proposed Audit and Inspection Reporting Procedure (PP705-ADR)
9. Proposed Incidents Reporting and Investigation Procedure (PP709-AIR)
10. Proposed Site Emergency Response Plan (PP711-SER)
11. Proposed Excavation Safety Procedure (PP712-EXS)
12. Proposed Personal Protective Equipment Procedure (PP715-PPE)
13. Proposed Scaffolding Safety Procedure (PP716-SSP)

APPENDIX E – ANNEXURE 13

HSE POLICY STATEMENT



CONSOLIDATED CONTRACTORS GROUP (CCC)

HSE POLICY STATEMENT

CCC Group HSE Goal:

Our Health, Safety & Environmental (HSE) goal is to prevent occupational incidents, injuries, illnesses, harm to people, property damage and to protect the environment at all locations of CCC Group operations.

Our Commitment:

We are committed to provide a safe and healthy work environment at all times. CCC Group Management strives to achieve this goal by placing incident prevention and protection of the health and safety of our own employees, the employees of our subcontractors, the visitors and of the local communities as one of the Core Values of CCC Group.

We will not compromise our values, beliefs and commitments to HSE in order to achieve any other business objectives. We are also committed to seeking international partnerships, aimed at promoting sustainable development and corporate social accountability.

HSE Management System Implementation:

CCC Group shall take a leading role in the promotion and implementation of its Health, Safety and Environmental Management System

CCC Group will strictly comply with all applicable legal laws and internationally accepted work practices and procedures for the protection and promotion of the safety and health and the protection of the environment.

CCC Group employees at all levels will strictly adhere to all site safety, health, environment standards and job work rules and procedures and must work continuously and diligently to execute this policy by maintaining the highest standards of occupational health, safety and environmental management to prevent human suffering, loss, and environmental damage which may result from unsafe acts and conditions. CCC Group enforces a disciplinary enforcement procedure and a "Zero Tolerance Policy" for HSE violations.

CCC Group shall attain its goal through:

- Developing, distributing, maintaining and monitoring the implementation of an HSE Management System that is compliant with internationally recognized standards
- Conducting HSE Training and developing the skills and competencies of all personnel.
- Assigning qualified HSE Personnel and providing the adequate resources.
- Maintaining transparent HSE reporting and investigation of incidents.
- Seeking partnerships and sharing experiences and lessons learned with our clients and partners.

CCC Group will perform rigorous and frequent internal and third party audits to ensure that the implementation of the HSE Management System on CCC Group work locations is in line with this policy.

HSE Targets and Objectives:

CCC Group will continuously strive for the improvement of its HSE Management System and performance by setting HSE targets and objectives. CCC Group targets and objectives are set by Executive Management and they are disseminated to all personnel and work location of CCC Group.

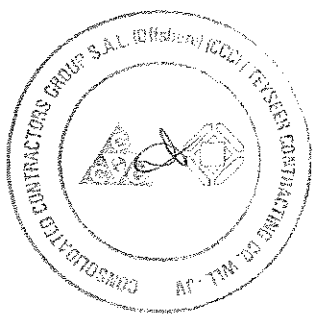
Samer Khoury

President (Engineering & Construction)
Consolidated Contractors Group (CCC)

June 2013

APPENDIX E – ANNEXURE 13

ENVIRONMENT POLICY STATEMENT



CONSOLIDATED CONTRACTORS GROUP (CCC)

ENVIRONMENT POLICY STATEMENT

The CCC Group recognizes its activities have an impact on the environment and it is committed to minimizing environmental impact as far as is reasonably practicable.

The CCC Group is committed to creating an organizational culture emphasizing environmental excellence as an integral part of operations and a value that will be promoted within the CCC Group.

CCC is committed to:

1. Compliance with all environmental legislation, regulation and codes of practice
2. Pollution prevention and protection of the environment
3. Minimizing and reducing impact on the environment and promotion of sustainability by ensuring the efficient use of resources
4. Continual improvement in its environmental performance

Environmental Management System Implementation:

The CCC Group shall take a leading role in the promotion and implementation of its Environmental Management System and shall strive to be a leader in environmental stewardship.

It is the policy of CCC Group to:

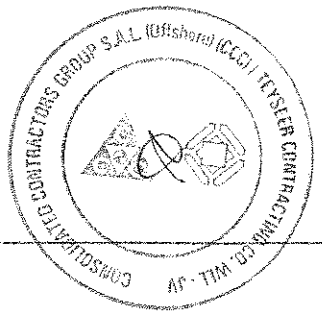
- Set detailed procedures and policies to ensure compliance with international and national standards and legal requirements.
- Operate in a way that conserves resources and minimizes harmful impacts on the environment.
- Reduce waste generation and promote the reuse and the recycling of materials.
- Manage and mitigate residuals of its operations.
- Use sustainable practices to protect its employees, the local community and the environment.
- Protect, conserve and minimize impact on the historical and cultural heritage sites.
- Promote environmental awareness and training among its employees and encourage them to work in an environmentally responsible manner.
- Seek international engagement and partnerships with various stakeholders to actively promote sustainable development and social accountability.
- Continuously improve its Environmental Management System.
- Be transparent in reporting all environmental incidents, investigate all incidents and implement corrective measures to prevent their reoccurrence.

The CCC Group will perform frequent internal and third party audits at CCC work locations to ensure the implementation of the Environmental Management System adheres to this policy.

Environmental Targets and Objectives:

The CCC Group Environmental targets and objectives will be established to achieve an acceptable level of environmental performance for its operations. Management at all levels of the CCC Group is responsible for ensuring that this policy is being promoted and communicated internally and externally to all parties.

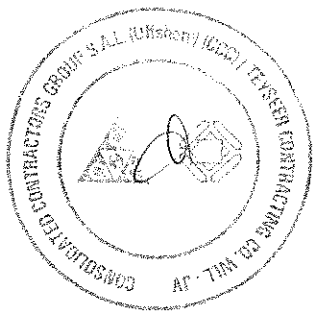
Samer Khoury
President (Engineering & Construction)
Consolidated Contractors Group (CCC)



June 2013

APPENDIX E – ANNEXURE 13

SECURITY POLICY STATEMENT



CONSOLIDATED CONTRACTORS GROUP (CCC)

SECURITY POLICY STATEMENT

CCC Group Security Goal:

Our Security goal is a shared responsibility to protect the company's employees, assets, information, integrity and reputation from any potential threats.

Our Commitment:

We are committed to provide secure and protected workplaces for our employees at all times. We shall exert all efforts and avail all possible resources to identify, evaluate and manage security risks to personnel, property and information, in order to eliminate or at least minimize the impact of these risks and threats.

CCC Group Security Principles:

CCC Group Management shall take a leading role in the implementation of CCC Group security plans and procedures and shall continually be aware of and take responsibility for the security aspects of the CCC Group business activities.
The security and protection of employees, property, and information must be the overriding priority of all CCC Group Managers.

CCC Group will maintain an effective security assurance process by:

1. Developing, maintaining, updating and continuously assessing emergency response plans to deal with assessed risks, so to mitigate incidents rapidly and effectively.
2. Reviewing and inspecting Security measures and procedures so as to maintain high levels of security standards on all CCC Group operations.
3. Integrating Security expectations with business planning and decision-making where business imperatives drive security.
4. Establishing relations and full coordination with local government agencies and local law enforcement authority's, and where possible pursuing security through good community relations and acceptance.
5. Implementing a "Zero Tolerance Policy" regarding Security issues and violations.
6. Maintaining transparent reporting and investigation of all security incidents, including security breaches and irregularities.
7. Taking corrective actions and following up through the regular verifications to improve the overall security standards.
8. Providing CCC Group personnel with the necessary Security training programs, briefings and awareness acknowledging that security is achieved through the everyday actions of employee's right across the company.
9. Initiating agreements with top international evacuation companies in order to assist in evacuating CCC Group employees during situations of high security emergencies and threats and where such services are required.

CCC Group will continuously strive to improve its Security plans and procedures by setting up targets and objectives as benchmarks. Such targets and objectives will be determined by the Executive Management and they will be cascaded and disseminated to all CCC Group operations and locations.

Samer Khoury
President (Engineering & Construction)
Consolidated Contractors Group (CCC)

CONSOLIDATED CONTRACTORS GROUP S.A.L. (Offshore) (CCC) / KEYSEER CONTRACTING CO. W.L.L.

June 2013

APPENDIX E – ANNEXURE 13

ISO 14001-2004 CERTIFICATE

BUREAU VERITAS
Certification

Consolidated Contractors Group S.A.L. (Holding Company)
62B, Kifissias Ave., Amaroussion 151 10, Athens
GREECE

This is a multi-site certificate, additional site details are listed in the appendix to this certificate

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standards

ISO 14001:2004

Scope of certification

ENGINEERING, PROCUREMENT AND CONSTRUCTION OF CIVIL, MECHANICAL, ELECTRICAL AND PIPELINES PROJECTS.

Certification cycle start date: **25 November 2013**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: **25 November 2016**

Original certification date: **01 October 2001**

Certificate No. GR13.1427E

Version 1, Revision date: 25 November 2013

N. TRILIZAS

UKAS MANAGEMENT SYSTEMS

008

Certification body address:
Brandon House, 180 Borough High Street, London SE1 1LB, United Kingdom
Local office:
Bureau Veritas Hellas A.E., 23 Etolikou str., 18545 Piraeus, Greece

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.
To check this certificate validity please call: **+30 210 4063000**

BUREAU VERITAS
Certification

Consolidated Contractors Group S.A.L. (Holding Company)
62B, Kifissias Ave., Amaroussion 151 10, Athens
GREECE

Standards

ISO 14001:2004

Scope of certification

ENGINEERING, PROCUREMENT AND CONSTRUCTION OF CIVIL, MECHANICAL, ELECTRICAL AND PIPELINES PROJECTS.

Consolidated Contractors Group S.A.L. (Holding Company)	Sabbagh & Khoury Building, Nicolas Sursock Street, Ramlet Al Baida, Beirut, Lebanon	Engineering, Procurement and Construction of Civil, Mechanical, Electrical and Pipelines projects.
Consolidated Contractors Group S.A.L. (Offshore)	Sabbagh & Khoury Building, Nicolas Sursock Street, Ramlet Al Baida, Beirut, Lebanon	Engineering, Procurement and Construction of Civil, Mechanical, Electrical and Pipelines projects.
Consolidated Contracting Engineering & Procurement S.A.L. (Offshore)	Sabbagh & Khoury Building, Nicolas Sursock Street, Ramlet Al Baida, Beirut, Lebanon	Engineering, Procurement and Construction of Civil, Mechanical, Electrical and Pipelines projects.
Consolidated Contractors International Company S.A.L. (Offshore)	Sabbagh & Khoury Building, Nicolas Sursock Street, Ramlet Al Baida, Beirut, Lebanon	Engineering, Procurement and Construction of Civil, Mechanical, Electrical and Pipelines projects.

Certificate No. GR13.1427E

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BUREAU VERITAS
Certification

Consolidated Contractors Group S.A.L. (Holding Company)
62B, Kifissias Ave., Amaroussion 151 10, Athens
GREECE

Standards

ISO 14001:2004

Scope of certification

ENGINEERING, PROCUREMENT AND CONSTRUCTION OF CIVIL, MECHANICAL, ELECTRICAL AND PIPELINES PROJECTS.

Teyseer Contracting Company W.L.L., Qatar	P.O.Box 2630 Qatar	Engineering, Procurement and Construction of Civil, Mechanical, Electrical and Pipelines projects.
Sicon Oil & Gas S.p.A., Italy	Via Della Giustizia 10 20125 Milano Italy	Engineering, Procurement and Construction of Civil, Mechanical, Electrical and Pipelines projects.
ACWA Services Ltd., UK	ACWA House Keighley Road, Skipton, North Yorkshire, BD23 2UE United Kingdom	Engineering, Procurement and Construction of Civil, Mechanical, Electrical and Pipelines projects.

Certificate No. GR13.1427E

Version 1, Revision date: 25 November 2013

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APPENDIX E – ANNEXURE 13

OHSAS 18001-2007 CERTIFICATE

BUREAU VERITAS
Certification

Consolidated Contractors Group S.A.L. (Holding Company)
62B, Kifissias Ave., Amaroussion 151 10, Athens
GREECE

This is a multi-site certificate, additional site details are listed in the appendix to this certificate

Bureau Veritas Hellas A.E. certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standards

OHSAS 18001:2007

Scope of certification

ENGINEERING, PROCUREMENT AND CONSTRUCTION OF CIVIL, MECHANICAL, ELECTRICAL AND PIPELINES PROJECTS.

Certification cycle start date: **25 November 2013**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: **25 November 2016**

Original certification date: **01 October 2001**

Certificate No. GR13.0643S

Version 1, Revision date: 25 November 2013

N. TRILIZAS

SAFETY CERT®

Certification body address:
Bureau Veritas Hellas A.E., 23 Etolikou str., 18545 Piraeus, Greece
Local office:
Bureau Veritas Hellas A.E., 23 Etolikou str., 18545 Piraeus, Greece

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62B, Kifissias Ave., Amaroussion 151 10, Athens
GREECE

Standards

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Consolidated Contractors Group S.A.L. (Holding Company)	Sabbagh & Khoury Building, Nicolas Sursock Street, Ramlet Al Baida, Beirut, Lebanon	Engineering, Procurement and Construction of Civil, Mechanical, Electrical and Pipelines projects.
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Consolidated Contracting Engineering & Procurement S.A.L. (Offshore)	Sabbagh & Khoury Building, Nicolas Sursock Street, Ramlet Al Baida, Beirut, Lebanon	Engineering, Procurement and Construction of Civil, Mechanical, Electrical and Pipelines projects.
Consolidated Contractors International Company S.A.L. (Offshore)	Sabbagh & Khoury Building, Nicolas Sursock Street, Ramlet Al Baida, Beirut, Lebanon	Engineering, Procurement and Construction of Civil, Mechanical, Electrical and Pipelines projects.

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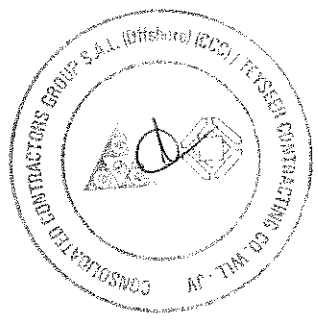
APPENDIX E – ANNEXURE 13

HSE LIST OF DELIVERABLES



Consolidated Contractors Group S.A.L. (Offshore)(CCC)
Teyseer Contracting Company W.L.L. Joint Venture

HSE Group

Project HSE Procedure Submission & Approval Status

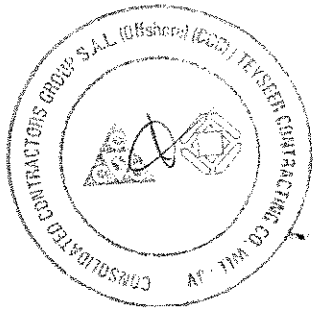
Project No.: 4857 ***Project Name:*** Construction of Mega Reservoir PRPSs (Package A)

Location: Qatar

Transmital No. / Date
1st T/No
Date
2nd T/No
Date

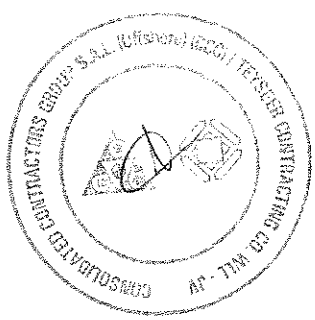
Form No: FORM-SCD-P001
Issue Date: 8/5/2006
Rev. No: 1 Rev. Date: 30/04/2012
Data Update
Page No

Srl.	Procedure No.		PROCEDURES	DATE SUBMISSION BY HSE Group		1ST COMMENTS / SUBMITTAL			2ND COMMENTS / SUBMITTAL			APPROVED BY PROJECT / CLIENT		Remarks
	No.	3 code		REV	ACTUAL	COMMENTS RECEIVED FROM PROJECT	SUBMITTED BY SCD REV	SUBMITTED BY SCD DATE	COMMENTS RECEIVED FROM PROJECT	SUBMITTED BY SCD REV	SUBMITTED BY SCD DATE	DATE	COPY RECEIVED BY HQ, HSE Department	
A	**PROJECT HSE PROCEDURES**													
1	PP 701	HSE	Health, Safety & Environment Management Plan	0	12/7/2014									
2	PP 702	EMP	Environment Management											
3	PP 703	FAP	First Aid & Medical Facilities											
4	PP 704	SEC	Security Plan											
5	PP 705	ADR	Audit / Inspection Reporting	0	12/7/2014									
6	PP 706	ASR	HSE Activities & Statistics Reporting											
7	PP 707	WMP	Waste Management Plan											
8	PP 708	SSC	Sub-contractor Selection and Control											
9	PP 709	AIR	Accident / Incident Reporting & Investigation	0	12/7/2014									
10	PP 710	CSE	Confined Space Entry											
11	PP 711	SER	Site Emergency Response Plan	0	12/7/2014									
12	PP 712	EXS	Excavation Safety	0	12/7/2014									
13	PP 713	FPP	Fire Prevention & Protection											
14	PP 714	JSA	Job Safety Task Instructions Procedure (JSTI)											
15	PP 715	PPE	Personal Protective Equipment	0	12/7/2014									
16	PP 716	SSP	Scaffolding Safety Procedure	0	12/7/2014									
17	PP 718	CSH	Camp Sanitation and Hygiene											
18	PP 719	DAF	Drugs, Alcohol, & Firearms											
19	PP 721	ISM	Incentive Scheme & Motivation											
20	PP 722	TIP	HSE Training & Induction											
21	PP 723	FLP	Fall Protection											
22	PP 724	CHS	Chemical Hazard Communication and Storage											
23	PP 725	JMP	Journey Management / Road Transport											
24	PP 726	LTP	Lock out / Tag out											
25	PP 727	NWP	Night Working											
26	PP 728	ROP	Radiography Operations											
27	PP 729	RAP	Risk Assessment Procedure											
28	PP 730	HTS	Hot Weather and heat Stress											
29	PP 731	MEE	Medical Emergency Evacuation											
30	PP 733	HKP	Housekeeping											
31	PP 734	DEP	Disciplinary Enforcement											
32	PP 735	IRP	Insects, rodents and pest control											
33	PP 736	HYS	Hydrogen Sulfide											
34	PP 737	WPS	Work Permit System											
35	PP 738	LOP	Lifting Operations											
36	PP 739	CGC	Compressed Gas Cylinders											
37	PP 740	GOA	Grinding Operations and Abrasive Wheels											
38	PP 741	PPT	Portable Power Tools											
39	PP 742	MHG	Manual Handling											
40	PP 743	SCP	Sand-Blasting – Coating – Painting											
41	PP 744	PTO	Pressure Testing Operations											
42	PP 745	RWT	Road Work and Traffic Signs											
43	PP 746	WPL	Working Near or Under Overhead Power Lines											
44	PP 747	HEB	Handling Explosive and Blasting Material											
45	PP 750	SRR	Site Restoration and Reinstatement Summary											
46	PP 751	SPR	Spill Management & Reporting Procedure											
47	PP 752	TFS	Fuel Storage and refueling Operations											
48	PP 754	AMP	Ammonia Procedure											
49	PP 755	WLP	Wild Life Procedure											
50	PP 756	VSP	Vehicle Safety Procedure											
51	PP 758	WNO	Working Near or Over water											
52	PP 759	FEL	Front End Loading											
53	PP 760	CER	Camp Emergency Response Plan											
54	PP 762	IPE	Basic HSE Training & Hazard Awarness for Project Employee											
55	PP 763	HIS	HSE Induction & Orientation for ProjectHSE Staff											
56	PP764	EEG	Electrical Equipment and Grounding procedure											
57	PP765	SWP	Stop Work											
58	PP766	ECP	ErosionSediment Control Plan											
59	PP767	LSP	Lightning Safety Procedure											
60	PP770	PMS	Pre & Post Employment Medical Screening											
61	PP771	HRP	Heavy Rain Procedure											
62	PP772	SIM	Simultaneous Operations Procedures											
63	PP773	DCP	Dust Control Procedure											
64	PP774	WTM	Wheel Tyres Maintenance and Repair Operations											
65	PP775	IMP	Influenza Management											
66	PP777	OSP	Office Safety Procedure											
67	PP778	STP	Sandstorm Procedure											
68	PP779	DWP	Drinking Water Facilities And Cleaning Procedure											
69	PP780	CPD	Competent Person Designation Procedure											
70	PP781	RCP	HSE Regulatory Compliance Procedure											
71	PP782	MOC	Management of Change Procedure											
72	PP783	ICM	Injury - Illness Case Management Procedure											



APPENDIX E – ANNEXURE 13

PROPOSED PROJECT HEALTH, SAFETY AND ENVIRONMENT PLAN (PP701-HSE)



Project Procedure

Health, Safety and Environment Plan

Qatar General Electricity & Water Corporation (KAHRAMAA)

Tender No. 4857

Construction of Mega Reservoir PRPSs (Package A)

Doha -Qatar

			MGT	OwR	
0	Issued for Tender use	12-Jul-2014	M.Tanbour (MGT) HSE Coordinator	O.Reed (OR) HSE Manager	R.Davies (RD) HSE Group Director
Rev	**Description**	**Date**	**Prepared By**	**Checked By**	**Approved By**

Index

1. Scope

1.1. HSE

1.1.1. The CONTRACTOR's Group of Companies Health, Safety, Environment and Security Plan (HSE Plan) represents the minimum working standards / practices to be observed and implemented in all group operations. This Plan is to be implemented on each Project to follow in conjunction with all Local and State Laws, Regulations, Procedures and International Practices.

1.1.2. The HSE Plan does not restrict an individual company and / or job from developing additional policies / procedures / practices in coordination with HSE Group to promote health, safety, and the protection of the environment as may be dictated by the job, work or the Company / Client.

1.1.3. The application of the HSE Plan to the certain project shall be defined through the Project Health, Safety & Environment Specific Procedures, Project health, safety and environment responsibilities and project specific Company / Client Health, Safety & Environment Regulations that must be addressed.

1.1.4. This plan covers all the work and site areas including temporary facilities and applies to all CONTRACTOR site employees and to CONTRACTOR's Sub-Contractors.

2. Bureau Veritas HSE&SCertifications

2.1. CONTRACTOR is certified by Bureau Veritas (BV, Third Party Auditors) for compliance with the requirements of the following standards:

2.1.1. ISO 14001(Environmental Management Systems)

2.1.2. OHSAS 18001(Occupational Health and Safety Management Systems)

2.2. This Project HSE&S Management Plan represents the HSE&S standards and practices that CONTRACTOR shall implement on this Project in order to maintain compliance with the requirements of BV HSE&S Certificates.

2.3. Refer to Attachments 2 & 3.

3. Introduction

3.1. CONTRACTOR will ensure that all persons engaged in any activities have attended the Client's induction session before commencing any work.

3.2. The CONTRACTOR Health, Safety & Environment Plan seeks to promote continuous improvement to the working conditions of our Company activities. Our ultimate goal for Health, Safety, & Environment improvement is the elimination of losses in all activities involving people, equipment, and material in addition to protecting the environment. We shall seek to effectively control all hazards and reduce the risk to all personnel to a zero accident level.

3.3. Successful management of Health, Safety & Environment is essential for the long-term viability of the company. To this effect we will set clear goals in these areas through our long-term objectives.

3.4. To achieve these long-term objectives, CONTRACTOR shall continuously improve the existing Health, Safety & Environmental Management System. This mechanism is in the form of procedures and set policies and rules based on the various International HSE Standards, monitoring and auditing systems that contribute towards the HSE working conditions and the subsequent wellbeing of personnel throughout all Consolidated Contractors Group facilities.

3.5. The CONTRACTOR Health, Safety & Environmental Plan is structured in a manner consistent with both International and National Standards as applicable.

4. CONTRACTOR Health, Safety and Environmental Policy Statement

4.1. CONTRACTOR has a Health, Safety, and Environmental Management Policy Statement signed by the President (Engineering & Construction). Refer to Appendix 1 for the detailed Policy Statement.

5. Targets

5.1. CONTRACTOR's Main Target is to have quality production with **Zero Accidents.**

Fatality	Lost Time Injury	Lost Time Accident Frequency	Environmental Accidents
0	0	0	0

5.2. How to reach these Targets?

5.2.1. Achieving CONTRACTOR's Main HSE Targets as described in item 6.1 of this Plan is feasible through:

5.2.1.1. Project's genuine commitment to HSE, starting from Top Management.

5.2.1.2. Support from Project Management to Project's HSE Department.

5.2.1.3. Full implementation of CONTRACTOR's HSE Plan & Procedures.

5.2.1.4. Zero Tolerance Policy (Against violators)

6. Objectives

6.1. **Health**: The immediate objectives are:

6.1.1. To provide adequate medical facilities on site through establishing sufficiently equipped first aid clinics and first aid stations.

6.1.2. To provide proper First Aid Treatment and the necessary equipment for its administration on site.

6.1.3. To properly track and register first aid cases on a logbook designed for such purposes. The cases are to be classified as "Medical" or "Industrial" cases.

6.1.4. To develop and encourage preventive medical care attitude through increasing Health & Hygiene Awareness.

6.1.5. To conduct periodic health inspections so as to ensure and maintain a good standard of health and hygiene.

6.2. **Safety**: The immediate objectives are:

6.2.1. To prevent all occupational accidents by implementing the necessary HSE procedures for such purposes.

6.2.2. To prevent off-duty accidents by implementing proper HSE control procedures.

6.2.3. To ensure that there is an effective HSE Management System by establishing a comprehensive HSE Organization Chart that delegates authority and responsibilities.

6.2.4. To address critical HSE activities during the construction and present methods and procedures for preventing accidents.

6.2.5. To comply with CONTRACTOR safety standards or by Contract Document Requirements where they are more stringent.

6.2.6. To promote HSE awareness and consciousness in employees and ensure implementation of HSE procedures through a proper HSE awareness program.

6.2.7. To establish audits for monitoring the implementation of the HSE Plan and HSE procedures.

6.3. **Environment:** The immediate objectives are:

6.3.1. To implement an environmental awareness program that aims at developing environmental friendly attitudes and promote understanding, and acceptance of environmental responsibilities among employees

6.3.2. To reduce or eliminate the creation of pollution through efficient use/reuse of raw material, energy, or other sources, and through environmentally sound effluent management.

6.3.3. To reinstate work areas to environmentally acceptable levels.

6.3.4. To minimize environmental impacts in accordance with Local Authority Requirements.

6.4. Security Objectives

6.4.1. To provide a safe and secure working environment and to protect personnel, image, proprietary information, and other physical assets against all forms of harm.

6.4.2. To ensure that the Security Risks to all persons, company information and image, and other assets are managed in a structured systematic manner.

6.4.3. To identify the key risk areas CONTRACTOR personnel are exposed to and to provide guidelines on personnel security measures to minimize these risks.

6.4.4. To reduce security risks to all information assets, whether owned by, or entrusted to the Company.

6.4.5. To ensure that effective Plans are in place throughout the company to manage serious incidents at the appropriate level and to effect the speedy restoration of critical business processes and services.

6.4.6. To explain the process of emergency and incident management and reporting.

6.4.7. To provide background information and guidance to corporate functions that will enable them to prepare contingency Plans.

6.4.8. To develop and have available effective Plans that ensure the speedy restoration of critical business processes and services in the event of serious business interruption.

6.4.9. To engender an awareness of personal safety and security issues in both the expatriate and national employees, make company's employees aware of corporate security issues and re-enforce employee's responsibilities in terms of appropriate behavior, information security and business ethics.

7. Lessons Learned

7.1. CONTRACTOR shall collate information and Lessons Learned gained from field experiences during the implementation the HSE Management System Plans and Procedures and initiate periodic reviews to identify opportunities for improvement. This shall be the direct responsibility of the HSE In Charge in close coordination with the project management and supervision.

7.2. Lessons Learned shall be reported to HSE Group by all projects, then these are communicated by HSE Group to all other CONTRACTOR projects on a standardized format. This information should be communicated to all workforces and be used in toolbox talks, JSAs and risk assessments.

8. Purpose

8.1. The purpose of this plan is to provide a systematic approach to manage HSE activities and services associated with CONTRACTOR scope of work in the Project.

8.2. This Project HSE Plan summarizes the HSE responsibilities and procedures for the Project in accordance with the President (Engineering & Construction) Health, Safety, and Environment Policy Statement.

9. Definitions and Abbreviations

9.1. Definitions

9.1.1. CLIENT: **Qatar General Electricity & Water Corporation (KAHRAMAA)**

9.1.2. PROJECT: **Construction of Mega Reservoir PRPSs (Package A)**

9.1.3. CONTRACTOR: **Consolidated Contractors Company and Teyseer Contracting Company Joint Venture**

9.2. Abbreviations

9.2.1. HSE&S: Health, Safety, Environment and Security

9.2.2. HSE Group: CONTRACTOR HSE Corporate Office

9.2.3. PEC HSE&S Drive 2012: CONTRACTOR President (Engineering & Construction) – HSE&S Drive issued in 2012.

10. References

10.1. OSHA 29 CFR (Code of Federal Regulations) Part 1926 – Labor

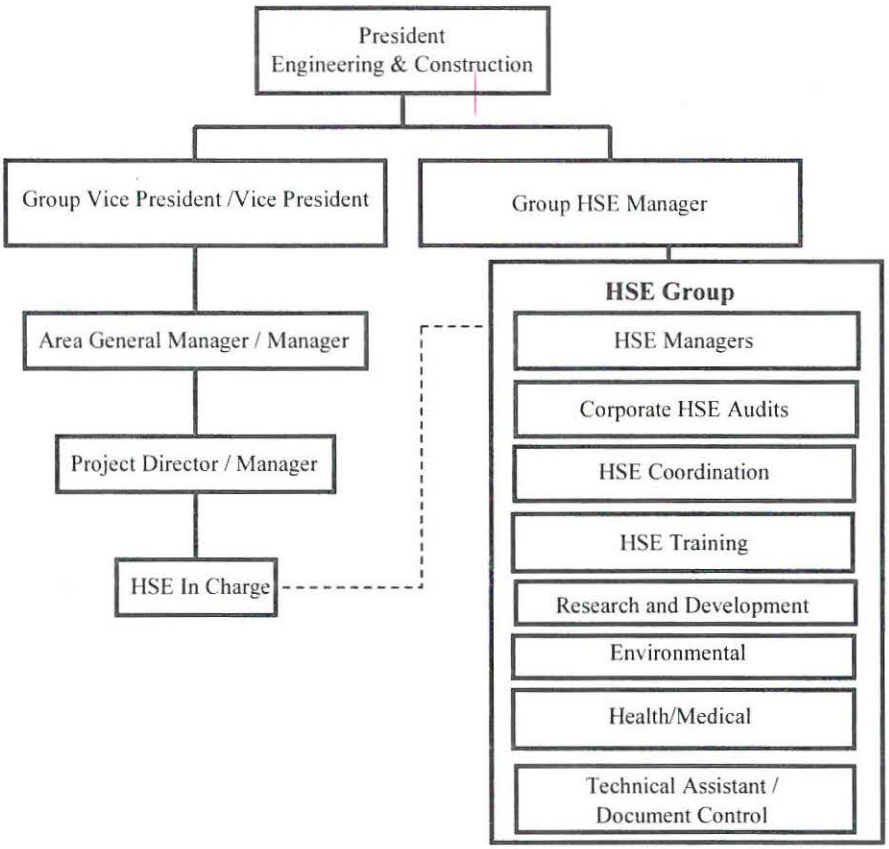
10.2. ISO 14001 & OHSAS 18001 Standards

10.3. Project Contract HSE&S Requirements

11. OPERATIONAL PROCEDUREHSE Organization and Responsibilities

11.1. Responsibilities: HSE Group

11.1.1. Organization Chart.

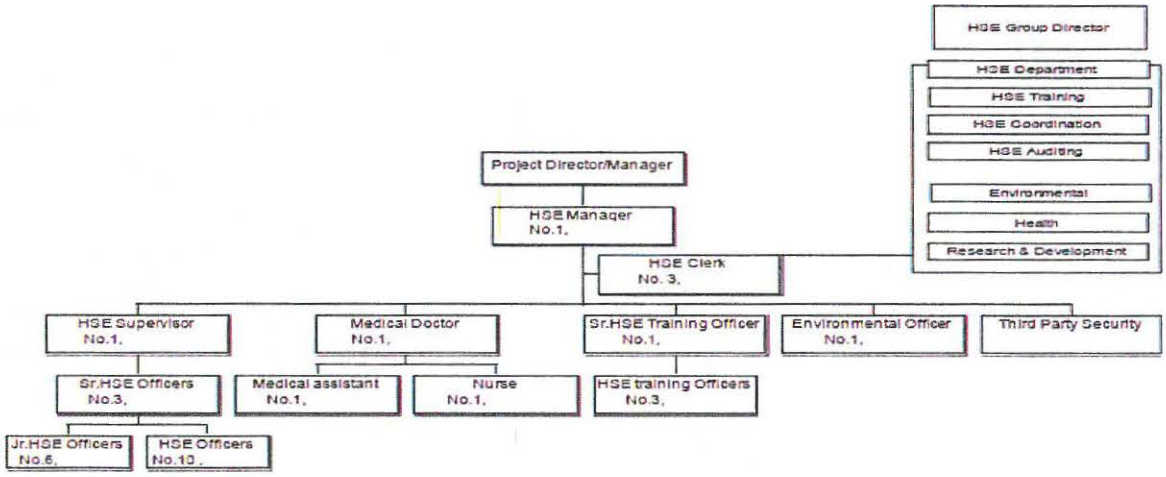


11.1.2. Responsibility and Authority

1	Group HSE&S Manager	1. Responsible for monitoring the operation of CONTRACTOR HSE&S Policy across CONTRACTOR Group Operations and Projects. 2. The Group Manager or his nominee will monitor the operation of CONTRACTOR HSE&S Policy through various tools available within the CONTRACTOR's HSE&S Management System.
2	Corporate HSE&S Managers	1. Corporate HSE&S Managers are located in HSE Group, and they report to the Group HSE&S Manager. 2. Corporate HSE&S Managers are delegated by the Group HSE&S Manager to conduct several assignments including, but not limited to, Corporate HSE&S Audits, Corporate HSE&S Visit, Cold Eye Reviews, and Incidents Investigations.
3	HSE&S Training Unit	1. The HSE&S Training Unit in the HSE Group is responsible for monitoring, enhancing and promoting HSE&S Training & induction throughout CONTRACTOR Group Operations and Projects by: 2. Preparing HSE&S Training & Induction Materials (including PowerPoint Presentations, Videos, Booklets, Posters, etc...) 3. Promoting HSE&S Training & Induction initiatives and campaigns 4. Introducing new best practices for implementation 5. Extending support and assistance to HSE&S Training Units/Departments on the Projects
4	HSE&S Auditing Unit	The HSE&S Auditors in HSE GROUP are responsible to conduct Corporate HSE&S Audits on CONTRACTOR Projects in accordance with CONTRACTOR approved HE Auditing Procedure (PP705-ADR) and issue recommendations for improvement.
5	HSE&S Coordination Unit	The HSE&S Coordination Unit is Located at HSE GROUP and is responsible to conduct various HSE&S Coordination activities starting with prequalification and tendering, and project phase (pre-mobilization, mobilization, construction, pre-commissioning and commissioning).
6	Research & Development	The Research and Development in HSE GROUP aims to research on HSE&S standards, international requirements, and to recommend areas for improvement within CONTRACTOR HSE&S Management System.
7	Environmental	Environmental coverage in HSE GROUP is carried out through Environmental Staff (in HSE GROUP and/or Projects) who provide support, assistance and advice on Environmental Matters.
8	Health/Medical	Medical/Health coverage in HSE GROUP is carried out through Medical/Health Staff (in HSE GROUP and/or Projects) who provide support, assistance and advice on Medical/Health Matters.
9	Technical Assistance / Document Control	Located in HSE GROUP and responsible to provide technical assistance for HSE GROUP units and staff, including document control.

Project HSE&S In Charge	*Note:* The Project HSE&S In Charge has a functional link with HSE GROUP at various locations. The purpose of this functional link is to provide support, guidance and assistance to him when and as needed.

11.2. Site Organization & Responsibilities



11.3. Responsibilities

General			The Project Director/Manager and the HSE&S In Charge are to acquire approval from HSE GROUP for any modifications and changes on all HSE&S Procedures, forms, and documentation for the HSE&S Management System prior to their implementation
Construction Staff	1	Project Director/ Manager	1. Held responsible and accountable for the development, implementation, enforcement, evaluation, and updating of the HSE&S Management program for the project at all levels of each operation / job site. It is the duty of the Project Managers to see that everything reasonably practicable is done to prevent personal injury in the process of design, construction and operation of all plant, machinery and equipment, and to maintain a safe and healthy place of work. 2. Ensure that a qualified HSE&S In Charge will be designated to the Project full time to coordinate and implement the CONTRACTOR HSE&S Management System with the overall Client HSE&S Contract requirements. 3. Overall Health and Safety of all personnel and environmental protection of CONTRACTOR's and Sub-Contractors scope. He shall also be responsible for compliance with all local and international statutes, rules, regulations and Client HSE&S Requirements as applicable. 4. Acting on HSE&S In Charge's recommendations and for implementing all agreed corrective actions.
	2	All Project Personnel	1. Compliance with the HSE&S Plan is mandatory for all employees on the Project.
	3	Subcontractors	1. Subcontractor shall fully meet and comply with the requirements of CONTRACTOR HSE&S Management System, HSE&S Management Plan and HSE&S Procedures as applicable to and approved for the project. 2. For specialized tasks, activities or scope of work that are to be executed by Subcontractor, and are not covered by CONTRACTOR (or Client) HSE&S Management System, HSE&S Plan, or HSE&S Procedures, Subcontractor shall submit their HSE&S Procedures covering the specialized tasks, activities, or scope of work for CONTRACTOR approval. Approved Subcontractor HSE&S Procedures covering the specialized tasks, activities, or scope of work shall be considered part of CONTRACTOR HSE&S Management System, HSE&S Plan, and HSE&S Procedures applicable to and approved for the project. 3. In the case where Subcontractor is required to have their own HSE&S staffs for any of the tasks, activities, or scope of work to be executed by Subcontractor, Subcontractor all submit to CONTRACTOR Project HSE&S Department the CVs of their HSE&S staffs for approval by HSE GROUP 4. Subcontractor shall ensure that only approved HSE&S staffs are working on the project. The approved HSE&S staffs cannot be replaced or released without CONTRACTOR prior written approval.

HSE&S Staff	4	Project Construction Manager	1. Providing continuous follow-up, oversight and support to the HSE&S In Charge for implementation of this plan in their respective area of operations 2. Emphasize that all Construction Supervisors and line-managers understand their HSE&S roles, responsibilities and expectations. 3. Sets an internal disciplinary measures for those not abiding to HSE&S instructions 4. Ensuring that proper coordination with the Project HSE&S In Charge/staff prior to the issuance of method statements or starting new activity.
	5	Project Engineers & Supervisors	1. On-site follow-up of construction activities and advices from HSE&S team implementation 2. Drive the employees to understand their roles, responsibilities and expectations regarding the HSE&S execution plan and enforce HSE&S work rules consistently 3. Provide pre-task briefings and communications regarding HSE&S information necessary for employees to work in a safe and compliant manner 4. Participate in preparation of Risk Assessment and JSA/JHA for their respective activities. 5. Assist in accident investigations and preparation of required reports.
	6	Project HSE&S In Charge	1. The HSE&S In Charge will interface with Company, Client and Sub-Contractors for all phases of the contract with regard to HSE&S matters. The HSE&S In Charge will have direct responsibility for ensuring compliance with all HSE&S requirements, procedures and work instructions for all the work force inclusive of CONTRACTOR Sub-Contractors. In the event of any difficulties, the HSE&S In Charge will provide early warning and the proposed corrective actions. 2. The HSE&S In Charge has direct responsibility for ensuring that the requirements of the HSE&S Plan are met and for advising the Project Manager of any non-compliance.
	7	HSE&S Staff	3. Assigned HSE&S Staff shall be competent & qualified and meet CONTRACTOR HSE&S Job Family minimum requirements. 4. Shall be responsible for the Environmental activities that will be done on site in order to prevent any major environmental incidents. 5. He is to investigate, assess and report with his recommendations any environmental non-compliance on site to the HSE&S In Charge immediately. 6. The HSE&S In Charge shall take any corrective or remedial action necessary to prevent any recurrence.
	8	Project Nurse	1. Shall be responsible for the medical facility and its content (medication, equipment, records, etc...) 2. He is to report any occupational incidents to the HSE&S In Charge immediately so that the necessary action is taken. 3. Shall be responsible for the site medical facilities logbook on which he is to register all the relevant details injuries. 4. The logbook shall include all "Medical" and all "Industrial" Incidents cases.
	9	Security	1. Shall be responsible for the security on site. He is to report any findings or violations to the HSE&S In Charge immediately. 2. The HSE&S In Charge shall take any corrective or remedial action necessary to prevent any recurrence.
	10	HSE&S Training Officer	1. Shall be responsible to plan, manage and provide HSE&S Trainings including Induction and refreshing HSE&S Trainings to the all employees and workforce on site including managers, section heads, supervisors, and line management. 2. The HSE&S Training Officer shall coordinate and facilitate Third Party Training and any other training when and where needed and as deemed necessary.

