



MEMO

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WBTC No. 32/99
Independent Safety Audit Scheme for
Mega Capital Works Contracts or
Capital Works Contracts Involving Unconventional
Construction Method

The purpose of this memo is to promulgate an updated Independent Safety Audit Scheme (ISAS) applicable to mega capital works contracts (i.e. estimated contract sums exceeding \$1,000 million) or capital works contracts involving unconventional construction method.

Background

2. The ISAS was first promulgated in 1996 by stages. After completion of the Second Stage of the ISAS promulgated via WBTC No. 32/99, further stages of the ISAS were not pursued under public works in view of the commencement of operation of the safety management system under the Factories and Industrial Undertakings (Safety Management) Regulation (Cap 59AF) in April 2002.

3. Notwithstanding the discontinuation of the ISAS in public works contracts, the circular (WBTC No. 32/99) is still in force as the Panel of Enquiry established under ETWB TC(W) No. 2/2003 (now superseded by DEVB TC(W) No. 3/2009 – “Regulating Action against Contractors for Occurrence of a Serious Incident or Conviction for Site Safety or Environmental Offences”) has from time to time recommended contractors having serious safety incidents on site to conduct an audit using the ISAS.

4. Due to the surge in the construction volume of infrastructure works in recent years and a number of serious construction incidents happened under large-scale public works contracts, it is considered necessary to re-introduce the scheme to such contracts so that over and above the statutory requirements in auditing could be imposed to uphold the safety performance in these contracts.

5. We had commissioned the Occupational Safety and Health Council (OSHC) in December 2013 to update the auditing system with the contemporary safety requirements especially for those in relation to large-scale construction works. The ISAS version 1.3 has now been prepared for implementation.

Major Revisions to Implementation Procedures

6. Whilst the implementation procedures under WBTC No. 32/99 are largely maintained, the following revisions are made to tally with the latest development in the industry: -

- (a) The Independent Management Committee for monitoring the accreditation, registration and management of the safety auditors is no longer required hence **Appendix A** is deleted;
- (b) The contractor would not be reimbursed of the cost of audits under separate payment items hence **Appendices D** and **F** (for the Method of Measurements and sampled Schedule of Rates) are deleted; and
- (c) For audits conducted under this initiative on or before 31 December 2017, the concerned audit reports would need to be submitted to OSHC for the purpose of fine tuning the auditing system. The content of the audit reports would not be affected as a result of such submissions.

7. Copies of the replacement **Appendices B, C** and **E** for the revised Special Conditions of Contract (replacing those in the library SCC in the Works Group Intranet Portal as well), revised Particular Specifications and revised Guidance Notes on the Administration of the ISAS respectively are attached herewith for your easy reference.

8. In this connection, Construction Site Safety Manual section 3.1.8 of Chapter 3 and sections 12.2.9 to 12.2.13 of Chapter 12 regarding the payment of ISAS due to previous initiative under WBTC No. 32/99 are hereby deleted as well.

Scope of Application and Effective Date

9. The requirement of the ISAS using the safety auditing system version 1.3 are to be incorporated into the documents of mega capital works contracts (estimated contract sums exceeding \$1,000 million) or capital works contracts involving unconventional construction method (such as working in compressed air at pressure exceeding 3.45 bars) even if the estimated contract sum is less than \$1,000 million, and for which tenders are to be invited on or after 1 January 2016 (maintenance contracts are excluded).

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10. Also, the safety auditing system version 1.3 will be applicable to the independent safety audits recommended by the Panels of Enquiry under DEVB TC(W) No. 3/2009 to be convened on or after 1 January 2016.

11. Should you have any enquiry on the above, please contact Mr. Terence TM Lam, CAS(W)5, at Tel No. 3509 8335 or Mr. Sam SW Lam, AS(WP)5, at Tel. No. 3509 8305.

(signed)

(Vincent SC Mak)
for Secretary for Development

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Revised Independent Safety Audit Scheme
Special Conditions of Contract

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- (1) General Conditions of Contract Clause 1(1) is amended by adding the following:

Independent
Safety Audit
Scheme

"Council" means the Occupational Safety and Health Council established under the Occupational Safety and Health Council Ordinance (Cap. 398).

Definitions

"Safety Audit" means the safety audit carried out by the Safety Auditor using the latest version of the safety auditing system developed by the Council for the purpose of the Independent Safety Audit Scheme (ISAS).

"Safety Auditor" means a person accredited by the Council as an Accredited Safety Auditor (ASA) and appointed in accordance with the Contract to carry out the Safety Audits.

"Safety Audit Assistant" means a person accredited by the Council as ASA proposed by the Safety Auditor for assisting in the Safety Audit.

- (2) The Contractor shall be deemed to have acquired detailed knowledge of the ISAS and the latest version of the safety auditing system on the aspects to be audited and how these aspects will be assessed.

- (3) (a) After the acceptance of the Tender, the Architect/Engineer* shall propose three candidates from the Council's list of Accredited Safety Auditors to the Contractor for the appointment of the Safety Auditor. The Contractor shall:

Appointment of
Safety Auditor

- (i) select one from among the three candidates and advise the Architect/Engineer* of his selection within seven days from the date of proposal by the Architect/Engineer*;

and

- (ii) confirm to the Architect/Engineer* that he has no conflict of interest with the candidate so selected.

If the Contractor considers that he has actual, potential or perceived conflict of interest with any of the proposed candidates for the Safety Auditor, he shall inform and provide the details to the Architect/Engineer* as soon as possible so that the Architect/Engineer* could propose further candidates to the Contractor for selection.

Upon subsequent confirmation by the Architect/Engineer* of the acceptance of the Contractor's selected candidate, the Contractor shall promptly appoint the candidate as the Safety Auditor.

The Safety Auditor shall then propose a Safety Audit Assistant, who is also accredited by the Council as ASA for the purpose of assisting the Safety Auditor in carrying out the Safety Audit. The Safety Audit Assistant shall also declare he has no conflict of interest with the Contractor before appointment by the Contractor and the Contractor is to submit the declaration to the Architect/Engineer* for reference.

- (b) The Contractor shall be under a continuing obligation to inform the Architect/Engineer* of any conflict of interest either actual, perceived or potential between him and the Safety Auditor and/or Safety Audit Assistant which arises during the currency of the Contract.

- (4) The Contractor shall be responsible for liaising with the Safety Auditor on the carrying out of Safety Audits and shall provide all facilities, access and assistance to the Safety Auditor. The Site Agent shall be responsible for the proper execution of the Safety Audits and attend

Assistance to
the Safety
Auditor

the site audit and 'open' and 'close-off' meetings of every Safety Audit. The Safety Officer of the Contractor shall attend all Safety Audits. The Contractor shall allow and assist the Safety Auditor to inspect all relevant documents and records and shall provide the Safety Auditor with copies if requested. The Contractor shall provide one copy each of the Safety Plan, including any updated or revised version, to the Safety Auditor. All works undertaken by the Contractor in preparation for or as a result of a Safety Audit shall be at the Contractor's expense and shall not entitle the Contractor to any extension of time for completion of the Works.

