

OSH Particular Specifications

1. General

The Contractor shall ensure as a priority in all activities connected with the Works, the safety and health of all persons on or adjacent to the company premises or project site.

The Contractor shall provide and employ on the company premises or project site only such personnel who have received adequate training including safety and health training relevant to their tasks and adopt safe working practices at all times and shall ensure his sub-contractors comply with this requirement.

The Contractor shall not allow any person to work on the company premises or project site who has repeatedly breached safety requirements.

2. Safety Plan

The Contractor shall prepare and submit to the Project Manager/Contractor Management Personnel adequate copies of the Safety Plan.

The Safety Plan shall be prepared in accordance with the provisions as stipulated in the Code of Practice on Safety Management Regulations issued by the Labour Department regarding the 14 key elements of a safety management system.

3. Safety Organisation

The Contractor shall provide to the Project Manager/Contractor Management personnel at regular intervals (as agreed between Contractor Representative and Project Manager/Contractor Management personnel) an updated safety organization chart containing a complete list of all direct employee, sub-contractors working on the company premises or project site and the name of the Project Safety Supervisor representing the Contractor and those representing each such sub-contractor, insofar as the employment of a Safety Supervisor is expressly set out in the Contract or in the absence of such requirement then by any enactment or statutory requirement. The list shall also include the names of the Safety Officer and Safety Supervisors, and the names of Safety Representatives. Contact phone numbers of these safety staff shall also be shown on the chart.

4. Safety Representatives

The Contractor shall appoint a foreman or ganger of each labour group or team working in the company premises or project site to act as Safety Representative. The Safety Representative shall be responsible for ensuring

that the directives from the Contractor, the Safety Officer or Safety Supervisor on safety and health matters are duly carried out, safety practices are adopted and personal protective equipment are used by the work force at all times in the company premises and project site.

5. **Risk Assessment**

The Contractor shall carry out, review and submit to the Project Manager/Contractor Management personnel risk assessments for works scheduled to start at least for the next Calendar Week. All risk assessments shall be compiled in accordance with the PCCW Safe Working Procedures [G-SWP-019] Hazard Identification & Risk Assessment Guideline.

The Safety Officer or appropriate Contractor personnel that formally appointed by the Contractor shall endorse the results of such risk assessments and relevant documentations. In addition, the risk assessment results shall be incorporated into the Safety Plan or relevant Method Statements. In addition, the Contractor shall also maintain an updated register of all risk assessments carried out, and update the relevant safety checklist based on the safety measures recommended in each new risk assessment.

6. **Safety Training**

The Contractor shall regularly review the training needs of all persons employed on the Works or in connection with the Contract and prepare a Safety Training Plan. During each Project/Progress Review Meeting, the Contractor shall submit a proposed training programme to be provided in the next month for the Project Manager/Contractor Management personnel's approval. It shall contain the topics, dates, venues and target participants of the proposed training the names and qualifications of the trainers.

All persons carrying out construction work including general workers, skilled workers, foremen, gangers, drivers and plant operators, who are employed on the Works or in connection with the Contract whether in the employ of the Contractor or his sub-contractors must have completed the mandatory basic safety training course for the construction industry under the Factories and Industrial Undertakings (Amendment) Ordinance 1999 and hold the relevant valid certificate [namely, Construction Green Card].

All persons employed on the Works or in connection with the Contract whether in the employ of the Contractor or his sub-contractors shall receive "Site Specific Induction Training". Site Specific Induction Training and its refresher shall take the form of an one-hour talk conducted by the Safety Officer.

7. **Project or Term Contractor's Safety Committee**

The Contractor shall establish their Project or Term Contractors' Safety Committee, which shall be responsible for ensuring the implementation of the Safety Plan, reviewing and monitoring the effectiveness of the safety and health measures taken and seeking the co-operation and commitment of staff at all levels.

The Project Manager or Contractor Management personnel shall be made as Standing Member of all Projects' or Term Contractors' Safety Committee and holds the right to participate in any of such Committee Meetings.

8. **Safety Inspection Programme**

The Contractor should establish Safety Inspection Programme to be conducted by the Contractor's Safety Officer, Safety Supervisor or his delegate. The Project Manager/Contractor Management personnel preserve the right to participate in all inspections.