12. HSE Planning and Front End Loading

12.1. FEL is a process of identifying and preparing the HSE requirements to ensure that a certain activity takes place as scheduled and in a safe manner. It is based on the periodic Look-ahead Risk Assessment, conducted to identify, analyze and provide mitigation measures for hazards and risks of the activities and tasks (Work, Material, Supplies, Equipment, Personnel, Location, etc.) planned for the scope of work for that period.

12.2. Front End Loading Procedure (Refer to Front End Loading Procedure. (PP759-FEL)

12.2.1. Identify all the activities and tasks planned for a specific period of time, and review the method statements in order to identify all the requirements needed to fulfill these tasks in a safe manner

12.2.2. Once the scope of work has been identified into the different tasks and activities, all relevant HSE requirements and procedures will be identified to be provided to the appropriate supervisors and foremen for their review and implementation.

12.2.3. Each of the tasks and activities is then assessed for potential hazards and risks. The idea is to anticipate and assess the potential hazards and risks that might arise while performing the planned scope of work and review the method statement prepared for the scope of work and integrate any identified specific HSE requirements.

12.2.4. All potential hazards and risks are then recorded in the Active track Register. At this stage, the idea is to concentrate on identifying the hazards and risks that might reasonably be expected to occur unless precautions are taken.

12.2.5. After identifying potential risks and hazards, mitigation measures shall be recorder for each. Every measure will be assigned a sponsor and a timeframe to fulfill it.

12.2.6. The Look-ahead risk assessment, which is translated into the Active Risk Tracking Register, shall be communicated to the supervisors and foremen for implementation on site.

12.2.7. The HSE In Charge, or his designee, shall follow up on this active track register, monitor the implementation and ensure that:

12.2.8. All HSE requirements are taken to fulfill the planned activities.

12.2.9. All recommended / required measures can then be integrated into a Job Hazard analysis or a Task Risk Assessment and presented to the crew as a tool box meeting.

12.3. CONTRACTOR's HSE In Charge will be in contact with Client's HSE Department to finalize and approve the HSE Plan and project specific HSE Procedures

12.4. Where Client HSE procedures exceed those prepared by CONTRACTOR, then the higher standard shall prevail. CONTRACTOR shall advise Client of these instances.

12.5. The English and other languages will be used for communicating Health, Safety, Environmental and Security issues on site.

13. CONTRACTOR Project HSE Program Structure

Sr.	Name	Frequency	Required Attendees	Remarks
A	Meetings			
1	CONTRACTOR HSE Meeting	Weekly	1. Project Director/Manger 2. Project Deputy Director/Manager 3. Construction Managers 4. Section Heads & Senior Engineers 5. Construction Supervisors 6. Project HSE&S In Charge	Weekly Meetings dedicated to discuss HSE&S matters on site, to be coordinated by the Area HSE&S Supervisor of one area each week. *The Meetings to be minuted and the MOM (along with the agreed actions and recommendations) to be reported to the HSE Group on weekly basis.*
2	CONTRACTOR Engineers/Supervisors HSE Meeting	Weekly	1. Project Director/Manger 2. Project Deputy Director/Manager 3. Construction Managers 4. Section Heads & Senior Engineers 5. Construction Supervisors 6. Project HSE&S In Charge 7. Senior HSE&S Team members 8. Selection of Line Supervisors/Charge-hands	In the meeting, the Construction Staff shall present a Near miss or an Accident that happened in their area. The HSE&S Team can assist in the preparation of the PowerPoint Presentation. *The Meetings to be minuted and the MOM (along with the agreed actions and recommendations) to be reported to HSE Group on weekly basis.*
3	Client HSE Meetings	Weekly	1. Project Director/Manger 2. Project Deputy Director/Manager 3. Project HSE&S In Charge 4. Others as agreed with Client	1. Agenda to be prepared by Contractor HSE&S In Charge and agreed with Client HSE&S Management. 2. The purpose of this meeting is to interface with Client HSE&S Representative(s) and discuss the HSE&S issues affecting the Project.
B	Walkthroughs			
1	Contractor Site HSE&S Walkthrough	Daily	1. Area Construction Manager 2. Area HSE&S Officer(s) 3. Area Construction Supervisor/In-Charge 4. Project HSE&S In Charge to participate on alternative basis (different Area each day)	1. Conduct a daily Site HSE&S Walkthrough (other than the Weekly HSE&S Walkthrough) on new area/zone of the Project each day. 2. Copy of the documented walkthrough to be kept on file for auditing purposes, and to be sent to HSE Group when requested.
2		Weekly	1. Project Director/Manger 2. Project Deputy Director/Manager 3. Construction Managers 4. Section Heads & Senior Engineers 5. Construction Supervisors 6. Project HSE&S In Charge 7. Senior HSE&S Team members 8. Selection of Line Supervisors/Charge-hands 9. Selection of Senior HSE&S Officers & HSE&S Officers	1. The walkthrough shall not be less than one hour. 2. Participants shall be divided into groups of 2-3 persons and each group will cover one assigned area. Each group will write down its notes and observations during the walkthrough on separate checklist. 3. A designated meeting is scheduled immediately after the walkthrough i.e. walkthrough at 07:00. Meeting at 08:00. 4. Notes & Observations during the Walkthrough to be documented, and to be closed by the end of day. 5. Copy of the close-out report to be sent on a weekly basis to HSE Group.

14. HSE Recognition

14.1. Upon completion of HSE Milestones, HSE Group recognize the project in the following manner:

14.2. Upon completion of the 1st, 3rd, 5th, 8th million man-hours without lost time accidents, the project shall be awarded with an HSE Plaque.

14.3. Upon completion of a project without a lost time accident, the project shall receive an HSE Plaque.

14.4. Upon completion of each million man-hours, congratulation's letter shall be sent to the project.

15. HSE Awareness Program

15.1. The Program

15.1.1. The HSE Awareness Program aims at increasing the level of awareness for all employees, which assists in the implementation of the Project Safety Program Structure. In order to implement this program effectively, educational material pertaining to the information needed has been prepared. The supporting material includes a HSE Booklet / Handbook, HSE Posters, HSE Videos, and HSE Hints. This educational material has been prepared using several languages. The languages used are the English, Arabic, Urdu and Hindi. It is noted that these languages are the most predominant languages on site.

15.2. Program Implementation Aids

15.2.1. HSE Booklet / Handbook

15.2.2. CONTRACTOR's HSE Booklet is a pocket-sized HSE Publication that covers the hazards that an employee in CONTRACTOR is expected to be faced with while working on CONTRACTOR premises. It also covers the basic methods that can be used to mitigate such hazards. (This Booklet does not replace the HSE Plan)

15.2.2.1. This HSE Booklet should be distributed to all Project Personnel (including workers) on the Project free of charge. The Project Manager can request the quantities he needs on his project from HSE Group, specifying the languages and HSE Group shall dispatch the requested quantities upon request (It is advisable to request the quantities ahead in time, allowing enough time for delivery to the Project).

15.2.2.2. The Project Manager shall ensure that these HSE Booklets are distributed to the Project personnel during the HSE Induction. The recipient of the HSE Booklets should sign an acknowledgment that he has received this booklet. This acknowledgment should be then filled in the HSE department.

15.2.2.3. The HSE Booklet is available in the following Languages:

15.2.2.3.1. Arabic

15.2.2.3.2. English

15.2.2.3.3. Hindi

15.2.2.3.4. Urdu

15.2.2.3.5. Tagalog

15.2.2.3.6. Bengali

15.2.2.3.7. Chinese

15.2.2.3.8. Thai

15.2.3. HSE Posters

15.2.4. These posters are visual aids that have been prepared with professional clipart graphics that display information in a quick, easy to remember and relate method. They are posted in various locations on the site. They are important for displaying information, and reminding employees of the proper HSE Methods to perform the job, and to caution them of potential hazards. They are prepared in A3 size and they are laminated in order to endure different and extreme meteorological / weather conditions.

15.2.5. HSE Videos

15.2.6. The HSE videos are audio-visual aids that are used to enforce the knowledge that the trainee acquires from the training. They may also be used either as information refreshers or as an initial method of educating the trainee or the employee. These videos are prepared in 2 languages: English & Arabic.

15.2.7. Toolbox-talks

15.2.8. Job Safety Task Instructions (JSTI)

15.2.8.1. JSTI is a method of studying a job in order to identify the hazards or potential accidents associated with each step of the job and develop solutions that eliminate, nullify or prevent such hazards. The task performer(s) are engaged in the process by participating in the task analysis.

15.2.8.2. This method involves the job performers in safety job planning, which encourages personal commitment and places accountability on the job performers.

15.2.8.3. No job will be allowed to start without conducting a proper JSTI.

15.2.8.4. For more details, please refer to CONTRACTOR's Project Specific Job Safety\Hazard Analysis Procedure (PP714-JSA).

15.2.9. These are short duration meetings that are held on daily / weekly basis to increase knowledge as well as familiarization with the scope of work. There are various topics for toolbox-talks. A manual with 72 topics is available. Toolbox-talks sign in sheets are also required to register the attendance. The HSE Hints described below can also be used to conduct these meetings.

15.2.10. Job Safety / Hazard Analysis

15.2.11. Job Safety / Hazard Analysis is a process of identifying the scope of work, materials needed, personnel needed, HSE equipment, potential HSE hazards, and how to protect the worker from those hazards.

15.2.12. For more detailed information, please refer to the Project's specific Job Safety\Hazard Analysis Procedure (PP714-JSA).

15.2.13. Material Safety Data Sheets

15.2.14. Material Safety Data Sheets (MSDS) are required by international standards to identify potential chemical hazards and toxic chemicals in the workplace. These MSDS's are provided free of charge from the vendor or supplier.

15.2.15. For more detailed information, please refer to the Project's specific Chemical Hazard Communication and Storage Procedure (PP 724-CHS).

16. HSE Training Of CONTRACTOR Personnel

16.1. General HSE Training

16.1.1. CONTRACTOR is responsible for providing the relevant Health, Safety, Environment and Security training to all personnel in order to ensure that they have the knowledge, skills and awareness to enable them to work in a safe, healthy, and responsible manner.

16.1.2. The CONTRACTOR Construction Project Manager and HSE In Charge are responsible for providing training courses as required. Site CONTRACTOR personnel shall attend, and where necessary pass, the mandatory HSE courses provided. Courses attended shall be recorded in the employee's Training Record.

16.1.3. Courses shall be conducted by or under the direction of the CONTRACTOR HSE In Charge or his designee.

16.1.4. HSE topics will be chosen and presented by the HSE Group, HSE personnel.

16.1.5. All attendees shall sign a register of courses attended, a copy of which shall be sent to Human Resources, and HSE Group.

16.1.6. Daily Supervisors Training / Seminar

16.1.7. Daily meetings will be held for a group of scheduled supervisors.

16.1.8. The training Program will be divided into (2) sets.

16.1.8.1.1. The first set has general HSE topics, construction-related activities pertinent to the project.

16.1.8.1.2. The second set of training has specific topics for special skilled activities of the project e.g. sandblasting, welding, firefighting, heat exposure, radiation, etc.

16.1.9. No CONTRACTOR project supervisory personnel will be exempted from this program. Supervisory personnel include the following: Engineers, Supervisors, Foremen, and Charge-hands.

16.1.10. Project Management, Department Managers, and Section Engineers, must choose one topic among the (4) week schedule and attend at least one per month.

16.1.11. A weekly topic will be chosen and presented by the HSE Personnel.

16.1.12. Supervisory personnel attending the training must conduct the weekly toolbox meeting to their respective groups. Weekly topics being discussed in the supervisory training will cascade down to their respective group / craft. Each group or department will have its specific HSE toolbox meeting.

16.1.13. Documented attendance and a brief written summary of the meeting will be submitted to the HSE Department.

16.1.14. The HSE Department will provide assistance and monitoring, as necessary.

16.2. Project HSE Induction- Project Employees

16.2.1. This procedure has been developed by HSE Group, in order to ensure that proper HSE induction is being provided to all employees on the project.

16.2.2. This procedure shall be implemented on all CONTRACTOR Projects.

16.2.3. This Project HSE Induction shall be provided by the HSE in charge/ HSE Trainer or his designee on site

16.2.4. This Induction Course shall be conducted in a language understandable by the Staff / Employees.

16.2.5. Upon completion of the course, the participants shall receive a copy of the HSE Employee Handbook and fill in the HSE Induction Sign In Sheet (refer to the project Basic HSE Training & Hazard Awarness for Project Employee, PP762-IPE for more details).

16.2.6. This induction course is not developed to cover every aspect of Health, Safety and Environment requirements. More details are available in the HSE Employee Handbook and CONTRACTOR HSE Plan and Procedures available on site.

16.3. Project Visitors HSE Induction

16.3.1. Visitors Escorted by project staff at all times; on condition that the escorting project staff have received full HSE induction

16.3.2. Shall receive an abridged version of the HSE induction program, covering the basic HSE requirements on the project

16.3.3. This approved version shall be approved by the HSE Group prior to implementation

16.3.4. Visitors only conducting office visits, without ever going to the project site

16.3.5. Shall receive an abridged version of the HSE induction program, covering the basic HSE requirements on the project

16.3.6. This abridged version shall be approved by the HSE Group prior to implementation

16.3.7. Visitors expected to conduct unescorted site visits

16.3.8. Shall receive a full HSE induction as per the requirements of this procedure.

16.3.9. Long term visitors expected to perform specific operations on the project (on secondment or otherwise)

16.3.10. Shall receive a full HSE induction, with concentration on HSE topics related to the operation they shall be conducting on the project.

16.4. Project HSE Induction- HSE Officers

16.4.1. This Procedure shall be applicable to all HSE Inductions provided for SNR HSE Officers, HSE Officers, Junior HSE Officers, and Assistant HSE Officers, HSE Training Staff, Medical Staff, and Environmental Staff.

16.4.2. This procedure shall be implemented on all CONTRACTOR Projects.

16.4.3. This Procedure provides guidelines for the Induction of HSE Officers (Seniors, Officers, Juniors and Assistants) on a Project.

16.4.4. Project HSE Induction shall be provided by the HSE In Charge, Trainer or his designee on site to newly recruited / relocated project HSE Staff, namely HSE Officers, HSE Engineers, Medical staff

16.4.5. This Induction Course shall be conducted in a language understandable by the Employees.

16.4.6. Upon completion of the course, the participants shall receive a copy of the HSE Employee Handbook and fill in the HSE Induction Sign In Sheet (refer to the project HSE Induction & Orientation for Project HSE Staff, PP763-HIS for more details).

16.4.7. This induction course is not developed to cover every aspect of Health, Safety and Environment requirements. More details are available in the HSE Employee Handbook and CONTRACTOR HSE Plan and Procedures available on site.

16.5. For more details, please refer to the following related Project Specific procedures:

16.5.1. HSE Training & Induction Procedure (PP722-TIP).

16.5.2. Project's HSE Induction (Project Employees) (PP762-IPE).

16.5.3. Project's HSE Induction (HSE Staff) (PP763-HIS).

17. General HSE Orientation (Induction Programs)

17.1. No CONTRACTOR personnel shall be deployed to the CONTRACTOR project work area without attending the required HSE orientation. This orientation will be given daily or as required by the numbers of personnel to be inducted. The HSE Department will conduct the orientation. A completion attendance slip will be given to each attendee so to be processed for issuance of their Personal Protective Equipment. Upon arrival, all personnel (no matter of grade or position) will be given this induction program. The program will orient them on HSE and other requirements of the project.

17.2. HSE Induction (Orientation)

17.3. General

17.3.1. This Project HSE Induction shall be provided by the HSE In Charge / HSE Trainer on the Project for all Project employees from the Project Director / Manager to the labours on site.

17.3.2. This Induction Course shall be conducted in a language understandable by the Employees.

17.3.3. Upon completion of the course, the participants shall receive a copy of the HSE Employee Handbook and fill in the HSE Induction Sign In Sheet and the Employee Acknowledgment. These shall be signed by each attendee, and kept on file subject to verification during Project HSE Audits.

17.3.4. This induction course is not developed to cover every aspect of Health, Safety and Environment requirements. More details are available in the HSE Employee Handbook and CONTRACTOR HSE Plan and Procedures available on site.

17.3.5. HSE Induction Course for Project's Employees

17.3.6. This HSE Induction course intends to provide the Project's Employees a brief introduction to the project, CONTRACTOR HSE Management System, as well as clarify the staff's HSE roles and responsibilities on the project among other issues.

17.3.7. The participants consist of All Project Employees and workforce. They shall attend this course prior to assuming their duties on the Project.

17.3.8. The HSE Induction course for Project's Employees shall take place in the Project Training room for a period of Four (4) hours.

17.3.9. Objectives: Upon completion of the course, the participants will be able to:

17.3.9.1.1. Have an understanding of the Project

17.3.9.1.2. Realize that HSE comes before Production and Quality

17.3.9.1.3. Define their HSE roles and responsibilities

17.3.9.1.4. Realize that HSE is everyone's responsibility

17.3.9.1.5. Define Incident, its types and how to report

17.3.9.1.6. Better understand the Project HSE requirements and safe work practices.

17.3.9.1.7. Basic communication, leadership and negotiation skills.

17.3.10. Visitors

17.3.10.1.1. All visitors to the Project shall attend an HSE Induction as per the following:

17.3.10.1.1.1. Visitors not conducting any site visits or visitors expected to conduct site visits who shall be escorted 100 % of their time spent on the Project site, shall attend an abridged version of the HSE Induction approved by HSE Group.

17.3.10.1.1.2. Visitors conducting an un-escorted site visit to the Project construction site shall attend the full HSE Induction as per the requirements of this procedure.

17.3.11. Training Facilities

17.3.12. Adequate and furnished fully functional training facilities shall be provided along with relevant audio-visual aids, graphics and multi-lingual support to enable training to be given effectively to all levels of personnel.

17.4. Attendance will be taken as a control measure for its implementation.

17.5. For more information, please refer to Project's HSE Induction (Project's Employees) Procedure. (PP762-IPE)

18. Sub-Contractors

18.1. HSE In Charge shall ensure that all Sub-Contractors shall comply with the requirements of the HSE Plan.

18.2. The provision of HSE performance criteria must be observed for all Sub-Contractors supplying services of a hazardous nature.

18.3. Subcontractor services can be grouped into the following categories:

18.3.1. Category 1

18.3.2. Type: Sub-contractors on site for short duration (1 day to 2-3 months).

18.3.3. Typical services: include short-term construction activities, facility modification (small), confined space operations, excavations etc.

18.3.4. Category 2

18.3.5. Type: Sub-contractor on site for moderate to long duration (2-3 months and more).

18.3.6. Typical services: include long-term construction services. Most control should be exercised at higher risk category 1 and all category 2 sub-contractors as these groups have the greatest potential for hazard exposure.

18.3.7. Selection of Sub-Contractors

18.3.8. The HSE requirements for the sub-contractors should be clearly stated at the earliest possible stage of the bid or contract for services to ensure that the HSE practices and methods required by the Company are fully understood and indicated in the contract documents.

18.3.9. Action

18.3.9.1.1. Specify HSE requirements in bid document and contract.

18.3.9.1.2. Obtain information from sub-contractor on past loss experience.

18.3.9.1.3. Conduct pre-job meeting with sub-contractor to review Company's HSE program requirements and to establish reporting relationships with designated sub-contractor personnel.

18.3.9.1.4. Review Subcontractors' personnel qualifications

18.3.9.1.5. Establish reporting systems to monitor sub-contractors HSE activities. These will include:

18.3.9.1.5.1. Subcontractor HSE Manual

18.3.9.1.5.2. Accident / Incident investigation reports.

18.3.9.1.5.3. All inspection reports.

18.3.9.1.5.4. Frequency and severity rates produced in monthly reports on overall performance.

18.3.9.1.5.5. HSE committee minutes.

18.3.9.1.5.6. Site HSE audits and weekly walk through inspections

18.3.10. Documentation

18.3.10.1.1. Bid document and Contract.

18.3.10.1.2. Selection criteria.

18.3.10.1.3. Records and reports.

18.3.10.1.4. Pre Contract audit

18.3.11. Control of Sub-Contractors

18.3.11.1.1. The requirement for the sub-contractors' controls is to ensure that the HSE practices and methods required by CONTRACTOR are fully implemented.

18.3.12. Action

18.3.12.1.1. Conduct regular meetings to review Company's HSE program implementation and the Site monthly HSE reports with designated sub-contractor personnel.

18.3.12.1.2. Conduct regular review meetings.

18.3.12.1.3. Ensure sub-contractors take corrective actions and preventive actions for identified deficiencies.

18.4. For more details, please refer to Project's Sub-contractors Selection & Control Procedure (PP708-SCC).

19. Environment Management

19.1. CONTRACTOR will meet in its Environment Management Plan all the requirements stipulated in Petrofac Environment Standard .

19.2. Introduction

19.2.1. CONTRACTOR and its Sub-Contractors shall implement action aimed at ensuring that the environmental impacts which could arise during construction, pre-commissioning and commissioning activities of the Project, as indicated in the Project Environmental Impact Assessment, are maintained within acceptable limits, minimized as far as possible and in compliance with the applicable environmental standards and regulations.

19.3. Air Quality Control

19.3.1. Dust and sand emissions in populated and sensitive areas will be kept to a minimum by proper mitigation measure. A specific procedure will be developed that addresses the practical means to be applied in order to minimize this impact.

19.4. Waste Management (Where Applicable)

19.4.1. Solid and liquid waste and liquid effluent generated during construction and pre-commissioning activities shall be properly separated and disposed of according to waste disposal requirements. A specific procedure will describe sources, quantities and characteristics of waste generated and guidelines for handling, transport, storage and disposal of waste will be recommended.

19.4.2. The following shall be under the Project Manager responsibility at each work site:

19.4.3. Inspect good housekeeping in working areas during day-to-day operations;

19.4.4. Waste identification, classification, and keeping records in the Waste Register;

19.4.5. Estimate the amount of wastes;

19.4.6. Agree with Client for designation and use of appropriate disposal sites;

19.4.7. Ensure that all Sub-Contractors are aware of the waste management procedures;

19.4.8. Control that all Sub-Contractors in charge of waste management and disposal are provided with required licenses and approvals;

19.4.9. Ensure that all environmental incidents (accidental spillage or discharges) are properly managed, reported and recorded.

19.4.10. Sub-Contractors, including their contractors, are wholly responsible for ensuring that the waste procedures are being followed and adhered to.

19.5. Noise and Vibration Control

19.5.1. Construction Contractor will assess the Noise levels within the construction area and implement control measures necessary to meet the requirements. The selection of equipment when possible shall take into account whether harmful levels of noise are emitted.

19.5.2. For the purpose of this project and in agreement with the Client, commonly accepted best practices will be followed, e.g. at levels in excess of 85dB (A) hearing protection will be provided and worn.

19.5.3. Construction equipment will be effectively silenced.

19.5.4. Speed controls will be in place with drivers instructed on good driving behaviors.

19.5.5. If any environmentally sensitive areas are determined, signs and barriers will be erected.

19.6. Site reinstatement

19.6.1. At the end of these phases Contractor shall completely dismantle and remove all temporary plant and buildings. A specific procedure will describe the activities to carry out to reinstate work areas and residence camp to their condition prior to construction.

19.7. Oil Spills Management

19.7.1. All environmental incidents (e.g. spills, releases) shall be reported to Client. A specific procedure will describe action to be applied to prevent spills and release, pollution response action in the event of a land spill, according the size of the spill, and action to be implemented for handling, reporting and notifying spills.

19.7.2. Prior to start of work, Project Manager shall draw up an Environmental Management Program. This Program shall meet generally accepted international standards. This program shall be developed and provided for this project at a later stage.

19.8. For more detailed information, please refer to the following Project's Specific Procedures:

19.8.1. Environment Management Plan Procedure (PP702-EMP)

19.8.2. Waste Management Plan (PP707-WMP).

19.8.3. Chemical Hazard Communication and Storage Procedure (PP724-CHS)

19.8.4. Site Restoration and Reinstatement Procedure (PP750-SRR)

19.8.5. Spill Management & Reporting Procedure (PP751-SPR)

19.8.6. Fuel Storage and refueling Operations Procedure (PP752-TFS)

20. Health & Medical Facilities

20.1. Medical facilities shall be in accordance with clients Medical Conditions of Contract and shall include as a minimum:

20.1.1. First aid clinic to provide medical treatment manned during established working hours by a qualified nurse or doctor as required and supplied with suitable and adequate medical equipment and supplies.

20.1.2. Ambulance to transport sick or injured to the local hospital.

20.2. HSE In Charge shall ensure that medical facilities comply with National Health Regulations.

20.3. First aid facilities shall be clearly labeled and marked on the site plan

20.4. CONTRACTOR's medical facilities shall be accessible and available to project personnel in the event of sickness or emergency.

20.5. The nurse shall register each case and coordinate with the HSE In Charge to determine record ability.

20.6. The Project to ensure that first aiders are trained at a medical institute in UAE, and to be approved by the Client.

20.7. For more details, please refer to CONTRACTOR's Project Specific Procedures:

20.7.1. First Aid & Medical Facilities Procedure (PP703-FAP)

21. Hygiene

21.1. The Administration Section, under the direction of the Project Manager, is the responsible party within CONTRACTOR's site organization for ensuring compliance with the hygiene standards.

21.2. Frequent inspections and monitoring of camp(s) facilities in order to maintain and protect the safety and health of CONTRACTOR employees, will be provided and will ensure compliance with the HSE requirements for food, laundry, cleaning and garbage disposal.

21.3. Medical staff that undertakes medical examinations and biological monitoring will be involved in the inspections. The medical staff will arrange the needed samples for laboratory analysis when required.

21.4. Inspection requirements

21.4.1. All camp facilities shall be inspected by HSE and Medical Personnel. These inspections will be appropriately conducted and documented.

21.5. General Considerations

21.5.1. Personnel shall be specifically appointed to monitor and maintain the communal living facilities in a clean condition on daily basis.

21.5.2. A schedule for daily cleaning shall be developed and implemented by the Camp Administrator. This schedule shall identify the areas to be cleaned and personnel responsible for that job as well as materials and equipment to be used.

21.5.3. All areas of the camp shall be inspected (documented inspection reports) daily by maintenance staff and shall be kept free of nuisance and safety hazards.

21.6. Potable Water

21.6.1. Water shall be obtained, conveyed, treated, stored and distributed in a closed system. Monthly tests shall be conducted on potable water. Results shall be documented and posted for information purposes.

21.6.2. Records of equipment operation and maintenance, quantities of product water produced, types and amounts of chemical added to treated water, pH, chlorine, BOD. COD, and residuals maintained shall be kept in a logbook.

21.7. Insect & Rodent Control

21.7.1. The use of methods such as exclusion, inspection and extermination shall be used to prevent the entry and harborage of insects, rodents, animals, birds, and other vermin. Control of chemicals or material will be in accordance with local Law.

21.7.2. The camps shall be maintained in an insect and rodent free condition.

21.7.3. The pest control program shall encompass all areas outside and inside the camp living facilities. Areas along fences, buildings, storage areas, refuse facilities in addition to walls, floors, ceilings, shall be inspected weekly to detect the presence of insects, rodents and other vermin.

21.8. For more details, please refer to CONTRACTOR's Project Specific Camp Sanitation & Hygiene Procedure (PP718-CSH)

22. Control of Illegal Drugs, Alcohol And Firearms

22.1. Policy

22.1.1. CONTRACTOR's policy regarding illegal drugs and controlled substances, alcoholic beverages, and firearms is:

22.1.2. The use, possession, distribution, purchase or sale of any illegal drugs or other controlled substances by any person while on Company / CONTRACTOR's premises or areas of Company / CONTRACTOR's operations, engaged in Company / CONTRACTOR's business or operating Company / CONTRACTOR's equipment is prohibited.

22.1.3. The use of any illegal drug or other controlled substances or alcohol that cause or contributes to unacceptable job performance or unusual job behavior is prohibited.

22.1.4. The unauthorized use, possession, transportation, or sale of alcoholic beverages by persons while on Company / CONTRACTOR's premises or while operating Company / CONTRACTOR's equipment is prohibited.

22.1.5. The use, possession, transportation, or sale of explosives, unauthorized flammable materials, firearms, or other weapons by persons while on Company / CONTRACTOR's premises, engaged in Company / CONTRACTOR's business or while operating Company / CONTRACTOR's equipment is prohibited.

22.2. CONTRACTOR Employees shall abide by this policy. Any person violating this policy shall be removed from Company / CONTRACTOR's premises and will be denied future access to Company / CONTRACTOR's premises. In appropriate cases, local law enforcement agencies will be advised of violations.

22.3. For more details, please refer to CONTRACTOR's Project Specific Procedure Drugs, Alcohol, & Firearms (PP719-DAF).

23. Site HSE Map

23.1. A Site HSE Map shall be prepared by the Project's HSE In Charge \ Department, indicating the site and camp's HSE provisions and equipment and posted at principal site and camp locations. The map shall include as a minimum the following details:

23.1.1. Location of first-aid clinic

23.1.2. Location of firefighting equipment

23.1.3. No smoking areas

23.1.4. Emergency exits

23.1.5. Special or limited access areas and permits required

23.1.6. Emergency muster points

23.1.7. Access roads and speed limits

23.1.8. Limited vehicle access

24. Site Rules

24.1. No drugs, alcohol or alcoholic beverages are permitted on work-site.

24.2. Fighting, romping and horseplay is prohibited.

24.3. Smoking is prohibited, except in specifically designated smoking areas. Any person found smoking in restricted areas is liable to be permanently removed from the work-site.

24.4. Beverages in glass bottles are discouraged. Thermos, paper, metal or plastic containers are preferred.

24.5. Where applicable, work shall only be carried out in accordance with the applicable permit regulations.

24.6. Where applicable all employees working at the worksite must possess a site badge.

24.7. Keep the site and the works in an orderly state in order to avoid danger to such persons.

24.8. Prepare method statements and risk assessments to identify risks, which are supplemented by the Client's work permit.

24.9. Apply permit before carrying hazardous works as per Client's HSE guidelines and procedure.

24.10. All incidents must be reported to the Client's representative.

24.11. Do not use the Client's facility without prior permission.

24.12. Contractors must ensure that their employees are familiar with the Project object to achieve to achieve health and safety excellence.

24.13. To ensure that Contractor's employees are familiar with the Project HSE Plan and Petrofac standards.

24.14. All HSE incidents and accidents with actual or potential serious consequences shall be notified, without delay to Company.

24.15. All incidents and accidents shall be notified, followed up, reported, recorded and investigated as is stipulated in the applicable procedures.

24.16. All necessary steps shall be taken to ensure that the site and the temporary facilities are maintained in a clean, healthy and sanitary condition. Rules of cleanliness and orderliness shall be enforced amongst all personnel working at the site.

24.17. Roads and walkways shall be maintained clean and every effort shall be made to keep mud, slush and other slippery substances off roads and walkways.

24.18. Laydown areas shall be maintained in a clean, healthy and sanitary condition at all times.

24.19. All waste containers shall be regularly emptied and cleaned.

24.20. Hazardous waste shall be identified, stored separately and disposed by the Contractor.

25. Protection of the Site

25.1. The location of existing services on the Site shall be ascertained before starting construction work and these services shall be protected from damage. Temporary diversions and supports shall be provided to existing drains and services affected by the execution of the Works.

26. Protection of The Works

26.1. Project Manager shall ensure that stability and structural integrity of the works are maintained during construction, provide temporary supports where necessary and ensure that no part of the Works is overloaded with materials, plant or contractor's equipment.

27. HSE Inspection / Auditing Program

27.1. An "HSE Inspection Program" will be tailored for each Project needs during mobilization. The following points will be addressed in more detail in the HSE Inspection Program prior to start the actual work:

27.1.1. Hierarchy of inspections and audits.

27.1.2. Joint Client / Contractor audits.

27.1.3. Internal audits.

27.1.4. Program of HSE inspections by HSE In Charges.

27.1.5. Program of HSE inspections by line supervisors.

27.1.6. Inspection timetable.

27.2. Construction supervisors and the HSE In Charge shall conduct weekly site inspections in each work area. The Project Manager who will ensure that remedial advice is implemented will review the results of the inspections and the remedial actions to rectify unsafe conditions or practices found during the inspections. HSE In Charge shall be copied on all reports relating to these inspections and HSE staff shall attend these meetings.

27.3. Group Internal HSE Audits will be conducted at least once every six months but shall always be carried out when one of the following conditions exists:

27.3.1. Significant changes in functional areas of the project organization.

27.3.2. Significant procedure alterations.

27.3.3. Systematic lack of effectiveness in HSE related aspects.

27.3.4. Major incident/Accident that could reflect general lack of effectiveness.

27.3.5. Violation of any of ISO 14001 or / and OHSAS 18001 requirements

27.4. A detailed checklist will be prepared by the Group HSE Managers showing the problems that will be investigated and the questions that will be put forward. In particular the following areas will be checked:

27.4.1. Records and files whether correct, up to date and complete.

27.4.2. Whether the work is performed in accordance with the approved procedures.

27.4.3. Whether the personnel know the requirements of the procedures.

27.4.4. How internal communications work as well as relations with the Client and sub-contractor.

27.4.5. How new procedures and issues are transmitted to work force.

27.4.6. HSE awareness of Management and site employees.

27.4.7. Any ISO 14001, or / and OHSAS 18001 non-conformities.

27.5. Planning and preparation for audits

27.5.1. Prior to the performance of a Scheduled Audit, Group HSE Managers or their nominees shall assign a HSE Audit Team Leader and will ensure that he is informed of the date of the audit, the organization to be audited, and the scope of the audit.

27.5.2. The nominated Audit Team Leader shall be responsible for Planning, Preparing, Performing, and Reporting the audit and for ensuring the performance of any necessary follow-up audits, and the close out of corrective actions all in accordance with the requirements of this procedure.

27.5.3. Should the scope of the audit necessitate that the audit team comprise more than one person, the Group HSE Managers or their nominees shall agree the assignment of the other audit team members with the Audit Team Leader. The individuals selected as audit team members shall have undergone indoctrination and training in auditing techniques and shall not have direct responsibility for any of the work in the areas to be audited.

27.6. Performance of the Audit

27.6.1. Upon arrival at the audit venue, the Audit Team Leader shall be responsible for undertaking the following activities:

27.6.2. Convene a brief meeting (opening meeting) between the audit team and the management representatives of the auditee, to explain the scope of the audit, review the proposed audit agenda, arrange for escorts for the audit team, arrange for the use of an office for audit team meetings, agree a tentative time for the audit closing meeting and the reporting format.

27.6.3. Record the names and Job titles of the attendees.

27.6.4. Conduct the audit, using the prepared check list(s) as a guide.

27.6.5. Upon completion of the audit, but prior to the audit closing meeting, the audit team shall meet to discuss and evaluate any non-conformity, analyze apparent HSE rules violations or conditions adverse to HSE and assure their validity as audit findings. Objective evidence of non-conformities against HSE procedures, HSE program requirements and/or other approved documented requirements shall be considered as valid justification for an audit finding.

27.6.6. Any violations identified during an audit and recorded on the checklist shall be documented by the auditor, on a Non Conformance Report form (see attachment No. 4) and by photographs if allowed by the Project.

27.6.7. Following the audit team meeting, the Team Leader shall convene the closing meeting with management representatives of the audited departments. He shall record the names and job titles of all attendees.

27.6.8. At the closing meeting the Team Leader shall offer his thanks to the participants of the audit for their cooperation and he will present an objective overview of the audit, summarizing the results and discussing problem areas to ensure that they are understood by the auditee and acknowledged.

27.6.9. For an internal and external audit the Team Leader shall obtain the signature on the NCR from a representative of the auditee acknowledging that the findings are understood. (This signature does not indicate that the auditee necessarily agrees with the findings, it indicates only that the findings are understood).

27.6.10. A copy of each acknowledged NCR shall be handed to the auditee for his action.

27.6.11. It is important for the Team Leader to ensure that the Auditee understands that not only must the HSE violation be immediately corrected, but also that actions must be taken to prevent recurrence.

27.6.12. The Team Leader shall advise the auditee of the intended issue date of the formal Audit Report and any findings and shall state the expected response date on any Corrective Action.

27.6.13. The auditee shall be requested to detail his proposed corrective action, with the implementation date on Part 2 of the NCR

27.7. Audit Report

27.7.1. Upon completion of the audit, an audit report will be written showing the findings. The Audit Report shall consist of:

27.7.2. Audit Report Form Template

27.7.3. Non-Conformance Report (NCR) (If any)

27.7.4. Observations

27.7.5. Audit Inspection Forms

27.7.6. An improvement plan will be developed between Lead auditor and with the Project Manager / Project HSE In Charge based on which the corrective measures will be implemented.

27.7.7. A summary of the audit findings and any NCR(s) raised shall be written and itemized accordingly on the cover sheet.

27.8. For more details, please refer to CONTRACTOR's Project Specific Procedure Audit / Inspection Reporting (PP705-ADR).

28. Accident / Incident Reporting & Investigation

28.1. Accident / Incident investigation involves the methodical examination of an undesired event that did, or could, result in physical harm to people or damage to property and the Environment.

28.2. Investigation activities are directed toward defining the facts and circumstances related to the event, determining the causes and developing remedial actions to control the risks.

28.3. A procedure is in place to ensure that all personnel are aware of what is to be reported and investigated, and when. The data to be provided by following the procedure requirements will enable a thorough analysis to be performed, which will determine the basic or underlying causes.

28.4. All incident's shall be reported promptly to the Client Representative as per Client's Site HSE Manual Procedures.

28.5. The benefits of effective reporting of accidents / incidents include:

28.5.1. Assurance that all accidents / incidents will be investigated.

28.5.2. Discovery of the causes.

28.5.3. Reduction of recurrences.

28.5.4. Identification of program needs.

28.5.5. Provision of information in case of litigation.

28.5.6. Overall program improvement.

28.5.7. Increase of production time and reduction of operating costs.

28.6. HSE Corrective Action

28.6.1. The Accident / incident investigation and analysis is ineffective if remedial action is not carried out. A written procedure is in place to delegate responsibilities and time frame to ensure that Non Compliance Reports are closed as per the corrective actions recommended.

28.6.2. All accidents / incidents shall be reported to the Project Manager and HSE In Charge within 24 hours of occurrence. All lost time accidents shall be reported within 24 hours to the HSE Group.

28.6.3. Notification to the HSE Group on the occurrence of fatalities (Occupational) shall be IMMEDIATE and by VERBAL means (sms, phone…). A Written Notification Report shall be submitted to HSE Group within 24 hrs. A second factual report shall be submitted within 48 hrs. A Full Detailed report shall be submitted to the HSE Group within one week from the occurrence of the fatality.

28.6.4. Notification to HSE Group on the occurrence of fatalities (Non-Occupational) shall be IMMEDIATE and by VERBAL means (sms, phone…). A Written Notification Report shall be submitted to the HSE Group within 24 hrs. A second factual report shall be submitted within 48 hrs. A Full Detailed report shall be submitted to the HSE Group within 10 days from the occurrence of the fatality.

28.6.5. Please refer to Incident Reporting Matrix (Attachment No. 7)

28.7. For more details, please refer to CONTRACTOR's Project Specific Accident / Incident Reporting & Investigation Procedure (PP709-AIR).

29. Near Miss and Property Damage Investigation and Reporting

29.1. Near Miss: an incident that, under different circumstances, could have resulted in harm to people, property and/or the Environment.

29.2. All Near Misses shall be reported Immediately to the HSE In Charge.

29.3. All near misses shall be reported to the HSE Group in the Weekly HSE Statistics Report.

29.4. A Written Notification Report shall be submitted to the HSE Group within 24 hrs

29.5. A Final Detailed Report describing the facts of the near miss is to be sent to the HSE Group upon completion of the said report, along with the lessons learned. (Refer to the Incident Reporting Matrix (Attachment No. 7)

29.6. A Final Detailed Report describing the facts of the property damage is to be sent to the HSE Group within 10 days from the occurrence of the incident, along with the lessons learned. (Refer to the Incident Reporting Matrix (Attachment No. 7)

29.7. The above reports must be documented and kept in file.

29.8. For more details, please refer to CONTRACTOR's Project Specific Accident / Incident Reporting & Investigation Procedure (PP709-AIR).

30. On The Job and Off the Job Vehicle Accidents

30.1. All vehicle damage / accidents that occur on site whether they are off the job or on the job should be immediately reported to HSE In Charge.

30.1.1. A Written Notification Report shall be submitted to the HSE Group within 24 hrs

30.2. Upon completion of the final report, a copy should be sent to HSE Group including any lessons learned.

30.3. A Final Detailed Report describing the facts of the vehicle accident and its results (fatalities, first aid cases or property damage) is to be sent to the HSE Group within one week from the occurrence of the Accident, along with the lessons learned. (Refer to the Incident Reporting Matrix (Attachment No. 7). In addition, the Project shall submit the Vehicle Fleet Monitoring System (FMS) Data recorded on the day of the Accident.