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| (5) | Safety Audits shall be carried out according to a programme prepared by the Safety Auditor and agreed by the Architect/Engineer*. The first Safety Audit shall be carried out within three months from the *date for commencement of the Works/commencement of the Contract Period. Subsequent Safety Audits shall be carried out at 6-month intervals until *the date of substantial completion of the Works/the expiry of the Contract Period. Safety Audits shall cease if the Architect/Engineer* informs the Contractor in writing that in his opinion most of the operations on the Site/all Sites* have been disengaged and the continuance of Safety Audits will unlikely serve any useful purpose. | Audit
programme |
| (6) | Should there be any substantial changes to the method statement, working procedures or plant/equipment involved in certain tasks, an additional audit on such changes may be ordered by the Architect/Engineer*. The Contractor upon instruction by the Architect/Engineer* shall arrange an additional audit with the Safety Auditor as soon as possible. | Additional
Audit |
| (7) | The Contractor shall not execute or continue to execute any portion of the Works which has been explicitly indicated by Architect/Engineer* to be audited by the Safety Auditor. The Contractor shall not be entitled to any extension of time or additional payment by reason of compliance with | No
commencement
of works before
independent
safety audit |

the requirement stated in this sub-clause

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| (8) | If the Architect/Engineer* is of the opinion that the Safety Auditor or the Safety Audit Assistant has been unable to carry out the Safety Audit properly or that there is either actual, perceived or potential conflict of interest between the Safety Auditor or Safety Audit Assistant and the Contractor, he shall instruct the Contractor to replace the Safety Auditor or Safety Audit Assistant. | Replacement of Safety Auditor or Safety Audit Assistant |
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If the Safety Auditor is to be replaced, the Architect/Engineer* shall within 14 days from the date of the written notice propose three candidates to the Contractor for the appointment of a replacement Safety Auditor in a similar manner as set out in sub-clause (3)(a) of this Clause.

If the Safety Audit Assistant is to be replaced, the Safety Auditor is to propose another candidate to the Contractor within 14 days from the date of the written notice for appointment in a similar manner as set out in sub-clause (3)(a) of this Clause.

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| (9) | On completion of any Safety Audit under the Contract, the Safety Auditor shall prepare a Safety Audit report within 14 days in accordance with the ISA which shall then be submitted to the Contractor, the Employer and the Architect/Engineer*. The Safety Audit report is the property of the Employer. The Contractor shall regard the Safety Audit report as confidential and shall not disclose the Safety Audit report, whether in whole or in part, to any third party without the prior written consent of the Employer. | Safety Audit report |
|-----|---|---------------------|

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| (10) | Should the Safety Audit report identify any aspects of the Safety Plan as not being fully and properly implemented or any inadequacy in the Safety Plan, the Contractor shall immediately take all necessary steps to rectify the identified | Action plan |
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aspects or revise the Safety Plan as appropriate. In addition, the Contractor shall prepare an action plan detailing any actions to be taken and actions which have been taken. The action plan shall be signed by the Site Agent and the Safety Officer and be submitted to the Architect/Engineer*, the Employer and the Safety Auditor within 14 days of the receipt of the Safety Audit report.

- (11) The conduct of Safety Audits by the Safety Auditor, the contents of any Safety Audit report or any recommendations contained therein or payment of the Safety Audit item under the terms of the Contract, shall not absolve the Contractor from any of his duties, obligations, responsibilities and liabilities for site safety under the Contract.

(Note : * delete or amend as appropriate to suit departmental contract arrangements)

Revised Particular Specifications

Independent Safety Audit Scheme

- (1) The Contractor's Site Agent and the Safety Officer shall accompany the Safety Auditor or Safety Audit Assistant during the Safety Audit in order to take such immediate action which may be called for and to understand the underlying problems of any non-compliances identified by the Safety Auditor.
- (2) Each Safety Audit report prepared by the Safety Auditor and the action plan prepared by the Contractor shall be discussed in the next Site Safety and Environmental Management Committee meeting with all identified non-compliances discussed and remedial actions reviewed.
- (3) If the Safety Auditor or Safety Audit Assistant identifies and points out during the site audit any situation of imminent danger to the Contractor and the Architect/Engineer's Representative*, the Contractor shall take immediate action to rectify the situation.
- (4) The Contractor shall keep the Architect/Engineer's Representative* informed of the changes that might render safety implications such as design, construction methods, plant and materials to be used. The Architect/Engineer's Representative* shall consider whether an additional audit specifically for the concerned changes under SCC 24(6) would be required taking into account factors such as whether the changes are planned, systemic, prevalence, scale and interface involved and implication to safe execution of Works.
- (5) Upon Architect/ Engineer's Representative's* confirmation, the Contractor shall ask the Safety Auditor to copy the Safety Audit report to the Occupational Safety and Health Council for the purpose of fine-tuning the safety auditing system of the Independent Safety Audit Scheme.

(Note: * delete as appropriate)

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Revised Guidance Notes on the Administration of the Independent Safety Audit Scheme

1. Background of Independent Safety Audit Scheme

- 1.1. In February 1996, a consultancy agreement was entered between the then Works Branch (WB) of the Hong Kong Special Administrative Region Government (the Government) and the Occupational Safety and Health Council (OSHC) for the latter to manage the Independent Safety Audit Scheme (ISAS), to establish an accreditation scheme for the accreditation of independent safety auditors and to develop a safety auditing system suitable for the Hong Kong construction industry.
- 1.2. The safety auditing system (previously known as the Works Branch Safety Auditing System) version 1.0 was then developed in 1996 for the use by WB. This version 1.0 was replaced by version 1.1 in 1998, which was subsequently replaced by version 1.2 in 2003.
- 1.3. The ISAS had been adopted for some 70 nos. of public works contracts in the first and second (under the previous initiative in 1999 via WBTC No. 32/99) stages.
- 1.4. Separately, the provisions in respect of the safety management system in Schedule 4 (except for Part 3) hence safety auditing under Factories and Industrial Undertakings (Safety Management) Regulation enacted in November 1999 have become operational since April 2002. Thereafter, it is statutory requirement for contractors and construction sites to establish safety management systems comprising 8 to 10 key elements (4 elements in Part 3 of Schedule 4 in the Regulation are not yet mandatory) depending on their sizes and to conduct safety audit in not more than 6-month intervals.
- 1.5. The scope of the safety auditing system under the ISAS is divided into two parts. Part A concerning the safety and health management system are to be evaluated through Elements 1 to 13. Part B concerning the implementation of the safety plan on site is to be evaluated by Element 14. The 14 Elements are as follows:
 1. Safety policy
 2. Safety organisation
 3. Safety training
 4. In-house safety rules and regulations
 5. Safety committee
 6. Program for inspection of hazardous conditions
 7. Job Hazard Analysis
 8. Personal protection program

9. Accident/incident investigation
 10. Emergency preparedness
 11. Safety promotion
 12. Health assurance program
 13. Evaluation, selection and control of sub-contractor
 14. Process control program
- 1.6. Due to the increase in number of serious incidents in 2011 to 2012 and the continuation of the booming in construction industry thereafter, it was proposed in 2013 to resurrect the requirement of the ISAS under large-scale capital works contracts as one of the various initiatives to uphold the safety performance of these contracts. In this connection, the safety auditing system had to be updated to meet with the latest development in the safety standard and peculiar requirements under large-scale construction contracts.
- 1.7. To this end, OSHC was engaged in an updating exercise of the safety auditing system of the ISAS and a new version, i.e. version 1.3 has been prepared. To better align the standard of the Safety Audits using version 1.3 of the safety auditing system especially at the inception stage when this version is more extensively used, the Safety Audit reports prepared by the Safety Auditors under individual contract might be required to submit to OSHC for the purpose of fine-tuning this version 1.3. Such submissions shall not affect the content of the Safety Audit reports.
2. Criteria for ISAS and preparation of contract documents
- 2.1. The Architect/Engineer of the contract shall consider stipulating the ISAS into the contract if the estimated contract sum exceeds \$1,000 million **or** upon confirmation from the Departmental Safety & Environmental Advisors (DSEA) that unconventional construction method is to be employed (such as working in compressed air at pressure exceeding 3.45 bars) even if the estimated contract sum is less than \$1,000 million.
- 2.2. If incorporation of the ISAS is considered not warranted despite meeting the above criteria, the project office concerned shall seek the approval of an officer at D2 level or above for exemption.
- 2.3. Once it is confirmed that ISAS is required under a contract, the Architect/Engineer shall draft the tender documents according to provisions set out in the updated Appendices B, C and E (these Guidance Notes) of WBTC No. 32/99 (Appendices A, D and F are no longer in operation).