The Contractor shall prepare and agree with the Project Manager/Contractor Management personnel a comprehensive checklist for use during site inspections. It shall contain a table listing out the deficiencies identified during the inspection with the proposed rectification measures, the names of the persons responsible for taking any necessary rectification measures and the corresponding completion dates. Inspection report shall be submitted to Project Manager/Contractor Management personnel upon request.

9. **Sub-Contractors**

The Contractor shall provide each sub-contractor with sets of site rules and regulations, safe working procedures and safety obligations to ensure compliance.

The Contractor shall, for contracts where more than two contractors are working in close proximity, establish a safety coordination system to liaise amongst the sub-contractors and to maintain a safe working environment.

10. **Reporting**

The Contractor shall submit a monthly report for consideration at the regular Project Progress/Contractor Management Meeting with a format formally agreed with the Project Manager/Contractor Management personnel.

11. **Accident / Incident Investigation**

The Project Manager or Contractor Management personnel have the right



to participate in the investigation of any work-related accident or incident. The Contractor shall submit detailed accident / incident investigation report as required by the Project Manager or Contractor Management personnel.

1. PURPOSE

The purpose of this Procedure is to describe how hazard identification and risk assessment processes on all PCCW business activities are being carried out to in order to establish an operational risk profile for the design and enhancement of the overall OSH management system

2. SCOPE

This Procedure shall apply to all Company business activities with potential occupational safety and health hazards that may endanger direct employees, contractors' workers and any associated third party personnel within the company premises or project operating construction sites.

3. REFERENCES

Safety Review Report for PCCW Limited, Occupational Safety & Health Council (January 2005)

4. DEFINITIONS AND ABBREVIATIONS

Consequence

is the outcome of an event or situation expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain.

Hazard

is an exposure to an actual or potential cause of loss which can be a substance, part of machine, form of energy, job method or physical conditions.

Frequency

is a measure of likelihood expressed as the number of occurrences of an event in a given time.

Likelihood

is used as a qualitative description of probability and frequency.

Loss

includes death, injury, ill-health, damage to property, loss of production, environmental pollution, or any combination of these.

Risk

is a measure of likelihood that the harm from a particular hazard will occur, taking into account the possible severity of the harm.

Risk Assessment

is the process used to determine risk management priorities by evaluating and comparing the level of risk against regulations and standards.

5. RESPONSIBILITIES

It is the responsibility of the OSH Unit to maintain this Procedure.

It is the responsibility of Unit Head who is responsible for any business activity which may give rise to potential occupational safety and health hazards to implement this Procedure.

6. PROCEDURE [Personnel Action Approach]

6.1 The OSH Unit

- 6.1.1 To maintain an update version of the Preliminary Hazard Summaries for the Corporate Functions, Cascade and Unihub operations based on the Safety Review Report compiled by the Occupational Safety & Health Council at January 2005.
- 6.1.2 Upon discovery of new operational activities through various safety committees, the OSH Unit shall prepare a draft of the Preliminary Hazards Summary for the newly discovered activity by following the guidance as stipulated in Appendix A for this Procedure. The OSH Unit shall present the draft Preliminary Hazards Summary for the comments and approval by the respective safety management committee of the PCCW Corporate or major Business Unit.
- 6.1.3 The approved Preliminary Hazards Summary shall be uploaded onto the OSH web page in the PCCW Intranet.

- 6.2 Unit Head
 - 6.2.1 To develop the Process Hazards Summary by extracting the relevant sections of the Preliminary Hazards Summary based on the Safety Review Report for PCCW Limited compiled by the Occupational Safety & Health Council on January 2005.
 - 6.2.2 To incorporate any update for Preliminary Hazards Summary compiled by the OSH Unit through the PCCW Intranet that is relevant to their daily business activities into their Process Hazards Summary.
 - 6.2.3 To notify the respective Safety Committee any new business activities that have not been covered in both the Preliminary Hazards Summary or Process Hazards Summary.

7. RECORDS

Preliminary Hazards Summary Register

Process Hazards Summary Register

8. EXHIBITS

Nil

9. AMENDMENT HISTORY

Version	Date	Reviewed By	Remarks
1.1	1 July 2006	Calvin Chan	1 st release

10. APPENDIX

PRELIMINARY HAZARD ANALYSIS

Purpose

The preliminary hazard analysis (PHA) is prepared at the early design phase of safety management system. It covers the identifying hazards, analyzing identified hazards, determining the level of risk after the controls are applied, and recommending hazard controls.