30.4. For more details, please refer to CONTRACTOR's Project Specific Accident / Incident Reporting & Investigation Procedure (PP709-AIR).

31. Weekly HSE Activities & Statistics Report

31.1. CONTRACTOR will submit to Petrofac on Weekly and Monthly basis the HSE Reports.

31.2. CONTRACTOR has established a weekly HSE activities and statistics report. The forms within this report are to be filled out by the HSE In Charge and copied to CONTRACTOR HSE Group. This report aims at compiling information that is necessary to conduct trend analysis for each project. More details are available in the Weekly HSE Activities & Statistics Reporting Procedure that will be developed and implemented on the project at a later stage.

31.3. Weekly HSE Statistics Report (Attachment no. 4)

31.3.1. The Weekly HSE Statistics Report supersedes any other form of safety statistics reporting. This form is to be filled out as follows:

31.3.2. For each item under description, a value shall be filled out for the Week, Month, and Year to date and Job to date.

31.3.3. The formulae at the bottom of the form shall be used to fill out the Overall Frequency rate, Severity Rate, and Mean Duration.

31.3.4. In case a lost time incident takes place, then the Total Man-hours from Last Lost time incident shall start from zero every time a Lost Time Incident happens.

31.3.5. On the Comments lines, the Dates of the Lost Time Incidents shall be included.

31.3.6. All HSE statistics reports sent to the HSE Group shall be signed by the Project Manager, and Project HSE In Charge.

31.3.7. Statistics reports shall be sent to HSE Group by Email, and not by Fax.

31.4. For more information, please refer to CONTRACTOR's Project Specific HSE Activities & Statistics Reporting (PP706-ASR).

32. HSE Audits

32.1. Internal HSE Audits

32.1.1. Internal HSE audits will be carried out in order to evaluate the effectiveness of the HSE Plan and the implementation of the recommended corrective actions.

32.1.2. Audits are conducted by competent people independent of the area or activities being audited. CONTRACTOR uses self-developed auditing systems consisting of the following:

32.1.3. HSE Audit Schedules.

32.1.4. Non-Compliance (Conformity) Report (NCR).

32.1.5. Non-Compliance (Conformity) Report (NCR) Status Log.

32.1.6. Attendance Sheets, and HSE Audit Reports.

32.2. HSE In Charge shall carry out weekly / daily internal audits to monitor the effective implementation of the HSE Plan. An audit schedule shall be drawn up and all Audits shall be reported in writing, with copies to Project Manager, discipline or area manager concerned and HSE Group.

32.3. Project Manager or Construction Superintendent shall attend audits if appropriate.

32.4. Corporate HSE audits will be carried out in order to evaluate the effectiveness of the Health, Safety & Environment Plan and the implementation of the recommended corrective actions. These audits shall be conducted by a designate of the HSE Department at CCIC Managing Office.

32.5. Analysis of collected data from regular inspections and audits, weekly HSE reports are feedback and discussed with management to identify trends and initiate improvements.

32.6. An Audit Reporting Procedure shall be developed and provided for this project at a later stage.

32.7. For more information, please refer to CONTRACTOR's Project Specific Audit / Inspection Reporting Procedure (PP705-ADR).

33. Reporting To HSE Group

33.1. HSE In Charge shall compile a weekly HSE report and shall send it to CONTRACTOR Managing Office, attention Group HSE Manager, Health Safety and Environment on the Saturday or Monday of the following week.

33.2. The HSE In Charge shall report the following items to the HSE Group within 24 hours of occurrence or the next working day:

33.2.1. Lost Time Accidents

33.2.2. Near misses

33.2.3. Vehicle Accidents on and off the job

33.2.4. Incidents

33.2.5. Property Damage

33.3. For more information, please refer to CONTRACTOR's Project Specific HSE Activities & Statistics Reporting (PP706-ASR) & Accident / Incident Reporting & Investigation Procedure (PP709-AIR).

34. Control Of HSE Records

34.1. All the HSE Records, including any Sub-Contractors' HSE records, which are generated as a result of the implementation of the HSE Plan & the Project Specific HSE Procedures will be managed and controlled through the established project document control procedure.

34.2. HSE records will be maintained to demonstrate the implementation and the effective operation of the HSE Plan. Where agreed contractually, the Client's Representative through the regular progress meetings will make HSE records available for evaluation. The minutes of such progress meetings will form part of the HSE records showing the Project overall HSE performance for that particular period. All Project HSE documents and data are controlled as per the CONTRACTOR Quality Management Procedure for "Document Control". However, the project HSE records, which are contained in the Monthly HSE reports, are compiled in HSE Group, on in-house database computer software for evaluation and monitoring.

34.3. HSE Review of Documents

34.3.1. HSE In Charge shall review all HSE related documents including:

34.3.2. CONTRACTOR and Sub-Contractor method statements

34.3.3. Work permit procedure

34.3.4. Requisitions and purchase orders for HSE equipment

34.3.5. Supplier data relating to toxic or dangerous substances HSE Management Review

35. Housekeeping

35.1. Housekeeping is the responsibility of each supervisor who will ensure that the construction areas are kept in a neat, orderly and clean manner so as to maintain good, efficient and safe working conditions, to reduce hazards and risks during construction activities. Supervisors shall include housekeeping in their weekly inspections.

35.2. All access ways and emergency exits shall be kept free of obstructions.

35.3. Adequate illumination shall be provided in all work areas.

35.4. A Housekeeping Procedure shall be developed and provided for this project at a later stage.

35.5. Offices

35.5.1. The following arrangements will be applied to office accommodation:

35.5.2. All exits and access passageways, fire doors, break-glass alarm points, firefighting equipment, first aid stations, and other emergency stations are to be kept clearly marked /identified and unobstructed.

35.5.3. Litter bins shall be emptied whenever needed or at least at the end of each working day.

35.5.4. Cords and leads will be situated to prevent trip hazards.

35.5.5. Fire extinguishers shall not be removed from their location.

35.5.6. Copier fluid or any other source of combustible material will be stored in a safe place away from any potential ignition sources.

35.5.7. Disposal of any hazardous waste will be in accordance with Environmental Management Procedure.

35.5.8. Personnel will maintain a clean desk policy to prevent the buildup of paper or other combustible sources.

35.6. Construction Site

35.6.1. All workplace area are to be maintained clear of debris waste and other rubbish, which shall be disposed of in segregated containers for disposal.

35.6.2. An adequate number of container for storage and disposal of waste materials will be provided

35.6.3. Any spillages, such as oil or grease will be immediately cleaned up, by absorption in inert absorbent material or other suitable materials. Toxic, corrosive or other hazardous liquids shall be cleared up in accordance with manufacturers instructions or material safety data sheet. All material used to mop up spills shall be immediately removed to a safe place and stored in closed containers for safe disposal.

35.6.4. Tools, equipment and raw materials in use at the workplace will be kept to the minimum required, as commensurate with efficient working practice. Tools and other equipment shall be removed as soon as possible to their defined storage area after use.

35.6.5. Cables and hoses will be routed wherever possible above grade to eliminate tripping hazards.

35.6.6. Shuttering and other timber articles will be de-nailed and stacked in a location away from the work area's and access routes.

35.6.7. Scaffolds will be swept and loose material removed on a regular basis.

35.6.8. Designated area will be identified for the racking and storage of scaffold tubes and fittings.

35.6.9. Where materials are being removed from elevated structures proper arrangements shall be in place e.g., Barriers, signs, winches, hoists etc. to eliminate the risk of injury to personnel working in the area.

35.6.10. A concrete washing area with suitable drainage shall be identified for concrete trucks, to prevent buildup of waste concrete from building up in site area. In case there is no other project approval method, the effluent will be drained into an evaporation pond, where also a daily removal of solidified concrete will take place to avoid it building up

35.7. Maintenance Workshops

35.7.1. Flammable liquids, including paints, thinners and solvents will be clearly labeled and provided with suitable fine protection/prevention measures and kept in purpose built containers away from sources of ignition.

35.7.2. Rags, Cardboard or other carbonaceous materials contaminated by oil or other combustibles, shall be disposed of on a regular basis to prevent build up and shall be contained in a sealed container.

35.7.3. Area's around grinders, lathes and other rotating equipment shall be kept free of trip hazards and shall have safe access maintained.

35.7.4. Maintenance pits shall be regularly cleaned and have any liquid build up removed.

35.7.5. Sump oil shall be drained and contained in labeled sealed containers.

35.7.6. Incompatible chemical products should not be stored together (refer to MSDS)

35.8. For more details, please refer to CONTRACTOR's Project Specific Housekeeping Procedure (PP733-HKP).

36. Fire Prevention & Fire Fighting

36.1. Firefighting equipment shall be provided in all vulnerable areas to protect personnel, Works, temporary works, material storage, offices, records, etc. from damage by fire.

36.2. HSE In Charge is responsible for instructing workmen in fire precautions and the use of firefighting equipment and for displaying notices giving details of action to be taken in the event of fire.

36.3. A Fire Prevention and Protection Procedure shall be developed and provided for this project at a later stage.

36.4. Summary of fire protection / protection program

36.4.1. All fabrication yards, site office and camp are assigned fire wardens.

36.4.2. Field fire extinguishers are checked weekly.

36.4.3. Field fire extinguishers tests / inspections are logged.

36.4.4. Fire equipment is not obstructed.

36.4.5. All employees are instructed in the use of fire extinguishers.

36.4.6. Fire warders are assigned to main office, fabrication yard and camp.

36.4.7. All flammable material is stored in designated areas.

36.4.8. Gas containers are stored in isolated areas.

36.4.9. A competent person periodically checks all electrical installations.

36.4.10. All trash is collected and disposed of each day.

36.4.11. Emergency telephone numbers are posted.

36.4.12. Building evacuation plans are posted.

36.5. Fire Prevention, Control Containment and Fire Fighting

36.5.1. Fire-fighting activities shall be performed only by official national / local and / or Client's fire-fighting organizations.

36.5.2. Firefighting equipment shall be provided in all vulnerable areas to protect personnel, Works, temporary works, material storage, offices, records, etc. from damage by fire.

36.5.3. HSE In Charge is to ensure instructions given to workmen in fire precautions and the use of firefighting equipment are given as per training requirements.

36.5.4. Notices will be displayed giving details of actions to be taken in the event of a fire.

36.5.5. The intent of fire protection is to prevent, control and contain the fire.

36.5.6. All Client / Plant fire-fighting rules are applicable.

36.6. For more details, please refer to CONTRACTOR's Project Specific Fire Prevention & Protection Procedure (PP713-FPP).

37. Emergency Services

37.1. For each project there will be an Emergency Evacuation Procedure together with a schedule of emergency drills to be conducted regularly. Such drills are scheduled to ensure that staff who have functions in responding to an emergency, are properly prepared to take part in their assigned role. The effective implementation of this Emergency Procedure is achieved by providing training and guidelines in the event of an emergency that could endanger life, property and the environment.

37.2. Emergency teams are provided with the necessary protective clothing and equipment, to enable them to perform their duties safely.

37.3. Records of scheduled emergency drills are kept to ensure HSE compliance.

37.4. A more detailed site-specific emergency evacuation procedure shall be developed and provided for this project at a later stage.

37.5. For more information, please refer to CONTRACTOR's Project Specific Site Emergency Response Plan (PP711-SER) & Camp Emergency Response Plan (PP760-SER).

38. Personnel Protective Equipment (PPE)

38.1. Personal Protective Equipment shall be provided to employees whenever there is an actual or potential exposure to hazards from a process or environment that could or does exceed the established threshold limit. Such personal protective equipment needs for the site shall be identified and supplied in accordance with accepted industrial standards.

38.2. HSE In Charge is responsible to ensure that proper PPE is purchased in accordance with International HSE Standards. HSE In Charge shall have access to manpower projections to enable advance requisitioning of adequate quantities of PPE. Suitable storage facilities are to be provided for storage of HSE equipment.

38.2.1. PPE Selection

38.2.2. PPE shall be selected and used to provide protection for all personnel and visitors on the project against:

38.2.3. Inhalation and respiratory tract hazards.

38.2.4. Skin contact hazards

38.2.5. Mechanical injury and hazards

38.2.6. Construction HSE hazards

38.2.7. Environmental hazards

38.2.8. Radiological hazards

38.2.9. PPE will be jointly selected by the Procurement and HSE In Charge in order to reach the safety and cost-effective solution. HSE Group will support the selection phases for PPE not available .

38.3. A Project Specific Personal Protective Procedure shall be developed for this project upon identifying the requirements after Project award.

38.4. PPE Matrix will be included in the Specific Procedure. (Refer to Attachment 8)

38.5. For more details, please refer to CONTRACTOR's Project Specific Personal Protective Equipment Procedure (PP715-PPE).

39. HSE Control Of Critical Activities

39.1. Critical tasks are those tasks which if incorrectly carried out have the greatest potential for major loss to people, property / process and the environment. To insure that all hazards associated with each task have been identified, it is necessary to carry out a formal analysis and document fully the results. Job Safety / Hazard Analysis Procedure is in place to ensure that such critical tasks are carried out in a safe and controlled manner. This shall be developed and provided for this project at a later stage.

40. Hazard Identification, Analysis, And Control

40.1. Hazard Identification and Analysis

40.1.1. The Project Manager assisted by HSE In Charge shall review all contract activities. The HSE In Charge shall identify potential serious hazards, prepare a detailed hazard analysis and submit proposals to control identified hazards.

40.1.2. Specialist Sub-Contractors shall be required to submit a method statement detailing how they intend to ensure safe working conditions.

40.1.3. All method statements for work performed by CONTRACTOR or Sub-Contractors shall be reviewed by the HSE In Charge.

40.1.4. All hazards shall be recorded in the

40.1.5. Basic Steps

40.1.6. The basic steps to doing a job safety analysis (JSA) are:

40.1.6.1.1. Select the job to be analyzed.

40.1.6.1.2. Break the job down into steps.

40.1.6.1.3. Identify all hazards or potential accidents.

40.1.6.1.4. Develop solutions for the potential accidents.

40.1.7. Major considerations to use in the selection of the job to be analyzed are:

40.1.7.1.1. Job accident frequency.

40.1.7.1.2. Job injury severity.

40.1.7.1.3. Potential injury severity.

40.1.7.1.4. Newly established jobs.

40.1.8. After the selection process, the next step is to break the job down into specific steps.

40.1.9. Preparing a JSA

40.1.9.1.1. To do a JSA, take an experienced worker and tell him that you are going to observe while they perform a job. Explain why you are observing and tell them not to do anything different from what they would normally do. As the employee does the job, study each step carefully. Ask yourself what is the hazard and how could the employee get hurt. Then figure out a way to correct the hazards and potential unsafe procedures.

40.1.9.1.2. The complete JSA may identify job steps that can be modified or eliminated to reduce injury potentials. This information should be used to redevelop the JSA to be used as a training guide so that it lists the way a job should be done properly.

40.1.9.1.3. Communicate the information and assure that is understood.

40.1.9.1.3.1. Use the four point Job Instruction Training method and Job Safety / Hazard Analysis to train the new employee. If a Job Safety Analysis or other training tool is used on a specific job, the

employee and supervisor should both sign the document that training was provided and understood.

40.1.9.1.3.2. Continue the JSA training process until all routine jobs of significance that the employee does on a daily or weekly basis have been covered and appropriate documentation has been made on the training checklist.

40.1.9.1.3.3. The employee and supervisor both sign the training checklist and turn it into the office. Once the Orientation Checklist, and the Discipline Policy have been completed and signed, a copy of the set is placed in the employee's personnel record.

40.1.9.1.3.4. These procedures may be modified to fit the situation. For example: Employees transferred from one job to another in the same location. In this case, the office and facility orientations do not apply. However, the new job orientation and training procedures must be followed.

40.1.10. Job Safety Task Instructions (JSTI)

40.1.10.1. JSTI is a method of studying a job in order to identify the hazards or potential accidents associated with each step of the job and develop solutions that eliminate, nullify or prevent such hazards. The task performer(s) are engaged in the process by participating in the task analysis.

40.1.10.2. This method involves the job performers in safety job planning, which encourages personal commitment and places accountability on the job performers.

40.1.11. For more details, please refer to CONTRACTOR's Project Specific Job Safety\Hazard Analysis Procedure (PP714-JSA).

40.2. Risk Assessment

40.2.1. The purpose of Risk Assessment is to conduct risk analysis for the scope of work that will be conducted in the project in order to implement appropriate control measures to prevent all incidents and accidents.

40.2.2. Risk Assessment Procedure

40.2.3. The Risk Assessment process consists of five essential steps. Each step of the assessment process should be completed before going onto the next.

40.2.4. Step 1. Define Tasks/Activities and Look for the Hazards.

40.2.5. Step 2. Identify Hazard Effects on People - who are at risk from each hazard and its effect(s) on them. In most cases those affected will be the persons involved in the tasks. In other cases it may be other personnel not directly involved with the task.

40.2.6. Step 3. Evaluate the Risks - arising from the hazards and estimate the consequence (severity) rating. Decide whether existing precautions are adequate or more should be done.

40.2.7. Step 4. Record - the findings, write down the more significant hazards e.g. above ground power cables.

40.2.8. Step 5. Monitor and Review - your assessment from time to time and revise if necessary. If there is any significant change, you should add to the assessment to take account of the new hazards.

40.3. For more details, please refer to CONTRACTOR's Project Specific Risk Assessment Procedure (PP729-RAP).

40.4. Site Specific Risk Assessments will be prepared by the Project's HSE In Charge and submitted for the Client's Approval. The list of Risk Assessment includes, but not limited to, the following:

40.4.1. Light Vehicle Driving

40.4.2. Heavy Transport Operations

40.4.3. Lifting Operations

40.4.4. Manual Lifting

40.4.5. Excavation

40.4.6. Welding and Gas Cutting

40.4.7. Working at Height

40.4.8. Electricity

40.4.9. Hand Tools

40.4.10. Vehicle Maintenance

41. Work Permits

41.1. Where CONTRACTOR is working in the proximity of an existing plant, then the plant's work permit procedure will be utilized or a work permit procedure shall be issued for Client / Company approval and implemented under the responsibility of the Project Manager.

41.2. Work Permit procedure shall apply to the following types of work:

41.2.1. Work in the vicinity of existing pipelines and work in or Adjacent to existing hydrocarbon plant shall require a permit from the owner of these facilities.

41.2.2. Pressure and leak testing

41.2.3. Pre-commissioning activities

41.2.4. Work in the vicinity of underground services

41.2.5. Work in the vicinity of overhead power-lines

41.2.6. Deep excavations

41.2.7. Work on or adjacent to steep slopes

41.2.8. Entry into confined spaces

41.2.9. Heavy or unusual or multiple lifts, or lifts over existing equipment, discovery of contaminated soil

41.2.10. Electrical Works (Lock out / Tag out)

41.2.11. Others: if identified during risk assessment or JSA's

41.3. Types of Permit to Work (PTW)

41.3.1. In the Permit to Work System tasks are allocated to one of the following categories:

41.3.2. Hot Work

41.3.3. Cold Work

41.3.4. Spark Potential

41.3.5. Radiography

41.4. The process of identifying the need of a Permit to Work is as follows:

41.4.1. Scope of work

41.4.2. Identify hazards and assess risks

41.4.3. Establish control measures to eliminate or mitigate hazards

41.4.4. Links the work to other associated work permits

41.4.5. Shall be signed by the Issuing Authority

41.4.6. Communicates information to all involved in the work

41.4.7. Insures adequate control over the return-to-normal operations

41.5. Confined Space Entry Certificate

41.5.1. A Confined Space Entry Certificate shall be raised when it is necessary for personnel to enter confined spaces as defined in Confined Space Entry Procedure (PP710-CSE).

41.6. For more detailed information, please refer to Project's Work Permit System Procedure (PP737-WPS).

42. Site Security

42.1. The Project Manager is responsible for taking all necessary measures to safeguard the site, the works, materials, storage areas, site offices, plant, equipment, temporary works, etc., against damage from trespass and theft and shall take precautions to prevent unauthorized entry.

42.2. CONTRACTOR shall be responsible for safeguarding the worksites or as indicated by contract documents.

43. Electrical Work

43.1. Electrical work shall only be undertaken by qualified persons familiar with the electrical code requirements and qualified for the class of work being performed.

43.2. The HSE In Charge is responsible for ensuring that work permits are obtained before doing any live electrical work.

43.3. Only qualified personnel shall be permitted to work with electrical equipment

43.4. Whenever feasible, all work shall be carried out with positively de-energized equipment. Lockout/tag out procedures shall be implemented.

43.5. All wiring shall have appropriate internal and external grounding, for personal protection.

43.6. All materials and equipment used shall be in accordance with International Standards.

43.7. Never bridge fuses.

43.8. De-energize all lines, on which work will be performed, install padlocks and lockout tags.

43.9. All appliances, equipment and materials used for temporary electrical installations shall be constructed, installed, protected, worked and maintained so as to eliminate the potential electrical related hazards.

43.10. No work of electrical nature shall be carried out without the proper work permit, whenever applicable.

43.11. Unessential electrical equipment and appliances shall be disconnected or turned off when not in use.

43.12. Temporary electrical extension cords shall be elevated off the ground.

43.13. CONTRACTOR competent person, before mobilization, shall inspect all electrical installation.

43.14. The use of 110v electrical equipment is recommended, whenever possible.

43.15. All temporary power supplies, used to provide power for electrical hand tools, must incorporate RCDs (Residual Current Devices) or ELCBs (Earth Leakage Circuit Breakers) that will trip at a leakage of 30 MA.

43.16. For more detailed information, please refer to Project's Electrical Equipment and Grounding Procedure (PP764-EEG).

43.17. A Lock-out / Tag-out Procedure shall be developed and provided for this project at a later stage.

43.17.1. Employees shall not be allowed to work on energized systems without written authorization from the Construction Manager and consultation with HSE In Charge and his signature for final approval.

43.17.2. This procedure specifies methods of controlling hazardous energy sources during construction and maintenance activities on electrical services, facilities, shop equipment, pressurized pipe, and systems used as service lines for construction. This Procedure also covers procedures to be used during commissioning phases.

43.17.3. A standard "DANGER – DO NOT OPERATE" tag and individually keyed locks will be used on the Project.

43.17.4. All tags will be dated, signed and a description of the work being performed shown on the tag and securely attached to the equipment/lock.

43.17.5. Tags must never be reused, but destroyed immediately upon removal. Alterations to a tag are prohibited.

43.17.6. Any device with a tag or lock attached shall not be operated regardless of circumstances.

43.17.7. No person shall remove another's tag or lock unless the requirements lock or tag removal is adhered to.

43.17.8. It is the discipline supervisor's responsibility to ensure that work is performed within the protection of locks and tags.

43.17.9. Tags required beyond one shift must be replaced by the oncoming shift. In no case will locks and tags be permitted to remain more than 30 days without re-inspection and re-dating with signatures.

43.17.10. Each person performing work on a system is required to affix a lock and tag on the system even though the equipment or system is already locked out. In these situations, a multiple locking device shall be used.

43.18. For more detailed information, please refer to Project's Lock out & Tag out Procedure (PP726-LTP).

44. Traffic Regulations

44.1. All project personnel shall comply with all regulations concerning traffic on public roads and shall follow routes for the transport of plant and heavy loads as directed by the relevant public authorities.

44.2. A temporary traffic control and diversion plan shall be developed on site by the HSE In Charge in order to control the temporary necessary diversions, signs and barricades.

44.3. Road Usage Procedure

44.3.1. All drivers shall have a valid driving license.

44.3.2. All drivers shall observe the posted speed limits.

44.3.3. Seat belts are mandatory for all drivers and passengers.

44.3.4. Seat belts are mandatory for all heavy equipment if provided for by the manufacturer

44.3.5. The driver shall ensure that the number of passengers does not exceed the number of available seat belts.

44.3.6. Drivers shall not transport any unauthorized personnel in project vehicles.

44.3.7. No passengers shall be transported on any equipment except in passenger seats with seat belts.

44.3.8. The Access Road shall not be used for storage of materials and equipment.

44.3.9. The Access Road shall not be used for loading or unloading operations.

44.3.10. The Access Road shall not be obstructed by broken down vehicles or equipment..

44.4. For more detailed information, please refer to Project's Road Work & Traffic Signs Procedure (PP745-RWT).

45. Fleet Monitoring System

45.1. As part of CONTRACTOR initiative to improve HSE on projects, the Fleet Monitoring System shall be implemented on all CONTRACTOR Projects as per a risk assessment that is conducted at the tender stage of the project by the Managing Office. The details of the implementation of the system are fully described in the following two procedures: Journey Management Procedure and Vehicle Safety and Monitoring Procedure.

45.2. For more detailed Information, please refer to Project's Vehicle Safety & Monitoring Procedure (PP756-VSP) & Journey Management Procedure (PP725-JMP).

46. Journey Management

46.1. A procedure to ensure effective journey management shall be developed and provided for this project. This procedure will provide rapid rescue in the event of accidents in remote locations and to mobilize a planned search operation in the improbable event of vehicles actually getting lost.

46.2. The procedure shall be written and managed by the HSE In Charge and communicated to all camps, offices and locations.

46.3. Personnel shall be selected and trained to make up search parties in case of an emergency.

46.4. The HSE In Charge will ensure that Plant, Machinery, and Vehicles Department has equipped each vehicle with standard emergency equipment that meets international standards.

46.5. For more detailed information, please refer to Project's Journey Management Procedure (PP725-JMP).

47. Warning, Prohibition, And Command Signs

47.1. All HSE, first aid and accident prevention facilities and equipment shall be prominently marked. Out of bounds or classified areas on site shall have prominent warning signs displayed.

47.2. No sign shall be removed without the consent of the HSE In Charge.

48. Plant, Machinery & Vehicles (PMV) Department

48.1. Plant, Machinery and Vehicles (PMV) Department are responsible for ensuring that the HSE requirements for cranes, hoists, etc. are met and maintained throughout the life of the project. HSE In Charge shall be notified of all such equipment entering the project for initial inspection.

48.2. Protective and warning devices e.g. overload switches, reversing horns, shall be in working order at all times. Plant, Machinery and Vehicles Department are responsible for ensuring that such devices are operative on all equipment.

48.3. Control of Non-conforming Equipment.

48.3.1. The HSE In Charge or his designee shall monitor construction equipment for their proper safe operation prior to use.

48.4. All Cranes and Heavy Equipment, lifting tackle shall be 3rd Party Certified by an approved 3rd Party prior to being allowed access to site.

48.5. Each Crane shall have a dedicated dually qualified and competent rigger certified by an approved 3rd Party.

48.6. For more detailed information, please refer to Project's Lifting Operations Procedure (PP738-LOP).

49. HSE Violation

49.1. An HSE violation is a case of disregard for an HSE procedure, which caused or could have caused an accident.

49.2. HSE Officer shall immediately correct and report any violations seen in the course of his duties in writing to HSE In Charge. These reports will be kept on file and will give details of the violation, work area, date and time, perpetrator, etc.

49.3. Disciplinary action will be considered for repeated offenders.

50. Scaffolding Safety

50.1. All scaffolding, type, erection methods, Scaffold erectors, supervisors, to be 3rd Part certified. All scaffolding shall be only approved by Client Safety Department. Only approved type will be allowed.

50.2. The purpose of Scaffolding Safety Procedure is to set standards for materials, erection, use and inspection of the scaffolding.

50.3. This procedure sets the standards and recommendation to observe the safety of all employees involved in erecting and working from scaffolds.

50.4. General Rules for Scaffold

50.4.1. Foundations

50.4.2. The foundations shall be level and adequate to carry the load imposed.

50.4.3. Base plates shall be placed under every standard irrespective of the foundation surface.

50.4.4. Under no circumstances will scaffolds be undermined by excavation.

50.4.5. Standards (Tube & Coupler Scaffolds)

50.4.6. Standards shall be plumbed vertical.

50.4.7. The spacing between standards is determined by the intended use of the scaffold. Under no circumstances will the bay length exceed those distances.

50.4.8. Joints in standards can be made with sleeve couplers or spigots (joint pins). Joints must be staggered, i.e., they must not occur at the same level in adjacent standards.

50.4.9. Ledgers (Tube & Coupler Scaffolds)

50.4.10. Ledgers must be plumbed level and fixed to the inside of standards using right angle, load-bearing couplers. The ledger must not extend more than 50mm past the load bearing coupler.

50.4.11. The vertical distance (lift height) between ledgers must not exceed 2 meters.

50.4.12. Joints in ledgers will be made with sleeve couplers. Spigots (joint pins) are not acceptable. All joints must be staggered.

50.5. Erection of Scaffolding

50.5.1. Scaffolds shall be erected by workmen deemed competent to carry out such activities.

50.5.2. All such competent workmen shall operate under the control of a competent supervisor.

50.5.3. Ladders will be properly lashed throughout the vertical height of a scaffold as it progresses. Workmen erecting the scaffold will use the ladders to gain access to the working level.

50.5.4. Tubes or boards being used in the construction of the scaffold will be stored flat in a neat and tidy manner. They will not be stacked vertically against the scaffold.

50.5.5. Loose tubes or boards will not be left on scaffolding after its completion.

50.5.6. Where men are erecting a slung or cantilevered section or crawling around on a pipe bridge or other structural steelwork they will, in all instances, where there is a possibility of falling more than 1.8 meters, wear a full body harness with a fall protection chock absorbing lanyard and life line which will be hooked off at all times.

50.5.7. Where a scaffold is left in an incomplete state, the bottom ladder will be removed and a notice will be secured to the lower lift stating "Danger Incomplete Scaffold Keep Off", and will be tagged red (not fit to use).

50.5.8. Where one section of a working platform is incomplete, access may be gained to the completed section provided that a stop end, preventing entry, is placed over the working platform at guardrail height. A Scaffold Tag stating "Danger Incomplete Scaffold Keep Off" will be secured to the stop end. This notice will be in the appropriate languages.

50.5.9. Handballing will be the normal method of erecting a scaffold. Where, however, a scaffold consists of a considerable number of lifts, a gin wheel may be used, provided the following requirements are met:

50.5.10. The cantilevered tube to which the gin wheel is secured does not project more than 760mm beyond the scaffold, unless it is adequately supported.

50.5.11. The cantilevered tube is secured to the inside standard using right angle couplers. Both standards to be diagonally braced.

50.5.12. The fiber rope which shall have a minimum diameter of 18mm will be checked daily by the approved Scaffolding Supervisor and discarded if unfit for use.

50.5.13. The maximum load to be lifted by a gin wheel will not exceed 50kg.

50.6. Inspection

50.6.1. All scaffolds will be inspected prior to use and seven-day periods thereafter.

50.7. Scaffold Users

50.7.1. Scaffolds will be used for the purpose to which they have been erected. Under no circumstances will they be overloaded.

50.7.2. Scaffold users will under no circumstances interfere with, modify or remove any part of a scaffold (this includes scaffold boards). Interference's with a scaffold will result in disciplinary action.

50.7.3. If a scaffold requires modification it will be carried out by the scaffolding team on the instruction of the Scaffold Supervisor.

50.7.4. If for any reason a user considers a scaffold to be unsafe, he will immediately contact his supervisor. The supervisor will immediately replace the scaffold tag with "Danger Incomplete Scaffold keep off" tag. The supervisor will then notify the Scaffolding Supervisor for further action.

50.7.5. For more details, please refer to Project's Scaffolding Safety Procedure (PP716-SSP).

51. Management of Change

51.1. Contractor will implement the MOC Procedure to control changes that occur within the Project to ensure that associated risks remain at an acceptable level and that the effects they have are advised around the Project in a logical manner. Changes may occur in the following Key Areas:

51.1.1. SOW,

51.1.2. Equipment,

51.1.3. Materials,

51.1.4. Drawings, Documents and Specifications,

51.1.5. Organization,

51.1.6. Personnel,

51.1.7. Procedures,

51.1.8. Health, Safety and Environment requirements (including HAZOP),

51.1.9. Interfaces/Synergies,

51.1.10. Cost and/or Schedule,

51.1.11. Logistics,

51.1.12. Security.

51.2. For more details please refer to the Management of Change Procedure (PP782-MOC).

52. Appendices

Appendix 1: Health, Safety & Environmental Management Policy Statement

CONSOLIDATED CONTRACTORS GROUP (CCC)

HSE POLICY STATEMENT

CCC Group HSE Goal:

Our Health, Safety & Environmental (HSE) goal is to prevent occupational incidents, injuries, illnesses, harm to people, property damage and to protect the environment at all locations of CCC Group operations.

Our Commitment:

We are committed to provide a safe and healthy work environment at all times. CCC Group Management strives to achieve this goal by placing incident prevention and protection of the health and safety of our own employees, the employees of our subcontractors, the visitors and of the local communities as one of the Core Values of CCC Group.

We will not compromise our values, beliefs and commitments to HSE in order to achieve any other business objectives. We are also commited to seeking international partnerships, aimed at promoting sustainable development and corporate social accountability.

HSE Management System Implementation:

CCC Group shall take a leading role in the promotion and implementation of its Health, Safety and Environmental Management System

CCC Group will strictly comply with all applicable legal laws and internationally accepted work practices and procedures for the protection and promotion of the safety and health and the protection of the environment.

CCC Group employees at all levels will strictly adhere to all site safety, health, environment standards and job work rules and procedures and must work continuously and diligently to execute this policy by maintaining the highest standards of occupational health, safety and environmental management to prevent human suffering, loss, and environmental damage which may result from unsafe acts and conditions. CCC Group enforces a disciplinary enforcement procedure and a "Zero Tolerance Policy" for HSE violations.

CCC Group shall attain its goal through:

- Developing, distributing, maintaining and monitoring the implementation of an HSE Management System that is compliant with internationally recognized standards
- Conducting HSE Training and developing the skills and competencies of all personnel.
- Assigning qualified HSE Personnel and providing the adequate resources.
- Maintaining transparent HSE reporting and investigation of incidents.
- Seeking partnerships and sharing experiences and lessons learned with our clients and partners.

CCC Group will perform rigorous and frequent internal and third party audits to ensure that the implementation of the HSE Management System on CCC Group work locations is in line with this policy.

HSE Targets and Objectives:

CCC Group will continuously strive for the improvement of its HSE Management System and performance by setting HSE targets and objectives. CCC Group targets and objectives are set by Executive Management and they are disseminated to all personnel and work location of CCC Group.

Samer Khoury

President (Engineering & Construction)
Consolidated Contractors Group (CCC)

June 2013

Appendix 2: Security Policy Statement

CONSOLIDATED CONTRACTORS GROUP (CCC)

SECURITY POLICY STATEMENT

CCC Group Security Goal:

Our Security goal is a shared responsibility to protect the company's employees, assets, information, integrity and reputation from any potential threats.

Our Commitment:

We are committed to provide secure and protected workplaces for our employees at all times. We shall exert all efforts and avail all possible resources to identify, evaluate and manage security risks to personnel, property and information, in order to eliminate or at least minimize the impact of these risks and threats.

CCC Group Security Principles:

CCC Group Management shall take a leading role in the implementation of CCC Group security plans and procedures and shall continually be aware of and take responsibility for the security aspects of the CCC Group business activities.
The security and protection of employees, property, and information must be the overriding priority of all CCC Group Managers.

CCC Group will maintain an effective security assurance process by:

1. Developing, maintaining, updating and continuously assessing emergency response plans to deal with assessed risks, so to mitigate incidents rapidly and effectively.
2. Reviewing and inspecting Security measures and procedures so as to maintain high levels of security standards on all CCC Group operations.
3. Integrating Security expectations with business planning and decision-making where business imperatives drive security.
4. Establishing relations and full coordination with local government agencies and local law enforcement authority's, and where possible pursuing security through good community relations and acceptance.
5. Implementing a "Zero Tolerance Policy" regarding Security issues and violations.
6. Maintaining transparent reporting and investigation of all security incidents, including security breaches and irregularities.
7. Taking corrective actions and following up through the regular verifications to improve the overall security standards.
8. Providing CCC Group personnel with the necessary Security training programs, briefings and awareness acknowledging that security is achieved through the everyday actions of employee's right across the company.
9. Initiating agreements with top international evacuation companies in order to assist in evacuating CCC Group employees during situations of high security emergencies and threats and where such services are required.

CCC Group will continuously strive to improve its Security plans and procedures by setting up targets and objectives as benchmarks. Such targets and objectives will be determined by the Executive Management and they will be cascaded and disseminated to all CCC Group operations and locations.

Samer Khoury

President (Engineering & Construction)
Consolidated Contractors Group (CCC)

June 2013

Appendix 3: Environmental Policy Statement

CONSOLIDATED CONTRACTORS GROUP (CCC)

ENVIRONMENT POLICY STATEMENT

The CCC Group recognizes its activities have an impact on the environment and it is committed to minimizing environmental impact as far as is reasonably practicable.

The CCC Group is committed to creating an organizational culture emphasizing environmental excellence as an integral part of operations and a value that will be promoted within the CCC Group.

CCC is committed to:

1. Compliance with all environmental legislation, regulation and codes of practice
2. Pollution prevention and protection of the environment
3. Minimizing and reducing impact on the environment and promotion of sustainability by ensuring the efficient use of resources
4. Continual improvement in its environmental performance

Environmental Management System Implementation:

The CCC Group shall take a leading role in the promotion and implementation of its Environmental Management System and shall strive to be a leader in environmental stewardship.

It is the policy of CCC Group to:

- Set detailed procedures and policies to ensure compliance with international and national standards and legal requirements.
- Operate in a way that conserves resources and minimizes harmful impacts on the environment.
- Reduce waste generation and promote the reuse and the recycling of materials.
- Manage and mitigate residuals of its operations.
- Use sustainable practices to protect its employees, the local community and the environment.
- Protect, conserve and minimize impact on the historical and cultural heritage sites.
- Promote environmental awareness and training among its employees and encourage them to work in an environmentally responsible manner.
- Seek international engagement and partnerships with various stakeholders to actively promote sustainable development and social accountability.
- Continuously improve its Environmental Management System.
- Be transparent in reporting all environmental incidents, investigate all incidents and implement corrective measures to prevent their reoccurrence.

The CCC Group will perform frequent internal and third party audits at CCC work locations to ensure the implementation of the Environmental Management System adheres to this policy.

Environmental Targets and Objectives:

The CCC Group Environmental targets and objectives will be established to achieve an acceptable level of environmental performance for its operations. Management at all levels of the CCC Group is responsible for ensuring that this policy is being promoted and communicated internally and externally to all parties.

Samer Khoury
President (Engineering & Construction)
Consolidated Contractors Group (CCC)

June 2013

CONSOLIDATED CONTRACTORS GROUP S.A.L. (Offshore) ICCC / TEYSEER CONTRACTING CO. W.L.L. - JV

Appendix 4: ISO 14001:2004 Certificate

BUREAU VERITAS Certification

Consolidated Contractors Group S.A.L. (Holding Company)
62B, Kifissias Ave., Amaroussion 151 10, Athens
GREECE

This is a multi-site certificate, additional site details are listed in the appendix to this certificate

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standards

ISO 14001:2004

Scope of certification

ENGINEERING, PROCUREMENT AND CONSTRUCTION OF CIVIL, MECHANICAL, ELECTRICAL AND PIPELINES PROJECTS.

Certification cycle start date: **25 November 2013**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: **25 November 2016**

Original certification date: **01 October 2001**

Certificate No. GR13.1427E

Version 1, Revision date: 25 November 2013

N. TRILIZAS

UKAS MANAGEMENT SYSTEMS
008

Certification body address:
Brandon House, 180 Borough High Street, London SE1 1LB, United Kingdom
Local office:
Bureau Veritas Hellas A.E., 23 Etolikou str., 18545 Piraeus, Greece

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.
To check this certificate validity please call: +30 210 4063000

Page 1 of 3

Appendix 5 : OHSAS 18001:2007 Certificate

BUREAU VERITAS Certification

Consolidated Contractors Group S.A.L. (Holding Company)
62B, Kifissias Ave., Amaroussion 151 10, Athens
GREECE

This is a multi-site certificate, additional site details are listed in the appendix to this certificate

Bureau Veritas Hellas A.E. certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standards

OHSAS 18001:2007

Scope of certification

ENGINEERING, PROCUREMENT AND CONSTRUCTION OF CIVIL, MECHANICAL, ELECTRICAL AND PIPELINES PROJECTS.