3. Selection and appointment of Safety Auditors

- 3.1. OSHC maintains a list of ASA. Only those on the list of ASA can be appointed as the Safety Auditor or Safety Audit Assistant under the contract.
- 3.2. DEVB would from time to time liaise with OSHC for purpose of inviting expression of interest from the above list of ASA for acting as Safety Auditor or Safety Audit Assistant for the mega works projects. A list of interested ASA would be forwarded to DSEAs of the Works Departments for reference.
- 3.3. DEVB with input from DSEAs would maintain a list of Safety Auditors and Safety Audit Assistants under this initiative so as to ensure that no individual ASA would be overloaded.
- 3.4. Upon commencement of the Contract, the Architect/Engineer, in consultation with DSEA, will then propose suitable candidates to the Contractor for consideration and appointment. The Safety Auditor and the proposed Safety Audit Assistant shall not have conflict of interest, either actual, potential or perceived, with the Contractor.

4. Safety Audits & Programme

- 4.1. Safety audits shall be carried out in not more than 6-month intervals by the appointed Safety Auditor and the Safety Audit Assistant proposed by the Safety Auditor. The Safety Auditor shall propose a programme of safety audits for the agreement of the Architect/Engineer with the first audit carried out within three months from the date for commencement of the Works/Contract Period*. They are to continue until the date of substantial completion of the Works/the expiry of the Contract Period*. Notwithstanding the above, the Architect/Engineer can notify the Contractor to cease further safety auditing under the ISAS if he/she considers that in his/her opinion most of the operations on site have been completed and the continuation of the ISAS will unlikely serve any useful purpose. (The safety audit under statutory requirements might still be required.)
- 4.2. The Contractor shall provide the Architect/Engineer with all the latest information pertaining to the method statement, working procedures and use of plant/equipment involved in the execution of the Works such that the Architect/Engineer can decide which task/portion of the Works is to be scrutinized by the Safety Audit before the commencement of such task/portion of the Works.
- 4.3. The Contractor shall keep the Architect/Engineer informed of any changes to

the method statement, working procedures and use of plant/equipment involved in the execution of the Works. If the Architect/Engineer considers the changes are substantial, an additional audit on the changes involved can be ordered in addition to the normal Safety Audit according to the audit programme. The Contractor shall arrange such additional audit as soon as possible. Typical substantial changes are unplanned but systemic; large scale; requiring work re-design; involving substantial changes in machinery and/or re-scheduling of work activities; or likely to result in grave consequences if not properly managed. However, day-to-day changes that are localized, planned/scheduled or re-assessment of the work activities/processes concerned would not require additional audit.

5. Preparation for the Safety Audit

- 5.1. The Safety Audits are to verify the proper implementation of the Contractor's safety management system as set out in the Safety Plan (a document setting out the details of the safety management system, which combine together with any other measures or information are to facilitate the Contractor in ensuring safety and health of personnel involved during the execution of the Works).
- 5.2. Therefore it is essential to have an adequate Safety Plan, which is appropriate to the Works. A checklist to assist the Architect/Engineer in checking the adequacy of the Safety Plan can be found in Appendix VII of Chapter 3 of the Construction Site Safety Manual. As the Safety Plan is a dynamic document to suit the contemporary stage of construction of the Works, the Contractor is therefore required to review and update the Safety Plan regularly throughout the construction period taking into account the current and impending works and conditions on site.
- 5.3. Not less than 14 days before each safety audit, the Safety Auditor shall prepare an audit plan to the Architect/Engineer and the Contractor for reference. The Architect/Engineer shall then provide his comment on the audit plan to the Safety Auditor with a copy to the Contractor, especially on the dates of the audit and areas of high priority and special concern. The Safety Auditor then provides the revised audit plan to the Architect/Engineer and the Contractor not less than 7 days in advance of the audit dates for information and making the necessary arrangements.

6. Attendance of the Safety Audit

- 6.1. The Contractor shall provide all necessary facilities for any Safety Audit including those required for the site audit on the Works. All certificates, records and reports relating to the safety and health matters shall be provided to the Safety Auditor in the Safety Audit.
- 6.2. The Site Agent and the Safety Officer shall accompany the Safety Auditor and the Safety Audit Assistant during the site audit in order to take necessary immediate action that might be called for and to understand the underlying problems of any non-compliances identified by the Safety Auditor.
- 6.3. The Architect/Engineer's Representative should also attend the site audit and the 'open' & 'close-out' meetings of each Safety Audit, in order to be acquainted with the comments made and non-compliances identified by the Safety Auditor. All non-compliances shall be recorded in the site record book/diary for follow-up action.
7. Action to be taken in case of "imminent danger" discovered during the site audit
 - 7.1. Should the Safety Auditor or Safety Audit Assistant observe any hazardous situation that constitutes an "imminent danger" under PS clause no. (xxx), they are required to immediately notify in writing to the Architect/Engineer's Representative and the Contractor. Such situation should also be brought up by the Safety Auditor during the close-out meeting and the Contractor shall confirm whether actions have been undertaken.
 - 7.2. If the Contractor does not carry out appropriate actions immediately then the Architect/Engineer shall consider to suspend the relevant part of the Works under relevant GCC clause and/or to report the situation to the Labour Department or Marine Department for their follow-up actions. In addition, such situation should be reflected in the Report on Contractors' Performance (RCP).
8. Safety Audit Reports
 - 8.1. The Safety Auditor has to prepare a Safety Audit report which will include mainly:
 - (a) the scores in Part A and Part B;
 - (b) any situations of "imminent danger" notified during the safety audit;
 - (c) any deviation from or inadequacy in the Safety Plan and its implementation;

- (d) improvement/further improvements required; and recommendations for improvements;
 - (e) comments on the Contractor's site safety performance and his safety management system highlighting strengths and weaknesses.
- 8.2. The Safety Audit reports will be sent to the project office, the Architect/Engineer and the Contractor with a copy to DSEA for information. It is highly recommended to utilize electronic transmission to expedite the submission of the reports.
- 8.3. For audits conducted under this initiative on or before 31 December 2017, the Architect/Engineer's Representative shall instruct the Contractor asking the Safety Auditor to submit a copy of the Safety Audit report to OSHC for the purpose of fine-tuning the updated safety auditing system, i.e. version 1.3. The content of the Safety Audit reports would not be affected as a result of such submissions.
9. Scores of Safety Audit reports and payment of the associated costs
- 9.1. Since the objective of the ISAS is to uphold the safety performance under the contract especially to curb any potential serious consequences, no passing score would be set and the scores of Audit Reports would not have any direct correlation with the assessment of the RCP. Notwithstanding this, scores of Parts A or B as indicated in paragraph 1.4 below 80% (based on the observations in the regulatory audit results under DEVB TC(W) No. 3/2009) would warrant special attention from the Architect/Engineer on the Contractor's safety management system.
- 9.2. No separate payment item would be given to the "Safety Audits" including any Additional Audits under SCC 24(6).
10. Follow-up action on Safety Audit Reports
- 10.1. After the receipt of the Safety Audit report, the Architect/Engineer should check if the Contractor has submitted a corresponding action plan within 14 days of the receipt of the Safety Audit report detailing the actions which have been taken and actions to be taken against deficiencies identified in the Safety Audit report. The action plan shall be countersigned by the Site Agent and the Safety Officer and submitted to the Architect/Engineer and the project office along with a copy to the Safety Auditor to facilitate preparation of the audit plan for the next Safety Audit.

- 10.2. The Safety Plan, the results of the Safety Audit and the action plan prepared by the Contractor in response to the recommendations contained in the Safety Audit reports shall be mandatory discussion items at the SSEMC meetings.
- 10.3. Taking into account of the Safety Audit reports, the Architect/Engineer shall issue warning letter to the Contractor urging for improvements to be made. Besides, the Architect/Engineer might consider marking the overall “site safety” section “Very Poor” if serious deficiency or non-compliance in the Contractor’s safety management system has been revealed or the Contractor is persistently failed to improve to the shortcomings identified by the Safety Auditor.