Terminology of Hazard Identification and Risk Assessment

Consequence is the outcome of an event or situation expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain.

Hazard is an exposure to an actual or potential cause of loss which can be a substance, part of machine, form of energy, job method or physical conditions.

Frequency is a measure of likelihood expressed as the number of occurrences of an event in a given time.

Likelihood is used as a qualitative description of probability and frequency.

Loss includes death, injury, ill-health, damage to property, loss of production, environmental pollution, or any combination of these.

Risk is a measure of likelihood that the harm from a particular hazard will occur, taking into account the possible severity of the harm.

Risk Assessment is the process used to determine risk management priorities by evaluating and comparing the level of risk against regulations and standards.

The Classification of Work

The possible sources of hazards in workplace are classified into 5 categories for assessment, and they are:

- Activity
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- Plant and Equipment
- Materials / Substances
- People
- Overall Workplace Layout and Environment

The Assessment Process

The assessment process adopted involved the following stages:

- (a) Identify the intrinsic hazards involved in the relevant activities, plant and equipment, substances and fixed installations.
- (b) Evaluate the uncontrolled hazard
- (c) Identify those who may be exposed to the hazards.
- (d) Analyze the causes and effects of the risks.
- (e) Validate the existing control measures to ascertain any residual hazards.
- (f) Quantify the risks to facilitate management decisions.
- (g) Recommend appropriate control measures and suggest further specific assessments if required.

In accordance with the Factories and Industrial Undertakings (Safety Management) Regulation, recording the “significant findings” of hazard identification and risk assessment is required. In order to facilitate the demonstration of compliance to such statutory requirements, a Preliminary Hazard Analysis Form (Appendix A) is used to document the above-mentioned process in a simple and consistent style so that all assessments could be compiled easily.

Stages of Hazard Identification and Risk Assessment Process

(a) Identify hazards

The major areas to be assessed had been identified at the preliminary discussion with management during the familiarization and pre-assessment visit. Detailed information on the use of plants / equipment, materials / substances and activities involved were collected during the on-site assessments through interviews with the

knowledgeable staff, observation on demonstrations of normal work activities by typical staff and on-site inspection.

On the hazard identification and risk assessment record form, the column headed **Hazard** records all the possible intrinsic hazards identified with a particular activity. The hazards listed may be repeated if the next activity contained similar hazards. As assessment to the severity of the most probable consequences of the hazards, a hazard severity rating (HSR) is entered under the column headed HSR according to Table 1.

TABLE 1. QUALITATIVE MEASURES OF CONSEQUENCE OR IMPACT

Level	Descriptor	Description		
		Multiple casualties	Single casualty	Ill-health
1	Insignificant	_____	First-aid Treatment (no lost time)	_____
2	Minor	first-aid treatment (no lost time)	Injury with lost Time no more than 3 day leave	Temporary Ill-health
3	Moderate	Injury with lost Time no more than 3 day leave	Injury with lost Time up to 14 days	Permanent Ill-health
4	Major	Injury with lost Time up to 14 days	Injury with lost Time more than 14 days or death	Permanent Ill-health that may lead to death
5	Catastrophic	Injury with lost Time more than 14 days or death	_____	_____

(b) Ascertain residual hazards

The existing control measures to the hazards identified are validated in line with the basic principles of hazard control, which are:

- Elimination hazard at source / Cease activity.
 - Reduce hazard at source / Substitution.
 - Contain hazard by enclosure / Isolate hazard
 - Remove person from hazard / Separate by space
 - Reduce employee exposure / Separate by time
 - Use personal protective equipment / Isolate employee
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Other than the control measures of elimination and reduction of hazard at sources, the residual hazards remain more or less the same as the intrinsic hazards. It is because most of the existing control measures are aimed at loss prevention, which focused on reducing the probability of loss.

(c) Identify persons at risk

From the on-site observations and the demonstrations of work activities, people likely to be exposed to the hazards are identified. In most cases, staff involved in the activities is affected. Sometimes, colleagues, customers, visitors and even other people in the areas can also be affected. The findings are listed under the column headed **People at Risk**.

(d) Analyze the causes and effects

The causes and effects of the hazards are analyzed. They are qualitative descriptions on the cause of hazard and the consequence if the residual hazards are not controlled. Results of the analysis are put under the columns headed **Causes** and **Effects** respectively.