Certification cycle start date: **25 November 2013**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: **25 November 2016**

Original certification date: **01 October 2001**

Certificate No. GR13.0643S

Version 1, Revision date: 25 November 2013

N. TRILIZAS

SAFETY CERT

Certification body address:
Bureau Veritas Hellas A.E., 23 Etolikou str., 18545 Piraeus, Greece
Local office:
Bureau Veritas Hellas A.E., 23 Etolikou str., 18545 Piraeus, Greece

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.
To check this certificate validity please call: +30 210 4083000

Page 1 of 3

CONSOLIDATED CONTRACTORS GROUP S.A.L. (Offshore) (CCCO) / TEXSEER CONTRACTING CO. W.L.L. - JV

Appendix 6: Weekly HSE Statistics Report Form

Consolidated Contractors International Company

HSE Statistics Report

Doc ID: PP701-HSE-F04
Issue Date:
Rev. No. 8 Rev. Date: 04-11-08
Page No. 1 of 1

Project Name: _____ Project Number: _____
Area: _____ Project Start Date: _____
Location: _____ Project Finish Date: _____
Project Manager: _____ Report Number: _____
HSE Manager: _____ Period Ending: _____
Segment: _____

NO.		DESCRIPTION	LAST PERIOD	THIS PERIOD	TOTAL TO-DATE
1	EMPLOYEE	No. of Employees (overall)			
2		No. of Employees (HSE)			
3	RECORDABLE CASES	No. of Lost Time Incidents (LTIs)			
4		No. of Restricted Work Cases			
5		No. Occupational Illnesses			
6		No. of Occupational Fatalities			
7		No. of Medical Treatment Cases			
8		No. of Loss Consciousness Case			
9	NON-RECORDABLE	No. of First Aid Cases			
10		No. of Near Misses			
11		No. of Non-Occupational Fatalities			
12	INDUCTION / TRAINING	No. of HSE Staff Inducted			
13		No. of Project Personnel Inducted			
14		No. of Employees Trained (other than Induction)			
15		Total Man-hours for HSE Induction			
16		Total Man-hours for Training			
17	DIRECTIVES	No. of HSE Meetings			
18		No. of HSE Inspections			
19	PROPERTY & SECURITY	No. of Fires			
20		No. of Thefts			
21		No. of Property Damage			
22		No. of Alcohol Intoxication Cases			
23		No. of Drugs Abuse Cases			
24		No. of Spills / Leaks			
25		No. of Chemical Releases			
26	VEHICLES	No. of Vehicles (Group 5 & 9)			
27		Total Kms. Driven (Group 5 & 9)			
28		No. of Vehicle Accidents (Group 5 & 9)			
29	MAN-HOURS	Total Man-hours Worked (Direct & Indirect)			
30		Total Lost Man Days due to LTIs			
31		Total Man-hours from Last LTI / Fatality			
32	RATES	***LTI Frequency Rate (LTI FR)***			
33		***Total Recordable Injury Rate (TRIR)***			
34		*Severity Rate*			
35		*Mean Duration*			

TYPE		First Aid		Recordable	
		This period	To-date	This period	To-date
NATURE OF INJURY	Abrasion				
	Arc Eye				
	Asphyxiation				
	Blister				
	Burns				
	Contusion				
	Cut / wound				
	Dislocation				
	Electric shock				
	Foreign Body				
	Fracture				
	Laceration				
	Puncture				
	Sprain / Strain				
	Others				
	TOTAL				
BODY PART AFFECTED	Ankle				
	Arm / Forearm				
	Back				
	Chest				
	Ear				
	Eye				
	Face				
	Finger				
	Foot				
	Groin				
	Hand				
	Head / Forehead				
	Internal Organs				
	Knee				
	Leg (Thigh / Calf)				
	Mouth				
	Neck				
	Shoulder				
	Skin				
	Torso				
	Wrist				
	Others				
	TOTAL				
NATURE OF ILLNESS	Allergy				
	Avian Flu				
	Dermatitis				
	Frost Bite				
	Hearing Loss				
	Heat Stress				
	Malaria				
	Poisoning				
	Respiratory				
	Skin Inflammation				
	Others				
	TOTAL				

Prepared by: _____ _____
Name & Signature *Date*

Checked by: _____ _____
HSE Manager (Name & Signature) *Date*

Approved by: _____ _____
Project Manager Name & Signature *Date*

INCIDENT RATE CALCULATIONS:

32 LTI Frequency Rate (LTI FR):

No. of Lost Time Injury x 200,000 (Item 3)
Total Man-hours Worked

33 Total Recordable Injury Rate (TRIR):

Total Number of Recordable Cases x 200,000 (Items 3+4+5+6+7+8)
Total Man-hours Worked

34 Severity Rates:

Total Lost Man Days x 200,000 (Item 30)
Total Man-hours Worked

34 Mean Duration:

Total Lost Man Days (Item 30)
No. of Lost Time Injury

Distribution: SCD MOA

Form: PP701-HSE-F04 Rev. B

Appendix 7: Weekly HSE Activities Report Form

Consolidated Contractors International Company

Weekly HSE Activities Report

Doc ID: PP701-HSE-F05
Issue Date:
Rev. No. C Rev. Date: 13/11/08
Page No. 1 of 1

Project Name: _____ Project Number: _____
Area: _____ Project Start Date: _____ Segment: _____
Location: _____ Project Finish Date: _____
Project Manager _____ Report Number: _____
Safety Manager: _____ Period Ending: _____

	Site Areas: (list the areas that the site is divided to)	Name of HSE Member Responsible for each Area:
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

			Number of Items			Number of Attendees (if applicable)		
			Last Period	This Period	Total to-date	Last Period	This Period	Total to-date
1	Project Meetings	Weekly Management Walk Through			0			0
2		Weekly Management Meeting			0			0
3		CCC Staff Weekly HSE Meetings			0			0
4		CCC HSE Coordination Meeting			0			0
5		Client HSE Meeting			0			0
6		Contractors Monthly Coordination Meeting			0			0
7		Others (please specify):			0			0
8		Others (please specify):			0			0
9		Total:			0			0
10	Activities	Project Internal HSE Audit			0			0
11		Risk Assessments			0			0
12		JHA / JSA			0			0
13		Bulletins / Newsletter			0			0
14		Handouts / Flyers			0			0
15		Toolbox Talks			0			0
16		Emergency Evacuation Drills			0			0
17		HSE Booklets Distributed			0			0
18		Others (please specify):			0			0
19		Others (please specify):			0			0
20		Total:			0			0
21	Safety Awards / Incentives	HSE Awards			0			0
22		Disciplinary Actions			0			0
23		Others (please specify):			0			0
24		Others (please specify):			0			0
25		Total:			0			0

Comments / Remarks

_____

_____

Prepared by: _____ Name & Signature _____ Date

Checked by: _____ HSE Manager (Name & Signature) _____ Date

Approved by: _____ Project Manager Name & Signature _____ Date

Distribution: SCD-MOA

Form: PP701-HSE-F05 Rev. C

Appendix 8: Project's HSE List of Deliverables

Sr.	Procedure No.		H/S/E/C	Procedure
	Code	Abb.		
1	PP 701	HSE	HSE&S	HSE&S Management Plan
2	PP 702	EMP	E	Environment Management
3	PP 703	FAP	H	First Aid & Medical Facilities
4	PP 704	SEC	C	Security Plan
5	PP 705	ADR	HSE&S	Audit / Inspection Reporting
6	PP 706	ASR	S	HSE&S Activities & Statistics Reporting
7	PP 707	WMP	E	Waste Management Plan
8	PP 708	SSC	HSE&S	Sub-contractor Selection and Control
9	PP 709	AIR	HSE&S	Accident / Incident Reporting & Investigation
10	PP 710	CSE	S	Confined Space Entry
11	PP 711	SER	S	Site Emergency Response Plan
12	PP 712	EXS	S	Excavation Safety
13	PP 713	FPP	S	Fire Prevention & Protection
14	PP 714	JSA	S	Job Safety / Hazard Analysis
15	PP 715	PPE	S	Personal Protective Equipment
16	PP 716	SSP	S	Scaffolding Safety Procedure
17	PP 717	MSP	S	Mine Awareness Procedure
18	PP 718	CSH	H	Camp Sanitation and Hygiene
19	PP 719	DAF	C	Drugs, Alcohol, & Firearms
20	PP 720	CWP	S	Cold Weather Procedure
21	PP 721	ISM	S	Incentive Scheme & Motivation
22	PP 722	TIP	S	HSE&S Training & Induction
23	PP 723	FLP	S	Fall Protection
24	PP 724	CHS	S & E	Chemical Hazard Communication and Storage
25	PP 725	JMP	S	Journey Management / Road Transport
26	PP 726	LTP	S	Lock out / Tag out
27	PP 727	NWP	S	Night Working
28	PP 728	ROP	S	Radiography Operations
29	PP 729	RAP	S	Risk Assessment Procedure
30	PP 730	HTS	S & H	Hot Weather and heat Stress
31	PP 731	MEE	H	Medical Emergency Evacuation
32	PP 733	HKP	S & H	Housekeeping
33	PP 734	DEP	S	Disciplinary Enforcement
34	PP 735	IRP	H	Insects, rodents and pest control
35	PP 736	HYS	S	Hydrogen Sulfide
36	PP 737	WPS	S	Work Permit System
37	PP 738	LOP	S	Lifting Operations
38	PP 739	CGC	S	Compressed Gas Cylinders
39	PP 740	GOA	S	Grinding Operations and Abrasive Wheels
40	PP 741	PPT	S	Portable Power Tools
41	PP 742	MHG	S	Manual Handling
42	PP 743	SCP	S	Sand-Blasting – Coating – Painting
43	PP 744	PTO	S	Pressure Testing Operations
44	PP 745	RWT	S	Road Work and Traffic Signs
45	PP 746	WPL	S	Working Near or Under Overhead Power Lines
46	PP 747	HEB	S	Handling Explosive and Blasting Material
47	PP 750	SRR	E	Site Restoration and Reinstatement Summary
48	PP 751	SPR	E	Spill Management & Reporting Procedure
49	PP 752	TFS	S & E	Fuel Storage and refueling Operations
50	PP 754	AMP	S	Ammonia Procedure
51	PP 755	WLP	S & E	Wild Life Procedure
52	PP 756	VSP	S	Vehicle Safety Procedure
53	PP 757	MLR	H	Malaria Procedure
54	PP 758	WNO	S	Working Near or Over water
55	PP 759	FEL	HSE&S	Front End Loading
56	PP 760	CER	S	Camp Emergency Response Plan
57	PP 762	IPE	S	Basic HSE&S Training & Hazard Awareness for Project Employee
58	PP 763	HIS	S	HSE&S Induction & Orientation for Project HSE&S Staff
59	PP764	EEG	S	Electrical Equipment and Grounding procedure
60	PP765	SWP	S	Stop Work
61	PP766	ECP	E	Erosion Sediment Control Plan
62	PP767	LSP	S	Lightning Safety Procedure
63	PP768	HIV	H	HIV / AIDS Prevention Guidelines Procedure
64	PP769	STD	H	Management of Sexually Transmitted Diseases Procedure
65	PP770	PMS	H	Pre & Post-Employment Medical Screening
66	PP771	HRP	S	Heavy Rain Procedure
67	PP772	SIM	S	Simultaneous Operations Procedures
68	PP773	DCP	S & H	Dust Control Procedure
69	PP774	WTM	S	Wheel Tyres Maintenance and Repair Operations
70	PP775	IMP	H	Influenza Management
71	PP776	MFF	H	Medical Facilities Matrix
72	PP777	OSP	S	Office Safety Procedure
73	PP778	SSP	H & S	Sandstorm Procedure
74	PP779	DWP	H	Drinking Water Facilities & Cleaning Procedure
75	PP780	CPD	S	Competent Person Designation Procedure
76	PP781	RCP	HSE&S	HSE Regulatory Compliance Procedure
77	PP782	MOC	HSE&S	Management of Change Procedure
78	PP784	HMP	H	Health Management Plan

H: Health Procedure
S: Safety Procedure
E: Environmental Procedure
S: Security Procedure

HSE&S: covers Health, Safety, Environment & Security aspects

Appendix 9: Project HSE&S Incidents Reporting Matrix

Consolidated Contractors Company
Managing Office- Safety and Control Department (MO-SCD)

HSE&S Incidents Reporting Matrix

Form No.:	FRM-SCD-HSE-006
Issue Date:	2/28/2008
Rev No.:	1
Rev Date:	23/05/2011
Data Update:	5/28/2011
Page No.	1 of 1

Sr.	Category	Type of Incident	Type of Reporting to MO-SCD				
			Initial Notification		Preliminary Investigation Report	Final Investigation Report	Remarks
			By Phone / Text Message	ON REPORT	ON FORM NUMBER (PP709-AIR-F04)		
1	RECORDABLES	Occupational Fatalities	*Immediately*	24 Hours *	48 Hours	10 Days	* Form No. (FRM-SCD-HSE-017)
2		Lost Time Injuries (LTI)		24 Hours *	48 Hours	10 Days	* Form No. (FRM-SCD-HSE-017)
3		Restricted Work Cases (RWC)		24 Hours *	48 Hours	7 Days	* Form No. (FRM-SCD-HSE-017)
4		Medical Treatment Cases (MTC)		24 Hours *	48 Hours	7 Days	* Form No. (FRM-SCD-HSE-017)
5		Occupational illnesses		24 Hours *	48 Hours	7 Days	* Form No. (FRM-SCD-HSE-017)
6		Loss of Consciousness		24 Hours *	48 Hours	7 Days	* Form No. (FRM-SCD-HSE-017)
7	NON RECORDABLES	Non- Occupational Fatalities	*Immediately*	24 Hours *	48 Hours	10 Days	* Form No. (FRM-SCD-HSE-017)
8		Near Misses		24 Hours **			** Use Near Miss Report Form (*PP709-AIR-F07*)
9		First Aid Cases (FAC)	1.Complete FAC Report (*PP709-AIR-F02*) and keep in the HSE Dept. & Clinic Records. 2. Report FACs in the Weekly HSE Statistics Report.				
10	PROPERTY DAMAGE	Vehicle Accidents/Transport (Group 5 & 9) *(No Injuries)*		24 Hours *		7 Days	* Form No. (FRM-SCD-HSE-017)
11		Fire *(No Injuries)*		24 Hours *		7 Days	* Form No. (FRM-SCD-HSE-017)
12		Property Damage *(No Injuries)*		24 Hours *		7 Days	* Form No. (FRM-SCD-HSE-017)
13	ENVIRONMENT	Spills/Leaks	1.Complete Spill/Release Report (*PP751-SPR-F01*) & keep in the Project HSE Dept. Records. 2. Report Incidents in the Weekly HSE Statistics Report & Weekly Env. Report.				
14		Chemical Releases					
15	SECURITY	Theft	1.Complete Incident Report (*PP709-AIR-F04*) and keep in the Project HSE Dept. Records. 2. Report Incidents in the Weekly HSE Statistics Report.				
16		Alcohol Intoxication Cases					
17		Drugs Abuse					

Appendix 10: PPE Matrix

Personnel Protective Equipment Matrix

Task / Position	Safety Glasses with side shields	Face Shield	Hard Hat with chin strap	Welding Hood	Air Supply Hood	Safety Boots	Coverall	Working Gloves	Welding Gloves	Dust Mask	Chemical Mask	Winter Cloth	Ear Plugs	Chemical Goggles	Safety Goggles	Flotation Vest	SCBA	Welding Goggles	Ear Muffs	Half Face Respirator	Full Face Respirator	Medical Exam. Gloves	Leather Apron	Half Top Leather	High Visibility Vest	Rubber Gloves	Chemical Gloves	Steelroe boots Rubber	Full Body Harness
Hitting steel upon steel	■	■				■	■	■				■	■						As Necessary By Noise Assessment										FOR EVERY ONE WORKING ABOVE 2 METERS(6 FEETS)
Grinding	■	■		■		■	■	■				■	■																
Sand blasting					■	■	■	■				■	■																
Power sawing	■	■	■				■	■		■		■																	
Laser exposure																													
Abrasive cut-off sawing	■	■	■			■	■	■				■																	
Chipping	■	■	■			■	■	■		■		■	■																
Electric arc welding				■		■	■		■			■											■	■					
Welder's helper	■	■		■		■	■		■			■											■	■					
Insulation spraying					■	■	■	■				■																	
Concrete breaking or placing	■	■		■		■	■	■				■	■		■														
Corrosive acids or alkaline		■				■	■				■			■													■		
Machine wire brushing	■	■	■			■	■	■		■		■																	
Airborne objects in shop			■			■	■			■		■																	
Wind and other air turbulence			■			■	■			■		■			■														
Working with coiled wire,wire	■	■	■			■	■	■				■																	
mesh rolls or banding materials			■			■	■	■			■	■																	
Chemical areas		■	■		■	■	■				■			■													■		
Gas cutting				■		■	■		■									■					■	■					
Carpenter	■		■			■	■	■				■																	
Fabricator	■		■			■	■		■	■		■											■	■					
Steel fixer	■		■			■	■	■				■																	
Mason	■		■			■	■			■		■																	
Dozer Operator	■		■			■	■			■		■	■																
Excavator Operator	■		■			■	■			■		■	■																
Loader Operator	■		■			■	■			■		■	■																
Pipe fitter	■	■	■			■	■	■				■											■	■					
Plumber	■		■			■	■	■				■																	
Tyreman	■		■			■	■	■				■																	
Helper	■	■	■			■	■	■				■																	
Millwright	■		■			■	■					■																	
Steel Erector	■		■			■	■	■				■																	
Steel Fabricator	■	■	■			■	■		■			■																	
Pipe Line Mechanical	■		■			■	■	■				■																	
Electric assisstant	■		■			■	■					■																	
Electricion	■		■			■	■					■																	
Instrment technition	■		■			■	■					■																	
Ground Worker	■		■			■	■	■		■		■																■	
Laundry Attendent																													
Kitchen Worker										■																		■	
Driver	■		■			■	■																						
Rigger	■		■			■	■	■				■													■				
Banksman	■		■			■	■	■				■													■				
Manual handler	■		■			■	■	■																					
Scaffolder	■		■			■	■	■																					
Scaffolder helper	■		■			■	■	■																					
Storeman	■		■			■	■																						
Mechanic	■		■			■	■	■				■																	
Painter	■		■			■	■					■																	
Doctor	■		■			■	■																						
Nurse	■		■			■	■																						
River Worker	■		■				■	■				■				■												■	

APPENDIX E – ANNEXURE 13

PROPOSED AUDIT AND INSPECTION REPORTING PROCEDURE (PP705-ADR)

Project Procedure

Audit And Inspection Reporting Procedure

Qatar General Electricity & Water Corporation (KAHRAMAA)

Tender No. 4857

Construction of Mega Reservoir PRPSs (Package A)

Doha -Qatar

			MGT	OwR	
0	Issued for Tender use	12-Jul-2014	M.Tanbour (MGT) HSE Coordinator	O.Reed (OR) HSE Manager	R.Davies (RD) HSE Group Director
Rev	Description	Date	Prepared By	Checked By	Approved By

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1. SCOPE

1.1. This procedure applies to HSE audits performed by trained and experienced personnel, to verify the implementation of the Health, Safety, Environment and Security Management system. It also establishes the requirements for planning, preparation, and performance, reporting, follow-up and close out of any HSE audit.

2. PURPOSE

2.1. The purpose of the audit is to monitor and evaluate the HSE management system and determine the effectiveness of its implementation.

3. REFERENCES

3.1. HSE Requirements as stipulated in Contract Document.

3.2. All applicable Local Regulatory Authority requirements and regulations.

4. DEFINITIONS AND ABBREVIATIONS

4.1. Definitions

4.1.1. CLIENT / COMPANY: **Consolidated Contractors Company and Teyseer Contracting Company Joint Venture**

4.1.2. PROJECT: **Construction of Mega Reservoir PRPSs (Package A)**

4.2. Abbreviations

4.2.1. HSE GROUP: CCC Managing Office-Safety & Controls Department

4.2.2. HSE: Health, Safety, Environment & Security

4.2.3. VP-HSE: Vice President- Health, Safety, Environment & Security

4.2.4. NCR: Non Compliance Report

4.3. Technical Definitions

4.3.1. HSE Audits

4.3.1.1. A documented activity aimed at verifying by examination and evaluation that the elements of the HSE program have been established and effectively implemented in accordance with the specified requirements.

4.3.2. HSE Audit Types

4.3.2.1. For the purpose of HSE audits within the scope of this procedure, it is acknowledged that there are three types of HSE audits that may be carried out:

4.3.2.1.1. Corporate HSE Audit – the audit carried out by HSE GROUP to evaluate their performance within the project. Procedure implementation and compliance within the project. These audits are carried out bi-annually.

4.3.2.1.2. Project HSE Inspections – the activities carried out by the Project HSE Manager or his designee to evaluate the implementation of the HSE Procedures within the areas or disciplines of the project. These inspFections are usually carried on weekly basis for each area or discipline of the project.

4.3.2.1.2.1. *HSE Inspections*: Inspections of sites and locations to ensure the equipment, arrangements and area conform with departmental standards

4.3.2.1.3. Third Party Audits carried out to ensure compliance with HSE Management System requirements

4.3.2.2. HSE Auditor

4.3.2.2.1. Any suitably qualified individual who performs the whole or a portion of a HSE audit. The qualified individuals could be HSE Audit Team Leaders, specialists, management representatives, HSE auditors-in-training or other employees who comprise part of HSE Audit Team.

4.3.2.3. Auditee

4.3.2.3.1. For Corporate HSE audits will be for the whole project or part of it to measure compliance with the project HSE Plan and Procedures.

4.3.2.3.2. For Internal HSE Inspections, the management of the area or discipline of the project being audited / inspected for compliance with the project HSE Plan and Procedures applicable to their scope.

4.3.2.4. HSE Audit Team Leader

4.3.2.4.1. An individual suitably qualified to organize and direct a HSE audit, report HSE audit deficiencies, or findings, and supervise HSE auditors-in-training.

4.3.2.5. HSE Procedures

4.3.2.5.1. An outline of the steps to be taken that are essential for the protection of employees, materials, and plants in construction work, and for ensuring effective control of injuries and losses in construction work undertaken by the company.

4.3.2.5.2. HSE Procedures describe the following:

4.3.2.5.2.1. What critical activities are controlled

4.3.2.5.2.2. Who is responsible

4.3.2.5.2.3. When controls are applied

4.3.2.5.2.4. Where controls are applied

4.3.2.5.2.5. Why controls are applied.

4.3.3. NCR: Non Compliance Report

5. RESPONSIBILITIES

5.1. The VP-HSE is responsible for planning, scheduling, documenting, and communicating Corporate HSE Audits with Project Director/Project Manager.

5.2. Project Director/Manager, HSE Manager and Managers or Supervisors in charge of the respective activity are responsible for taking the necessary action to correct deficiencies revealed by the audit and follow the improvement plans.

5.3. The Project Director/Manager shall be ultimately responsible for the implementation of this procedure on the Project.

5.4. The Project HSE Manager:

5.4.1. Shall verify the implementation of recommended corrective actions and improvement plans.

5.4.2. Shall provide advisory service to the Construction Manager and Line Management on the correct implementation of this procedure.

5.4.3. Shall arrange periodic independent audits to assure the effective implementation of this procedure throughout the Project.

5.4.4. Shall collate information and lessons learnt gained from field experiences implementing this procedure and initiate periodic reviews to identify opportunities for improvement.

5.5. Project Construction Manager: Shall be responsible for ensuring implementation of this procedure on all worksites under his control.

6. PROCEDURE

6.1. Execution of Audits

6.2. Corporate HSE Audits will be conducted on the project on regular basis and when and as needed; but shall always be carried out when one of, but not limited to, the following conditions exists:

6.2.1. Significant changes in functional areas of the project organization.

6.2.2. Significant procedure alterations.

6.2.3. Systematic lack of effectiveness in HSE related aspects.

6.2.4. Major incident/Accident that could reflect general lack of effectiveness.

6.2.5. Increase in HSE Statistics Rates

6.2.6. Violation of any of ISO 14001 or / and OHSAS 18001 requirements

6.3. The audit program will include among other things the following:

6.3.1. Date of Audit.

6.3.2. Items or persons to be checked or be involved in the audit.

6.3.3. List of areas / activities to be audited and relevant organization that will be involved.

6.3.4. Purpose

6.3.5. Program.

6.4. A detailed checklist will be prepared to identify the issues to be covered during the Audit. In particular, but not limited to, the following areas will be checked:

6.4.1. Records and files whether correct, up to date and complete.

6.4.2. Whether the work is performed in accordance with the approved procedures.

6.4.3. Whether the personnel know the requirements of the procedures.

6.4.4. How internal communications work as well as relations with the Client and sub-contractor.

6.4.5. How new procedures and issues are transmitted to work force.

6.4.6. HSE awareness of Management and site employees.

6.4.7. Any ISO 14001, or / and OHSAS 18001 non-conformities.

6.5. Corporate HSE Audit Schedule

6.5.1. The VP-HSE will develop a project HSE audit schedule of sufficient scope to ensure that all critical aspects of the management system are audited as early as practicable and that the intervals of the elements of the management system shall not be greater than a set period of time. (See attachment No. 1 Audit Schedule).

6.5.2. Should a serious deficiency become apparent during routine operations, the VP-HSE shall initiate an unscheduled Corporate HSE Audit at less than 24 hours notice to the Project Director/Manager of the project to be audited. When complete, the unscheduled audit shall form part of the original Audit Schedule.

6.6. Planning and preparation for audits

6.6.1. Prior to the performance of a Scheduled Audit, HSE GROUP shall assign a HSE Audit Team Leader and will ensure that he is informed of the date of the audit, the organization to be audited, and the scope of the audit.

6.6.2. The nominated Audit Team Leader shall be responsible for Performing, and reporting the audit and the close out of corrective actions all in accordance with the requirements of this procedure.

6.6.3. Should the scope of the audit necessitate that the audit team comprise more than one person; the VP-HSE shall agree the assignment of the other audit team members with the Audit Team Leader. The individuals selected as audit team members shall have undergone indoctrination and training in auditing techniques and shall not have direct responsibility for any of the work in the areas to be audited.

6.6.4. The Project Director/Manager and Project HSE Manager shall advise and confirm their availability on the project during the scheduled Corporate HSE Audit

6.6.5. If for any reasons the Project Director/Manager and Project HSE Manager are unable to attend, HSE GROUP shall be notified of the reasons in writing and accordingly HSE GROUP will determine the course of action in either re-scheduling, canceling or postponing the Corporate HSE Audit

6.6.6. The same conditions in item 6.6.5 applies for the Third Party HSE Audit, however the Third Party will determine the course of action in either re-scheduling or postponing the Third Party HSE Audit.

6.6.7. However, if HSE GROUP is unable to re-schedule the Corporate or the Third Party HSE Audits, the Project Director/Manager or HSE Manager shall nominate in writing senior qualified persons to attend on their behalf.

6.6.8. For an external audit initial contact with the auditee may be done by means of a pre-audit meeting, which can be followed by a familiarization tour of the facility. The audit date, procedures, and scope of the audit will follow the same steps as for the internal audit.

6.6.9. For external audits, confirmation of all discussions shall be made in writing, including the subject of the audit, the proposed agenda, dates, times of the audit, and the Audit Team Leader's name.

6.6.10. The Audit team leader shall prepare audit checklists based upon the audit scope, and the elements to be audited. When the Audit checklists have been prepared by other than the Audit Team Leader, they shall be submitted to the Audit Team Leader for review prior to use during the Audit.

6.6.11. The Audit team Leader shall ensure that the audit includes the examination of work in progress to check the following:

6.6.11.1. That necessary controlling procedures have been identified.

6.6.11.2. That correct HSE procedures are being followed and documentation prepared in accordance with the procedures.

6.6.11.3. That adequate records are being generated and maintained.

6.6.11.4. That HSE during work is adequately supervised.

6.6.11.5. That instructions on HSE requirements are known.

6.7. Performance of the Audit

6.7.1. Upon arrival at the audit venue, the Audit Team Leader shall be responsible for undertaking the following activities:

6.7.1.1. Convene a brief meeting (opening meeting) between the audit team and the management representatives of the auditee, to explain the scope of the audit, review the proposed audit agenda, arrange for escorts for the audit team, arrange for the use of an office for audit team meetings, agree a tentative time for the audit closing meeting and the reporting format.

6.7.1.2. Record the names and Job titles of the attendees.

6.7.1.3. The Project Director/Manager and the Project HSE Manager and other Senior Staff and Head of Departments shall attend the opening and the closing meetings of the Corporate and Third Party HSE Audits

6.7.1.4. Conduct the audit, using the prepared check list(s) as a guide.

6.7.2. Upon completion of the audit, but prior to the audit closing meeting, the audit team shall meet to discuss and evaluate any non-conformity, analyze apparent HSE rules violations or conditions adverse to HSE and assure their validity as audit findings. Objective evidence of non-conformities against HSE procedures, HSE program requirements and/or other approved documented requirements shall be considered as valid justification for an audit finding.

6.7.3. Any violations identified during an audit and recorded on the checklist shall be documented by the auditor, on a NCR form (see attachment No. 4) and by photographs if allowed by the Project.

6.7.4. Following the audit team meeting, the Team Leader shall convene the closing meeting with management representatives of the audited departments. He shall record the names and job titles of all attendees.

6.7.5. At the closing meeting the Team Leader shall offer his thanks to the participants of the audit for their cooperation and he will present an objective overview of the audit, summarizing the results and discussing problem areas to ensure that they are understood by the auditee and acknowledged.

6.7.6. For corporate and third party HSE audits, the Audit Team Leader shall obtain the signature on the NCR from a representative of the auditee acknowledging that the findings are understood. (This signature does not indicate that the auditee necessarily agrees with the findings, it indicates only that the findings are understood).

6.7.7. A copy of each acknowledged NCR shall be handed to the auditee for his action.

6.7.8. It is important for the Audit Team Leader to ensure that the Auditee understands that not only must the HSE violation be immediately corrected, but also that actions must be taken to prevent recurrence.

6.7.9. The Audit Team Leader shall advise the Project Director/Manager & HSE Manager of the project being audited on the expected response date on any Corrective Action required by the project

6.7.10. The Audit Team Leader shall request the Project Director/Manager & Project HSE Manager of the project being audited to detail their proposed corrective action, with the implementation date on Part 2 of the NCR

6.7.11. VP-HSE may at anytime issue a NCR to the project following a Corporate and/or Third Party HSE Audits or anytime non conformities at the project are observed, reported or identified. In this case, the Project Director/Manager & HSE Manager shall consider closing this NCR as any NCR issued by the HSE Audit Team as detailed in this procedure

6.8. Audit Report

6.8.1. Upon completion of the audit, an audit report will be written showing the findings. The Audit Report shall consist, but not limited to:

6.8.1.1. Audit Report Form Template

6.8.1.2. Non-Conformance Report (NCR) (If any)

6.8.1.3. Observations

6.8.1.4. Other Attachments

6.8.2. An improvement plan will be developed between Audit Team Leader and with the Project Director/Manager & Project HSE Manager based on which the corrective measures will be implemented.

6.8.3. A summary of the audit findings and any NCR(s) raised shall be written and itemized accordingly on the cover sheet.

6.8.4. The body of the report shall be, but not limited to, the standard format as follows:

6.8.4.1. Opening meeting - brief summary stating who attended, requirements of the audit, purpose of the audit, time schedule and reporting format.

6.8.4.2. Audit - A detailed account of the audit, listing areas that were not in compliance with requirements as well as areas that were excellent.

6.8.4.3. Closing meeting - Brief summary of the audit findings, stating who attended, issue of any NCR(s) raised countersigned by the auditee and any additional information provided.

6.8.4.4. Indicate "Commended Practices"

6.8.4.5. Indicate "Opportunities for Improvement"

6.8.4.6. Observations - include any general observations, i.e. where procedures are being implemented but might need updating to suit the practices being followed, where these practices do not constitute an NCR

6.8.4.7. The list of observations will be indicated on the NCR Status Log and Summary Form (Attachment 2) after the list of NCRs.

6.8.4.8. Indicate the type of NCRs as 'Minor' or 'Major' and the deadline by which they should be cleared.

6.8.5. When the audit report is finalized the cover sheet shall be signed by the Audit Team Leader and issued by HSE GROUP to the Project Director/Manager.

6.9. Audit Follow-up

6.9.1. When a response is required to a NCR, HSE GROUP shall remind the Project Director/Manager of the audited project when the proposed corrective actions & objective evidences are not received within the stipulated time scale.

6.9.2. Following receipt of the response, the Audit Team Leader shall review the Corrective Action and the implementation by date as detailed in Part 2. of the NCR. If the Audit Team Leader does not consider the corrective action to be satisfactory, HSE GROUP shall contact the auditee to resolve the differences.

6.9.3. HSE GROUP shall determine if a follow-up audit is required and specify a suitable date for the follow-up audit.

6.9.4. Individual NCR's should, where possible, be followed-up immediately after the end of the audit, with the formal Audit Report normally being issued after the last of the agreed NCR implementation dates.

6.9.5. If problems are encountered in closing-out non-compliance then HSE GROUP shall, where appropriate, take up the matter to resolve the issue.

6.9.6. Following the satisfactory completion of the follow-up Audit, the Audit Team Leader shall prepare the formal Audit Report, ensuring that there is a statement that all non-compliances from the original audit have been "closed out", and that the completed NCR's are filed with their previous corresponding Audit Report.

6.9.7. When the follow-up audit does not "close-out" all the corrective actions, the Team Leader shall prepare the formal Audit Report, as per requirements stated in section 6.8 of this document. He shall ensure that the Audit Report includes a statement as to which of the non-compliance from the original audit have been "closed out" and those which have not. A statement shall also be included that the completed NCR's are to be filed with their previous corresponding Audit Report.

6.9.8. When the Follow-up Audit Report has been issued by HSE GROUP, the Audit Team Leader has the responsibility for ensuring that the Audit Records Register is completed.

6.9.9. The follow-up audit will be performed to the same standards as the original audit.

6.10. Records

6.10.1. HSE GROUP and the Project HSE Manager shall be responsible for maintaining adequate records for audits, including an Audit Records Register, and copies of Audit Reports, NCRs and checklists.

6.11. Inspection

6.11.1. The Project HSE Manager (or his designee) shall be responsible to carry out periodical inspection on the Project activities, at least 1 inspection a month

for each Project area Section. Upon completion of the inspection, copy of the relevant report is to be sent to the Project Director/Manager and Area Inspected Supervisor. The Project HSE Manager shall be responsible for maintaining adequate records for inspection, including an Inspection Records Register, and copies of Inspection Reports, NCR's and checklists.

6.12. HSE Inspection Schedule

6.12.1. The Project HSE Managers or their nominees will develop a project HSE inspection schedule of sufficient scope to ensure that all critical aspects of the management system and Project areas are inspected as early as practicable.

6.12.2. Should a serious deficiency become apparent during routine operations, the Project HSE Managers or their nominees shall initiate an unscheduled inspection at less than 24 hours notice to the inspected area supervisor. When complete, the unscheduled inspection shall form part of the original Inspection Schedule.

6.13. Performance of the Inspection

6.13.1. Upon arrival at the inspection venue, the Inspection Team Leader shall be responsible for undertaking the following activities:

6.13.1.1. Convene a brief meeting (opening meeting) between the inspection team and the management representatives of the inspected area, to explain the scope of the inspection, review the proposed inspection agenda, arrange for escorts for the inspection team, arrange for the use of an office for inspection team meetings, agree a tentative time for the inspection closing meeting and the reporting format.

6.13.1.2. Record the names and Job titles of the attendees.

6.13.1.3. Conduct the inspection, using the attached checklist (see Attachment 5) as a guide.

6.13.2. Upon completion of the inspection, but prior to the inspection closing meeting, the inspection team shall meet to discuss and evaluate any non-conformity, analyze apparent HSE rules violations or conditions adverse to HSE and assure their validity as inspection findings. Objective evidence of non-conformities against HSE procedures, HSE program requirements and/or other approved documented requirements shall be considered as valid justification for an inspection finding.

6.13.3. Any violations identified during an inspection and recorded on the checklist shall be documented by the Auditor, on a Non-Compliance Report (see attachment No. 4).

6.13.4. At the closing meeting the Team Leader shall offer his thanks to the participants of the inspection for their cooperation and he will present an objective overview of the inspection, summarizing the results and

discussing problem areas to ensure that they are understood by the inspected and acknowledged.

6.13.5. A copy of each acknowledged NCR shall be handed to the inspected area manager for his action.

6.13.6. It is important for the Team Leader to ensure that the inspected manager understands that not only must the HSE violation be immediately corrected, but also that actions must be taken to prevent recurrence.

6.13.7. The Team Leader shall advise the inspected manager of the intended issue date of the formal Inspection Report and any findings and shall state the expected response date on any Corrective Action.

6.13.8. The Inspected manager shall be requested to detail his proposed corrective action, with the implementation date on Part 2 of the NCR

7. ATTACHMENTS

7.1. Attachment No. 1: HSE Audit Schedule Form.

7.2. Attachment No. 2: NCR Status Log.

7.3. Attachment No. 3: HSE Audit Report Form. (Sample)

7.4. Attachment No. 4: NCR Form.

7.5. Attachment No. 5: HSE Audit Inspection Form.

Attachment 1: HSE Audit Schedule Form

HSE Audit Schedule

Schedule for:
Prepared by:
Approved
Date:

Page: of

Audit Scope		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Activity	HSE Manual Reference												

Attachment 2: Non-Conformance Report Status Log and Summary Form

Consolidated Contractors Company
Safety & Controls Division
Project

NON-CONFORMANCE REPORT SUMMARY

AUDITEE / LOCATION	NON CONFORMANCE						CORRECTIVE ACTION								
	NCR NO		OBSERVATION	DESCRIPTION	DATE ISSUED	TO BE CLEARED ON	S.NO	DESCRIPTION	DOCUMENTATION	Corrected BY	DATE	by Auditee	DATE	MOA	DATE
	MAJOR	MINOR													

Attachment 3: HSE Audit and Inspection Report Forms

HSE AUDIT & INSPECTION REPORT

PROJECT NAME
PROJECT #.
AUDIT REPORT NO.