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Ref. : WB(W) 273/32/22
Group : 8

28 December 1999

Works Bureau Technical Circular No. 32/99

Second Stage of the Independent Safety Audit Scheme

Scope

This Circular introduces the second stage of the Independent Safety Audit Scheme (ISAS). A total of 35 contracts are to be selected for inclusion including works contracts and term contracts.

Effective Date

2. This Circular shall take immediate effect.

Effect on Existing Circulars

3. This Circular supersedes WBTC No. 5/96.
4. This Circular shall be read in conjunction with WBTC No. 14/98 promulgating the updated version of Chapter 3 on "Contractual Provisions on Construction Site Safety", the third stage of the Pay for Safety Scheme (PFSS) to include term contracts and Chapter 12 on the "Administration of Contracts Participating in PFSS" and Appendix D of WBTC No. 12/98 where appropriate. However, existing contracts which have incorporated contract provisions contained in WBTC No. 5/96 shall follow their adopted provisions and the practice notes contained thereat.

Background

5. Works Bureau (WB) introduced two safety initiatives, PFSS and ISAS, in March 1996 to encourage public works contractors to set up more efficient safety management systems and to enhance the standard of safety performance of contractors.

6. Before that, a consultancy agreement was entered into between WB and the Occupational Safety and Health Council (OSHC) in February 1996 for the latter to develop and maintain a health and safety management auditing system and to implement the auditing system in selected works contracts. The OSHC was also responsible for the accreditation, registration and management of the safety auditors. The activities of the OSHC in connection with the ISAS are monitored by an Independent Management Committee, the terms of reference and membership of which are set out in Appendix A.

7. Since the start of the ISAS in 1996, WB has been monitoring the first stage of implementation of the ISAS and the audit results have shown continuous overall improvement in site safety performance. In 1998, a "Consultancy Study to Review the Assessment of Safety Performance on Construction Sites" was also commissioned and the consultants were asked to, inter alia, review the effectiveness of ISAS. In their Final Report, the consultants recommended that more ISAS data from more contracts would need to be collected and analysed to better identify causal factors and determine the impact of the ISAS on safety performance and accident statistics. In order to more fully determine the effectiveness of the ISAS, it has been decided to include 35 contracts in the second stage. A decision will then be made in due course on the general application of the ISAS in public works contracts.

Implementation of the Second Stage of ISAS

8. A total of 35 contracts will be selected by WB in consultation with the works departments for inclusion in the second stage of the ISAS. They will comprise a mixture of term contracts and works contracts. Departments will be asked to nominate contracts satisfying the following criteria for selection:

- (a) contracts participating in the Pay for Safety Scheme;
- (b) works contracts with estimated contract sums of \$ 20 million or above/term contracts with total estimated expenditure of \$ 50 million or above;
- (c) contract period from 18 months up to 36 months; and
- (d) contracts with commencement dates between 1 December 1999 and 31 December 2000.

9. WB will confirm to the works departments once their contracts are selected for inclusion. The contractual provisions in Appendices B to D shall then be incorporated into the contract documents accordingly.

10. Further background and guidance notes on the administration of the second stage of ISAS are set out in Appendix E and a sample Schedule of Rates for use in term contracts is attached in Appendix F.

11. Major modifications included in the second stage include the following:

- (a) the Architect/Engineer will propose the names of three safety auditors from the list of Accredited Safety Auditors maintained by the OSHC for the Contractor to choose one;
- (b) not every safety audit report will be scrutinised by the OSHC; and
- (c) the preparation of an action report by the Contractor upon receipt of the safety audit report; the action report shall be signed by the Contractor's Site Agent and Safety Officer and submitted to the Architect/Engineer within 14 days of the receipt of the safety audit report.

12. The Works Bureau entered into a consultancy agreement CE 29/99 on 18 November 1999 with the OSHC for the latter to manage the second stage of the ISAS. As in the first stage, management fees of the OSHC will be paid through the WB consultancy vote. Payment of the auditors' fees and 5% on-cost administrative charge by the OSHC and travelling allowance for the auditors will be borne by the individual project vote.

13. The Independent Management Committee at its meeting on 26 November 1999 decided that for the second stage of the ISAS, the fee for the audit team (inclusive of travelling allowance) to be \$ 2,000 per hour. The maximum hours that an audit team can claim for an audit are 16 hours unless the size and complexity of the contract requires longer hours and prior agreement had been sought from the project officers.

(W S CHAN)
Deputy Secretary, Works Policy

Independent Management Committee
Terms of Reference, Membership and Rules

Terms of Reference for the Independent Management Committee (the Committee)

1. To monitor and review the implementation of the Independent Safety Audit Scheme (Scheme) and recommend to the Secretary for Works improvements to the effectiveness of the Scheme.
2. To receive reports and to monitor the activities of the Occupational Safety and Health Council in their management of the Scheme.
3. To establish and review the appropriate standards and experience of safety auditors.
4. To recommend to the Secretary for Works those applicants fulfilling registration criteria as safety auditors for registration.
5. To recommend to the Secretary for Works for any disciplinary action on safety auditors.
6. To study any complaints lodged in connection with the Scheme and recommend appropriate actions.
7. To establish sub-committees to develop and recommend to the Committee any particular facet of the Committee's role.
8. To establish the level of remuneration of the safety auditors.

Composition of the Committee and Rules

1. The Committee shall consist of a chairman, a representative each from the Works Bureau, Housing Department, Labour Department, the Hong Kong Construction Association, the Hong Kong Electrical and Mechanical Contractors' Association, the Occupational Safety and Health Council and two safety practitioners.
2. The chairman and members of the Committee shall be appointed by the Secretary for Works for a normal term of 3 years. Re-appointment will be made by the Secretary for Works 3 months before the expiry of the tenure.
3. The vice-chairman shall be elected by members of the Committee and shall preside over the meeting during the absence of the chairman.
4. The chairman shall have the casting vote on any decision that cannot be agreed by a majority of the Committee.
5. The Committee shall hold quarterly meetings or as necessary to fulfil its role.

Independent Safety Audit Scheme
Special Conditions of Contract

<u>SCC 1</u>	(1)	General Conditions of Contract 1(1) is amended by adding the following: "Council" means the Occupational Safety and Health Council established under the Occupational Safety and Health Council Ordinance (Cap. 398). "Safety Audit" means the safety audit carried out by the Safety Auditor using the Works Bureau Safety Auditing System (WBSAS) developed by the Council for the purpose of the Independent Safety Audit Scheme (ISAS). "Safety Auditor" means a person accredited by the Council as an Accredited Safety Auditor and appointed in accordance with the Contract to carry out Safety Audits.	Independent Safety Audit Definitions
	(2)	The Contractor shall be deemed to have acquired detailed knowledge of the ISAS and WBSAS on the aspects to be audited and how these aspects will be assessed.	
	(3)	(a) After the acceptance of the Tender, the Architect/Engineer* shall propose three names from the Council's list of Accredited Safety Auditors to the Contractor for the appointment of the Safety Auditor. The Contractor shall: (i) select one from among the three names and advise the Architect/Engineer* of his selection within seven days from the date of proposal by the Architect/Engineer*; and (ii) confirm to the Architect/Engineer* that he has no conflict of interest with the Safety Auditor so selected. The Safety Auditor shall be appointed by the Council. (b) The Contractor shall be under a continuing obligation to inform the Architect/Engineer* of any conflict of interest between him and the Safety Auditor which arises during the currency of the Contract.	Appointment of Safety Auditor