(e) Quantify the risks

Quantifying the risks will give an idea of the scale of the risk. It also provides a ranking of the hazards to enable management decision upon the priorities. The assessment of a risk involves the rating of two factors, namely the severity of the hazard and the probability of occurrence of harm from the hazard.

A scale of five has been assigned for Hazard Severity Rating (HSR) and four for the Probability of Occurrence Rating (POR). The POR is given in the following definition:

TABLE 2. POSSIBILITY OF OCCURRENCE RATING [POR]

POR	Description
H	High probability of hazard causing harm / probable
M	Medium probability / reasonably probable

L	Low probability / remote
N	Nil / impossible / extremely remote

The risks are evaluated by compounding the HSR and POR. To avoid loss of useful information, alphanumeric codes are adopted as risk assessment codes (RAC) instead of direct multiplication of figures. For the purposes of risk evaluation, the following HSR / POR matrix table is used to give a guide of the size of the residual risk in form of RAC.

Risk Assessment Code (RAC) = Severity x Probability

TABLE 3. HSR/POR MATRIX

Severity	Likelihood			
	H	M	L	N
5	Unacceptable	Unacceptable	High	Significant
4	Unacceptable	High	Significant	Low
3	High	High	Significant	Low
2	High	Significant	Low	Negligible
1	Significant	Low	Negligible	Negligible

LEGEND:

Unacceptable Risk	– Detailed research and management planning at senior levels are required
High Risk	– Senior management attention is needed
Significant Risk	– Management responsibilities must be specified.
Low Risk	– Manage by routine procedures
Negligible	– Acceptable with review

From HSR / POR matrix, the risks are categorized as follows:

Unacceptable Risk	– 5H, 5M and 4H
High Risk	– 5L, 4M, 3H, 3M and 2H
Significant Risk	– 5N, 4L, 3L, 2M and 1H
Low Risk	– 4N, 3N, 2L and 1M



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Negligible	– 2N, 1L and 1N
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(f) Recommend control measures

Having categorized the risks in order of significance, each risk is considered in detail amongst members of the assessment team. Bearing in mind that risk assessment is a process upon which management decisions on control measures are based. Risk assessment should be concerned with the adequacy of control measures and not just an accurate assessment of risk. The recommended control measures are given in the record form.

Instructions

“Hazardous Event” Column: A description of the hazards and/or undesired or unacceptable occurrences.

“Causal Factors” Column: A description of why or how the hazard may result in a mishap.

“Effects” Column: A description of each significant hazard that addresses how many people could be affected, how much is known about the hazard, how the community or environment could be affected, and how the system or subsystems could be affected.

“RAC” Column: The risk assessment code assigned to each uncontrolled hazard or undesired or unacceptable occurrence.

“Controlled RAC” Column: The risk assessment code under the existing controls.

“Recommended Actions” Column: Describe the actions recommended to further control the hazard

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3 Example A Preliminary Hazard Analysis of Stores & Logistics of PCCW Ltd at -1/F to 4/F of 298 Kwai Shing Circuit

#	Activity/Plant & Equipment	Hazard	Causes	Effects	People at risk	RAC	Existing Control	Residual Hazard	Controlled RAC	Assessment	Recommendations
1	Storage of goods at mezzanine floor at 4/F	Falling objects hitting people underneath <i>(see photo 1 & 2)</i>	Racks without fencing	Bodily injury of people	People around	4M	Not evident	Falling objects hitting people	4M	High	1. Installation of fence at sides of racks
		Falling objects hitting people underneath <i>(see photo 3)</i>	Fencing without toe board	Bodily injury of people	People around	4M	Not evident	Falling objects hitting people	4M	High	1. Installation of toe board and net fence
		Falling of people from mezzanine floor	Leaning on unlocked access door	Bodily injury of people	People on mezzanine floor	4L	Not evident	Falling of people from mezzanine floor	4L	Significant	1. Display of warning notice of keeping the access door closed and locked after use and not leaning on it
		Collapse of metal cockloft	Overload	Bodily injury of people	People around	5L	Not evident	Collapse of metal cockloft	5L	High	2. Confirmation of the loading capacity of the metal cockloft 3. Establishment of arrangement to monitor the loading on the metal cockloft



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		People striking against ventilation duct	Insufficient headroom under ventilation duct <i>(see photo 4)</i>	Bodily injury of people	People around	2M	Not evident	People striking against beams	2M	Significant	1. Display of 'Mind Your Head' signage
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