Location
Country

Appraisal Date:

Auditor:

INDEX

Attachment 4: Non-Conformance Report Form

CONSOLIDATED CONTRACTORS GROUP
SAFETY & CONTROLS DIVISION
NON-CONFORMITY REPORT

Project Number	Project:	NCR No.	Of
Date	DEPARTMENT / Location:	(MOA) SCD Auditor:	
Major / Minor	Project Representative:	Submitted by:	
Procedure Title, Number & Section:			
NONCONFORMITY AUDIT COMMENTS:			

Submitted To: (Title)	(Name)	Received By (Signature)
Project Manager		
HSE Manager		

CORRECTIVE ACTION REPORT (to be completed by the Site HSE Manager)

Required Completion Date:	Actual Completion Date:
CORRECTIVE ACTION	

CLEARANCE REPORT (to be completed by Safety & Controls Division)

FOLLOW-UP COMMENTS		
AUDITOR:	**SIGNED:**	**DATE:**

Attachment 5: Inspection Report Forms (page 1)

PROJECT

HSE DEPARTMENT
HSE INSPECTION REPORT

From: _____ Report Serial No.:_____

To: _____ Area to be inspected: _____

Date _____

List of possible problems to be inspected :

No.	Possible problem	Description	No.	Possible problem	Description	No.	Possible problem	Description
1	Acids		30	Dust		59	Railroads cars	
2	Aisles		31	Electric motors		60	Ramps	
3	Alarms		32	Elevators		61	Raw materials	
4	Atmosphere		33	Explosives		62	Respirators	
5	Automobiles		34	Extinguishers		63	Roads	
6	Barrels		35	Flammable		64	Roofs	
7	Bins		36	Floors		65	Safety devices	
8	Blinker lights		37	Forklifts		66	Safety glasses	
9	Boilers		38	Fumes		67	Safety shoes	
10	Borers		39	Gas cylinders		68	Scaffolds	
11	Buggies		40	Gas engines		69	Shafts	
12	Buildings		41	Gases		70	Shapers	
13	Cabinets		42	Hand tools		71	Shelves	
14	Cables		43	Hard hats		72	Sirens	
15	Carboys		44	Hoists		73	Slings	
16	Catwalks		45	Hoses		74	Solvents	
17	Caustics		46	Hydrants		75	Sprays	
18	Chemicals		47	Ladders		76	Sprinkler sys	
19	Claxons		48	Lathes		77	Stairs	
20	Closets		49	Lights		78	Steam engines	
21	Connectors		50	Mills		79	Sumps	
22	Containers		51	Mists		80	Switches	
23	Controls		52	motorised carts		81	Tanks	
24	Conveyors		53	Piping		82	Trucks	
25	Cranes		54	Pits		83	Vats	
26	Crossing lights		55	Platforms		84	Walkways	
27	Cutters		56	Power tools		85	Walls	
28	Docks		57	Presses		86	Warning devices	
29	Doors		58	Racks		87	Others	

Describe conditions using the following items :

A	Broken
B	Corroded
C	Decomposed
D	Frayed
E	Fuming

F	Gaseous
G	Jagged
H	Leaking
I	Loose (or slipping)
J	Missing

K	Rusted
L	Spillage
M	Vibrating
N	
O	

Attachment 5: Inspection Report Forms (page 2)

PROJECT

HSE DEPARTMENT
HSE INSPECTION REPORT

CONDUCTED BY : _____ **DATE :** _____

1. Fire Preventions	%
Adequate Fire Extinguishers	
Proper Type Extinguisher	
Fire Extinguisher Training	
Adequate Water Barrels/Buckets	
Property Located	
Fire Hydrants/Hose/Nozzle/Wrench	
Emergency Telephone Numbers Posted	
Fire Watches (If required)	
Open Flame Operations	
Storage of Flammable/Combustibles	
Other	

2. Housekeeping	%
Site Access Roads	
Security Fences/Gates	
Site Access Signs	
Trash Containers	
Daily Clean-up/Removal of Trash	
Materials Stacking	
Aisleways	
Old Timber Denailed	
Overall Condition	
Other	

3. Scaffolds/Mobile Towers	%
Base & Sole Plates	
Condition of Frame Members	
Plumb & Level	
Proper Couplers	
Ties/Outriggers	
Planking (Civil)	
Toe Boards/Guard Rails	
Wheel Locks	
Proper Wheels/Condition	
Scaffold Access	
Other	

4. Sand Blasting	%
Operator's Hood (Air Supplied)	
Air Filters (to Hood)	
Air Intake Location	
Dead Mans Controls	
Hoses Property Grounded	
Operators Protective Clothing	
Helper's protective Clothing	
Remote Area/Warning Sings	
Condition of Air Purity	
Other	

5. Cartridge Operated Tools N/A	%
Proper Cartridge Strength	
Penetration to Safe Zone	
low Velocity Tool	
Control Storage of Cartridges	
Proper Maintenance of Tool	
Certified Operator	
Operator Protective equipment	
Other	

6. Power Tools/Machines & Equipment	%
Properly Guarded	
Tool Rest	
Overall Conditions	
Correct Grinder Disc Speeds	
Cable/Hose Connections	
Operator's Protective Equipment	
Damaged Hand Tools	
Other	

7. Trenching/Excavations & Shoring	%
Shoring/Trench Box	
Sloping	
Spoil Clearance	
Barriers/Warning Signs/Lights	
Access/Egress	
Other	

8. Heavy Equipment	%
Roll Over Protection (Where required)	
Back-up Alarms (Where required)	
Overall Condition	
Licensed Operators	
Certification	
Other	

Attachment 5: Inspection Report Forms (page 3)

PROJECT

HSE DEPARTMENT
HSE INSPECTION REPORT

CONDUCTED BY : _____ **DATE :** _____

9. Gas/Electric Welding	%
Proper Acetylene Pressure	
Acetylene On/Off Wrench	
Gauges/Hoses Condition	
Operator's Protective Equipment	
Cable Condition	
Electrode Holder/Ground Clamp Condition	
Pipe supports	

10. Concrete Formwork	%
Timbers Adequate Strength	
Support Plumb & Level	
protective Clothing & Equipment	
Firm Footings for Supports	
Side Slope Bracing	
Shoring Layout on Site	
Other	

11. Compressed Gas	%
Cylinders Secured	
Proper Storage	
Protective Caps in Place	
Condition of Cylinders/Connections	
Proper Handling	
Proper Colour Coding	
Other	

12. Health & Welfare	%
Medical Facilities/Supplies	
Designated Smoking Areas	
Washing Facilities	
Drinking Water & Cups	
Toilet Facilities/Sanctions	
Ventilation	
Other	

13. AirCompressors	%
Pressure Relief Valves Operational	
Air Pressure Gauges	
Hoses & Connections	
Coupling Safety Wired	
General Condition	
Guards	
Other	

14. Transportation	%
Buses/Pick-up Trucks/Other Vehicles	
Use of Seat Belts	
Licensed Operators	
Overall Operating Condition	
Tires/Lights/Brakes/Signals, etc.	
Provide Emergency Equipment for Off Site Vehicles Triangle, Flashlight, First-Aid Kit, etc.	

15. Site Safety Administration	%
Accident Reports	
Safety Co-ordinator	
Fire/Safety Inspection Log	
Site Safety Program	
Work Permit Requirements	
Construction Safety Manual on Site	
Safety Contract/Eng. Specs. on site	
Safety Inspection Reports	
First Aid, Accidents, Facilities	
Other	

16. Temporary Electrics	%
Correct Voltage	
Ground Fault Interrupts Used	
Circuits 3 Wire Ground	
Receptacles/Plugs	
Service Panel Fused	
Overall Condition	
Warning Signs	
Hold Tags & Lock Out	
Other	

17. Cranes Lifting Devices	%
Current Inspection Sticker	
Licensed Operator	
Certification	
Load Radius Indicator	
Safety Lathes (Hooks)	
Condition of Wire Ropes	
Conditions of Slings & Chains	
Safe Load Chart (Arabic/English)	
Lattice/Boom Damage	
Tube Blocks	
Man Lifts	
Proper Use of Outriggers	
Tag Lines used	
Signalman/Rigger	
Barricade Swing Radius	

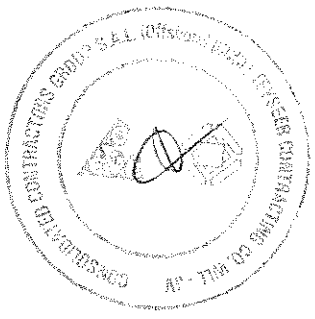
18. OVERALL SCORE :

DATED : 21-10-98

SIGNATURE :

APPENDIX E – ANNEXURE 13

PROPOSED INCIDENTS REPORTING AND INVESTIGATION PROCEDURE (PP709-AIR)



	ORIGINATING COMPANY:	Consolidated Contractors Group S.A.L. (Offshore)(CCC) Teyseer Contracting Company W.L.L. Joint Venture
	PROJECT:	Construction of Mega Reservoir PRPSs (Package A)
	CLIENT:	Qatar General Electricity & Water Corporation (KAHRAMAA)
	LOCATION:	Doha -Qatar

DOCUMENT TITLE:	CONTRACTOR'S DOCUMENT NUMBER:
Incidents Reporting and Investigation Procedure	**PP 709-AIR**

ABSTRACT:
This document covers the reporting requirements and the principles of incident investigation and analysis

REV	DATE	DESCRIPTION	PREPARED BY	CHECKED BY	REVIEWED BY	APPROVED BY
			MGT		Owen W. Reed, CSP	
0	12-jUL-2014	Issued for tender use	Mohammad Tanbour HSE coordinator	Hasan Deeb, IDipNEBOSH HSE Manager	Owen Reed, CSP Group HSE Manager	Robert Davis Group HSE Director

INDEX

1. SCOPE

1.1. This document covers the reporting requirements and the principles of incident investigation and analysis.

2. PURPOSE

2.1. The purpose of this procedure is to control the basic elements required to maintain an accident / incident investigation system and the implementation of the relevant corrective action.

2.2. This procedure also covers the reporting and analysis for near misses that can happen within the working environment.

3. REFERENCES

3.1. US OSHA 29 CFR (Code of Federal Regulations) Part 1926 – Labor

3.2. OSHA Regulations in the 29 CFR 1904 and 1952

3.3. All applicable Local Regulatory Authority requirements and regulations

3.4. HSE Requirements as stipulated in Contract Documents.

4. DEFINITIONS AND ABBREVIATIONS

4.1. Definitions

4.1.1. CLIENT / COMPANY: Qatar General Electricity & Water Corporation (KAHRAMAA)

4.1.2. PROJECT: Construction of Mega Reservoir PRPSs (Package A)

4.2. Abbreviations

4.2.1. Contractor : Consolidated Contractors Group S.A.L. (Offshore)(CCC) and Teyseer Contracting Company W.L.L. Joint Venture

4.2.2. HSE Group: Contractor's HSE Managing Office

4.2.3. HSE: Health, Safety, Environment & Security

4.3. Technical Definitions:

4.3.1. Incident

An unplanned event or chain of events which did or could have caused personal injury, illness or damage (loss) to assets, environment or negatively affect the company reputation. This includes Near Miss incidents.

4.3.2. Accident

An uncontrolled, unplanned or undesired event resulting in: injury or illness to personnel; damage or loss to assets, the neighboring community or to the environment.

4.3.3. Near Miss

An incident (undesired event) which had the potential to cause harm to people, environmental or property damage but injury or damage did not occur due to chance, immediate corrective action or timely intervention.

4.3.4. Serious Near Miss

A significant incident during the normal course of work that did not result in injuries or fatalities but had the potential to have caused such. Examples include explosion, fire, failure or collapse of equipment, faulty machinery, building or structure collapse, excavation collapse, faulty electric lines, pipeline rupture, radiation leak from equipment using radioactive sources, release of flammable sources, release of hazardous materials, fall or dropping from height any tool, plant, machinery, equipment, materials, substance or object or any incident which resulted in or could have resulted in the release or escape of a biological agent.

4.3.5. Unsafe Act/Unsafe Practice

Performance of a task or other activity that is conducted in a manner that is violating the accepted safe procedure and could lead to an accident or may threaten the health and/or safety of workers (i.e., Failure to use personal protective equipment (PPE), working without authorization)

4.3.6. Unsafe Condition

A Physical condition in the work place which renders it unsafe and is likely to cause property damage or injury (i.e. unguarded machines, spills, Defective tools, equipment, or supplies)

4.3.7. Observation

- Negative Observation: The potential for an incident to occur was observed and subsequently prevented through immediate intervention. (No injury or damage) (Limited to unsafe act or unsafe condition)
- Positive Observation: Proper compliance with HSE procedures or additional measures above minimum requirements. (Examples: safe acts, safe conditions, using proper PPE, PTW, JSTI, RA, SOC, etc.)

4.3.8. Corrective action

Actions to address the cause of any incident, accident, near miss or significant near miss in order eliminates or minimizes reoccurrence.

4.3.9. Occupational Fatality (Work-Related)

Work-Related Fatality is a death resulting from an injury or illness, regardless of the time elapsed between injury and death.

4.3.10. Non Occupational Fatality

A death that, after thorough investigation, is proven to be not related to official business. Ex. Heart Attack (not due to occupational illness or injury), non-

occupational illness related death, death due to an accident caused outside official working hours or during the victim's R&R.

4.3.11. Days Away From Work Case (Lost Time Incident - LTI) - Major Accident

Any work-related injury or illness which results (or would have resulted) in the injured or ill worker or employee (Daily, Monthly, Subcontractor, Vender or Visitor) being unable to return to normal work on his next scheduled shift after the day the incident occurred as determined by a certified medical professional.

4.3.12. Medical Treatment Case (MTC) - Moderate Injury

Is a work-related injury or illness that calls for medication, treatment, or medical check that is administered by a health-care professional and that goes beyond a first aid case. Medical treatment case does not result in lost time from work beyond the date of the injury.

4.3.13. Restricted Work Case (RWC) - Moderate Injury

Is a work-related injury or illness that results in limitations on work activity that prevents an individual from doing any task of his or her normal job or from doing the entire job for any part of the day.

4.3.14. First Aid Cases (FAC) - Minor Accident

Is a minor work-related injury or illness that calls for simple First Aid treatment and does not call for follow-up treatment by a health-care professional. First aid injuries do not result in lost time from work or work restrictions.

4.3.15. Occupational Injury

Physical harm to employee that resulted from single exposure event to chemical, physical, biological agent in the work environment.

4.3.16. Occupational Illnesses Cases (OIC)

Any abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to environmental factors associated with employment. It includes acute and chronic illness or disease caused by inhalation, absorption, ingestion, or direct contact

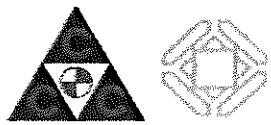
4.3.17. Loss of Consciousness (LOC)

A case where a victim on official company business suffers loss of consciousness due to an occupational illness or injury. This includes loss of consciousness due to heat exhaustion or heat stroke.

4.3.18. Property Damage

All incidents (other than fire/explosion) that resulted in damage to the company property caused by accident (not because of normal wear and tear damages to the equipment) like crane related incidents, forklift hitting and damaging equipment

4.3.19. Off Duty Accidents



An accident that occurs outside the hours of work that the employee is employed.

4.3.20. Fire

An undesired incident/ event where an uncontrolled fire erupts causing harm to personnel, damage to property or environment that is caused by business related operation whether during or off official working hours.

4.3.21. Theft

The act of unlawfully taking something from a company employee, company, client or third party with the intention of depriving the other party of it.

4.3.22. Alcohol intoxication

An event where an employee on official business has ingested alcohol in any amount that has affected in any way or form his work. Alcohol intoxication cases can be only determined by a competent medical authority (Doctor or Nurse).

4.3.23. Spell /Leak

An incident where a chemical (whether liquid or gas) sills out of its original or intended container in a volume causing any significant harm to personnel, damage to property or environment.

4.3.24. Recordable Cases

Any work-related incident resulting in: Occupational Fatality (OF), Days away from work (LTI), Restricted Work Cases (RWC), Medical Treatment cases (MTC), Occupational Illnesses Cases (OIC) and Loss of consciousness (LOC)

5. RESPONSIBILITIES

5.1. Project Director /Project manager

5.1.1. Has the ultimate responsibility of ensuring the availability of resources essential to establish, implement, maintain and improve this incident reporting and investigation procedure

5.1.2. Is responsible for defining roles, responsibilities and accountabilities and assigning authority to facilitate effective incident reporting and investigation.

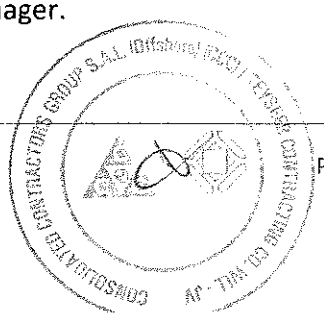
5.1.3. Review all accident investigation reports to ensure that corrective action has been taken and to observe any trends that may require action on his part.

5.1.4. The Project Director, Manger or his designee must participate in the investigation (depending on the level of Incident)

5.2. Line Supervisor / Foreman

The Line supervisor or foreman will carry out an immediate reporting and investigation of every accident that occurs within his area of responsibility. He will complete an incident investigation report as soon as possible and submit it to his superior with a copy to the HSE Manager.

5.3. HSE Manager / Designee



5.3.1. Ensure compliance with the relevant HSE legislation.

5.3.2. Has the responsibility for implementing and monitoring this procedure.

5.3.3. Leading the incident investigation team.

5.3.4. Documenting and keeping relevant records of all incidents.

5.3.5. Communicating the incident to the concerned personnel.

5.3.6. Recommending corrective actions to prevent incident reoccurrence.

5.3.7. Cooperate with external parties involved in incident reporting and investigation.

5.3.8. Completing the approved Incident Investigation Report form and reporting all incidents to the Corporate HSE Group as per Incident Reporting matrix

5.3.9. Will verify the findings of the line supervisor or foreman and carry out independent investigation of every serious or potentially serious occurrence with a copy of each independent report submitted to the Project Manager.

5.4. The Project Administrator

The Project Administrator is responsible for filling in claims for all Property Damage when reported no matter how small the damage may appear as well all administrative issues related to the project incidents.

5.5. All employees

All the employees shall ensure that all incident, injuries, illness, hazards and damage to property are reported to their line Supervisor and/or HSE Manager/ Officer or responsible person.

6. PROCEDURE

6.1. Introduction

6.1.1. All project personnel are responsible to report accidents, incidents, near misses, property damage and environmental loss immediately to their direct supervisor and to the project HSE Department. Whenever practical, every individual shall be required to immediately rectify identified hazards/unsafe practices provided they do not expose themselves to any danger.

6.1.2. The commitment to careful reporting and investigation of all accidents / incidents, near misses, property damages, and environmental losses is a major factor in accident prevention. The accident investigation process provides the accurate, information needed to prevent recurrences. In case of recordable incidents, an incident investigation team shall be formed in order to investigate. An immediate notification report shall be made to the following:

- The Client
- Project Manager and Project HSE Manager
- The Corporate HSE Group (As per the Incident Reporting Matrix, Attachment 1).

6.1.3. Following initial notification, incident reports are to be prepared by concerned Section/Line Supervisors and HSE Manager, depending on the location where the incident occurred. The HSE Manager will be involved in investigating the incidents and in preparing the required reports

6.1.4. Every accident / incident consists of a cause and a result. An accident involving a slight injury may reveal as many constructive conclusions as the investigation of any accident involving a fatality.

6.1.5. Lessons learned from accidents should be communicated to all project staff to prevent the reoccurrence.

6.1.6. Any delay in immediate action prevention may lead to weak and unclear facts.

6.2. Incident Classification

The project incidents will be classified to:

6.2.1. RECORDABL INJURIES which includes:

- Occupational Fatality (OF)
- Days away from work (LTI)

  This applies to workers/ employees being on official business (on the work site, commuting back and forth, and business travel).

  a. The counting of days lost begins the day after the injury or occupational illness occurred and includes all subsequent days until he resumes work. Weekends and holidays are counted.

  b. In cases of severe injury or illness total days lost are capped at 180.

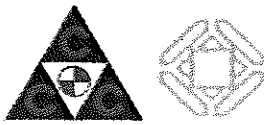
  c. If the worker leaves the company for some reason unrelated to the injury or illness, such as retirement, a plant closing, or to take another job, you stop counting days away from work or days of restriction / job transfer on the day he left if this occurs before the 180 day maximum.

  d. If the worker leaves the company because of the injury or illness, you must estimate the total number of days away or days of restriction / job transfer and enter accordingly (up to a maximum of 180 days).Counting of Man-hours worked shall start from zero after an DAFW case.

- Restricted Work Cases (RWC)

  Restricted work occurs when, as the result of a work-related injury or illness:

  a. The employee is kept from performing one or more of the routine functions of his or her job, or from working the full workday that he or she would otherwise have been scheduled to work; as per a physician or other licensed health care professional recommendation/ report.



b. Job transfer is recorded when an injured/ ill worker is assigned to a job other than his regular job. The day on which the injury/ illness occurred is not counted.

c. When an injury or illness involves restricted work or job transfer but does not involve death or days away from work, we must record the injury or illness as a job transfer or restriction and count the number of restricted or transferred days.

d. A partial day of work is recorded as a full day of job transfer or restricted case.

- Medical Treatment cases (MTC)

Medical treatment' means the management and care of a patient to combat disease or disorder – **it does not include**:

a. visits to a physician or other licensed health care professional solely for observation or counseling;

b. the conduct of diagnostic procedures, such as x-rays and blood tests, including the administration of prescription medications used solely for diagnostic purposes (e.g., eye drops to dilate pupils); or

c. 'First Aid' as defined later in this Section

d. Any loss of consciousness arising from work-related circumstances if worker makes quick recovery and return to normal work in same shift.

If a work-related injury or illness results in medical treatment beyond first aid but does not involve death, one or more days away from work, one or more days of restricted work, or one or more days of job transfer, it is considered Medical Treatment - whether or not it is administered by a physician or other licensed health care professional.

- Occupational Illnesses Cases (OIC)
- Loss of Consciousness (LOC)

6.2.2. NON RECORDABLE INJURIES which includes:

- First Aid Cases (FAC)

The following is a sample list of treatment considered First Aid, as per OSHA 1904.

a. Using a non-prescription medication at non-prescription strength (for medications available in both prescription and non-prescription form, a recommendation by a physician or other licensed health care professional to use a non-prescription medication at prescription strength is considered medical treatment for record-keeping purposes);

b. Administering tetanus immunizations (other immunizations, such as Hepatitis B vaccine or rabies vaccine, arising from a work-related incident are considered medical treatment)

c. Cleaning, flushing or soaking wounds on the surface of the skin

d. Using wound coverings such as bandages, Band-Aids™, gauze pads, etc.; or using butterfly bandages or Steri-Strips™ (other wound closing devices such as sutures, staples, etc. are considered medical treatment)

e. Using hot or cold therapy

f. Using any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc. (devices with rigid stays or other systems designed to immobilize parts of the body are considered medical treatment).

g. Using temporary immobilization devices while transporting an accident victim (e.g., splints, slings, neck collars, backboards, etc.)

h. Drilling of a fingernail or toenail to relieve pressure, or draining fluid from a blister

i. Using eye patches

j. Removing foreign bodies from the eye using only irrigation or a cotton swab

k. Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs or other simple means

l. Using finger guards

m. Using massages (physical therapy or chiropractic treatment are considered medical treatment for record-keeping purposes)

n. Drinking fluids for specific relief of diagnosed heat stress.

- Near Misses or Serious Near Misses (NM)
- Non- Occupational Fatalities (NOF)

6.2.3. PROPERTY DAMAGES which includes

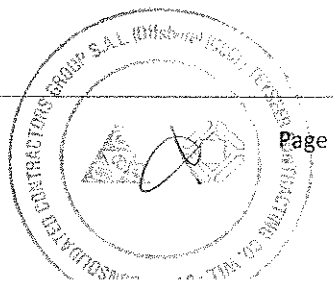
- Vehicle, Traffic, Roadway Incidents (No Injuries)
- Fire (No Injuries)

6.2.4. ENVIRONMENT

- Oil, Gas, Chemical spill, leak or release incidents

6.2.5. SECURITY

- Security Breaches (Theft, Alcohol intoxication cases, drug Abuse, Violence's, etc)



- Drug Abuse

  a. The use of a drug for a purpose other than that for which it is normally prescribed or recommended.

  b. The use of illegal drugs or the inappropriate use of legal drugs.

  c. The use or possession of controlled substances, or illegal drugs, or the non-medical or improper use of other drugs that are packaged with a recommended safe dosage. That includes the use of substances for other than their intended use (for example, glue and gasoline fume sniffing or steroid use for other than that which is specifically prescribed by competent medical authority).

6.3. Incidents Reporting

6.3.1. Internal Incident Reporting

- Internal incident reporting is the reporting that takes place within the project sites and facilities and CONTRACTOR corporate HSE group.
- All accidents / incidents shall be reported to the line supervisor and the Project HSE Manager/In Charge immediately and to the Project Manager within 24 hours of occurrence.
- The following incident shall be reported to the Project Manager immediately: (recordable, property damages to the plant, equipment and materials, environment incidents and security breaches).
- Incidents must be reported to the Corporate HSE Group as per the Incident Reporting Matrix.
- Notification to Corporate HSE Group on the occurrence of fatalities (Occupational & Non-Occupational) shall be IMMEDIATE and by VERBAL means (SMS, phone...). A Written Notification Report shall be submitted to Corporate HSE Group within 24 hrs. A Full Detailed report shall be submitted to the Corporate HSE Group within 10 days of the incident occurrence using the report form attached to the end of this procedure detailing circumstances, corrective action taken and actions recommended to prevent reoccurrence
- The internal Injury and Illness case management and classification flowchart is illustrated in Attachment # 2.

6.3.2. External Incident Reporting

HSE incidents will then be reported to the Client or to the country regulatory authority (Municipality, Civil Defense, Police, etc) as per the country legal requirements.

6.4. Incidents Investigation

6.4.1. HSE incident investigation is a system for investigating, analyzing, and documenting, health, safety, environmental incidents, near misses, property

damages and dangerous occurrence (An incident with potential consequences of catastrophic, severe and critical nature).

6.4.2. The purpose of HSE incidents/ accident investigation at CONTRACTOR sites and facilities are to:

- Identify the main causes of HSE incidents, prevent recurrence and/or eliminate potential incidents occurring in the future
- Ensure that appropriate response actions are taken in case of HSE incidents.
- Ensure incidents are fully investigated to ascertain the root causes, develop and implement necessary corrective actions as part of the continuous HSE management system improvement process.

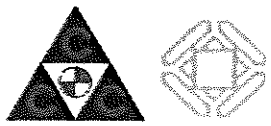
6.4.3. A designated incident investigation team must be established and announced in the project. The team must include:

Two permanent members from HSE Department; the HSE Manager and another HSE supervisor who shall be trained and competent investigators.

Two members from the Project Management and Construction Engineers selected based on the location, severity and the circumstances of the incident.

6.4.4. The projects investigation team who is conducting the investigation must know the CONTRACTOR procedures and incident investigations techniques (CONTRACTOR Investigators Training) to collect relevant information and draw effective conclusions, using the following four-step investigation process

- STEP ONE: Gather the information.
  - Promptness: The best time to start an accident investigation is a soon as possible after the event. The less time between the accident and the investigation, the better and more reliable will be the information available
  - Investigators Kit: Equipment required for an investigators kit, depending on its nature (Photographic equipment, Portable lights, Notepads, Sketchpads, CONTRACTOR Witness statement forms, Record-keeping equipment, Sample collection equipment), **Put together an investigators kits for key investigation personnel**
  - Secure the Scene: The first priority is to help injured people, For serious incidents, the site may need to be made safe but otherwise left undisturbed as a 'crime scene' pending an investigation by the police or a health and safety enforcement inspector
  - Interviewing Witnesses: Any investigation will involve people who can contribute with beneficial information to find out the direct and root causes of incidents, including the Victim himself, the eyewitness, supervisors, managers, colleagues, etc, immediately segregate all the witnesses involved in the incident from each other until after the



investigation team has completed its interviews and Putting the Witness at Ease by encouraging him and show interest in his ideas and understanding his input in a friendly manner and to assure him the purpose of the interview is not to blame anyone (more details in attachment #4)

- STEP TWO: Analyze the information.

  This means examining all the facts, piecing them together to determine what actually happened and determining why it happened by assemble all your data or evidence, extract the information that is relevant, Identify any gaps - and follow leads to fill those gaps and discover the direct and root causes by systematically working through the event

- STEP THREE: Identify suitable control measures.

  By Identifying all possible control measures, then select the ones which are most suitable taking in account of reasonable practicability and the effectiveness of different control types and consider also the wider implications of an event. Is this an isolated event or is the same event waiting to happen on a similar piece of equipment in other parts of the plant or elsewhere

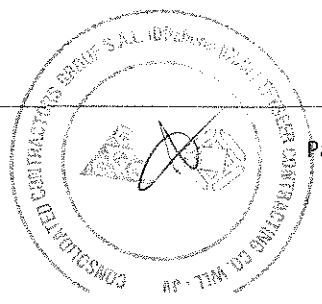
- STEP FOUR: Develop an action plan and its implementation

  Plan what you have decided to do and do it (action plan). This will involve setting timescales (short-term vs long-term) and allocation of specific actions to specific individuals and also, finally, checking that the proposed actions have actually been implemented. Follow up!

6.4.5. Near Miss Investigations will be conducted in order to provide facts rather than faults. The point of such investigations is to prevent recurrence of similar incidents. Each near miss incident will be followed by an investigation and a relevant report will be filled out using the standard Incident investigation form

6.4.6. Reporting Personal Injury

- In the event of any injury the injured person will immediately go to the First Aid clinic for treatment.
- The Doctor or Nurse will immediately notify the HSE Department. The HSE Department will ensure that the documented details are correct
- The Doctor or Nurse responsible for first aid treatment will record details of the injury on the daily Accident Register and incident investigation form
- All the Accidents must be recorded on the 'Daily Accident Register' which is to be sent to the HSE Manager on a daily basis.
- If the injury is minor the employee will be sent back to work after treatment.



- If the injured is transported to the hospital, a designated person will accompany the patient and stay with him to ensure proper treatment.
- If the injured employee requires time off the job or referral to a hospital, this will require approval by the Doctor. The injured person's supervisor will be kept informed of the situation.
- All completed forms will be returned to the Doctor or Nurse responsible for First Aid cases. Any comments from the hospital will be communicated to the injured person's foreman or superintendent and HSE department.

6.4.7. Reporting Property Damage

- In the event of any accident that involves damage or loss to any property, whether owned by Company or not will be reported to the HSE manager, project manager and Corporate HSE group as explained above
- It is important that immediate notification is made verbally to the Project HSE Manager and Project Administrator, as notification to the Insurers is essential within 24 hours of the incident.
- Copies of all reports will be sent to: Project Manager, HSE Manager, Project Administrator and Corporate HSE group (as per the Incident reporting matrix, i.e., the cost is more than 5,000 USD)
- All Property Damage must be reported no matter how small the damage is. Photographs have to be taken in order to assess the damage at the time of accident, and if possible photos are taken before removal or rearrangement of material on-site.
- Estimates of the damage are always necessary but under no circumstances will these estimates be discussed with any third party.
- Repairs will not be completed until clearance is given by the Project Management. However, if danger prevails immediate action will be taken to render the area safe.
- The Project Administrator will execute all reports and communications with the insuring company.

6.5. Reporting Form

6.5.1. The attached Incident Investigation forms (attachment #3) should be used for all accident reporting within the Project, the first page of the Report (including section 1 thru 3.4) to be completed as initial notification and sent to Corporate HSE Group as per the Incident Matrix.

6.5.2. The following appendices should be attached along with the Incident Investigation Report

- Incident Witness Statements
- Incident Analysis Form

- Schematics or drawings
- Sequence of events and timelines
- Photographs
- Copies of log sheets and logbooks
- Medical Reports
- Police Report
- Failure Tracing Method used to tracing the causes of incident (Causal factors / fault – tree / root cause analysis chart for the incident, event tree analysis, TapRoot analysis, etc)
- Other pertinent information

6.6. Final Report Distribution

6.6.1. The Final Investigation report with attachments (as decided by the Incident investigation team leader) shall be distributed to all concerned departments, Project Manager and the Corporate HSE group (per reporting matrix).

6.6.2. The results of the investigation shall be reviewed pro-actively with the affected personnel. The Incident Investigation summary report as given in this document contains the minimum information required for investigation sharing with all the affected employees.

6.6.3. The corrective actions and recommendation shall be communicated to all project staff as lesson learned to prevent reoccurrences

7. ATTACHMENTS

Attachment 1.: Incident Reporting Matrix

Attachment 2.: The Internal Injury/Illness case management and classification flowchart

Attachment 3.: Incident Investigation Report form

Attachment 4: Guidelines for interviewing the incidents witnesses

Attachment # 1: The Incident reporting Matrix

Consolidated Contractors Company

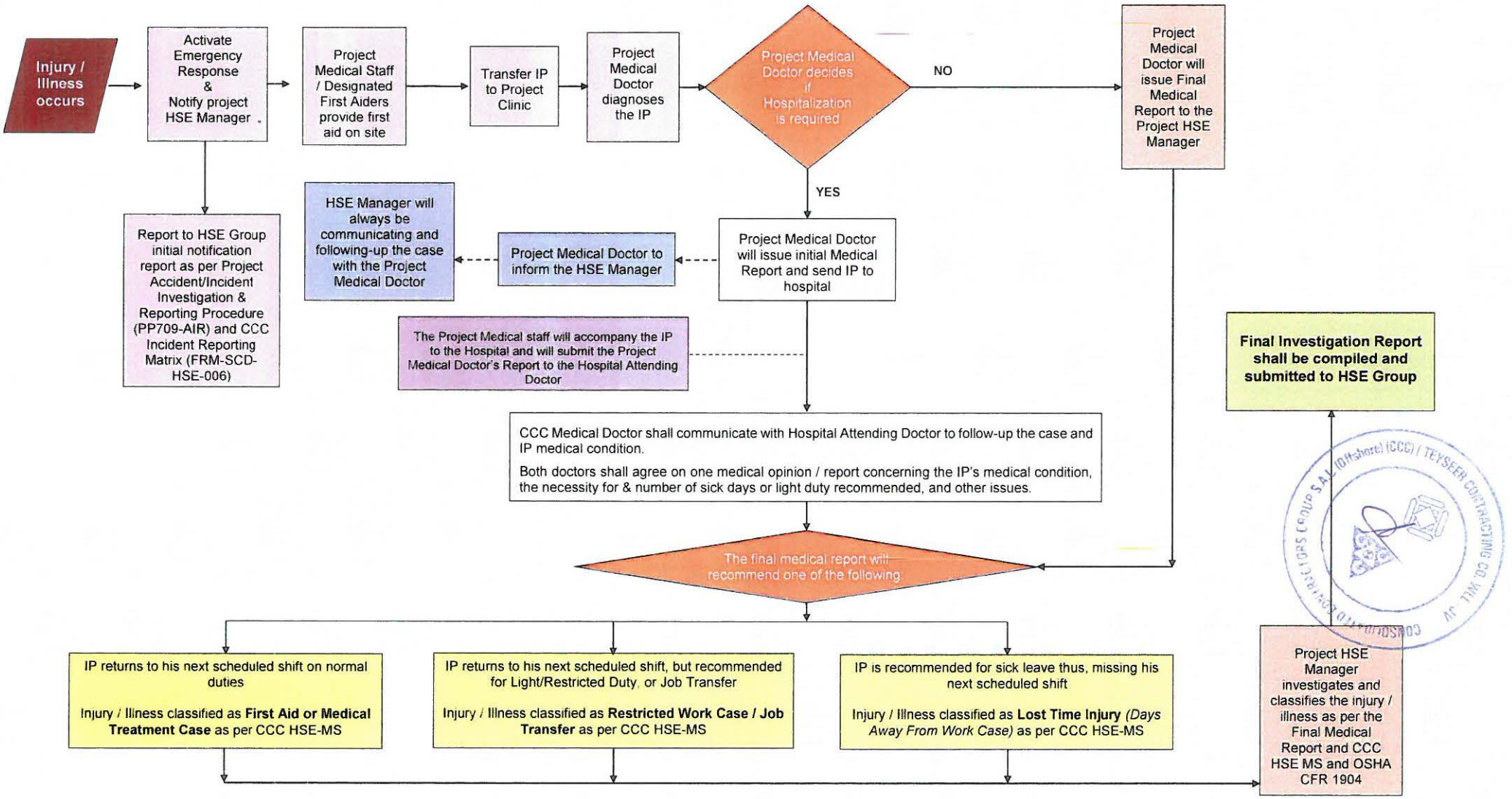
Corporate HSE Group

HSE Incidents Reporting Matrix

Form No.:	PP709-AIR-F01
Issue Date:	28-Feb-08
Rev No.:	2
Rev Date:	1-Jun-14
Data Update:	1-Jan-14
Page No:	1 of 1

Sr.	Category	Type of Incident	Type of Reporting to Corporate HSE Group			Remarks
			Incident Notification Report		Incident Investigation Report	
			By Phone / Text Message	REPORT ON FORM NUMBER (PP709-AIR-F04)	REPORTON FORM NUMBER (PP709-AIR-F04)	
1	RECORDABLES	OF- Occupational Fatalities	*Immediately*	24 Hours	10 Days	
2		LTI- Lost Time Injuries		24 Hours	10 Days	
3		RWC- Restricted Work Cases		24 Hours	10 Days	
4		MTC- Medical Treatment Cases		24 Hours	10 Days	
5		OLC-Occupational Illnesses Case		24 Hours	10 Days	
6		LOC- Loss of Consciousness		24 Hours	10 Days	
7	NON RECORDABLES	FAC- First Aid Cases	1.Complete FAC Report and keep in the HSE Dept. & Clinic Records 2. Report FACs in the Weekly HSE Statistics Report			
8		NM -Serious Near Misses		24 Hours *	10 Days	* Refer to HSEMP or incident reporting procedure for serious near miss defenition
9		NOF- Non- Occupational Fatalities	*Immediately*	24 Hours	10 Days	
10	PROPERTY DAMAGE	Vehicle, Traffic, Roadway Incidents *(No Injuries)*		24 Hours *	10 Days	* Damage in any amount to existing equipment / property in excess of $5,000
11		Fire *(No Injuries)*		24 Hours *	10 Days	* Damage in any amount to existing equipment / property in excess of $5,000
12	ENVIRONMENT	Major Oil , Gas or Chemicals Spills, Leaks or Released		24 Hours *	10 Days	* Corporate HSE Group to be informed within 24 hours depending on the size of the chemical or leaks/spills
13	SECURITY	Security Breaches (Theft, Alcohol intoxication cases, drug Abuse , Violances, ..etc)	1.Complete Incident Report (***PP709-AIR-F04***) and keep in the Project HSE Dept. Records 2. Report Incidents in the Weekly HSE Statistics Report			

Attachment # 2 : The Internal Injury/Illness case management and classification flowchart



Attachment 3 : Guidelines for interviewing the incidents witnesses

Ten Tips to follow while conducting interview for the incidents witnesses

1. *Put the person at ease*. Reduce anxiety and fear with a simple, sincere explanation of the values to be gained from the information. A friendly, understanding manner will help create a climate of cooperation.

2. *Keep interviews private*. Explain that individuals will be interviewed separately, allowing each person to relate his own view of the situation and events.

3. *Get the person's own version.* Avoid leading questions and judgmental remarks that tell the person what you think and feel or that put words in his/her mouth. Let them tell it as he sees it and feels it. Have him tell what he knows, what he heard, what he saw - his own version.

4. *Try not to interrupt*. Let the other person do most of the talking, with a few words of encouragement and appreciation. Ask questions only when really necessary. Then, use open-ended questions such as "At what point did that happen?" or "Where was the equipment at that time?" Don't be an interrogator - be an interested listener.

5. *Record critical data quickly*. Document items such as names, dates, locations, times, numbers and dimensions. Complete the after action review promptly after the interview.

6. *Repeat his/her story to them.* This brings three benefits. First, it lets the person know you have listened. Second, it gives the person a chance to explain or correct areas of possible confusion. Third, it ensures mutual understanding.

7. *End the interview on a positive note.* If the person has helped you understand the accident, let him know it. Express appreciation for ideas that may help prevent future accidents. Thank the person for cooperating.

8. *Ask the employee for corrective suggestions*. While these suggestions are apt to deal only with immediate causes, they can still be valuable as you formulate your own thoughts for corrective action.

9. *Supplement interview information*. Since conditions change quickly after an accident, a quick photograph is a valuable reference later on. Accurate measurements and sketches often prove valuable. And, of course, defective or damaged materials and equipment involved in the accident may be vital in further investigative procedures and remedial actions.

10. *Keep the pipeline open*. Encourage people to contribute additional facts they might remember. Maintain good supervisory rapport, and profit from the continuing voluntary information that can be a great aid to accident investigation and accident prevention.

Site / Activity Supervisor Interview

(Questions that should be discussed with the site /activity line supervisor)

1. What was the task being performed?
2. What happened?
3. What training is required for the task?
4. What hazards were associated with the task?
5. Were there any unusual hazards for this task at the location where it was being performed?
6. What training, qualifications and needed skills was provided for this task?
7. Was the pre-start talk / JSTI for the activity conducted prior starting the work?
8. What was the surrounding conditions/weather?
9. What was the allotted time frame to perform the task?
10. Was the proper tools/equipment selected or readily available?
11. Was this activity in the employee's normal work schedule?
12. What are the employee's qualifications to perform the job?
13. How could this incident have been avoided?
14. Do written or accepted procedures, method statement and risk assessment exist for this task/activity?
15. Was there an unrecognized hazard involved?
16. Was this activity a frequent occurrence or an accepted practice as long as no incidents occurred?
17. Have similar near misses/hits, other incidents been recorded prior to this incident?
18. Had this behavior been observed by a supervisor previously and no corrective action taken?

Attachment 4: Incident investigation Form

	Consolidated Contractor Company Corporate HSE Group Incident Investigation Report (IIR)	Doc. ID: PP709-AIR-F04 Issue Date: 1-Jun-14 Rev. No. 0 Rev. Date Data Update Page No

Note 1: This form shall be used for All Incidents (i.e. Recordable, Non Recordable, Property Damage, Environmental Harm and Security)
Note 2: The first page of the Report (including section 1 thru 3.4) to be completed as initial notification and sent to Corporate HSE Group as per the Incident Matrix

Section 1 : Project Information

1. Project Name :	3. Activity :	5. Report No. :
2. Project Number :	4. Area / Location of Incident :	6. Date :

Section 2 : Injured Person (IP) Details

1. The Accident/ Incident affecting: People ☐ Environment ☐ Property ☐		
2. Name of Injured Person:	3. Badge Number:	4. Age :
5. Nationality of Injured Person	6. Date of employment (dd/mm/yyyy)	7. Company Name (CCC or Subcontractor) :
8. Trade of Injured Person:	9. Job Title of Injured Person :	10. Line Manager (Supervisor/ foreman/ charge Hand) Name:

Section 3 : Incident Details

1. Incident Date (dd/mm/yyyy)	2. Incident Time (##:## am/pm):
3. Date and Time Reported to Direct Supervisor:	4. Date and Time Reported to HSE Manager/ Incharge:
5. Property Damage Yes ☐ No ☐	6. Estimated Damage Amount (US Dollar) , If applicable:

7. Duties the Injured Person was performing at the Time of Incident / The activity was performing at the Time of Incident (Brief Description)?