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| (4) | The Contractor shall be responsible for liaising with the Council and the Safety Auditor on the carrying out of Safety Audits and shall provide all facilities, access and assistance to the Safety Auditor. The Site agent and the Safety Officer of the Contractor shall attend all Safety Audits. The Contractor shall allow and assist the Safety Auditor to inspect all relevant documents and records and shall provide the Safety Auditor with copies if requested. The Contractor shall provide one copy each of the Safety Plan, including any updated or revised version, to the Council and the Safety Auditor. All works undertaken by the Contractor in preparation for or as a result of a Safety Audit shall be at the Contractor's expense and shall not entitle the Contractor to any extension of time for completion of the Works. | Assistance to the Safety Auditor |
| (5) | Safety Audits shall be carried out according to a programme prepared by the Safety Auditor and agreed by the Architect/Engineer*. The first Safety Audit shall be carried out within three months from the *date for commencement of the Works/commencement of the Contract Period/commencement of the term contract period. Subsequent Safety Audits shall be carried out at quarterly intervals until *the date of substantial completion of the Works/the expiry of the Contract Period/the expiry of the term contract period. Safety Audits shall cease if the Architect/Engineer* informs the Council and the Contractor in writing that in his opinion most of the operations on the Site/all Sites* have been disengaged and the continuance of Safety Audits will unlikely serve any useful purpose. | Audit programme |
| (6) | If the Architect/Engineer* is of the opinion that the Safety Auditor has been unable to carry out the Safety Audit properly or that there is a real or apparent conflict of interest between the Safety Auditor and the Contractor, he shall advise the Council to remove the Safety Auditor. The Safety Auditor shall only be removed by a written notice by the Council served upon the Safety Auditor. The Architect/Engineer* shall within 14 days from the date of the written notice propose three names to the Contractor for the appointment of a replacement Safety Auditor in a similar manner as set out in sub-clause (3)(a) of this Clause. | Removal of Safety Auditor |

Appendix B

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|------|--|---------------------------|--------------|
| (7) | On completion of a Safety Audit, the Safety Auditor shall prepare a Safety Audit report in accordance with the ISAS which shall then be submitted to the Council, the Contractor, the Employer and the Architect/Engineer*. The Safety Audit report is the property of the Employer. The Contractor shall regard the Safety Audit report as confidential and shall not disclose the Safety Audit report, whether in whole or in part, to any third party without the prior written consent of the Employer. | Safety
report | Audit |
| (8) | Should the Safety Audit report identify any aspects of the Safety Plan not being fully and properly implemented or any inadequacy in the Safety Plan, the Contractor shall immediately take all necessary steps to rectify the identified aspects or revise the Safety Plan as appropriate. In addition, the Contractor shall prepare an action plan detailing any actions to be taken and actions which have been taken. The action plan shall be signed by the Site agent and the Safety Officer and be submitted to the Architect/Engineer*, the Employer, the Council and the Safety Auditor within 14 days of the receipt of the Safety Audit report. | Action plan | |
| (9) | Payment shall be made to the Contractor for the Safety Audit item in the Bills of Quantities/Schedule of Rates* only if the Safety Audit report indicates that the Contractor's scores in both Part I - the Contractor's safety management system and Part II – the implementation of the Safety Plan on site are 70% or above. | Payment
Safety
item | for
Audit |
| (10) | The conduct of Safety Audits by the Safety Auditor, the contents of any Safety Audit report or any recommendations contained therein or payment of the Safety Audit item under the terms of the Contract, shall not absolve the Contractor from any of his duties, obligations, responsibilities and liabilities for site safety under the Contract. | | |

(Note : * delete or amend as appropriate to suit departmental contract arrangements)

Particular Specification

Independent Safety Audit

- (1) The Contractor's Site agent and the Safety Officer shall accompany the Safety Auditor during the Safety Audit in order to take such immediate action which may be called for and to understand the underlying problems of any non-compliances identified by the Safety Auditor.
- (2) Each Safety Audit report and the action plan prepared by the Contractor shall be discussed in the next Site Safety Management Committee meeting with all identified non-compliances discussed and remedial actions reviewed.
- (3) If the Safety Auditor identifies and points out during the Safety Audit any situation of imminent danger to the Contractor and the Architect/Engineer*, the Contractor shall take immediate action to rectify the situation.

(Note: * delete as appropriate)

Method of Measurement for Works Contracts**Independent Safety Audit**

Units	XX.01	The unit of measurement shall be: (i) Attendance on Safety Auditor number (ii) Safety Audit number				
Measurement	XX.02	The measurement of "Attendance on Safety Auditor" shall be the number of Safety Audits completed.				
	XX.03	The measurement of "Safety Audit" shall be the number of Safety Audits which report has indicated that the scores in both Part I - the Contractor's safety management system and Part II - the implementation of the Safety Plan on site are 70% or above. No measurement shall be made if either one of the scores is below 70%.				
Itemization	XX.04	Separate items shall be provided for independent safety audit in accordance with General Principles paragraphs 3 and 4 and the following: <table><tr><th>Group</th><th>Feature</th></tr><tr><td>I</td><td>1. Attendance on Safety Auditor 2. Safety Audit</td></tr></table>	Group	Feature	I	1. Attendance on Safety Auditor 2. Safety Audit
Group	Feature					
I	1. Attendance on Safety Auditor 2. Safety Audit					
Attendance on Safety Auditor	XX.05	The item for "Attendance on Safety Auditor" shall in accordance with General Preambles paragraph 2 include for:				
Item Coverage		(i) providing all necessary facilities and assistance to the Safety Auditor including meeting rooms and transportation between different areas of the Site for the carrying out of the Safety Audit; (ii) providing copies of relevant documents and records; (iii) arranging his Site agent and Safety Officer to accompany the Safety Auditor during the Safety Audit; (iv) arranging responsible persons to be present for interview by the Safety Auditor and during the Safety Audit; (v) preparing an action plan within 14 days of the receipt of the audit report and submitting one each to the *Architect/Engineer, the Employer, the Council and the				

Safety Auditor.

Safety Audit XX.06 The item for " Safety Audit" shall in accordance with General Preambles paragraph 2 include for:

- Item Coverage
- (i) the setting up of a satisfactory safety management system;
 - (ii) the satisfactory implementation of the Safety Plan on site.

(Note : * delete as appropriate)

Method of Measurement for Term Contracts

- | | | |
|-------|------------------|--|
| xx.01 | Item Description | Attendance on Safety Auditor |
| xx.02 | Measurement | The measurement of "Attendance on Safety Auditor" shall be the number of Safety Audits completed. |
| xx.03 | Item Coverage | <p>The item for "Attendance on Safety Auditor" shall include for:</p> <ul style="list-style-type: none">(i) providing all necessary facilities and assistance to the Safety Auditor including meeting rooms and transportation between different areas of all Sites for the carrying out of the Safety Audit;(ii) providing copies of relevant documents and records;(iii) arranging his Site Agent and Safety Officer to attend the Safety Audit.(iv) arranging responsible persons to be present for interview by the Safety Auditor and during the Safety Audit;(v) preparing an action plan within 14 days of the receipt of the audit report and submitting one each to the *Architect/Engineer, the Employer, |

the Council and the Safety Auditor.

xx.04	Item Description	Safety Audit
xx.05	Measurement	The measurement of "Safety Audit" shall be the number of Safety Audits which report has indicated that the scores in both Part I – the Contractor's safety management system and Part II - the implementation of the Safety Plan on site are 70% or above. No measurement shall be made if either one of the scores is below 70%.
xx.06	Item Coverage	<p>The item for Safety Audit shall include for:</p> <ul style="list-style-type: none">(i) the setting up of a satisfactory safety management system;(ii) the satisfactory implementation of the Safety Plan on site.