Section 3.1 Body Part Affected

Abdomen	☐	Ankle	☐	Arm	☐	Back	☐	Chin	☐	Chest	☐
Ear	☐	Body	☐	Breast	☐	Buttocks	☐	Face	☐	Foot	☐
Fingers	☐	Elbow	☐	Eye	☐	Forearm	☐	Head	☐	Heart-Cardiovascular	☐
Hip	☐	Genitalia	☐	Hand	☐	Heel	☐	Leg	☐	Lower Extremity	☐
Lungs-Respiratory	☐	Internal	☐	Knee	☐	Lips	☐	Nose	☐	Scalp	☐
Side/Ribs	☐	Mouth	☐	Multiple Body Parts	☐	Neck	☐	Thigh	☐	Toe	☐
Shoulder	☐	Stomach-Gastrointestinal	☐	Upper Extremity	☐	Tail Bone	☐	Wrist	☐	OTHERS	☐
Tooth/Teeth	☐	Trunk-Not Back or Internal	☐								

Section 3.2 Nature of Injury

Abrasion	☐	Contusion	☐	Laceration	☐	Sprain/Strain	☐
Amputation	☐	Cut / wound	☐	Loss of Consciousness	☐	Scratch	☐
Arc Eye	☐	Coma	☐	Muscle/Tendon Tear/Pull/Sep	☐	Tear Ligament/Cartilage	☐
Avulsion	☐	Dislocation	☐	Paralysis	☐	Traumatic Stress React-Mental	☐
Blister	☐	Electrical Shock	☐	Puncture	☐	Tooth Lost/Broken	☐
Burns	☐	Foreign Body	☐	Radiation Effect	☐	Vision Loss-Partial/Total	☐
Blinding Injuries	☐	Fracture	☐	Spinal Cord Injuries	☐	No Injury	☐
Bursitis	☐	Hearing Loss/Deafness	☐	Sprain / Strain	☐	Death	☐
Bite/Sting	☐	Internal Bleeding	☐	Scalds	☐	OTHERS	☐
Crushed	☐	Phychological (Stress)	☐				

Section 3.3 Nature of Illness

Asthma	☐	Carpal Tunnel Syndrome	☐	Inhalation/Irritation	☐	Poisoning	☐
Avulsion	☐	Dizziness	☐	Impaired Breathing	☐	Radiation Effect	☐
Asbestos Related Disease	☐	Epicondylitis	☐	Infection/Inflammation	☐	Respiratory Distress	☐
Asphyxiation	☐	HIV	☐	Infectious Disease	☐	Skin Reaction/Dermatitis	☐
Avian Flu	☐	Hyper-Extension	☐	Ingestion of Substance	☐	Sprain/Strain	☐
Bursitis	☐	Heart Attack	☐	Loss of Consciousness	☐	Subjective Pain	☐
Blood Clot/Thrombosis	☐	Heat Exhaustion/Dehydration	☐	Muscle/Tendon Tear/Pull/Sep	☐	Sprain/Strain-Repetitive	☐
Concussion	☐	Hernia	☐	Malaria	☐	Trauma	☐
Phychological (Stress)	☐	Tendonitis	☐	Overdose-Hazardous Substance	☐	Traumatic Stress React-Mental	☐
Occupational Illness	☐					NOT Applicable	☐
						OTHERS	

Section 3.4 Direct Cause of injury or illness

Bite/Sting	☐	Fall on same level (Slip and Fall, trip over)	☐	Failing to use PPE properly	☐
Bending-Repetitive Trauma	☐	Fire	☐	Improper Lifting	☐
Cave-in or Collapse	☐	Mental Stress	☐	Horseplay	☐
Contact with (Electricity, Heat, cold, Radiation, Caustics, Toxics, Biological, Noise)	☐	Lifting/ Manual Handling	☐	NOT Applicable	☐
Contact With-Sharp Object	☐	Occuptational Violance	☐	OTHERS	
Caught In-Tool/Equipment (Pinch and Nip points)	☐	Push/Pull- Trauma	☐		
Caught on (snagged, hung)	☐	Struck by (Hit by moving object)	☐		
Caught betw een or under (Crushed or amputated)	☐	Struck against (Running or Bumping into)	☐		
Exposure- Dust / Gases, biologicals chemicals/Fumes noise, Lead	☐	Struck By-Falling Object	☐		
Equipment Failure	☐	Vehicle Incident-Injured Driver/ Passenger/ Pedestrian			
Fall from Higher level to low er level	☐				

Consolidated Contractors Company and Teyseer Contracting Company Joint Venture
Incidents Reporting and Investigation

Section 3.5 Classification of Incident:

A. RECORDABLE

- OF- Occupational Fatalities ☐
- LTI- Lost Time Injuries ☐
- RWC- Restricted Work Cases ☐
- MTC- Medical Treatment Cases ☐
- OLC-Occupational Illnesses Case ☐
- LOC- Loss of Consciousness ☐

B. NON RECORDABLE

- FAC- First Aid Cases ☐
- NM -Near Miss/ Serious Near Misses ☐
- NOF- Non- Occupational Fatalities ☐

C. Property Damage

- Vehicle, Traffic, Roadway Incidents ☐
- Fire (No Injuries) ☐

D. Environmental Incident

- Mayor Oil Gas or Chemicals Spills, Leaks or Released ☐

E. Security Breaches Theft, Alcohol intoxication cases, drug Abuse ☐

Section 3.6 Incident Preliminary Root Cause

Design-Drawing/Specification/Data Error	☐	Design-Error in Equip/Material Selection	☐
Design-Inadequate Man/Machine interface	☐	Design-Inadequate/Defective Design	☐
Equip/Material-contamination	☐	Equip/Material-Defective Weld/Braise/solder Joint	☐
Equip/Material-Defective/Failed Material	☐	Equip/Material-Defective/Failed Part	☐
External Phenomenon-External Fire/Explosion	☐	External Phenomenon-Non-Employee Action	☐
External Phenomenon-Sabotage/Terrorism/Coorus Act of War	☐	External Phenomenon-Environmental /Weather/Ambient Condition	☐
External Phenomenon-Violence/Crime	☐	Management-Improper Resource Allocation	☐
Management-Inadequate Supervision	☐	Management-Work Organization/Planning Deficiency	☐
Personnel-Horseplay	☐	Personnel-Inadequate Work Environment	☐
Personnel- Communication Problem/ Ineffective Communication	☐	Personnel-Violation of Requirement/Procedure	☐
Procedure-Defective/Inadequate	☐	Procedure-Lack of Procedure	☐
Training-Inadequate Content	☐	Training-Inadequate Presentation/Materials	☐
Training-Insufficient Practice/Hands-On Experience	☐	Training-No Training Provided	☐
Unsafe Confined Space	☐	Unsafe Scaffolding or Ladders	☐
Unsafe trenches/ Excavations	☐	Unsafe Road/ transport	☐
Unsafe Mobile Plant/ Equipment	☐	Unsafe hand tools/Appliances	☐
Unsafe Fixed machinary/ Plant	☐	Unsafe Work practice/ Hazard Identification	☐
Animal, Human and Biological conditions	☐	Hazardous materials or chemical Substances	☐
		OTHERS	

Section 3.7 Incident Case Related Details

1. Employee /Line Supervisor Disciplinary Action Taken — None ☐ Termination ☐ Verbal Warning ☐ Written Warning ☐

2. Frequency the employee performs the task?
Continuous ☐ Daily during work hours ☐ Weekly or occasionally ☐ Monthly ☐ Few times per year ☐ Highly exceptional ☐

3. Severity Potential if no corrective action taken
Multiple Fatalities ☐ Single Fatality/Permant Disabilty ☐ Major Injury/Lost Time ☐
Moderate Injury (RWC or MTC) ☐ Minor Injury/First-Aid ☐

4. Risk Assessment/ JSTI
Risk Assessment/ JSTI -Followed ☐ Risk Assessment/ JSTI -Non Required ☐ Risk Assessment/ JSTI -Not Followed ☐
Risk Assessment/JSTI -To Be Modified ☐ Risk Assessment/ JSTI -To Be Written ☐

5. Job Safety Task Instruction (JSTI) was conducted before starting the work at the day of Incident ? Yes ☐ No ☐

6. Personal Protective Equipment (PPE) provided and used as required by Risk Assessment/JSTI ? Yes ☐ No ☐

Section 3.8 Medical Section

1. First Aid Treatment given ? Yes ☐ No ☐
2. Emergency Treatment given ? Yes ☐ No ☐
3. Treating Medical Facility Name (if applicable) _____
5. Desripe Briefly the medical emergency response carried out _____

2. The Injured Person was sent to :
- ☐ Hospital for further treatment , Number of days stayed at hospital ? _____
- ☐ Camp to rest , Number of days stayed at Camp ? _____
- ☐ Back to Work

Section 3.9 Further Investigation Details

1. Property Damage Description (if applicable) _____

2. Personnel Wearing Required PPE for Task?	Yes ☐	No ☐
3. Personnel Trained to Complete the Task safely?	Yes ☐	No ☐
4. Personnel Directed to Perform Task (Adequate Supervision) ?	Yes ☐	No ☐
5. Other Persons Involved in the incident ?	Yes ☐	No ☐
6. Other Persons Injured ?	Yes ☐	No ☐

7. Descripe the Sequence of events / Timeline :

8. What did others do or failed to do that allowed the accident to happen?

9. Description of Equipment/Machine/Property Involved in the Incident (if any)

10. Other conditions present contributing to the incident?

11. Detailed Description of the Incident/Accident

12. Direct Causes of Incident/ Accident

13. Root Cause(s) of the Incident

14. What is the Failure Tracing Method used to tracing the causes of the incident?
Fault Tree Analysis (FTA) ☐ Event Tree Analysis(ETA) ☐ Bow Tie Analysis (BTA) ☐ TapRoot Analysis ☐ Other Methods ☐ (Descripe)

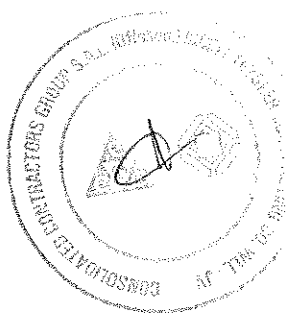
15. Corrective actions and Recommendations to avoid reocurrence?

CONSOLIDATED CONTRACTORS GROUP S.A.L. (OFFSHORE) (CCC) - TEYSEER CONTRACTING CO. W.L.L. - JV

16. Witnesses			
	1-	3-	
	2-	4-	
17. Investigation Team			
	1-	3-	5-
	2-	4-	6-
18. Remarks			
19. Attachments : Incident Notification Report, Photos, Sketches, Drawings, Witness Statements, Medical Reports , JSTI, Training Record, Other evidences and Support Documents (Attach in separate files			
20. Report Prepared by (Name)	Designation	Signature	Date
21. Report Approved by (Name)	Designation	Signature	Date

APPENDIX E – ANNEXURE 13

PROPOSED SITE EMERGENCY RESPONSE PLAN (PP711-SER)



Project Procedure

Site Emergency Response Plan

Qatar General Electricity & Water Corporation (KAHRAMAA)

Tender No. 4857

Construction of Mega Reservoir PRPSs (Package A)

Doha -Qatar

			MGT	OwR	
0	Issued for Tender use	12-Jul-2014	M.Tanbour (MGT) HSE Coordinator	O.Reed (OR) HSE Manager	R.Davies (RD) HSE Group Director
Rev	**Description**	**Date**	**Prepared By**	**Checked By**	**Approved By**

Index

1. SCOPE

1.1. This procedure details the necessary information and action involved in the Site Emergency Response Plan belonging to the project's site.

2. PURPOSE

2.1. To handle any potential emergency situation that might occur on site, and to successfully evacuate all personnel from the project's site during such a circumstance.

3. REFERENCES

3.1. HSE&S Requirements as stipulated in Contract documents

3.2. All applicable Local Regulatory Authority requirements and regulations

4. DEFINITIONS AND ABBREVIATIONS

4.1. Definitions

4.1.1. CLIENT / COMPANY: Qatar General Electricity & Water Corporation (KAHRAMAA)

4.1.2. PROJECT: Construction of Mega Reservoir PRPSs (Package A)

4.2. Abbreviations

4.2.1. Contractor: Consolidated Contractors Group S.A.L. (Offshore)(CCC) Teyseer Contracting Company W.L.L. Joint Venture

4.2.2. MO: CONTRACTOR Managing Office

4.2.3. HSE&S: Health, Safety Environment & Security

5. RESPONSIBILITIES

5.1. The Project Manager / HSE&S Manager / his designee is responsible for the execution of Site Emergency Response Plan.

6. PROCEDURE

6.1. General

6.1.1. The HSE&S Manager along with the project's medical staff will prepare a Site Emergency Response Plan in accordance with the Client's General Emergency Procedure Instructions, to be followed to ensure maximum evacuation efficiency and minimum harm or illness.

6.1.2. In case of severe injuries this plan specifies coordination of relevant information to all related persons to act upon the situation.

6.1.3. The plan includes but is not limited to:

6.1.3.1. Emergency training

6.1.3.2. First Aid

6.1.3.3. Persons to Contact

6.1.4. The Project Manager / HSE&S Manager / his designee is responsible for the execution of the Site Emergency Response Plan. He shall be assisted by the HSE&S Manager / HSE&S Officers, the project medical staff and any member of the Health, Safety, and Environment Department. The implementation of this Plan is to be conducted in accordance with the Client's General Emergency Procedure Instructions, in order to ensure maximum evacuation efficiency and minimize harm or illness.

6.1.5. The said Procedure shall consider the local status for external facilities such as:

6.1.5.1. Owner's fire brigade, medical organization and ambulance services available at site.

6.1.5.2. Distance, means and time of response of official fire-fighting organization and medical services

6.2. Reporting of Emergency Situations

6.2.1. Any person diagnosing an emergency situation shall report the same, by phone, to Client / Owner's emergency numbers, giving his full name and describing briefly the exact location.

6.3. Typical Emergency Procedure Contents

6.3.1. Emergency telephone numbers

6.3.2. Site / Premises Evacuation Plot Plan with evacuation routes, gates and muster points

6.3.3. Acoustic emergency signals (lasting approx. 1 minute)

6.3.4. Type and forms for emergency signal depend on Owner's Emergency Procedures typically specified as follows:

6.3.4.1. Evacuation Sign; in case of emergency (Evacuate the project site and abide by the Emergency Actions specified in point 6.5)

6.3.4.2. All Clear Signal

6.4. General precautions

6.4.1. The Evacuation plan shall be explained to all employees in a language they understand.

6.4.2. Evacuation plan shall be posted on all office and site notice boards. This plan, Attachment 1, shall reveal the following:

6.4.2.1. The site's general layout

6.4.2.2. The location of the muster points allocated for the project's site.

6.4.2.3. Emergency routs leading to the designated assembly points

6.4.2.4. Emergency exits for the project site.

6.4.2.5. Locations of fire extinguishers

6.4.2.6. Emergency telephone numbers

6.4.2.7. Location of the site security gates

6.4.2.8. Location of the site first aid facilities

6.4.3. The Project Manager / HSE&S Manager / his designee will provide his home address and telephone number (including replacements) to the Client's Representative, so that he may be contacted after working hours in case of an emergency involving CONTRACTOR job or equipment.

6.4.4. All CONTRACTOR personnel shall be given instruction on CONTRACTOR HSE&S procedures as well as specific HSE&S procedures. During this instruction, personnel shall be made aware of the Site Emergency procedures, with particular attention to:

6.4.4.1. Alarms

6.4.4.1.1. Disaster Siren (2 minutes continuous blast - Sounds throughout the Site)

6.4.4.1.2. Stop Work Horn (3 minutes air horn blast - local alarm - individual areas only)

6.4.4.1.3. All Clear Siren (30 seconds continuous blast - Sounds throughout the Site)

6.4.4.2. Emergency Telephone Numbers: (number to be filled in) and posted on all office and site notice boards.

6.4.4.3. Site gates

6.4.4.4. Site shelters (assemble outside)

6.4.4.5. Contractor office/yards.

6.4.5. CONTRACTOR HSE&S staff shall also perform periodic audits to assess employees' knowledge concerning emergency procedures. Where general lack of knowledge is noted, special training courses are held.

Employees' knowledge of emergency procedures is also recorded in our various inspection programs.

6.4.6. This procedure shall be carried out in conjunction with CONTRACTOR's Medical Emergency Procedure-Medevac (PP731_MMEE), and Security Procedure (PP704_SSEC).

6.5. Typical Emergency Actions

6.5.1. In the event of an emergency situation (serious personal injury, fire, critical damage to operating equipment, etc.), the HSE department, and the project management shall be notified at once, as well as notifying the Guard Houses responsible for the project site. Notification shall be as follows:

6.5.1.1. By telephone: Dial the emergency number from the nearest Client Operational Telephone system.

6.5.1.2. By radio (if available): If the Client's Project Main Security Gate cannot be contacted directly, radio an area or location that has a telephone in the Client's system and ask them to dial the emergency number.

6.5.1.3. By messenger: Send a messenger to the nearest telephone, radio, or Client's Project Main Security Gate, whichever is the nearest.

6.5.1.4. When transmitting a message by telephone, radio, or messenger, to ensure the messenger clearly identifies himself by giving:

6.5.1.4.1. His name.

6.5.1.4.2. Badge Number.

6.5.1.4.3. Exact location.

6.5.1.4.4. Nature of the emergency

6.5.1.4.5. Seriousness of the emergency

6.5.1.5. He shall maintain contact through the telephone line until informed to hang up.

6.5.1.6. Where necessary a person will standby or be available to direct the ambulance, fire truck, or helicopter to the point where it is required.

6.5.2. Upon hearing sound 'stop work' alarm, personnel stop ALL activities immediately.

6.5.3. All equipment will be shut down, and the area made safe.

6.5.4. Follow the instructions given by the responsible personnel specified under point no.6.1.1, or the Owner's HSE representatives.

6.5.5. All personnel shall proceed to the pre-designated assembly following the emergency routs, as outlined by the Site Emergency Response Plan posted on the offices and site notice boards.

6.5.6. The Emergency Response Team will immediately respond to the emergency and attempt to control the danger situation without putting their lives at risk and help facilitate in the evacuation of employees and help with the injured.

6.5.7. In case of fire, the plan for fire fighting will be adopted as stipulated in the fire Protection Plan.

6.5.8. Wind direction indicated by windsocks must be observed and movement should be across wind, in case of an emergency due to gas leak.

6.5.9. No one is permitted to go back to the site until notification has been received from Project's Management, or from the Client's Representative that it is safe to do so.

6.5.10. Following the announcement of an alarm, radio traffic will be confined to emergency communications only.

6.5.11. Telephone lines will be used only by those authorized to use them for the purpose of dealing with the emergency.

6.5.12. No vehicles other than emergency vehicles will be driven on site in an emergency condition.

6.5.13. The HSE&S Manager in association with Superintendents shall conducted a head count. If any employees are found to be missing, the Emergency Response Team shall be informed immediately of the employee's name, employee number, and last known location of the employee.

6.5.14. No attempt will be made to locate missing employees until: (1) a search is authorized by the HSE Manager, and (2) it is determined that a search and rescue party can be reasonably protected during such a search.

6.6. Security Defense Incidents

6.6.1. In case of a security threat, Abide by the project's security procedure (PP704_PSEC)

6.6.2. The General response to a security incident threat would be to:

6.6.2.1. Comply with the immediate wishes of armed persons where lives are at risk.

6.6.2.2. Inform the appropriate Project Officials and Military Authorities at the earliest opportunity.

6.6.2.3. Where terrorist or hostile power activity resulted in fire or explosion, site emergency services would respond in accordance with established procedures while the HSE department maintains liaison with the civil and military authorities.

6.6.3. Bomb Threat

6.6.3.1. Bomb threats are normally conveyed by telephone. The person receiving such a call should:

6.6.3.2. Record the conversation if possible.

6.6.3.3. Keep the caller on the line for as long as possible.

6.6.3.4. Try to attract the attention of others, and get them to listen in.

6.6.3.5. Obtain as much detail as possible, particularly on the location of the bomb.

6.6.3.6. Try to identify background details.

6.6.3.7. Notify Project Officials

6.6.4. Disaster Involving Civilians

6.6.4.1. Notify the Project Officials and they will do the following:

6.6.4.2. Theoretical possibilities of a major incident on or off the site with implications for the civilian population might include several situations.

6.6.4.3. In all such situations the HSE Department must be manned and liaison maintained with the appropriate civil and military authorities while emergency services respond to the disaster.

6.6.4.4. Pending arrival of civil and military authorities the emergency main controller must take all possible steps to safeguard it civilian population. Decisions taken by the emergency main controller and incident controller at this time shall be based on the fundamental principle that the first duty of executive personnel in an emergency is the preservation of life.

6.6.5. Gas Release

6.6.5.1. In case of gas release, the Person discovering the gas release shall:

6.6.5.1.1. Raise the alarm

6.6.5.1.2. Evacuate the Area crosswind of the release.

6.6.5.2. In the case of the presence of a qualified person, well aware of the process implications, and of isolating the source of the leak, he may attempt to isolate the leak providing it is safe to do so, and:

6.6.5.2.1. He is equipped with a breathing apparatus

6.6.5.2.2. His attempt is witnessed by colleagues equipped to pull him clear in case he is overcome

6.6.5.3. The Project incident controller shall be responsible for:

6.6.5.3.1. Evacuating personnel from downwind of the release to a safe area.

6.6.5.3.2. Establish, with fire services, the correct breathing equipment and protective clothing to be used.

6.6.5.3.3. Isolating the source of the release.

6.6.5.3.4. Direct search and rescue operations in low lying areas and enclosed spaces downwind of the release.

6.6.5.3.5. Arrange for the shutting down or removal of potential ignition sources from areas threatened by the plume.

6.6.5.3.6. In the case where the gas has been ignited and the consequences of the fire are not greater than the consequences of further gas release, isolate the source of the release before directing the fire services to extinguish the flames.

6.6.5.3.7. Appoint an observer to monitor and report the direction of movement of any gas cloud formed by the release.

6.6.5.3.8. Inform medical services of the nature of the gas.

6.6.5.3.9. Ensure security services are aware of the need to open site gates without restriction of exit in the event of general evacuation.

6.6.5.3.10. There is virtually no hazard associated with the release of an inert gas to atmosphere. In enclosed spaces, however, inert gases are Asphyxiates, and evacuation is mandatory.

6.6.6. Dust Cloud Explosion

6.6.6.1. An explosion which occurs in a materials handling or storage area away from process plant or hydrocarbon storage tanks will very

likely be the result of spontaneous or accidental ignition of dust. Action is as follows:

6.6.6.1.1. The Project Incident controller is to:

6.6.6.1.1.1. Direct search and rescue operations

6.6.6.1.1.2. Decide with fire services the method of fighting any associated fire.

6.6.6.1.1.3. Check surrounding areas for blast damage.

6.6.6.1.1.4. Instruct all personnel to leave the debris undisturbed pending investigation, into the cause of the explosion.

6.6.7. Plant Explosion

6.6.7.1. When a process or utilities area explosion occurs, it will almost certainly be followed by severe fire. There are two aspects of an explosion that demand additional consideration. These are discussed below:

6.6.7.1.1. Blast Damage

6.6.7.1.1.1. The knock-on effects of blast damage may not manifest themselves immediately but may result in serious independent incidents occurring during a later stage of the emergency. The incident controller shall inspect all plant and storage vessels within the vicinity of the explosion, or ask the emergency main controller to arrange for the inspection to be carried out for him. Broken glass and windows provide a good indication of the range of blast damage.

6.6.7.1.1.2. Separately the emergency main controller's staff may be able to pinpoint potential trouble spots by monitoring the instrumentation of equipment still in operation.

6.6.8. Debris

6.6.8.1. When the cause of an explosion is unknown e.g. (when it occurred at the start of an emergency and not as the result of spreading fire) every effort will be made to leave debris from the explosion undisturbed.

6.6.8.2. The debris from an explosion will be left undisturbed until the emergency main controller can photograph the area before it is cleaned

6.6.9. Spills

6.6.9.1. Any spillage or leak of flammable liquid represents a serious fire risk. In addition the gases from many flammable liquids are toxic, or present an asphyxiation hazard in enclosed spaces.

6.6.10. Land Spills

6.6.10.1. This section attends to procedures for handling land spills.

6.6.10.2. Hydrocarbon Spill

6.6.10.2.1. Person discovering spill shall raise the alarm and notify the Project incident controller.

6.6.10.2.2. Incident controller is to:

6.6.10.2.2.1. Decide, in liaison with technical advisers, method of isolating the source of the Spill.

6.6.10.2.2.2. Decide, in liaison with fire services, method of containing the area of the spill.

6.6.10.2.2.3. Consider covering the spill with foam blanket to reduce potential fire hazard under the direction of the Project Officials.

6.6.10.2.2.4. Arrange for the shutting down or removal of potential ignition sources in vicinity of the spill.

6.6.10.2.2.5. Cordon off the area.

6.6.10.2.2.6. Prepare action plan to respond to ignition of the spill.

6.6.10.2.2.7. Decide method of recovery or disposal of spilled hydrocarbons.

6.6.10.2.2.8. Block drains, or runoff into sewers, storm water drains, etc

6.6.10.2.3. Note: The following will be conducted under the direction of Project Emergency Response Officials.

6.6.10.2.3.1. Decision will depend on volume, value and practicability of recovery; for example, in an off - site area a pipeline spill of crude would most practicably be allowed to gas off, the dead crude being then scraped from the vicinity of the pipeline and left to decay.

6.6.10.2.3.2. Ensure during the recovery or disposal operations that emergency services are on hand, and that personnel engaged in the operation wear appropriate protective clothing.

6.6.11. Tank Farm Spill

6.6.11.1. The main hazard from a tank farm spill, even if the product is contained within barred walls, is the potentially very large release of flammable vapor.

6.6.11.2. Person discovering the spill is to raise the alarm and notify the Project incident controller.

6.6.11.3. The Incident controller is to:

6.6.11.3.1. Check all non-emergency services personnel have evacuated the area.

6.6.11.3.2. Note: The general alarm must be sounded for a tank farm spill.

6.6.11.3.3. Check there are no potential ignition sources in the vicinity, taking the direction of the wind into account.

6.6.11.3.4. Agree with technical advisers and fire services the method of recovery or disposal of the spill, and the extent to which the drainage system network shall be used.

6.6.11.3.5. Decide whether to cover the spill with a foam blanket to reduce the potential fire hazard.

6.6.12. Any Spill or Leak

6.6.12.1. The following general procedures apply when handling any spill or leak:

6.6.12.1.1. Person discovering the spill shall be responsible for:

6.6.12.1.1.1. Raising the alarm.

6.6.12.1.1.2. Standing well away, upwind.

6.6.12.2. Notes:

6.6.12.2.1. For a minor spill (e.g. leaking drum) a telephone report to the shift control room may be preferred to the activation of the local alarm call point, providing there is no immediate risk of fire. If in doubt, raise the alarm.

6.6.12.2.2. The alarm must always be raised for a process spill.

6.6.12.2.3. Incident controller from the Project: The following will be conducted under the direction of Emergency Response Officials:

6.6.12.2.3.1. Identify the chemical.

6.6.12.2.3.2. Establish flammability and toxicity.

6.6.12.2.3.3. Establish with fire services the correct breathing equipment and protective clothing to be used.

6.6.12.2.3.4. For a process spill direct appropriate isolation and shutdown operations.

6.6.12.2.3.5. When the spill results in the release of toxic gas, evacuate the area downwind of the emergency.

6.6.12.2.3.6. If a flammable gas is involved, shut down or remove potential ignition sources downwind of the emergency, and evacuate the area.

6.6.12.2.3.7. Consider covering the spill with a foam blanket to reduce potential fire hazard.

6.6.12.2.3.8. When the source of the spill has been isolated direct cleanup operations.

6.6.12.2.4. On completion of cleanup ensure that personnel involved in the operations are aware of appropriate decontamination procedures for themselves, their protective clothing and equipment.

6.6.13. Extreme Meteorological Conditions

6.6.13.1. General

6.6.13.1.1. Extreme meteorological conditions pose major hazards for process plants such as earthquakes, typhoons, and floods, which are not part of the normal climatic pattern for plants, are designed to withstand wind speeds well in excess of the expected maximum for the region.

6.6.13.1.2. Advance warning of an impending extreme meteorological upset allows project shutdown. Without warning, results are inevitably unpredictable.

6.6.13.2. Thunderstorms

6.6.13.2.1. As a precaution against the results of electrical discharge by lightning it is common international practice to cease the loading or unloading of bulk hydrocarbon products on the approach of a thunderstorm.

6.6.13.2.2. Cease lifting operations, work at heights, lower boom on cranes, and remove tower crane operators.

6.6.13.2.3. Ensure that all cranes are electrically grounded.

6.6.13.3. Extreme Winds

6.6.13.3.1. Routine precautions in the event of exceptionally high winds are to.

6.6.13.3.2. Stop all external materials handling operations.

6.6.13.3.3. Secure all exposed materials.

6.6.13.3.4. Reduce outside work to essential tasks.

6.6.13.3.5. Because of design tolerances it is most unlikely that extreme wind-speeds would result in an emergency condition.

6.6.13.3.6. When rain creates a hazard to craftsman due to slippery steel, muddy and flooded work environment, unstable trenches and excavations, and poor visibility, work shall be stopped and all equipment's secured.

7. ATTACHMENTS

7.1. None.

APPENDIX E – ANNEXURE 13

PROPOSED EXCAVATION SAFETY PROCEDURE (PP712-EXS)

	ORIGINATING COMPANY:	Consolidated Contractors Group S.A.L. (Offshore)(CCC) Teyseer Contracting Company W.L.L. Joint Venture
	PROJECT:	Construction of Mega Reservoir PRPSs (Package A)
	CLIENT:	Qatar General Electricity & Water Corporation (KAHRAMAA)
	LOCATION:	Doha -Qatar

DOCUMENT TITLE:	CONTRACTOR'S DOCUMENT NUMBER:
Excavation Safety	**PP 712-EXS-GEN**

ABSTRACT:

This Excavation Safety Procedure applies to all open excavations made in the earth's surface and provides guidelines for protecting employees who may work in or adjacent to an excavation or trench.

REV	DATE	DESCRIPTION	PREPARED BY	CHECKED BY	REVIEWED BY	APPROVED BY
			MGT		Owen W. Reed, CSP	
0	12-Jul-2014	Issued for Tender use	HSE coordinator	**Hasan Deeb,** IDipNEBOSH HSE Manager- Corporate	**Owen Reed,** CSP Group HSE Manager	**Robert Davis** Group HSE Director

INDEX

1. SCOPE

This Excavation Safety Procedure applies to all open excavations made in the earth's surface and provides guidelines for protecting employees who may work in or adjacent to an excavation or trench.

2. PURPOSE

To protect the employees who may work in or adjacent to an excavations or trenches.

3. REFERENCES

3.1 HSE Requirements as stipulated in Contract Documents.
3.2 All applicable Local Regulatory Authority requirements and regulations.
3.3 29 CFR (Code of Federal Regulations) Part 1926 – Labor

4. DEFINITIONS AND ABBREVIATIONS

4.1 Definitions

4.1.1 CLIENT / COMPANY: Qatar General Electricity & Water Corporation (KAHRAMAA)
4.1.2 PROJECT: Construction of Mega Reservoir PRPSs (Package A)

4.2 Abbreviations

4.2.1 HSE: Health, Safety Environment & Security
4.2.2 JSTI: Job Safety Task Instruction

4.3 Technical Definitions

4.3.1 BENCHING: A method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps.
4.3.2 COMPETENT PERSON: A person who has been documented to be trained and knowledgeable about soil classification, protective systems and is capable of identifying existing and potential hazards related to excavations and the surrounding work area. He also has the authorization to take immediate corrective action to eliminate hazards.
4.3.3 EXCAVATION: all processes and activities that move earth or rock, or disturb or break ground, any work that involves driving an object into the ground, all digging, including ditches, shafts, wells, and trenching or trench filling; grading; tunneling; boring and/or drilling
4.3.4 HAZARDOUS ATMOSPHERE: An atmosphere which may be explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, oxygen enriched, toxic or otherwise harmful and may cause death, injury or illness.
4.3.5 PROTECTIVE SYSTEM: A method of protecting employees from cave-ins. Protective systems include: support systems, sloping and benching systems, shield or shoring systems and other systems that provide necessary protection. (Please refer to appendix 2 for more clarification)
4.3.6. Sloping: Another protective system method that protects employees from cave-ins and collapse of soils. This usually made by excavating sides of excavation in sloping condition to prevent soils and excavated soils to collapse into personnel. The actual slope shall be less steep than the maximum allowable slope, when there are signs of distress. If that situation occurs, the slope shall be cut back to

an actual slope which is at least ½ horizontal to one vertical (½H:1V) less steep than the maximum allowable slope.

4.3.7. Shoring and Shielding: Another type of protective system that uses structures like timbers, mechanical, and/or hydraulic systems that supports the sides of an excavations and designed to prevent from cave-ins and and/or collapse. While shielding often referred to a trench box which is common type of protective system and excellent choice when continuous horizontal installations are contemplated. It is placed in the trench and dragged along with the progress of works.

5. RESPONSIBILITIES

5.1 Project Manager shall be the ultimate responsible for the implementation of this Procedure. He should ensure that adequate resources are provided and suitable trainings given for safe execution of work.

5.2 Construction Manager shall be responsible for site implementation and will continuously liaise with HSE Team for advises and recommendation to effective safety implementation.

5.3 HSE Manager shall monitor the application of this procedure on site and make sure that adequate trainings and awareness are provided to workforce through continuous inspection, assessment & review.

5.4 Line supervision shall be accountable for his employee (s) and he shall ensure that relevant information's and equipment's are supply prior to work instruction, and shall ensure that, where required by the risks involved with the excavation, a permit to work system is implemented , method statement and risk assessment are approved and implemented for excavations

5.5 All employees are accountable for their own safety and their co-workers, carry out their work in accordance with the documented safe systems of work, report identified hazards and risks in accordance with the process outlined during the induction and excavation specific training, use equipment in accordance with the instruction and training provided, they have the right and duty to stop action or condition that posing danger to them or to his co-workers and at the same time reporting to his supervisor and site HSE personnel for immediate action.

6. PROCEDURE

6.1 The Company shall be contacted and advised of the proposed work in order to establish the location of underground utilities such as electrical, gas, sewer, communication, fuel, and water lines. Overhead power transmission lines must be de-energized and visibility grounded or insulated by barriers to avoid contact by equipment that cannot maintain the minimum clearances.

6.2 The Company shall ensure that the site has been surveyed correctly with markers/confirmation of alignments and boundaries and that all available site diagrams, maps, drawings, specifications, information on the nature and location of hazardous materials and relationships with surrounding properties are obtained.

6.2 The Company must be notified at least 24 hours prior to the start of the work. Warning signs and adequate physical barricades or protective covers must be provided for all trenches, wells, pits and shafts. Physical barriers must be erected around all excavation.

6.3 Employees shall not work in excavations in which water is accumulating, unless adequate precautions have been taken to protect employees against the hazards posed by water accumulation. Precautions include special support or shield systems to protect from cave-ins, de-pumping to control the level of accumulating water, and use of a safety harness and lifeline.

6.4 If water is controlled or prevented from accumulating by the use of water de-pumping equipment, the water removal equipment and operations shall be monitored by an attendant and competent person to ensure proper operation.

6.5 Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations, support systems such as shoring, bracing, or underpinning shall be provided as determined by the Engineer to ensure the stability of such structures.

6.6 Excavations that exceed 1.2m or 4 ft in depth and require personnel to enter or perform works must implement the confined space entry procedure.

6.7 Access and Egress

6.7.1 A stairway, ladder, ramp or other safe means of access or egress shall be provided in all trenches that are 4 feet (1.2.m) or more in depth and shall be positioned at adequate intervals of lateral travel for employees. In addition, two access and egress points should be established if possible.

6.7.2 Standard guardrails shall be provided on all walkways, ramps or bridges where employees are required or permitted to cross over excavation or trenches.

6.8 Loose Rock or Soil

Employees shall be protected from excavated or other materials, or equipment that could fall or roll into the excavation by placing and storing such material or equipment a minimum distance of 4 feet (1.2m) from the edge of the excavation.

6.9 Hazardous Atmospheres

All trenches and excavations greater than 4 feet (1.2m) in depth shall be atmospherically tested prior to employees entering the excavation or trench. Excavations at locations where hazardous atmospheres can be reasonably expected to exist, such as landfills or plant's that process and store hazardous substances. These shall be air monitored on a continuous basis. Employees who may be subjected to hazardous dusts, gases, fumes or an oxygen deficient atmosphere shall ensure that all foreseeable emergency situations are identified and appropriate emergency procedures developed to manage these situations and provided with appropriate respiratory protection. The safety department will determine what type of respiratory protection is required as per the PPE Matrix.

6.10 Confined Space Entry Procedure must be utilized with this procedure. Refer to PP 710 – Confined Space Entry.

6.11 Underground Electrical Cables

6.11.1 If digging or disturbing the earth care should be taken to avoid damaging underground services. Underground electrical cables can be particularly hazardous because they often look like piping and it is difficult to determine if they are live just by visual inspection.

6.11.2 Damage to underground electrical cables can cause fatal or severe injury and all safety precautions have to be considered to avoid danger.

6.12 Working near Electrical Live Cable

No person should be engaged in any work activity on or near any live cable other than one that is suitably insulated unless it is not possible for it to be de-energized and suitable precautions have been taken to prevent injury. For more details about the HSE requirements and precautions to be considered in working near any live electrical cable please refer to procedure (PP 746-WPL-Overhead & Underground Power Line Safety)

6.13 Inspections

6.13.1 Prior to the start of work a competent person shall make daily inspections of excavations, trenches, adjacent areas and protective systems and as required throughout the shift. Inspections shall be made after every rainstorm or unusual work activities e.g. excess heavy equipment travel or vibration.

6.13.2 Employees will not be allowed in any excavation or trench if the competent person finds evidence of hazards that could result in a possible cave-in, protective system failure, hazardous atmosphere or other hazardous condition.

6.13.4 Inspections will be properly documented. This record should be maintained on file in the HSE Office until the excavation is back-filled and shall be available for review upon request.

6.14 Protective System Requirements

- All employees working in an excavation must be protected from cave-ins by an adequate protective system unless the excavation is in stable rock (as determined by compressibility test) or the excavation is less than 1.2 m (4 ft.) in depth.
- For larger excavations, a survey of the soil prior to excavation by a trained and experienced person shall be conducted which will provide appropriate information for appropriate methods of excavation and support to be determined, and decided by a competent engineer and shall ensure appropriate supplies of support materials are available before the excavation commences which shall be sound, free from defects, of appropriate strength, good construction, appropriately maintained.

7. ATTACHMENTS

7.1 Appendix 1: Type of Soils

7.2 Appendix 2: Protective System Illustrative Photos

7.3 Appendix 3: Excavation Checklist Form

APPENDIX 1: SOIL TYPES

1. Soil Type Identification

   Soil is classified into four categories:

   1.1 Stable Rock
   1.2 Type A
   1.3 Type B
   1.4 Type C

   Note: Stability is greatest in stable rock and decreases with Type C being least stable.

2. Soil Type Definitions

   2.1 Stable Rock is defined as natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed. A common misconception is that all rock is stable; most is not because it is fractured, fissured, faulted, bedded or shale.

   2.2 Type A is defined as cohesive soil with an unconfined compressive strength of 1.5 tons per square foot (1.36 metric ton per 92.9 cm2 or greater). Examples of cohesive soils are: clay, silty clay, sandy clay, clay loam and in some cases silty and sandy clay loam. However, no soil is Type A if:

   - It is fissured.
   - The soil is subject to vibration from heavy traffic, pile driving or similar effects.
   - The soil has been previously disturbed.
   - The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical or greater
   - The material is subject to other factors that would require it to be classified as a less stable material.
   - The exclusion for Type A eliminate its use in most typical construction situations.

   2.3 Type B

   - Cohesive soil with unconfined compressive strength greater than 0.5 TSF (.453 metric ton, 92.9 cm2) but less than 1.5 TSF (1.36 metric tons, 92.9 cm2).
   - Granular soils with on cohesiveness including: angular gravel, silt, silt loam, sandy loam and in some cases silty and sandy clay loam.
   - Previously disturbed soils except those that would be classified as Type C soil.
   - Soil that meets the unconfined compressive strength or cementation requirements for Type A but is fissured or subject to vibration.
   - Dry rock that is not stable.
   - Material that is part of a sloped or layered system where the layers dip into the excavation on a slope less steep than four horizontal to one vertical but only if the material would otherwise be classified as Type B.
   - Most soils fall into this category until they become predominantly granular or saturated, at which time they become Type C.

   2.4 Type C

   - Cohesive soil with a confined compressive strength of 0.5 TSF (0.453 metric tons / 92.9 cm^2) or less.

- Granular soils including gravel, sand and loamy sand.
- Submerged soil or soil from which water is freely seeping.
- Submerged rock that is not stable.
- Material in a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical or steeper.

3. Soil Testing

3.1 The Competent Person shall classify the soil type in accordance with the definitions section and on the basis of at least one visual and one manual analysis, or as per prior Company classification of soil type. These tests are designed to determine stability based on a number of criteria: cohesiveness, whether or not it is fissured, the presence and amount of water, the unconfined compressive strength, the presence of layering, prior excavation and vibration.

3.2 An examination of the job site will determine sources of vibration or evidence of prior excavation, such as existing underground utilities. Observation of the excavation will determine the presence and amount of moisture as well as layering, faulting and fracturing.

3.3 The unconfined compressive strength will be determined through a sample test. There are several methods of testing. The thumb penetration test is useful and easy to perform. If the sample can be dented but penetrated only with great effort, it is type A. Type B can be penetrated with little effort and molded. If it can be penetrated several inches and molded by light pressure it is Type C.
Note: Field tests are to be performed on "freshly excavated" samples.