(Note: * delete as appropriate)

Background and Guidance Notes on the Administration of the Independent Safety Audit Scheme (ISAS)

1.0 Background of ISAS

- 1.1 The ISAS and the Pay for Safety Scheme (PFSS) were two safety initiatives introduced by the Works Bureau in 1996 to encourage public works contractors to set up more efficient safety management systems and to enhance the standard of safety performance of contractors.
- 1.2 Both schemes originated from a trial scheme of three construction contracts during the period 1993-1995 in which a schedule of fully specified safety related items were pre-priced in the Bills of Quantities by the Engineer/Surveyor. This trial scheme was in fact the first stage of the PFSS. Under this stage, a safety checklist was used to audit the safety performance of the contractors and to certify the payment of the "Safety Audit" item to the Contractor. The safety items in the checklist were marked by a team of five people, two each from the Employer and the Contractor, and one representative from the Occupational Safety and Health Council (OSHC). As this commitment could not be sustained in a wider application of the PFSS, therefore it was proposed to set up the ISAS to replace the checklist.
- 1.3 In February 1996, a consultancy agreement (No. CE 86/95) was entered into between Works Bureau (WB) of the Hong Kong Government and the OSHC for the latter to develop and maintain a health and safety management auditing system, to implement the auditing system in selected works contracts nominated by Government and agreed by the OSHC for inclusion in the ISAS and to establish a register of safety auditors.
- 1.4 The activities of the OSHC in connection with the ISAS are monitored by an Independent Management Committee (IMC) which meets on a quarterly basis. The Committee is chaired by a senior academic and reports to the Secretary for Works. Its membership consists of representatives from both public and private sectors, including the Works Bureau, Housing Department, Labour Department, OSHC, Hong Kong Construction Association, Hong Kong Electrical and Mechanical Contractors Association and two safety practitioners. The terms of reference are set out in Appendix A.
- 1.5 The ISAS and PFSS are two schemes running in parallel with each other. Under the ISAS, safety audits are carried out at quarterly intervals by Accredited Safety Auditors using the Works Bureau Safety Auditing System (WBSAS).

Works Bureau Safety Auditing System

- 1.6 Under the consultancy agreement no. CE 86/95, the OSHC developed the WBSAS (Version 1.0) based on a proprietary auditing system - Construction CHASE (Complete Health and Safety Evaluation) – from the United Kingdom with due consideration of the local construction industry environment, the proposed Factories and Industrial Undertakings (Safety Management) Regulations and our requirement for the auditing of contracts included in the ISAS. The safety management system on which Construction CHASE is based is one recommended by the United Kingdom's Health and Safety Executive in its book "Successful Health and Safety Management". The five key elements to such a system are :

- setting your policy
- organise your staff
- planning and implementing
- measure your performance
- review performance and audit

This model of pro-active health and safety management is also adopted by BS 8800:1996 – Guide to Occupational Health and Safety Management Systems.

- 1.7 The scope of the WBSAS is divided into two parts. The first part concerns the safety management system which is evaluated through element 1 to element 13. The second part concerns the implementation of the safety plan on site which is evaluated by element 14. The fourteen elements are:

1. Safety policy
2. Safety organisation
3. Safety training
4. In-house safety rules and regulations
5. Safety committee
6. Program for inspection of hazardous conditions
7. Job Hazard Analysis
8. Personal protection program
9. Accident/incident investigation
10. Emergency preparedness
11. Safety promotion
12. Health assurance program
13. Evaluation, selection and control of sub-contractor
14. Process control program

- 1.8 The WBSAS is subjected to regular review and updating. A working group was formed in September 1997 to revise the audit questions of the first version. The revised version, version 1.1, was used in safety audits conducted since April 1998.
- 1.9 After each safety audit, the auditor will prepare a report highlighting the strengths and weaknesses of the contractor in the contract being audited and areas where improvements are required. Scores attained in each of the elements in Part I and Part II are also listed out. The contractor will receive payment of the "Safety Audit" item in the Site Safety section of the Bills of Quantities/Schedule of Rates if the scores in both Part I and Part II are equal to 70% or above. No payment will be made if either of the scores is below 70%. Furthermore, if either of the scores is below 60%, the respective quarterly Report on Contractors Performance will be automatically marked "Adverse".
- 1.10 A total of 36 contracts were included in the first stage of ISAS. In order that more data will be collected to fully determine the effectiveness of the ISAS, it was decided in July 1999 that another 35 contracts will be included in the second stage.
- 1.11 It should be noted that under the proposed Factories and Industrial Undertakings (Safety Management) Regulation, a safety audit is required to be carried out by a contractor engaged in a construction project with a contract value of \$ 100 million or more or a contractor employing an aggregate of 100 or more workers in a day in one or more sites. Safety audits are however to be conducted at least once every six months which is different from our requirement of an audit on a quarterly basis. Furthermore, safety audits can be carried out by a staff of the contractor independent of that project which means the safety audit could be an internal safety audit.

2.0 Guidance Notes on the Administration of ISAS contracts – Second Stage

Nomination and selection of contracts for inclusion in the 2nd stage of ISAS

- 2.1 The WB will invite nominations of contracts from departments for inclusion in the second stage of ISAS. Contracts satisfying the following criteria will be considered and selected for inclusion:
- (a) contracts participating in the PFSS;
 - (b) works contracts with estimated contract sums of \$ 20 million or above/term contracts with total estimated expenditure of \$ 50 million or above;

- (c) contract period from 18 months up to 36 months; and
- (d) contracts with commencement dates between 1 December 1999 and 31 December 2000.

- 2.2 Selection of contracts shall be co-ordinated through departmental Safety Advisers (DSA) with the WB who will confirm to the concerned departments on the outcome of the selection exercise. DSA will in turn advise the concerned Architect/Engineer.
- 2.3 As soon as the list of contracts selected in the second stage of ISAS is finalised, details of the selected contracts, such as contract no. and title, contract period, range of estimate of cost, nature of works, locations of the site and a brief description of the works will be provided to the OSHC. The OSHC can include such advance information in the circular issued to safety auditors.

Preparation of estimates and contract documents

- 2.4 Once it is confirmed that a contract has been included in the ISAS, the Architect/Engineer shall draft the tender documents according to contractual provisions set out in Chapters 3 and 12 of the Construction Site Safety Manual (CSSM) and Appendices B, C, D and E of this circular. After preparation, the draft contract documents should be forwarded to the Contract Adviser and the DSA for comment before tender invitation.
- 2.5 The safety auditors' fees and the associated 5% on-cost administration charge by the OSHC are to be paid out of the project /maintenance vote. For the purpose of estimation, an allowance is to be made in the project/maintenance vote for a sum based on 16 man-hours per safety audit on a quarterly cycle at the rate notified by the WB. Safety audits shall be carried out during the construction period, i.e. up to when works are substantially completed but not up to the issue of the certificate for completion. In the case of term contracts, safety audits shall be carried out until the date of completion of the Contract Period/term contract period. A further 25% allowance to cover the possibility of extension of the completion date/Contract Period/term Contract Period and 5% on-cost administration charge for the OSHC should be allowed.
- 2.6 At its meeting on 26 November 1999, the IMC decided that for the second stage of the ISAS, the fee (inclusive of travelling allowance) for the auditing team, consisting of an ASA and a SAA, to be \$ 2,000 per hour. The maximum hours that an audit team can claim for an audit are 16 hours unless the size and complexity of the contract requires longer hours and that prior agreement had been sought from the project officers.