3.4 The Competent Person shall perform multiple checks at 4 foot (1.2m) intervals of the excavation to generate consistent, corroborating data along its depth and length. The soil type is likely to change many times along a right of way and the moisture content will vary with the weather and job conditions. All these factors must be taken into consideration during the course of the work. It is the responsibility of the competent person to be sure of the soil type at all times and that the protective measures are also sufficient at all times.

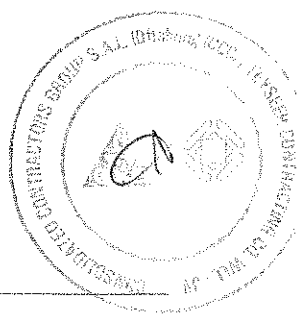
3.5 All testing will be documented, dated and signed by the competent person and will be maintained on file in the HSE and concerned engineering departments.

4 Design of Sloping and Benching Systems

The slopes and configuration of sloping and benching system for excavation 5 feet (1.5m) to 20 feet (6.0m) in depth shall be selected by the employer or his designee and shall be in accordance with the following requirements:

MAXIMUM ALLOWABLE SLOPES

SOIL OR ROCK TYPE	MAXIMUM ALLOWABLE SLOPES (H:V) (1) FOR EXCAVATIONS LESS THAN 20 FEET DEEP (3)
STABLE ROCK TYPE A (2) TYPE B TYPE C	VERTICAL (90°) 3/4: 1 (53°) 1:1 (45°) 1-1/2:1 (34°)



Notes:

- Simple slope excavations in Type A soil which are open 24 hours or less (short term) and are 12 feet (3.7m) or less in depth shall have a maximum allowable slope of 1/2:1.
- All simple slope excavations in Type A soil 20 feet (6.0m) or less in depth shall have a maximum allowable slope of 3/4:1.
- All sloping and benching of excavation in excess of 20 feet (6.0m) shall be approved by the Engineer.

4.1 Support systems, Shield Systems, Other Protective Systems

- Design of support, shield and other protective systems shall be selected and constructed by the employer or designated competent person.
- Timber or aluminum hydraulic shoring in trenches shall be determined in accordance with the conditions of soil classification
- Design of support systems, shield systems or other protective systems, that are drawn from manufacturer's tabulated data shall be in accordance with all specifications, recommendations and limitations issued or made by the manufacturer (for example: hydraulic shores). This information must be maintained on file on site.

4.2 Materials and Equipment

- Materials and equipment used for protective systems shall be free from damage or defects that might impair their proper function.
- Manufactured materials and equipment used for protective systems shall be used and maintained in a manner that is consistent with the recommendations of the manufacturer and in a manner that will prevent employee exposure to hazards.
- Any modification, alteration or repair to a protective support system shall be made only with the approval of the Engineer. Documentation such as charts, tables, drawing, welding specifications, etc., which identify the Engineer who approved the modification, alteration or repair of the protective system shall be maintained at the site.

4.3 Installation and Removal of Support Systems

- Members of support systems shall be securely connected together to prevent sliding falling, kick-outs or other predictable failure.
- Support systems shall be installed and removed in a manner that protects employees from cave-ins, structural collapses or from being struck by members of the support system.
- Individual members of support systems shall not be subjected to loads exceeding which the members were designed to withstand.
- Before temporary removal of individual support members begins, additional precautions shall be taken to ensure safety of employees, such as installing other structural members to carry the loads imposed on the support system.
- Removal shall begin with and progress from the bottom of the excavation upwards. Support members shall be released slowly so as to note any

indication of possible failure of the remaining members of the structure or possible cave-in of the sides of the excavation.

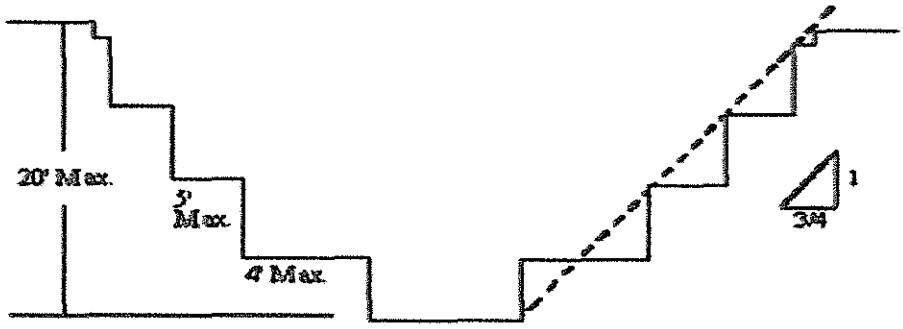
- Back-filling shall progress along with removal of excavation support systems.

4.4 Shield Systems

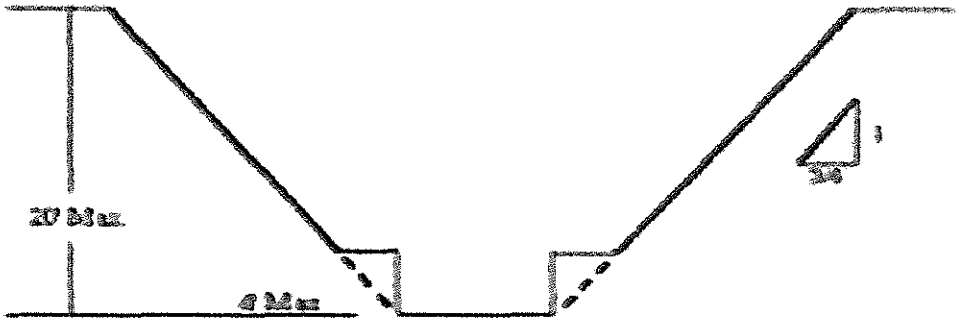
- Shield systems shall not be subjected to loads exceeding system design load.
- Shields shall be installed in a manner to restrict lateral or other hazardous movement of the shield.
- Employees shall be protected from the hazard of cave-ins when entering or exiting the areas protected by shields.
- Employees shall not be allowed in shields when shields are being installed, removed, or moved vertically.

APPENDIX 2: PROTECTIVE SYSTEM ILLUSTRATIVE PHOTOS

Benching Type



Sloping Type



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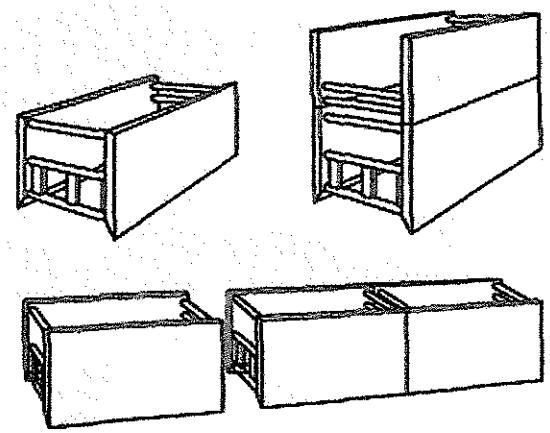

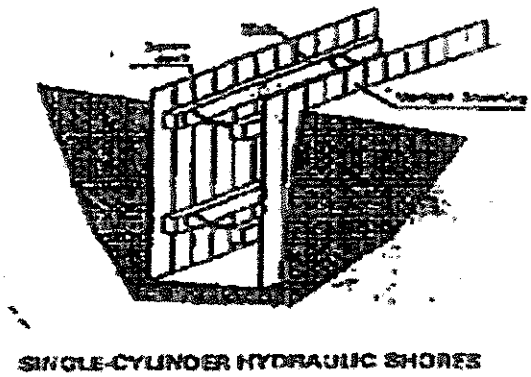

SINGLE-CYLINDER HYDRAULIC SHORES

APPENDIX 3: DAILY SITE EXCAVATION CHECKLIST

	Consolidated Contractors Company HSE Group EXCAVATION CHECKLIST		Doc. ID: PP712-EXS-F03 Issue Date: 14-05-2014 Rev. No.: 0 Data Update: Page No.: Page 12 of 2

Daily Site Excavations Inspection Checklist

Location/ Area: _____ **Excavation Number:** _____

Subject	Yes	No	N/A
I. Prior Starting the Work			
A. Excavation permit obtained where required by client/facility and kept at working area			
B. Excavation area checked for wetlands, endangered species, cultural/historic resources			
C. Stockpile management plan prepared			
D. Waste discharge permit obtained for excavation dewatering			
E. Excavations, adjacent areas, and applied protective systems have been inspected by Competent Person before the start of work.			
F. Competent Person has authority to remove employees from the excavation immediately.			
G. Adequate and continuous supervision is provided in the area			
H. PPE worn by all employees and supervision? Are PPE inspected?			
I. Warning vests or other highly visible clothing provided and worn by all employees			
J. Hard barriers provided at excavations (1.2 m) or deeper			
K. Barriers or covers provided for All wells, pits, shafts, or similar excavation			
L. Guardrails provided on walkways over excavation (1.2m) or deeper			
M. Warning system established & utilized when equipment is operating near to excavation. (warning signs and Lights)			
N. Method Statements and Risk assessments for the activity are signed by HSE Manger			
O. All employees completed excavation safety training.			
P. All employees received the Pre-task talk, Job Safety Task Instruction (JSTI/TSTI) prior starting the Work Daily? (Attached to this inspection record)			
II. EXCAVATING ACTIVITIES			
A. The employees are protected from loose rock and/or soil that could pose a hazard by falling and / or rolling into the excavation			
B. The employees standing away from vehicles being loaded or unloaded.			
C. The employees are prohibited from going under suspended loads.			
D. The excavated soils, Spoils, materials, and equipment are placed at a minimum 1.5 meter from the edge of excavation?			
E. Exposed underground utility lines supported			
F. Undermined surface structures supported or determined to be in safe condition			
G. Warning system used to remind equipment operators of excavation edge			
H. Earthmoving equipment operated safely away from excavations edge			
III. EXCAVATION ENTRY			
A. All excavations are provided with safe means of access/ egress			
B. Structure ramps designed and approved by competent person			
C. Potential hazardous atmospheres tested prior to entry			
D. The ladder(s) used in excavation extend at least one meter above the edge of excavation			
E. Rescue equipment provided where potential for hazardous atmospheres exists			

F. Ventilation used to control hazardous atmospheres and air tested frequently			
G. Precautions taken to prevent cave-in from water accumulation in excavation			
H. Protection provided from falling/rolling material from excavation face			
I. Precautions taken to prevent surface water from entering excavation			
J. Employees protected from cave-ins when entering or exiting the excavation			
K. The travel distance to means of egress no greater than 25 feet in excavations 4 feet depth?			
IV. EXISTING UTILITIES			
A. The Location of utilities properly marked.			
B. Prior to the use of equipment, underground utilities have been located by hand digging			
C. Underground utilities are protected, supported, or removed when excavation is open			
V. HAZARDOUS ATMOSPHERE			
A. Are there exposed sewer or natural gas lines in excavation? If answered is YES, then treat the Excavation as **Confined Space**			
B. Is excavation near a landfill area, or are hazardous substances being stored close to the excavation? If answered is YES, then treat the Excavation as **Confined Space**			
C. Only properly trained, equipped and competent persons should work near live cables , Utilize insulated barriers and screens around the live cables			
D. Potential hazardous atmospheres have been tested and found to be at safe levels			
E. Precautions have been taken to prevent cave-in from water accumulation in the excavation			
F. Precautions have been taken to protect employees from the accumulation of water			
G. Water removal equipment monitored by a competent person			
H. Surface water or runoff diverted or controlled to prevent accumulation in the excavation.			
I. Emergency Response Plan prepared for activities in hazardous atmosphere excavations (presence of live electrical cables, natural gas lines, sewer lines, etc).			
J. Inspections have been made after every rainstorm or other hazard-increasing occurrence.			
VI. SUPPORT SYSTEMS			
A. Protective systems used for excavations (1.5 m) or deeper, unless stable rock			
B. Materials and/or equipment for support systems selected based on soil analysis, trench depth, and expected loads.			
C. Materials and equipment used for protective systems inspected and in good condition.			
D. Materials and equipment not in good condition have been removed from service.			
E. Protective systems installed without exposing employees to the hazards of cave-ins, collapses, or threat of being struck by materials or equipment			
F. Members of support system securely fastened to prevent failure			
G. Support systems provided to ensure stability of adjacent structures, buildings, roadways, sidewalks, walls, etc.			
H. Removal of support systems progresses from the bottom and members are released slowly so you can note any indication of possible failure.			
I. Is the backfilling progress with removal of support system will be executed in safe manner?			
J. Excavation of material to a level no greater than two feet below the bottom of the support system and only if the system is designed to support the loads calculated for the full depth.			
K. Backfill certified clean when required by client or local regulation			

	Name	Date	Signature
Prepared by Site Supervisor			
Reviewed and approved by Site Engineer/In charge			
Checked by HSE Officer/ HSE Supervisor			

APPENDIX E – ANNEXURE 13

PROPOSED PERSONAL PROTECTIVE EQUIPMENT PROCEDURE (PP715-PPE)

Project Procedure

Personal Protective Equipment

Qatar General Electricity & Water Corporation (KAHRAMAA)

Tender No. 4857

Construction of Mega Reservoir PRPSs (Package A)

Doha -Qatar

			MGT	OwR	
0	Issued for Tender use	12-Jul-2014	M.Tanbour (MGT) HSE Coordinator	O.Reed (OR) HSE Manager	R.Davies (RD) HSE Group Director
Rev	**Description**	**Date**	**Prepared By**	**Checked By**	**Approved By**

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1. SCOPE

1.1. This procedure applies to all personnel employed on the project, including subcontractors and visitors to the project.

2. PURPOSE

2.1. This procedure has been developed to ensure that all site personnel on the project are provided with, and utilize appropriate Personal Protective Equipment (PPE), to protect themselves against work related hazards which may endanger their health and safety.

2.2. Personnel Protective Equipment and Respiratory Protective Equipment (PPE & RPE) are seen as the last defense in the prevention of risk exposure and should not be considered as a substitute for eliminating or controlling the risks at source.

3. REFERENCES

3.1. HSE Requirements as stipulated in Contract Documents.

3.2. All applicable Local Regulatory Authority requirements and regulations.

3.3. 29 CFR (Code of Federal Regulations) Part 1926 – Labor

4. DEFINITIONS AND ABBREVIATIONS

4.1. Definitions

4.1.1. CLIENT / COMPANY: Qatar General Electricity & Water Corporation (KAHRAMAA)

4.1.2. PROJECT: Construction of Mega Reservoir PRPSs (Package A)

4.2. Abbreviations

4.2.1. Contractor: Consolidated Contractors Group S.A.L. (Offshore)(CCC) Teyseer Contracting Company W.L.L. Joint Venture

4.2.2. MO: CONTRACTOR Managing Office

4.2.3. HSE: Health, Safety Environment & Security

5. RESPONSIBILITIES

5.1. The Project Manager / HSE Manager is responsible for ensuring that CONTRACTOR employees and all Subcontractors' employees are adhering to the requirements of this procedure.

5.2. The Project Manager is responsible for the effective communication and adherence to this procedure throughout the Project organization and shall

assign responsibility to the Project procurement department for ensuring that purchased equipment conforms to internationally accepted standards.

5.2.1. The HSE Manager has responsibility for developing this procedure and for ensuring its compliance and the following:

5.2.1.1. Monitoring the implementation of this procedure

5.2.1.2. Liaising with the procurement department in the purchasing of HSE equipment.

6. PROCEDURE

6.1. Instructions

6.1.1. General Requirements.

6.1.1.1. The risks posed in any particular work activity shall be assessed, and the adequate PPE selected in accordance with the following:

6.1.1.1.1. Gives protection against risk(s) without in itself leading to any increased exposure.

6.1.1.1.2. Suitability for the user

6.1.1.1.3. Compatibility to the work activity

6.1.1.1.4. Complies with a recognized national or International standard of design or construction.

6.1.2. All employees shall be provided with the necessary PPE for their particular work activity. PPE and the necessary training courses shall be given to the employee on the use and care for PPE.

6.1.3. All employees shall be held responsible for the proper care and use of any PPE supplied to them. The Project shall replace, free of charge to the employee, any PPE which becomes deficient and deflective in any way through normal work usage or wear and tear such that at all times the worker has adequate protection. Normal wear and tear shall include the period or effective use specified by the manufacturer and requirements of basic hygiene standards.

6.1.4. Supervisors shall be responsible for ensuring that all personnel on the project are trained in the use of, provided with, and wear all PPE required for the work activity. Personnel not properly equipped for their task shall not start or continue work.

6.1.5. All employees shall wear the appropriate PPE supplied to them at all times while working at their assigned tasks. Supervisors shall apply disciplinary action in accordance with the project procedure to any employee who fails to comply.

6.2. PPE Selection

6.2.1. PPE shall be selected and used to provide protection for all personnel and visitors on the project against:

6.2.1.1. Inhalation and respiratory tract hazards.

6.2.1.2. Skin contact hazards

6.2.1.3. Mechanical injury and hazards

6.2.1.4. Construction HSE hazards

6.2.1.5. Environmental hazards

6.2.1.6. Radiological hazards

6.2.2. PPE will be jointly selected by the Procurement and HSE Manager in order to reach the safety and cost-effective solution. Group (CONTRACTOR) HSE Departments will support the selection phases for PPE not available in the Country of the operation

6.3. Eye protection

6.3.1. It is a mandatory requirement that eye protection is worn within the construction areas (including fabrication yards). This eye protection shall conform international HSE standard. Clear or tinted safety glasses shall be designated by the HSE department.

6.3.2. Those individuals who wear prescription glasses shall comply by wearing prescription safety glasses with side shields or visitors glasses over prescription glasses.

6.3.3. A listing of hazardous tasks, and their corresponding eye protection equipment includes, but is not limited to the following:

Refer to PPE Matrix (attached)

TASK	EYE PROTECTION EQUIPMENT
Hitting steel upon steel	Safety glasses with side shields or monogoggles over prescription glasses
Grinding	Face shield with safety glasses for all grinding applications
Sandblasting	Air supplied sand blast hood
Power sawing	Monogoggles or side shield safety glasses
Laser exposure	Goggles with shaded lens depending on laser wave length
Abrasive cut-off sawing	Face shield with side shield safety glasses
Chipping	Face shield over side shield safety glasses
Gas cutting	Face shield, Welding goggles, #3 to #6 shade lens (UV Protection)
Electric arc welding	Welding helmet, #10 to #14 shade lens with hard hat combination (UV Protection)

Welder's helper	Side shield safety glasses or flash goggles with #5 shade lens (UV Protection)
Insulation spraying	Air supplied face mask
Concrete breaking or placing	Monogoggles/side shield safety glasses
Corrosive acids or alkaline	Chemical goggles and face shield
Machine wire brushing	Face shield over side shield safety glasses
Airborne objects in shop	Side shield safety glasses
Wind and other air turbulence	Monogoggles
Working with coiled wire, wire mesh rolls or banding materials	Side shield safety glasses or monogoggles
Chemical Areas	Green and white lines indicate chemical areas. Chemical monogoggles shall be worn with face shield.
Ceramic Fiber	Monogoggles
Live Areas	Nomex Coverall

6.3.4. These are minimum requirements. Alternate equipment must provide at least equal protection.

6.3.5. Employees working in close proximity to those tasks having potential exposure to eye injuries shall also be required to wear the appropriate eye protection.

6.3.6. Eye protection equipment must conform to the International Standards and Practice for Occupational and Educational Eye and Face Protection.

6.3.7. Contact lenses will not be worn on construction work sites. Contact lenses are not acceptable for site eye protection.

6.3.8. The establishment of a 100 percent eye protection (double protection: face shield and safety goggles) requirement shall be initiated for work areas where a significant number of eye injuries may occur where nailing, welding, chipping, sawing, and grinding operations are conducted. Signs shall be posted at appropriate locations, such as entrances, informing employees that they are entering an area requiring proper eye protection. All construction areas, shops and yards are considered eye protection areas requiring the minimum of safety glasses with side shield.

6.4. Head protection

6.4.1. The Project Management requires that hard hats be worn properly in all construction areas including roads, shops, and outlying work areas.

6.4.2. One hundred percent hardhat protection is required in fieldwork areas including roads, warehouses, and shops.

6.4.3. Hard hats are not required in offices and change shacks except when construction work is being performed.

6.4.4. In order to satisfy general requirements for heavy construction, hard hats must meet the international specifications Class A or B. Class A hats provide protection from high voltage.

6.4.5. Supplementary hardhat equipment includes winter liners, sweat bands, chin straps, and cloth caps. If a worker must work in an inverted position then chinstraps are required. Hearing protectors (ear plugs) can be used in conjunction with head protection (attached to the hard hat).

6.4.6. When using a face shield, welding hood or sandblasting hood, the type that combines with a hard hat shall be used unless an alternative is designated by the HSE Department.

6.4.7. Hard hats shall not be modified or painted.

6.4.8. Hard hats shall be adjusted to fit properly and be worn correctly. The hat shall be squared off straight and not cocked at an angle or perched on the back of the head.

6.4.9. Aluminum hats shall not be worn.

6.5. Hand Protection

6.5.1. Hand protection is essential to protect employees from sharp edges, burns, rough material, corrosive or infections substances, hot or cold items, electrical contacts, and generally when handling material.

6.5.2. Employees shall be required to wear proper hand protection for tasks which expose them to recognized potential hand injuries, such as handling rough and sharp edged materials, and shall be worn for protection against concrete, solvents, epoxies, creosote, acids, and other harmful chemicals.

6.5.3. Gloves shall not be worn when working within 6 inches. Of a powered cutting edge such as a grinder or a drill bit.

6.5.4. Gloves shall not be worn when working near rotating machinery.

6.5.5. Gloves having metal parts or reinforcements should never be used around electrical apparatus.

6.5.6. The care of gloves is important. Laundering of gloves removes contaminants, prolongs glove life, sanitizes, and permits reuse.

6.5.7. Worn or torn gloves and those with loose tie strings are not to be used.

6.5.8. Dielectric gloves shall be inspected before each use and shall be dielectrically tested and certified every six months.

6.5.9. Leaky neoprene or dielectric gloves shall be discarded.

6.5.10. Oily or greasy gloves constitute a potential fire hazard and shall be laundered or discarded.

6.5.11. Hand leathers or palm pads can be made heavier and less flexible and may be more satisfactory than gloves where protection from heat or extremely abrasive or splintery material is needed. Hand leathers are primarily for heavy materials and handling and should not be used around moving machinery.

6.6. Foot Protection

6.6.1. Various types of standard footwear protect against impact, puncture, compression forces, chemical and radiological contamination, electric shock, static spar, and flammable materials. Safety footwear shall comply with International Safety Standards.

6.6.2. Sneakers, tennis or sport shoes with safety caps, and canvas loafers are not acceptable as work shoes. Even though they may have safety toe caps, they have soft soles and are sport attire, not work shoes. These types of shoes subject the employee to puncture wounds and crushing type injuries more so than the conventional leather shoe and industrial sole.

6.7. Fall Protection

6.7.1. A full body harness shall be worn when there is a potential of a fall and no other fall protection is provided.

6.7.2. All employees and Subcontract personnel who are required to work on or inspection of items higher than 6 feet (1.8 meters) must wear and use a full body harness. Each employee and Subcontractor personnel shall be trained in their use. Where extensive time periods of high work is anticipated, or where considerable heights are encountered, supervision will be continuous.

6.7.3. Safety Belts are not considered to provide adequate protection to the individual; therefore, they are not acceptable for use.

6.7.4. Traveling at unguarded work locations shall involve the use of the full protection harnesses and lifeline. All lifelines (vertical and horizontal) are installed by designated rigging personnel using 3/8 or ½ inch wire rope or equivalent. All lifelines are properly installed using standard rigging practice/methods. Such lifelines are inspected daily by our rigging group and before use by the respective supervisor before use.

6.7.5. A competent engineer, superintendent or G/F, shall design the lifelines where vertical or horizontal lifelines are required, them. Each lifeline shall be able to support 5,400 lbs. as a minimum. Wire rope lifelines shall be 1/2" to 3/8" in diameter and certified accordingly by our competent person for rigging.

6.7.6. HSE Manager / his designee shall inspect all fall protection equipment on a routine basis. Where lifelines are used, they shall be erected by a qualified person and inspected on a daily basis.

6.7.7. The care and use shall be in accordance with the manufacturer's instructions. Users of all fall protection equipment shall inspect equipment before use. Defects or unsafe conditions will be reported to their supervisor immediately. Foremen will inspect equipment frequently and ensure workers are performing pre-use inspections.

6.7.8. All inspections shall be recorded and items certified safe for utilization.

6.8. Safety Harnesses

6.8.1. Full body harnesses are required for the following:

6.8.1.1. Any worker 1.82M (6 feet) above ground without the protection of a guardrail system, or a proper platform.

6.8.1.2. Confined space shall wear a full body harness and standard lanyard.

6.8.1.3. Working on elevated surfaces even where there is rail protection or guarded edges.

6.8.1.4. Within 6 ft of unprotected roof and platform edges.

6.8.1.5. On boatswain chairs and other suspended personnel platforms, boxes, and the like. Lanyards shall be tied off to an approved independent lifeline.

6.8.1.6. On elevated equipment such as fan housings, pipes, motors, and switch gear without handrails.

6.8.1.7. On a slope or roof without handrails and angle greater that 15 degrees to the horizontal.

6.8.1.8. On a ladder when the worker's waist is above a protective handrail on an upper level adjacent to the edge.

6.8.2. The safety harness shall be of the web type with a buckle fastening and a single D Ring in the middle of the back for most purposes, with a ½ in. Nylon lanyard 6 ft long. The lanyard shall be eye spliced into the D ring with a drop forged steel double locking snap hook on the other end.

6.8.3. Safety harnesses shall be worn comfortable snug and tied off overhead or at least above the waist.

6.8.4. The full body harness lanyard shall be tied off as a short as is practical but at least short enough to prevent a fall of more than 6 feet. Mechanical rope grabs shall be used to attach the full body harness lanyard to the lifeline where practical; otherwise the taut line hitch is to be used.

6.8.5. The user must inspect safety harnesses prior to each use.

6.8.6. The care of full body harnesses is extremely important. When stored, they shall be hung away from exposure to weather, fire and sparks, and corrosive chemicals.

6.8.7. When worn but not in use, the lanyard should be coiled or wrapped around the waist or over the shoulder to prevent tripping or snagging of the lanyard on protruding objects.

6.9. Safety Harness and Lanyard Testing and Inspection

6.9.1. Safety harnesses will be used only for the time recommended by the manufacturer. No harness (webbing) shall be used over a period of five (5) years under average wearing conditions. The lanyards used in a full body harness will decrease its strength about 5 to 6 percent each year under perfect conditions.

6.9.2. Lanyards shall be inspected for cuts, excessive wear, loose splices, and defective hardware.

7. ATTACHMENTS

1. PPE Matrix

P.P.E. To Be Reviewed For Each Scope Of Work By The HSE Manager And Supervisor

Personnel Protective Equipment Matrix

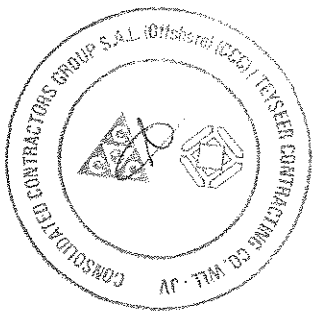
Task / Position	Safety Glasses with side shields	Face Shield	Hard Hat with chin strap	Welding Hood	Air Supply Hood	Safety Boots	Coverall	Working Gloves	Welding Gloves	Dust Mask	Chemical Mask	Winter Cloth	Ear Plugs	Chemical Goggles	Safety Goggles	Flotation Vest	SCBA	Welding Goggles	Ear Muffs	Half Face Respirator	Full Face Respirator	Medical Exam. Gloves	Leather Apron	Hall Top Leather	High Visibility Vest	Rubber Gloves	Chemical Gloves	Steelhoe boots Rubber	Full Body Harness
Hitting steel upon steel	■		■			■	■	■				■	■																
Grinding	■	■		■		■	■	■				■	■																
Sand blasting					■	■	■	■				■	■																
Power sawing	■	■	■			■	■	■		■		■																	
Laser exposure																													
Abrasive cut-off sawing	■	■	■			■	■	■				■	■																
Chipping	■	■	■			■	■	■		■		■	■																
Electric arc welding				■		■	■		■			■	■										■	■					
Welder's helper	■			■		■	■		■			■	■										■	■					
Insulation spraying					■	■	■	■				■	■																
Concrete breaking or placing	■		■			■	■	■				■	■		■														
Corrosive acids or alkaline		■				■	■				■			■													■		
Machine wire brushing	■		■			■	■	■		■		■	■																
Airborne objects in shop	■		■			■	■	■		■		■	■																
Wind and other air turbulence			■			■	■			■		■			■														
Working with coiled wire,wire mesh rolls or banding materials	■		■			■	■	■				■																	
Chemical areas		■	■		■	■	■	■			■	■		■													■		
Gas cutting				■		■	■		■									■					■	■					
Carpenter	■		■			■	■	■				■																	
Fabricator	■	■	■			■	■		■	■		■											■	■					
Steel fixer	■		■			■	■	■				■																	
Mason	■		■			■	■	■		■		■																	
Dozer Operator	■		■			■	■			■		■	■																
Excavator Operator	■		■			■	■			■		■	■																
Loader Operator	■		■			■	■			■		■	■																
Pipe fitter	■	■	■			■	■	■				■											■	■					
Plumber	■		■			■	■	■				■																	
Tyreman	■		■			■	■	■				■																	
Helper	■	■	■			■	■	■				■																	
Millwright	■		■			■	■					■																	
Steel Erector	■	■	■			■	■	■				■																	
Steel Fabricator	■	■	■			■	■	■	■			■																	
Pipe Line Mechanical	■		■			■	■	■				■																	
Electric assisstant	■		■			■	■					■																	
Electricion	■		■			■	■					■																	
Instrment technition	■		■			■	■					■																	
Ground Worker	■		■			■	■	■		■		■																■	
Laundry Attendent						■	■																					■	
Kitchen Worker						■	■			■																		■	
Driver	■		■			■	■																						
Rigger	■		■			■	■	■				■													■				
Banksman	■		■			■	■	■				■																	
Manual handler	■		■			■	■	■				■																	
Scaffolder	■		■			■	■	■				■																	
Scaffolder helper	■		■			■	■	■				■																	
Storeman	■		■			■	■					■																	
Mechanic	■		■			■	■	■				■																	
Painter	■		■			■	■	■				■																	
Doctor	■		■			■	■																						
Nurse	■		■			■	■																						
River Worker	■		■				■	■				■				■												■	

As Necessary By Noise Assessment

FOR EVERY ONE WORKING ABOVE 2 METERS(6 FEETS)

APPENDIX E – ANNEXURE 13

PROPOSED SCAFFOLDING SAFETY PROCEDURE (PP716-SSP)



Project Procedure

Scaffolding Safety

Qatar General Electricity & Water Corporation (KAHRAMAA)

Tender No. 4857

Construction of Mega Reservoir PRPSs (Package A)

Doha -Qatar

			MGT	OwR	
0	Issued for tender use	12Jul-2014	Mohammad G. Tanbour HSE Coordinator	O.Reed (OR) Group HSE Manager	R.Davies (RD) HSE Group Director
Rev	Description	Date	Prepared By	Checked By	Approved By

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1. SCOPE

This procedure shall apply to all aspects of scaffolding in use on the project. Including: Access scaffolding, falsework scaffolding, working platforms on formwork scaffolds and any other temporary framework structures on the project used to provide a temporary working platform, access route, shelter, protection, material storage area or any other such similar assembly.

This Procedure will apply to all CONTRACTOR and all of their subcontractors scaffolding operations.

2. PURPOSE

The purpose of this procedure is to set the minimum safety and quality standards for finished scaffolds, the materials used, the storage & maintenance of materials and the operational safe working practices for the provision of scaffolding; inclusive of the construction, modification and dismantling stages.

This procedure also addresses the actions of the scaffold users to ensure safe use of scaffolds.

3. REFERENCES

3.1. Project Specific HSE documentation:

3.1.1.1. HSE&S Requirements as stipulated in Contract Documents.

3.1.1.2. All applicable Local Regulatory Authority requirements and regulations

3.2. CONTRACTOR and International Scaffolding Documents & Codes of Practice:

3.2.1.1. CCC CM-CSQM-014 – Corporate Manual for Access Scaffolding

3.2.1.2. BS EN 12811-1 – Scaffolds – Performance requirements and general design

3.2.1.3. TG20:08 – Technical guidance on the use of BS EN 12811-1

3.2.1.4. BS 5973: 1993 – Cop - Access & Working scaffolds and special structures in Steel

3.2.1.5. 29 CFR (Code of Federal Regulations) Part 1926 – Labor

3.3. Material Quality standards:

3.3.1.1. BS EN 39: 2001 – Tube for use in Tube & Couplers type scaffolds

3.3.1.2. BS 2482: 2009 – Scaffold Boards

3.3.1.3. BS 1139 section 2.1 1991 inclusive of EN 74: 1988 – Couplers

3.3.1.4. BS 1139 section 2.2: 2009 – Couplers continued.

3.3.1.5. BS 2037 & EN 131 – Ladder Quality Standards

3.3.1.6. Manufacturers Documentation – Specific to System Type scaffolding materials

4. DEFINITIONS AND ABBREVIATIONS

4.1. Definitions

4.1.1.1. CLIENT / COMPANY: Qatar General Electricity & Water Corporation (KAHRAMAA)

4.1.1.2. PROJECT: Construction of Mega Reservoir PRPSs (Package A)

4.2. Abbreviations

4.2.1.1. Contractor: Consolidated Contractors Company and Teyseer Contracting Company Joint Venture

4.2.1.2. MO: CONTRACTOR Managing Office

4.2.1.3. HSE: Health, Safety Environment & Security

4.2.1.4. CS: CONTRACTOR Construction Support – Managing Office

5. RESPONSIBILITIES

5.1. Project Director / Project Manager:

5.1.1.1. Will be responsible for the overall implementation, and the projects compliance, with this procedure

5.2. Project Construction Manager:

5.2.1.1. Will ensure that this procedure is being implemented correctly and in full

5.2.1.2. Will be responsible for ensuring that sufficient, manpower, materials, meetings, support services and staff are made available to allow for the correct and proper implementation of this procedure

5.2.1.3. Will delegate a suitably competent 'scaffolding in charge' and supporting supervisory team to conduct the scaffolding operations on the project

5.2.1.4. Will ensure that the scaffolding team have hard copies of this procedure, CONTRACTOR Corporate Manual for Access Scaffolding, and the manufacturer's instructions for the use of each type of system scaffold in use on the Project, before any scaffolding work starts using the respective system type.

5.3. Project HSE Manager:

5.3.1.1. Will monitor the projects compliance with this procedure and report all non-compliances to the project Director / Manager so that corrective actions can be made

5.3.1.2. Will facilitate and manage the provision of all required HSE training regarding scaffolding safety that is applicable on the Project.

5.4. The Project 'Scaffolding in Charge':

5.4.1.1. The term 'Scaffolding in Charge' applies to the most senior member of the scaffolding team on the project irrespective of his given job title.

5.4.1.2. Shall have a comprehensive knowledge of the scaffolding standards applicable to scaffolding types in use on the project and will be responsible for the practical implementation of this procedure - in full compliance with the technical standards for the specific types of scaffolding materials in use

5.4.1.3. Will ensure that all scaffolds constructed are safe to use, fit for purpose and that the material type used in their construction is correct for the purpose of the scaffold.

5.4.1.4. Will ensure that all scaffolding safety procedures, including this document, are adhered to in full by the scaffolding team during all scaffolding operations on the project

5.4.1.5. Will liaise with the Construction Manager and all necessary third parties for designing any special scaffolds

5.4.1.6. Will ensure that materials are checked before use and are compliant with minimum standards

5.4.1.7. Shall implement and monitor the scaffold inspection system on the project.

5.4.1.8. Will delegate suitable numbers of competent scaffold inspectors, and provide adequate support to these inspectors, to enable the full and correct operation of the scaffold inspection system on the project.

5.4.1.9. Will advise the CONTRACTOR Construction Manager of any concerns he has

5.5. Site Supervision

5.5.1.1. Will ensure that all members of the scaffolding team under his jurisdiction operate in a safe and controlled manner and follow all HSE procedures, including this one, applicable on the project.

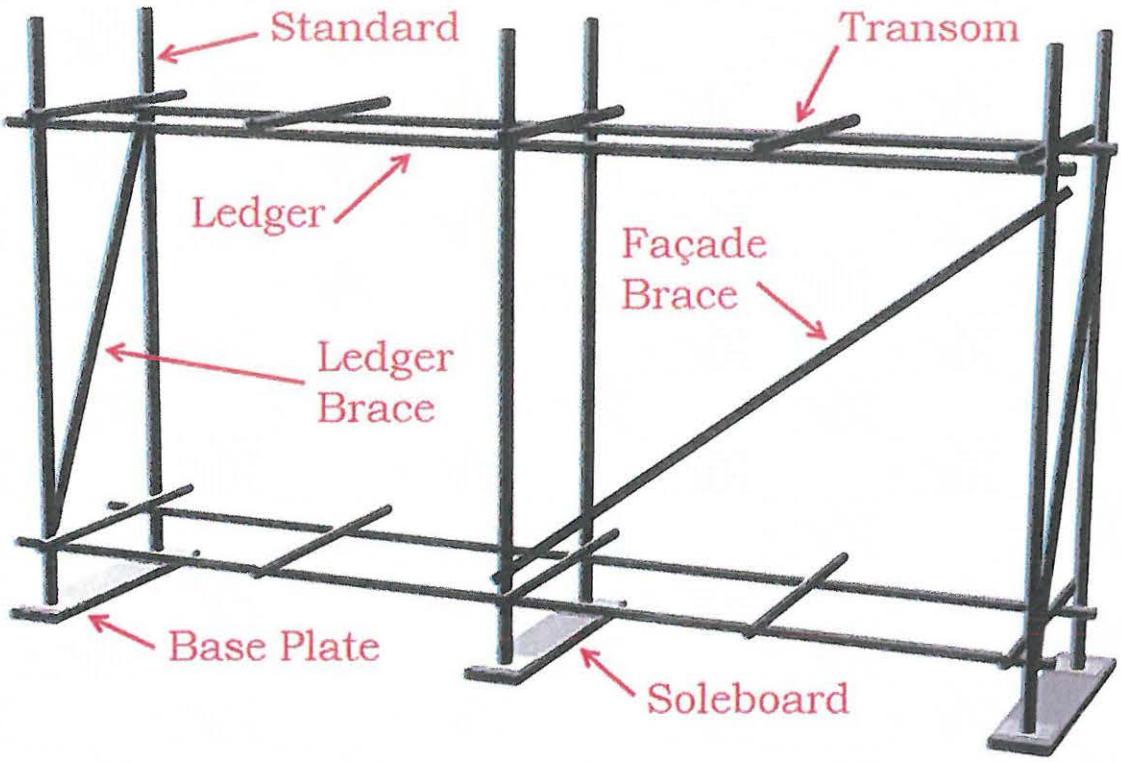
5.5.1.2. Will conduct Job Safety Analysis and a Job Safety Task Instruction for each scaffolding operation under his control.

5.6. Scaffolding Inspectors

5.6.1.1. Will ensure that all scaffolds, of all types, are inspected as required by the scaffold inspection procedure detailed in this procedure

5.7. Subcontractors

5.7.1.1. All Subcontractors shall be required to comply with this procedure.



6. PROCEDURE

6.1. DESIGN

6.1.1. Technical Construction Details

6.1.1.1. The Technical design quality of a scaffold is dependent upon the component system type from which it is constructed.

All scaffolds will adhere to the basic quality standards applicable to all scaffolding types, as contained in this procedure, and the following technical documents that deal with the specific scaffolding systems in use:

6.1.1.2. Tube & Coupler scaffolding:

CONTRACTOR CM-CSQM-014 – Access Scaffolding:

In compliance with:

6.1.1.2.1. BS EN 12811-1 – Scaffolds – Performance requirements and general design

6.1.1.2.2. TG20:08 – Technical guidance on the use of BS EN 12811-1

6.1.1.2.3. BS 5973: 1993 – Cop - Access & Working scaffolds and special structures in Steel

6.1.1.3. System scaffolding:

CCC CM-CSQM-014 – Access Scaffolding:

In compliance with:

6.1.1.3.1. Manufacturer's instructions, guidelines and recommendations specific to the system scaffolding in use

CCC CM-CSQM-014 and this 'Scaffolding Safety' document are fully compatible. Where there is any conflict between these documents and the manufacturer's instructions, guidelines or recommendations the most stringent standard will always apply.

6.1.2. System Selection

6.1.2.1. Each type of scaffold system in use on the project will be reviewed to confirm what types of scaffolding it is suitable to be used for. Only appropriate system types will be used for the type of scaffold required.

6.1.2.2. Where it is practical to do so; preference will always be given to erecting scaffolding from the ground upwards, as opposed to erecting hanging or cantilever type scaffolds.

6.1.2.3. Where practical to do so the design of the scaffold will provide for a working area at least 900mm wide. If the work area and access are in the same bay this minimum width should be increased to a minimum of 1,200mm.