Selection and appointment of Safety Auditors

- 2.7 The OSHC maintains two lists of safety auditors, Accredited Safety Auditor (ASA) and Safety Auditing Assistant (SAA). Only those on the list of ASA can be appointed to be the Safety Auditor. Those on the list of SAA will assist the ASA in carrying out safety audits, but the ASA is personally responsible for them.
- 2.8 The Architect/Engineer will advise the OSHC of the name of the contractor of a particular contract with a copy of the letter of acceptance. The OSHC will then send a request to all ASA requesting them to:
- α) indicate their workload, present workload as well as anticipated workload,
 - b) indicate their spare capacity to take up more contracts for audits,
 - c) declare "no conflict of interest" with the contractor, and
 - d) express interests in taking up safe auditing for that particular contract.
- 2.9 Based on the return from the ASA, the OSHC will prepare a list of those who have indicated their spare capacity and expressed interests in taking up more contracts for audits to the Architect/Engineer. Information on past performance and the CV of these ASA will also be passed to the Architect/Engineer to facilitate selection.
- 2.10 The Architect/Engineer, in consultation with the DSA, will then pick the names of three ASA and propose them to the Contractor for the selection of one.
- 2.11 On receipt of the Contractor's decision, the Architect/Engineer will advise the name of the selected ASA to the OSHC who will be responsible for the appointment of the ASA. The ASA is responsible for the selection of the SAA.
- 2.12 Before the appointment of the Safety Auditor, the OSHC will ask the ASA and SAA to sign the "Declaration of Interest" forms. Should the ASA and SAA fail to carry out audits once they are appointed, the OSHC is to be informed. Refusal to carry out safety auditing after appointment constitutes a breach of the rules governing the lists of safety auditors. The OSHC will consider whether the case needs to be put up to the IMC for disciplinary action.

Programme of Safety Audits

- 2.13 Safety audits shall be carried out at quarterly intervals by ASA with the assistance of SAA. The Safety Auditor shall propose a programme of safety audits for the agreement of the Architect/Engineer with the first audit carried out within three months from the date for commencement of the *Works/Contract Period/term contract period. They are to continue until the date of *substantial completion of the Works/the expiry of the Contract Period/Term Contract Period. The Architect/Engineer shall notify the OSHC accordingly at this juncture. Notwithstanding the above, the Architect/Engineer can still notify the OSHC and the Contractor that safety audits shall cease if he considers that in his opinion most of the operations on the Site/all Sites have been disengaged and the continuance of safety audits will unlikely serve any useful purpose.
- 2.14 The Architect/Engineer will provide the agreed programme to the OSHC and one copy to the appointed ASA for the preparation of a schedule of tentative dates for the audits. Any change in the schedule of dates must have the agreement of the Architect/Engineer and the OSHC must be informed not less than 7 days in advance of the audit dates. Unless otherwise approved by the Architect/Engineer and the OSHC, safety audits shall be conducted on two consecutive days during weekdays of the same week (Mondays to Fridays excluding public holidays).

Preparation for the Safety Audit

- 2.15 Safety audits are carried out against the Contractor's safety management system as set out in the Safety Plan and its implementation on site. The Safety Plan is a document setting out details of the safety management system that the Contractor will implement on the Site, together with any other measures and information required by the Contract to ensure safety and health in the execution of the Contract.
- 2.16 It is therefore essential that the Safety Plan is adequate and appropriate to the works to be carried out under the Contract. A checklist to assist the Architect/Engineer in the checking of the Safety Plan can be found in Appendix VII of Chapter 3 of the Construction Site Safety Manual. As the Safety Plan is a dynamic document, throughout the construction period the Contractor is therefore required to review and update the Safety Plan regularly taking into account of the current and impending works and conditions on site.. The Architect/Engineer shall comment on the Safety Plan and its revisions. They shall also be discussed at the monthly Site Safety Management Committee meetings. After each safety audit, the ASA is also

required to include his comment on the adequacy of the Safety Plan in his audit report.

- 2.17 Not less than 14 days before each safety audit, the Safety Auditor shall prepare an audit plan and provide a copy each to the OSHC, the Architect/Engineer, the Contractor and the DSA. The Architect/Engineer shall then provide his comment on the audit plan to the Safety Auditor with a copy to the OSHC and the Contractor, especially on the dates of the audit and areas of high priority and special concern. The Safety Auditor then provide the revised audit plan to the Architect/Engineer, the OSHC, the DSA and the Contractor not less than 7 days in advance of the audit dates for information and making the necessary arrangements.

Attendance of the Safety Audit

- 2.18 The Contractor shall provide all necessary attendance for any safety audit including fully facilitating the auditing of the Site and the Works, and all certificates, records and reports relating to safety and health matters, and shall fully co-operate with the Safety Auditor in the carrying out of the safety audit.
- 2.19 When a safety audit is being carried out, the Contractor shall arrange his Site Agent and his Safety Officer to accompany the Safety Auditor during the safety audit in order to take such immediate action which may be called for and to understand the underlying problems of any non compliance identified by the Safety Auditor.
- 2.20 The Architect/Engineer's site representative should also be in attendance during the safety audit, in particular the 'open' and 'close-out' meeting, in order to be kept fully aware of the comments made and non-compliance identified by the Safety Auditor. All non-compliances shall be recorded in the site record book/diary for follow-up action. The Architect/Engineer or his Representative shall confirm to the OSHC by letter of the actual number of hours spent by the ASA on the Site (proforma at page 12 of this Appendix). If dissatisfied for any reason with the Safety Audit or its results, the Architect/Engineer shall inform the Council and the WB with reasons for the dissatisfaction.

Action to be taken in case of "imminent danger" discovered during the safety audit

- 2.21 Should the Safety Auditor observe any hazardous situation that constitutes an "imminent danger" under PS clause no. (), they are required to immediately

notify in writing to the Architect/Engineer and the Contractor. Such situation should also be brought up by the Safety Auditor during the close-out meeting and the Contractor should be asked to confirm whether immediate action had been taken. If the Contractor does not take immediate action to rectify the situation, then the Architect/Engineer shall consider to suspend the relevant part of the Works under GCC clause no. 54/56* and/or to report the situation to the Labour Department or Marine Department for their immediate action. In addition, the Report on Contractors' Performance (RCP) and/or the next RCP should be marked "Adverse" unless the situation has been rectified.

Report on the Safety Audit

- 2.22 The Safety Auditor has to prepare a report on the Safety Audit which will include mainly:
- (a) the scores in Part I and Part II;
 - (b) any situations of "imminent danger" notified during the safety audit;
 - (c) any deviation or inadequacy in the Safety Plan and its implementation;
 - (d) areas where improvement/further improvements are required; and recommendations for improvements;
 - (e) comments on the Contractor's site safety performance and his safety management system highlighting strengths and weaknesses.
- 2.23 The audit report will be sent by the ASA to the Employer, the Architect/Engineer, the Contractor and the OSHC within 14 days of the site audit. Unless stated otherwise, the Employer's copy is to be sent to the DSA.
- 2.24 The OSHC will scrutinise the audit report on a random basis once every year and carry out site verification of audits on a yearly basis. After the receipt of the report, the OSHC will carry out the checking of scores and/or scrutiny of the report and seek clarification with the Safety Auditor if needed. The OSHC will prepare a brief report to the Architect/Engineer and the Contractor within 14 days of the receipt of the audit report if the OSHC is in general satisfied with the quality and sufficiency of the safety audit.
- 2.25 For audit reports which have not been selected for scrutinisation or site verification by the OSHC, the OSHC will carry out a casual checking of the audit scores for arithmetic errors and notify the Architect/Engineer of the outcome of the checking.
- 2.26 Whilst the OSHC is mainly responsible for the scrutiny of audit reports on a

random basis and site verification, the Architect/Engineer shall go through the audit report and note down any obvious discrepancies for discussion at the following SSMC meeting. The Architect/Engineer could consult the DSA where necessary for comment. Obvious discrepancies should be notified to the OSHC who will be monitoring the performance of the safety auditors.

Payment of the Safety Audit Fees and associated costs

- 2.27 For audit reports which have been scrutinised or site verified by the OSHC to be satisfactory, the OSHC will issue to the Architect/Engineer a "notice of satisfaction" together with an invoice for the auditors' fees plus the OSHC's 5% on-cost administrative charge (stated separately from the ASA's fee).
- 2.28 For audit reports which scores have been checked by the OSHC for arithmetic errors, the OSHC will notify the A/E of the outcome of the checking and also issue an invoice for the auditors' fees plus the OSHC's 5% on-cost administrative charge (stated separately from the ASA's fee).
- 2.29 Upon receipt of the invoice from the OSHC, the Architect/Engineer will then certify the payment in the usual manner and such payment are to be borne by the individual project/maintenance vote. The payment of the auditor's fees will be calculated by multiplying the hours that the ASA actually spent on working on site (as recorded and countersigned by the ASA in the site record book/diary) by the current hourly rate. Lunch hours shall not be counted.
- 2.30 The hourly rate paid for each safety audit is all inclusive of off-site, pre-audit and post-audit work and includes that of the ASA and SAA and the preparation of audit plans and audit reports plus travelling allowances. WB will keep works departments informed of any change in the hourly rate and the remuneration set out in para. 2.6 above.
- 2.31 On receipt of the payment from the Architect/Engineer, the OSHC will pass the sum due to the ASA. However the Architect/Engineer's certificate of payment to the ASA is not a certificate of satisfaction of site safety.
- 2.32 The auditor's fees are to be paid for regardless of all circumstances other than that the ASA has not carried out the job properly - which is for the OSHC to decide. Whilst it is not the Architect/Engineer to decide the quality or relevance of the safety audit, should the Architect/Engineer (or the Contractor) have any reason to be dissatisfied with the performance of the ASA, the OSHC and WB shall be informed immediately.

- 2.33 If the ASA carries out the safety audit but fails to produce the report within two weeks or cannot provide clarifications requested by the OSHC within the time limit without good reason, the ASA will have to be replaced and the safety audit re-arranged as soon as possible. Without the audit report, the fees for the "Safety Audit" item cannot be paid.
- 2.34 The "Safety Audit" item in the Site Safety Section shall be paid to the Contractor in the next payment certificate if the audit report indicates that the scores in both the Contractor's safety management system (Part I) and the implementation of the Safety Plan on site (Part II) are 70% or above.

Payment of Attendance on Safety Auditor

- 2.35 After the Contractor had provided the necessary attendance to the safety auditors and submitted the action plan in accordance with the method of measurement, the Architect/Engineer shall include in the next interim payment certificate the value of the "Attendance on the Safety Auditor" that the Contractor have entered in the BQ . Measurement of this item does not depend on the outcome of the safety audit and whether the "Safety Audit" item is paid or not.

Completion of Report on Contractors' Performance (RCP)

- 2.36 When either of the audit scores in Part I or Part II is below 60%, the Contractor's performance on the "site safety" item should be marked "poor" which in turn will lead to an "Adverse" RCP. In addition, the Architect/Engineer should issue a warning letter to the Contractor urging for improvements be made.
- 2.37 As sometimes it may take about one month after the site audit for the receipt of the audit report and the confirmation of the quality of the safety audit from the OSHC, it is possible that the RCP for a particular reporting period may have been completed before they are available. Furthermore, it may also be possible that a RCP may not be marked "Adverse" based on the Reporting Officer's (i.e. the Architect or Engineer) assessment whereas the safety audit results may warrant an "Adverse" RCP be given, or vice versa. Under such circumstances, the Reporting Officer should report the safety audit results to the Works Bureau and/or where appropriate amend the RCP in accordance with the procedures set out in Appendix D of WBTC No. 12/98. The Reporting Officer should check to ensure that a contractor will not be given two "Adverse" RCPs on account of poor audit results in one safety audit.

Follow-up action on Safety Audit

- 2.38 All non-compliances identified by the Safety Auditor during the safety audit and subsequently in the safety audit report shall be raised in the following Site Safety Management Committee (SSMC) meeting and the remedial measures taken or proposed by the Contractor, including appropriate deadlines for completion and the responsible person, should be recorded for monitoring. The meeting shall also review any outstanding issues raised by any previous Safety Audit.
- 2.39 After the receipt of the audit report, the Architect/Engineer should check that the Contractor has submitted an action plan detailing actions which have been taken and actions to be taken against deficiencies identified in the audit report. It shall be countersigned by the Site Agent and the Safety Officer and be submitted to the Architect/Engineer, the Employer, the OSHC and the safety auditor within 14 days of the receipt of the audit report. The submission of a copy to the safety auditor is to enable him to prepare the audit plan for the next audit.
- 2.40 The Safety Plan, the results of the safety audit and the action plan prepared by the Contractor in response to the recommendations contained in the safety audit reports shall be mandatory items on the agenda of the SSMC meeting.
- 2.41 Where the Contractor has not taken immediate action to rectify any situation of "imminent danger" identified and notified by the Safety Auditor to the Contractor during the safety audit, the RCP and/or the next RCP should be marked "Adverse" unless the situation has been rectified.

**To : Occupational Safety and Health Council,
Independent Safety Audit Scheme Management Office,
1/F, Kimberley House,
35 Kimberley Road,
Tsimshatsui,
Kowloon.**

Attn : ISAS Administration Manager

Contract No. : _____
Contract Title : _____

Contractor's Name : _____

This is to confirm that the actual auditing hours spent by the Accredited Safety Auditor, *Mr/Ms _____ (name of ASA in block letters) on the captioned site are as follows:

Auditing Date	Auditing Time (excluding lunch hour)	Auditing Hours (A)	Lunch Hours (B)	Actual Auditing Hours (excluding lunch hours) (A) – (B)
	to	(hrs)	(hrs)	(hrs)
	to	(hrs)	(hrs)	(hrs)
	to	(hrs)	(hrs)	(hrs)
Total Actual Auditing Hours				(hrs)

Signature: _____

Name : _____ (in block letters)

Post : _____ Telephone number : _____

Department : _____

Date : _____

(Note : To be completed by the Architect/Engineer or his Representative and sent to OSHC within a week of the audit
* Delete as appropriate)

Appendix F

Sample Schedule of Rates for term contracts included in both PFSS and ISAS (Based on \$ 100M contract value over 2 years)

Item No.	Description	Quantity#	Unit	Scheduled Rate	Amount#
A	Complete draft Safety Plan (not > 1.0% of the estimate of total safety payment)*	-	Item	20,000	20,000
B	Complete Safety Plan (not > 1.5% of the estimate of total safety payment)*	-	Item	30,000	30,000
C	Updating of Safety Plan	24	nth	3,000	72,000
D	Provide Safety Officer	24	nth	20,000	480,000
E	Attend Site Safety Management Committee	24	nth	4,000	96,000
F	Attend Site Safety Committee	24	nth	4,000	96,000
G	Arrange and attend weekly safety walk	104	nr	4,000	416,000
H**	Provide safety training in the form of general induction training to				
	(a) skilled workers	280	nr	650	182,000
	(b) general workers	120	nr	450	54,000
I**	Provide safety training in the form of site specific induction training	700	nr	100	70,000
J**	Provide safety training in the form of tool box talks	2,000	nr	40	80,000
K	Safety Audit (Approx. 25% of estimate of the total safety payments)*	8	nr.	60,000	480,000
L+	Attendance on Safety Auditor	8	nr.	2,000+	16,000
Total to Collection Sheet					

Notes:-

(*) The words in brackets are for guidance only and should not be entered in the Schedule of Rates.

** The rates for items H, I, and J are fixed and should not be adjusted upwards or downwards even if the value of the contract is greater than or below \$ 100M, but the quantities can be adjusted in accordance with the content of works under that contract.

The shaded columns are for illustration purpose and should not be included in the Schedule of Rates.

nth month

nr number

+ this item is to be placed in the Section for "preliminary" items and its rate is to be subject to competitive tendering by the Contractor; for term contracts with rates to be inserted by the Contractor, the rate of \$ 2,000 should be omitted and the Contractor allowed to insert his own rate in the schedule.

(A sample BQ for works contracts is given in Chapter 12 of the Construction Site Safety Manual)