6.1.3. Controlled Design

6.1.3.1. All scaffolds, no matter what type, will be constructed in such a manner that:

6.1.3.1.1. There will be no unnecessary protruding parts extending outward from the scaffold that could be accidentally caught during lifting operations or by any vehicles, plant or moving machinery.

6.1.3.1.2. All component parts of the scaffold will be secured against movement, including boards.

6.1.4. Scaffold to be lifted by Crane or alternative Mechanical means

6.1.4.1. Any scaffolds that are to be lifted, or moved in any fashion, by crane or any other alternate mechanical means must be designed specifically for that purpose.

6.1.4.2. A copy of the detailed design drawing showing the location of lifting points on the scaffold and the engineering calculations to prove that the lift is safe to a minimum safety factor of 4:1 will be provided for each individual scaffold.

6.1.4.3. A lifting plan will be provided for the operation detailing as a minimum: The design drawing number for the scaffold that is to be lifted, the lifting equipment to be used, the lifting points on the scaffold, the location and the sequence of the lift.

6.1.4.4. Personnel are forbidden from being present on the scaffold at any stage of such a lift.

6.1.5. Mixing of different scaffolding systems

6.1.5.1. Different scaffolding system types will not be mixed in any one individual scaffold with the following limited exception:

6.1.5.2. Tube & Coupler system may be mixed with system type scaffolding types providing there is compatibility in tubular strength and size. For example Cuplok, All-round and Kwikstage scaffolding, supplied by approved manufacturers, may be mixed with Tube & Coupler components.

6.1.5.3. Aluminium system scaffolds must never be mixed with any other system. Particular care must be taken if there is more than one type of Aluminium system on use on the project, if there is any reasonable possibility of similar looking components becoming confused with each other the project will clearly colour code each system to improve identification of system type.

6.2. MATERIALS

6.2.1. Quality Control – Project Stocks

6.2.1.1. All materials will be designed and manufactured for purpose, and as such will be supplied to the project complete with quality certification and test certification.

6.2.1.2. The project will maintain copies of the manufactures certificates of quality and test certification for all scaffolding materials on the project.

6.2.1.3. The quality of all materials, and accessories, will be compliant with CM-CSQM-014 Section 8.1. In essence this requires all materials to be compliant with current British and European standards, equivalent to, or manufactured to a higher standard.

6.2.1.4. The minimum quality standards for Tube & Coupler scaffolding materials are:

6.2.1.4.1. Tube: BS EN 39 / BS 1139 sections 1.1 & 1.2.

6.2.1.4.2. Couplers: BS 1139 section 2.1 & 2.2 & EN 74.

6.2.1.4.3. Boards: BS 2482: 2009

6.2.1.5. The minimum Quality standards for scaffolding ladders are:

6.2.1.5.1. Metal Ladders: BS 2037: 1994 & EN 131: 1993

6.2.1.5.2. Pole Ladders: BS 1129: 1990

6.2.1.6. Minimum Quality standards for System scaffolding are:

6.2.1.6.1. BS EN 12810 & 12811

6.2.1.7. Wooden and trestle type scaffolds will not be used.

6.2.2. Quality Control – On site

6.2.2.1. The use of any scaffolding materials for anything other than their designed purpose is forbidden.

6.2.2.2. All members of the scaffolding team will be trained to identify the Conforming (safe to use) and Non-conforming (sub-standard) materials of all types of scaffolding materials they are required to use on the project.

6.2.2.3. Non-conforming materials will not be used.

6.2.2.4. Conforming and Non-conforming materials will not be stored together.

6.2.2.5. A clearly defined quarantine area will be constructed, usually attached to the main scaffold storage facilities, for the storage of all non-conforming scaffolding materials. The area will be segregated by hard barriers and clearly sign-posted to inform all personnel that the materials in the quarantine area must not be used.

6.2.2.6. All scaffolding materials will be checked for conformity before each use by the scaffolding team on site. Non-conforming materials will not be used, will be removed immediately upon discovery from the common stock and will, as soon as is reasonably practicable be removed from site to be placed within the quarantine area.

6.2.2.7. All materials will be checked for conformity in the scaffold storage area before release to the site. Non-conforming materials will be placed in the quarantine area.

6.2.2.8. Boards will not be notched or nailed.

6.2.2.9. Wooden, or composite, parts of any scaffolding system, in particular boards and ladders, will not be painted or otherwise treated in any way that could conceal defects.

6.2.3. Quality Control – Preservation

6.2.3.1. Scaffolding Materials will be serviced and maintained as required to ensure their continued safe use.

6.2.3.2. The maintenance procedures in CM-CSQM-014 section 8.2 shall be followed for all general scaffolding materials.

6.2.3.3. The maintenance of system scaffolding components shall be carried out in accordance to CM-CSQM-014 section 8.2.2.7 and manufacturer's recommendations.

6.2.4. Safe Storage – Storage Yards

6.2.4.1. All Scaffolding Materials will be stored in safe and tidy and level manner, either in sturdy Scaffold Racks or in bundles or packs.

6.2.4.2. Bundles or packs must be stored on suitable packing; on firm level ground in a controlled manner without any risk of collapse.

6.2.4.3. Bundles or packs must be supported from the ground and separated by packing (or bites). Packing must be of uniform size and be suitably robust for the task. The clearance provided off of the ground and between bundles must not be less than 75mm.

6.2.4.4. Bundles and packs of materials must be tied a minimum of twice with suitably strong ties.

6.2.4.5. Materials will be stored separated by type and by length.

6.2.4.6. Suitable traffic controls will be in place to segregate operative personnel from vehicles used in the storage yard. Competent banksmen will be used to assist with the reversing of forklifts, and other vehicles.

6.2.4.7. All material types will be stored in compliance with CM-CSQM-014 section 8.3

6.2.5. Safe Storage – Onsite

6.2.5.1. All materials will be stored in a safe and neat manner with provision taken to ensure they do not create a trip hazard or obstacle.

6.2.5.2. Materials will not be stood unless they are secured against slipping and falling.

6.2.5.3. Materials will not block access routes, emergency escape routes, access to emergency and firefighting equipment or views to any site signage.

6.2.5.4. Where required hard barriers will be erected to ensure the segregation of the materials from the general workforce & third parties

6.2.5.5. Materials will not be stored close to excavations or traffic routes.

6.3. GENERAL SAFETY – Applicable to ALL Scaffold systems

6.3.1. Boarded Platforms

6.3.1.1. All boarded platforms will be close boarded without any unnecessary gaps.

6.3.1.2. Scaffold Boards will not be notched or nailed.

6.3.1.3. The Boards will be supported by correctly spaced transoms for the type of board used

6.3.1.4. Boards will be secured to prevent movement.

6.3.1.5. Boards used on any one lift will be of the same type and thickness.

6.3.1.6. Fleets of Boards will be uniform in length and be positioned such that the ends of the boards are in a neat and straight line.

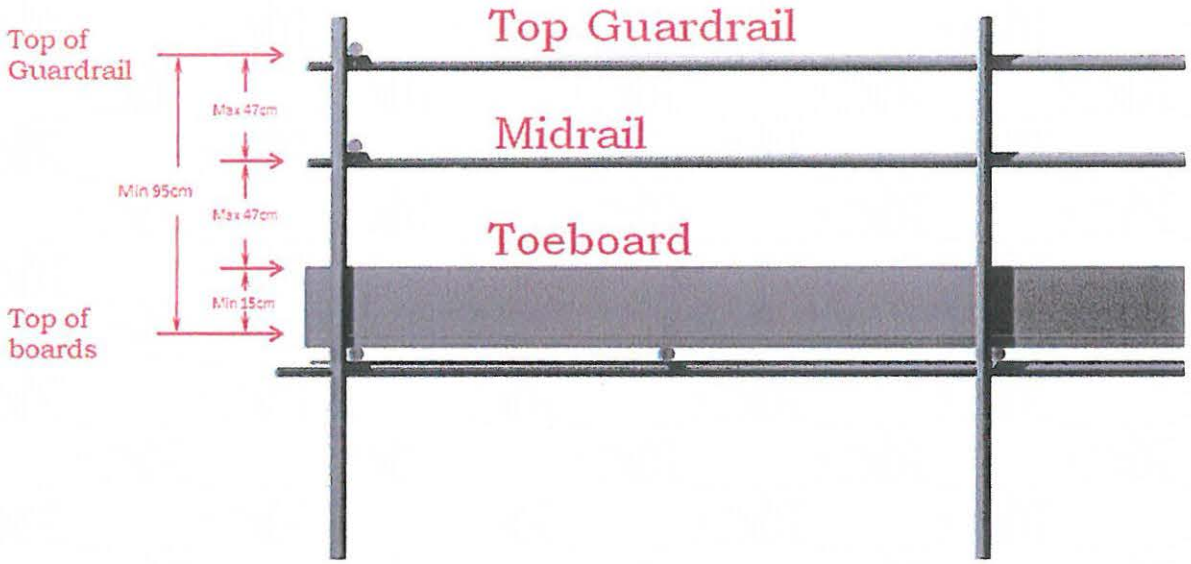
6.3.1.7. On scaffold returns and on radial scaffolds the overlapping of boards is permitted. However; in all other circumstances the overlapping of boards will be avoided. Where there is no other option than to use lapped boards they will be secured into place by means other than nailing.

6.3.1.8. Trap end boards are not acceptable in any circumstances, even outside of the working lift. The minimum overhang of a board over the end transom is 50mm. The maximum permitted overhang is 4 times the thickness of the board.

6.3.1.9. Transom types in any one given lift will be the same height so as to provide a smooth level decking surface.

6.3.1.10. Where softwood boards are used: Gaps of up to 30cm (300mm) in boarded platforms will be coved with plywood of a minimum thickness of 1.2cm (12mm). Suitable nails will be used to secure the plywood. The plywood will overlap the supporting boards by a minimum of 10cm (100mm) on each face.

6.3.2. Edge Protection



6.3.2.1. Edge protection on a scaffold will be provided where there is any risk of injury from falling.

6.3.2.2. The minimum edge protection where there is the potential to fall 1.8m or more will consist of a double guardrail and a toeboard.

6.3.2.3. The height of the top guardrail will be between 95cm (950mm) and 1.15cm (1,150mm) from the top of the working platform.

6.3.2.4. The Middle guardrail (Midrail) will be fitted between the top guardrail and the toeboard at such a height that there is no vertical gap greater than 47cm (470mm).

6.3.2.5. The maximum spacing allowed between standards supporting a handrail is 2.7m (2,700mm).

6.3.2.6. The edge protection must be fully installed without gaps, with the exception of access points which will be protected by the top guardrail only.

6.3.2.7. The minimum toeboard height will be 15cm (150mm).

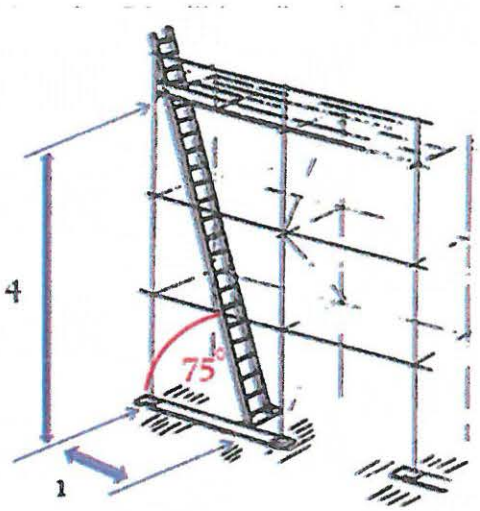
6.3.2.8. In certain circumstances the inclusion of a toeboard is impracticable. In these situations an additional third guardrail will be added to ensure that there is no vertical

unprotected gap of more than 47cm (470mm). Additional controls required for falling objects may need to be imposed.

6.3.2.9. Edge protection on the inside face of a scaffold (against the workface) will be erected to suitably control the fall of persons or materials where the gap between the scaffolding and the workface exceeds 15cm (150mm). The controls in place will be stated on the Risk assessment specific to the scaffolding.

6.3.3. Safe Access

6.3.3.1. The provisions contained within CM-CSQM· safe access, ladder safety, thoroughfares & selected bullet points from that procedure are g



6.3.3.1.1. Staircase access will be provided on major access routes and emergency accesses.

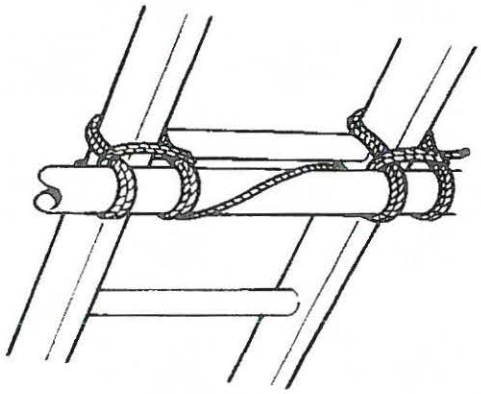
6.3.3.1.2. The access area will be separate from the working platform area.

6.3.3.1.3. Preference will be given to internal ladder access above external. External ladder access will not be used to platforms more than 6m from the ground.

6.3.3.1.4. All ladder access holes will be protected b

6.3.3.1.5. The access up and down all ladders will be open and clear for the user.

6.3.3.1.6. All ladders will be set from a suitable firm base at an angle of between 1 in 4 and 1 in 7 (75°-82°). The exception to this rule is mobile towers where the ladder will be set vertical.



6.3.3.1.7. All ladders will extend past the final working platform by a minimum of 1.05m, or suitable replacement handholds will be provided for the user.

6.3.3.1.8. The maximum distance between the ladder and the working platform is 30cm (300mm).

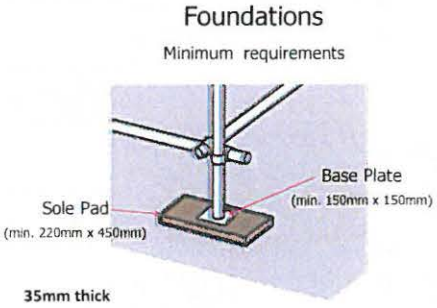
6.3.3.1.9. All ladders will be secured at least twice using square lashing or ladder clamps to prevent movement.

6.3.3.1.10. The user must not use makeshift hop-ups, add boards across handrails, stand on toeboards or use any such similar methods to extend their reach. If the scaffold is

unsuitable for the work the user must inform their supervision who can arrange with the scaffolding supervision for modifications to be made

6.3.4. Foundations

6.3.4.1. The provisions contained within CM-CSQM-01 foundations – selected bullet points are given belo



6.3.4.1.1. All standards will be supported at the base by a baseplate

6.3.4.1.2. Unless the scaffold is built from a solid concrete base all baseplates will be supported at the base by a suitable sized Sole Board or Sole Pad.

6.3.4.1.3. All foundations will be assessed for suitability before the scaffold is built.

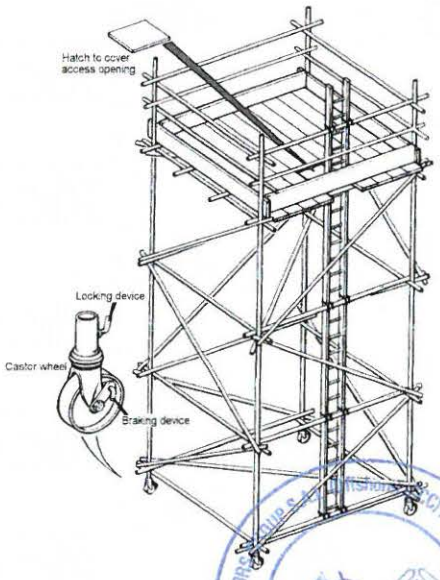
6.3.4.1.4. Scaffolds will not be erected within 2m of excavations without suitable control measures in place to prevent collapse.

6.3.5. Load Capacity

6.3.5.1. The load capacity for all scaffolds will be clearly shown on the scafftag at each access point to the scaffold.

6.3.5.2. Special duty scaffolds attached to existing scaffolds, such as loading bays, will be individually tagged to show their increased loading capacity.

6.3.6. Mobile Tower Scaffolds



6.3.6.1. Mobile towers may only be used on hard, flat and le

6.3.6.2. The tower is limited to a maximum 4 standards ar unless the tower is erected to the specifications of a d by a qualified scaffolding design engineer.

6.3.6.3. The working lift may not extend outside the star boards).

6.3.6.4. Mobile towers cannot be used for work where subs applied at the working lift height without being suital

6.3.6.5. Lifelines must never be secured in any way to mobil

6.3.6.6. The maximum loading for a mobile tower is 1.5 KN is erected to the specifications of a drawing and cal scaffolding design engineer.

6.3.6.7. The smallest permitted base dimension is 1.2m.

6.3.6.8. Bracing should be on all 4 sides and at every lift.

6.3.6.9. Plan bracing should be fixed to the bottom lift and to the underside of the top lift unless it can be shown by the manufacturer's instructions that they are not required.

6.3.6.10. The ladder should be fixed vertically and internal to the smallest width of the tower and should be supported under the base of the ladder stiles.

6.3.6.11. The access hole in the working platform should be protected by a single guardrail or a suitable trapdoor cover.

6.3.6.12. Maximum permitted lift height is:

- Internal of a building: 3½ times the smallest base dimension
- External of a building: 3 times the smallest base dimension

Note: Outriggers may be considered when calculating the smallest base dimension.

Note: Internal mobile towers that may become subject to wind loading should be considered as being external for the calculation of the maximum lift height.

6.3.6.13. Castors must be fixed to the bottoms of the standards such that they cannot accidentally come loose.

6.3.6.14. The mobile tower must never be moved with people or materials on it.

6.3.6.15. To reduce the risk of overturning when moving a mobile tower care should be taken to apply the force required as close as is reasonable practicable to the base of the tower, with due consideration to keeping a straight back. The supervisor should ensure that enough people are available for the task to prevent any injuries.

6.3.6.16. Before moving the mobile tower the route should be carefully checked to ensure that the surface is level and suitable for supporting the load and that there are no overhead obstructions.

6.3.6.17. Once in place all four wheels must be locked before use.

6.4. SAFE SYSTEMS of WORK

6.4.1. Before Starting Any Work

6.4.1.1. All scaffolding operations must be risk assessed prior to starting. The control measures dictated by the task specific Risk Assessment must be in place and understood by all members of the scaffolding team before work starts.

6.4.1.2. A Method Statement for the scaffolding operation will be in place and understood by the personnel involved in the work prior to work starting.

6.4.1.3. Before work starts a task specific Job Safety Analysis (JSA) and Job Safety Task Instruction (JSTI) will be carried out by the scaffolding supervisor with the scaffolding team. Work will not commence until any hazards raised by this JSA have been suitably controlled to make the work safe and properly communicated to the scaffolding team through a JSTI.

6.4.1.4. The scaffolding supervisor will ensure that all operations will be carried out in a controlled, systematic and safe manner that minimises the risk of injury or property damage. This requires practical planning and adequate instruction from Supervision at the workface. Every member of the scaffold team must be aware of their duties and

tasks, the duties and tasks of all other team members and the system of work that will be in place to safely carry out the work.

6.4.2. Authorization to Work with Scaffolding:

6.4.2.1. Only authorized competent scaffolders may erect, dismantle or alter scaffolding in any way. Scaffolding helpers are not considered competent for these tasks and must not carry such scaffolding activities, or use scaffolding tools on the work-site.

6.4.3. Suitable lighting

6.4.3.1. No scaffolding operations may be conducted without suitable and sufficient light, including access and egress lighting as required for the task.

6.4.4. Inclement Weather Conditions:

6.4.4.1. During periods of severe weather scaffolding operations may only be conducted if a risk assessment of the works has concluded that the area is safe to work in.

6.4.4.2. In particular; works that would require the operatives to work or climb on open steel or unboarded areas during rain, snow or high winds must be avoided.

6.4.4.3. Works on external scaffolding during periods of inclement weather where there is a risk of lightning strike are not allowed.

6.4.4.4. Under the Scaffold Inspection Procedures scaffolds must be checked after periods of server weather that may have affected their safe use. Rain alone is not considered to be severe weather.

6.4.5. Barriers and Segregated Work Areas:

6.4.5.1. Where there is any risk of site personnel or third parties entering the work area of ongoing scaffolding operations barriers will be put in place to segregate the area and prevent access to those people not directly involved in the task. Clear signs will be put in place to define the segregated area and measures will be taken to ensure that unauthorized personnel do not enter. If unauthorized people are found inside the area work should stop immediately and should not recommence until the area is once again clear.

6.4.6. Working above others

6.4.6.1. Scaffolding works will not be conducted above others without the provision of suitable protection to protect those below from falling objects.

6.4.7. P.P.E.:

6.4.7.1. The minimum Personal Protective Equipment (PPE) to be worn by members of the scaffolding team (Supervisors, Foremen, Inspectors, Chargehands, Scaffolders, Trainees and Helpers) at all times while on the worksite is:

6.4.7.1.1. Hardhat

6.4.7.1.2. Coveralls - with full sleeves rolled down

6.4.7.1.3. Safety footwear

6.4.7.1.4. Safety Glasses

6.4.7.1.5. Full body harness with double lanyard, shock absorber and 2 scaffold hooks

6.4.7.1.6. Gloves – While carrying out any work activities

6.4.7.2. All such PPE must be of the correct international standard, suitable for use and in good condition.

6.4.7.3. Where additional PPE is dictated by the Risk Assessment, Method Statement, Permit to Work or Project Procedures the wearing of such is mandatory.

6.4.8. Tools & Toolbelts

6.4.8.1. All working scaffolding operatives, including Chargehands, Scaffolders and Trainees will be issued with suitable quality tools and toolbelts with which to safely and efficiently carry out their works. Helpers will not be issued with tools or toolbelts and will not be allowed to erect, dismantle or modify scaffolding in any way.

6.4.9. Passing Materials

6.4.9.1. The passing or raising and lowering of materials must always be carried out in a safe and controlled manner, hand to hand, by use of a Gin Wheel & Rope or by suitable mechanical means.

6.4.9.2. Operatives passing materials from hand to hand must operate a clear system, understood by all team members, to confirm that the receiving man has taken control of the item that is being passed. This system can be verbal or involve a physical action, such as twisting the item; the important factor is that all operatives understand the system and that it is implemented in practice.

6.4.9.3. Couplers and small items will be raised or lowered in Fittings Bags or Buckets supplied specifically for the task. It is not acceptable to use makeshift bags or baskets for this task.

6.4.9.4. The throwing or dropping of materials is strictly forbidden.

6.4.9.5. Suitable numbers of scaffolders will be assigned to the work to reduce the manual handing risks and the potential for dropped objects.

6.4.9.6. Protection Scaffolds (Fans) will be erected to protect personnel from dropped objects where required.

6.4.9.7. Gin Wheels and Rope will only be used by trained personnel to the safety standards contained in CM-CSQM-014 attachment 10.

6.4.9.8. Gin Wheels and Ropes shall be visually inspected at the beginning of every work shift for any wear and tear and damages. Defective Gin Wheels and Ropes be removed from site and replaced.

6.4.10. Scaffolders climbing scaffolds:

6.4.10.1. Climbing the outside of the scaffold is not allowed. Use of a ladder is the preferred method for climbing up or down a scaffold during scaffolding operations. Where it is not possible to use a ladder or alternative means of safe access then the scaffolder may, while maintaining 100% tie off, climb the scaffold on the inside to reach the next place of work.

6.4.11. Overloading of scaffolds during Erect & Dismantle activities:

6.4.11.1. At no time during operations may scaffolds be overloaded for any reason. Components on lifts must be strictly controlled, quantities should be limited to the immediate work at hand with due regard to the need to minimise the risks of falling objects and trip hazards in the working area.

6.4.12. Housekeeping:

6.4.12.1. High quality housekeeping standards must be maintained at all times. This is applicable to all areas including on the finished, or part finished, scaffold. No scaffolding operation is considered to be complete until all loose materials have been cleared away and correctly stored at the end of the job. Loose materials on a working lift are not allowed.

6.4.13. Traffic Movements

6.4.13.1. Scaffolding operations that have the potential to come into contact with moving traffic will be tightly controlled. Scaffolds will be segregated from the flow of traffic by barriers that ARE NOT directly connected to the scaffold.

6.4.13.2. Consideration will be given at the design stage of all scaffolds to ensure that the movement of traffic is taken into account. This consideration includes the erecting and dismantling stages of the scaffolding where the use of barriers to segregate the work area may not be practically possible.

6.4.13.3. Where scaffold standards are in close proximity to traffic routes the use of luminescent markings or flashing warning lights will be considered in the risk assessment.

6.4.13.4. Where bridging, hanging or other types of scaffolding are erected above traffic routes the sections of the scaffold directly over the route will be clearly marked with signage stating the maximum height of a vehicle allowed to pass under the scaffold. In addition, where practicable, warning goal posts or dangling wooden blocks or tubes with hazard stripes shall be installed at a minimum clearance of 50cm from the overhead scaffold.

6.4.13.5. The Scaffold Supervision and Inspectors will be extra vigilant in monitoring any changes in the height of the road, for example from civil works, which would affect the maximum vehicle height allowed under the scaffold.

6.4.14. Power line Clearance

6.4.14.1. Before any works are carried out the work requirements found in the Project Procedure 'Work Under Power Lines' and all additional requirements as stipulated by the Local Authorities and the Project Contract Documents.

6.4.14.2. Additional care will be given to the handling of long tube and metal ladders which can easily encroach into the minimum safe distance if care is not taken. Where applicable the maximum length of the scaffolding components will be limited so as to reduce the potential hazard of encroaching on the minimum safe distance.

6.4.15. During Construction

6.4.15.1. Scaffolds being erected will be RED tagged as early as is reasonably practicable during their construction.

6.4.15.2. Scaffolders will always maintain a safe and controlled working area. Different types, and systems of scaffolding, will require slightly different practical approaches to achieving this but the core principles will always remain the same:

6.4.15.2.1. Lifts are erected one at a time and completed before moving onto the next lift.

6.4.15.2.2. Lifts are boarded out from within a safe working area, usually from below.

6.4.15.2.3. All boards, whether temporary or as part of a working lift, are supported by correctly spaced transoms. (Max. of 1.2m for normal 38mm thickness boards).

6.4.15.2.4. The minimum boarding provided for scaffolders to work from is a fully boarded lift with a maximum of a one board gap, and that gap can only be on the outside edges (not between two boards).

6.4.15.2.5. The scaffolder remains hooked on to the most suitable anchor point available at all times when outside of a safe working platform.

6.4.15.2.6. Ladders, or alternative safe means of access, are preferred to the climbing of the scaffold. Where there is no other option than to climb the scaffold it is done from the inside, not the outside.

6.4.15.2.7. So far as is reasonable practicable the top handrail is erected as early as possible and dismantled as late as possible during operations.

6.4.15.2.8. Single handrails are erected on non-boarded lifts and left in place to provide protection during the dismantle process.

6.4.15.3. Part erected scaffolds may be released for inspection and use providing that suitable hard barriers and signs are in place to show the scaffold user which section of the scaffold is safe and which is not.

6.4.16. During Modifications

6.4.16.1. A safe working area will always be maintained. (*See: 6.4.15.2 above*)

6.4.16.2. Scaffolds under modification will be RED tagged and may not be used until re-inspected

6.4.16.3. Modifications will be carried out in a step process that maintains the structural stability of the scaffold at all times:

6.4.16.3.1. The scaffolding in-charge will be directly responsible for all modifications. All modifications will be directly supervised. Major, or complex, modifications will be directly supervised by the scaffolding in-charge who will request design engineer assistance if required.

6.4.16.3.2. Replacement structural components, such as ties or bracing, will be added to the scaffold before the existing components are removed.

6.4.17. During Dismantle

6.4.17.1. A safe working area will always be maintained. (*See: 6.4.15.2 above*)

6.4.17.2. In essence: where possible, the dismantle process will follow the reverse step process of a safe erect process. The scaffold dismantle will be systematic, one full lift at a time and leaving the top guardrail until as late as possible in the process.

6.4.17.3. Ties and braces will remain in place until the correct stage of the dismantle; removing ties and braces early in the dismantle is prohibited.

6.4.17.4. Because it is common for scaffolds to be modified and adjusted during the scaffolds working life it is never safe to assume that a scaffold can automatically be dismantled in the exact reverse order of the erection process. The entire scaffold, in particular the ties and bracing, will be inspected prior to the dismantle starting. Any components that require replacement, or adding, will be added before the dismantle starts.

6.4.17.5. Scaffolds will be cleaned before dismantling.

6.4.17.6. Materials will be systematically passed down to the ground and safely stacked to avoid overloading the scaffold with materials.

6.4.17.7. Temporary protection scaffolds will be erected to protect workers on the ground from potential falling object during large dismantles if required by the applicable risk assessments.

6.5. SCAFFOLD USERS RESPONSIBILITIES

6.5.1. Check the Scafftag

6.5.1.1. The scaffold user must check the colour of the scafftag before using the scaffold. The user must only use a GREEN tagged scaffold. If there is no tag on the scaffold the user must not use the scaffold; they must contact their supervision.

6.5.2. Protection of the Scaffold

6.5.2.1. The user has the responsibility to protect the scaffold, and its components, from any damage that may be caused by their work (through their action or inaction). For example the use of fire blankets during hot works or the use of protective sheets during fireproofing, blasting, painting or spraying works.

6.5.3. Do Not Modify a Scaffolding

The Scaffold user is prohibited from altering, modifying or interfering with the scaffold in any way; this includes the removal of boards, handrails and toeboards. It is very important that ties are never altered or damaged in any way by the scaffold users.

6.5.4. Do Not Access a Red Tagged Scaffolding

6.5.4.1. The user is not allowed access onto a Red tagged Scaffold or any section of scaffolding that is marked as incomplete or 'Do Not Use'.

6.5.5. Do Not Overload the Scaffold

6.5.5.1. It is the responsibility of the user to ensure that the loading capacity, as detailed on the Scafftag, is not exceeded at any time. In particular the temporary storage of heavy materials should be avoided.

6.5.6. Do Not Make Temporary Extensions

6.5.6.1. The user must not use makeshift hop-ups, add boards across handrails, stand on toeboards or use any such similar methods to extend their reach. If the scaffold is unsuitable for the work the user must inform their supervision who can arrange with the scaffolding supervision for modifications to be made.

6.5.7. Do Not Apply Extra Heavy Loads

6.5.7.1. A load that the scaffold is not designed to support is strictly prohibited. This includes loads applied for lifting, pushing, pulling, supporting, holding down or any other action that produces a force on the scaffold other than that the scaffold is designed for. Where known loads are required to be supported, for example in rigging operations, a specific request should be made for a scaffold structure capable of supporting the intended load.

6.5.8. Do Not Under-mine the base of the scaffold

6.5.8.1. When using the scaffold, or operating near to the scaffold, the user must not conduct any operations that would undermine or weaken the foundations or supporting structures of the scaffold.

6.5.9. Do Not Misuse Scaffold Materials

6.5.9.1. The misuse of scaffolding materials by anyone who is not a member of the scaffolding team on the project is strictly forbidden.

6.5.10. Report Possible Unsafe Scaffolds.

6.5.10.1. If there is any reason to believe that the scaffold is unsafe the scaffold must not be used and the user must inform their supervision immediately.

6.5.11. Report Changes Made by the Users Works

6.5.11.1. The user must inform their supervision immediately if works on the scaffold cause hazards such as holes in the boarded lift or gaps in handrails. These hazards are commonly caused when items are repositioned in the work area or removed completely from it.

6.6. SCAFFOLD INSPECTION

6.6.1. Scaffold Inspection Procedure

6.6.1.1. All scaffolds on the project, with the exceptio to be tagged and will undergo regular inspecti they remain safe to use and fit for purpose. The

- Access scaffolds.
- Falsework scaffolds.
- Working platforms on formwork scaffolds.
- And any other temporary framework structu temporary working platform, access route, shel any other such similar assembly.

6.6.1.2. The scaffold inspector will be competent anc types that are in use on the project.

6.6.1.3. The scaffold inspector and the scaffolding supe

6.6.1.4. Scaffolds will be tagged with the following colors:

- RED: Signifies that the scaffold is NOT SAFE to use
- GREEN: Signifies that the scaffold is SAFE to use.

Scaffolds will never be yellow tagged (the yellow tag is only for use by the scaffolding inspector as a record keeping tool).

6.6.1.5. Scaffolds will be tagged at each access point to the scaffold. Hence; scaffolds with multiple access points will require multiple tags.

6.6.1.6. Weather-proof and durable tags shall be used. Information on the tag shall include:

- DATE the scaffold was built and VALIDITY DATE
- SAFE WORKING LOAD (SWL)
- Scaffold INSPECTOR's NAME, SIGNATURE and COMPANY NAME

6.6.1.7. Within a period not exceeding 7 days, the scaffold will be re-inspected by the Scaffold Inspector and the GREEN Tag is revalidated with a signature, date of re-inspection and/or validity date. Where a scaffold does not meet safety standards after

re-inspection the GREEN Tag will be removed, a prohibition notice placed at the access to inform personnel not to use and a RED Tag is placed on the scaffold.

6.6.1.8. Accurate records of all scaffold inspections will be retained with the project Scaffolding In-Charge for all tagged scaffolds. These records will be updated by the scaffolding inspector on the same day that the inspection was carried out.

6.6.1.9. A copy of the latest updated scaffold inspections record will also be kept with the Project HSE Department.

6.6.1.10. The scaffold inspector will climb every ladder and walk every platform of the scaffold during his inspection of the scaffold.

6.6.1.11. Only the scaffold inspector may GREEN tag the scaffold as safe to use. The Scaffolding supervisor may not.

6.6.1.12. All scaffolds will be inspected:

6.6.1.12.1. Before the scaffold is first used

6.6.1.12.2. After any modifications, repairs or structural changes to the scaffold

6.6.1.12.3. After any severe weather that may have affected the quality of the scaffold

6.6.1.12.4. At a minimum period of once every seven days

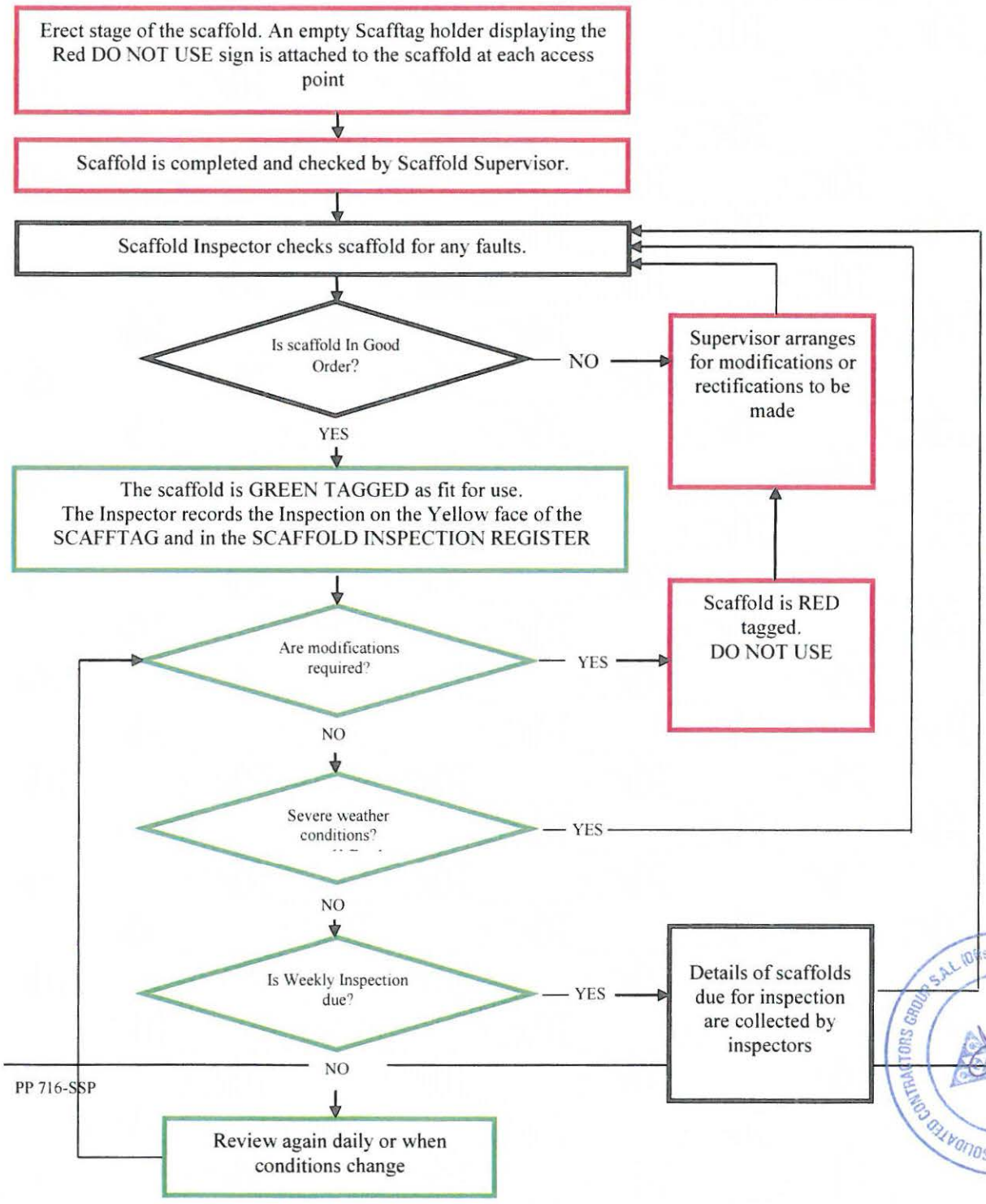
6.6.1.13. CM-CSQM-014 section 7.5 gives the complete details of the system that will be utilised on the project.

6.6.1.14. Attachment 7.1 provides a flowchart for the scaffold inspection to be used on the project

7. ATTACHMENTS

7.1. Attachment 001: Scaffold Inspection System Flowchart

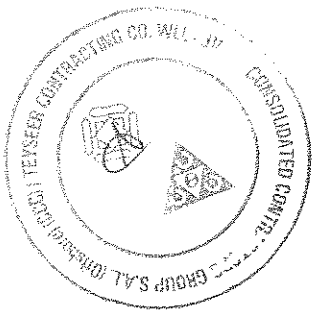
Attachment 001: Scaffold Inspection System Flowchart



SECTION 19: APPENDIX K
DEPARTURE FROM OR QUALIFICATION TO THE SPECIFICATION

APPENDIX K

DEPARTURE FROM OR QUALIFICATION TO THE SPECIFICATIONS



APPENDIX – K
DEPARTURE FROM OR QUALIFICATION TO THE SPECIFICATIONS

The Tenderer shall furnish the information required by the following schedule along with the Technical Part of the offer. The schedule shall not contain any information regarding prices.

Any deviation from the requirements of the Tender Specifications shall be specifically listed in the schedule enclosed herein. By this schedule the Tenderer confirms that the Tender fully complies with the requirements of the Tender Documents except for the deviations listed.

If the Tenderer wishes to submit alternative technical proposals, it must be submitted as an alternative tender. The Tenderer shall also complete and submit the schedule "departures from or qualifications to the specification requirements" stating clearly the reasons for proposing such departures or qualifications. If the Tenderer fails to provide the subject form, the technical offer, as provided, shall be deemed to be fully compliant in accordance with the Tender requirements. No deviations, except those specified in the subject form and accepted by KAHRAMAA during Technical Evaluation, shall be allowed in the case of Contract award.

The Tenderer is obliged to provide a list of deviations, if any, ONLY in the subject form, duly signed and stamped by the Tenderer's authorized representative and in the name of the Tenderer. Deviations specified in any other form, manufacturer's notes and comments shall not be considered.

For each of the deviations listed, the Tenderer shall provide the following information:

1) Precise reference to the corresponding Tender requirements;
2) Description of deviation clearly stating the reasons for proposing such deviation.

The subject form shall be submitted with the alternative technical proposal, and shall not contain any information regarding prices. Forms shall be provided in hard copy and soft copy as editable Ms Excel documents, version 97-2007 (or 2003). If there is a cost impact related to the Deviation then the Tenderer shall state in the alternative technical proposal the change as a +/- percentage of the cost impact without stating the amount. Deviations specified shall be priced in Appendix B and shall be submitted only within the commercial offer. Commercial Deviations related to alternative proposals shall be submitted separately with the original bid and shall be marked as an alternative bid.

DEPARTURE FROM OR QUALIFICATION TO THE SPECIFICATION

Clause	Description of Departure
	- Our offer is based on "having a stream of water through the pipes for cleaning and testing the reservoirs. Hauling water by tankers is not feasible thus has not been allowed for in our bid". - Our offer is based on a power connection fee (the rate is shown in the copy of Appendix K enclosed in the Commercial Offer). We were unable to get a solid feedback from Kahramaa in this regard, despite our several trials. (The Tenderer confirms that there are no other deviations from the requirements contained in the Tender Documents, but for those stated above)

Note: if the above is insufficient the Tenderer shall complete the schedule by affixing loose sheets of paper.