

PETRONAS TECHNICAL STANDARDS
HEALTH, SAFETY AND ENVIRONMENT

HSE ASSURANCE GUIDELINES
(GUIDELINE)

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PREFACE

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They are based on the experience acquired during the involvement with the design, construction, operation and maintenance of processing units and facilities. Where appropriate they are based on, or reference is made to, national and international standards and codes of practice.

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HSE MANUAL AMENDMENT RECORD SHEET**PTS Number: 60.0301****PTS Title: HSE Assurance Guidelines**

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1 **MANAGEMENT SUMMARY**

See section 2 for a fuller definition of the terms in *Italics*

These guidelines provide detailed guidance on the interpretation of the Assurance element of the Group Procedure for an HSE Management System. Additional guidance on the interpretation of the guidelines is available from the General Manager Corporate HSE, who should be consulted as appropriate.

These guidelines apply to all HSE Assurances, from Internal HSE Assurances of specific aspects of an Operating Unit/joint Venture (OPU/JV) activities to high-level assurances of the Group or Business level approach to manage HSE.

MINIMUM EXPECTATIONS FOR HSE ASSURANCE PROGRAMMES

The Group HSE Management System requires that an assurance programme shall be in place to review and verify the effectiveness of the management system. It shall include assurances by assessors independent of the process or facility being assessed and requires that assurance follow-up be timely, thorough and assessable.

It is expected that *HSE Assurance Programmes* shall meet the following criteria:

- Be part of an overall *Assurance Plan*, that also includes *Self-Appraisal* processes designed to provide assurance that all the elements of the OPU/JV's HSE MS are in place and effective.
- Be risk-based when determining the frequency and depth of *HSE Assurances*, and the type of assurance (*Internal, External or Independent*). For critical operations e.g. seismic, drilling and logistics or installations, the frequency shall not be less than once every five years. Shorter intervals are justified if the opinion of the most recent relevant audit was not at least 'Fair'.
- Include *Independent HSE MS Assurances*, which cover the entire HSE MS of an OPU/JV as their scope at least once every five years. This period is reduced to three years for OPU/JVs with *Major Installations* or individual OPU/JV having significant HSE risks as defined by each Group Business. Shorter intervals apply when the previous audit opinion was not at least 'Fair'.
- The scope of *Independent HSE MS Assurances* shall include the process adopted for the preparation and substantiation of Annual HSE Letter of Assurance.
- All *HSE Assurances* shall meet a requirement for *Independence*. This means that *HSE Assurances* shall be led by assessors who are independent of the operation or installation being assessed. *Independence* is a key difference between assurance and *Self-Appraisal* processes.
- The competency of HSE assessors (leaders and team members) for *Internal, External and Independent HSE Assurances* shall be assured and for *Independent HSE Assurances* the following applies:

- OPU *Independent HSE Assurances* shall be led by assessors whose competence requirements have been defined by the General Manager Corporate HSE on behalf of the Business Sector Committee, and who do not come from the OPU/JV being assessed.
- General Manager Corporate HSE shall approve OPU/JV *Independent HSE MS Assurance* leaders, who may be resourced from PETRONAS Group or third party audit service providers. A register of 'approved' *Independent HSE MS Assurance* team leaders shall be maintained by the Group HSE Committee.
- There shall be appropriate systems for rating and reporting assurance findings and arriving at an overall *Assurance Opinion*.
- The management summaries of all *Independent HSE MS Assurance* reports shall be provided to the Group HSE Committee.
- OPU/JVs shall have appropriate procedures for the tracking of *HSE Assurance* findings to ensure they are followed up and closed out. As a minimum, by means of the Annual HSE Letter of Assurance procedure, Operating Units shall annually review the numerical status of outstanding 'High' assurance findings and the actual progress of recommendations which address each outstanding 'Serious' finding.

2 **DEFINITIONS**

The terminology used in describing audit and related processes has evolved over the years, and terms are not always used consistently in current HSE documentation. The following terms and their definitions, which reflect the most recent PETRONAS Group thinking on risk management as described in the PETRONAS 'Hazard and Effects Management Process', have been used in these guidelines and are recommended for use in future Business and OPU/JV documentation related to HSE Assurance.

ASSURANCE PLAN

An outline of the various forms of Assurances which will take place over a stated time frame, to provide assurance regarding the effectiveness of a risk based control framework.

Source: Petronas Hazard and Effects Management Process

ASSURANCE OPINION

An Assurance Opinion is an assessment of 'the overall level of control for the subject area', and shall be provided for all Independent HSE Assurances. The assurance team shall base its Assurance Opinion on the standards, requirements, or policies specified in the assurance Terms of Reference. The Assurance Opinion shall be classified using the terms 'Good', 'Fair', 'Unsatisfactory', or 'Unacceptable' as defined in the Internal Assurance Guidelines (see Appendix IV for the definitions

of these terms).

Source: PTS 60.0101 HSE Assurance Manual

EXTERNAL ASSURANCE

An External HSE Assurance is an assessment led by an assessor from outside the PETRONAS Group. External assessors are typically used to provide greater independence, more external credibility, competence and experience not available internally, or are provided in response to specific stakeholder/JV partner requirements, for example of joint venture partners or stock exchange regulations. External HSE Assurances may also be used for HSE performance verification purposes or to achieve certification of all or part of an OPU/JV's HSE MS. Other areas of external assurance include those of certification bodies e.g. ISO 14001, OSHSAS 18001, etc.

OPU/JV HSE ASSURANCE PROGRAMME

An HSE Assurance Programme is the risk-based combination of Internal, External and/or Independent HSE Assurances that is planned to take place over a stated time frame, which in aggregate with Self-Appraisals provides assurance that the HSE MS is effective. The HSE Assurance Programme is an important part of an OPU/JV's overall Assurance Plan.

Source: These Guidelines

HSE MANAGEMENT SYSTEM (HSE MS)

An HSE MS is a structured system of HSE controls meeting the requirements of the PETRONAS Group Procedure for an HSE Management System, which has been adopted as a mandatory procedure by all PETRONAS Group of companies. HSE MS exist at Group, OPU/JV and facility or activity levels. One element of the PETRONAS Group Procedure for an HSE MS is a requirement for HSE Assurance which is further defined in these guidelines.

Source: These Guidelines, based on the Group HSE Management System Manual

INDEPENDENCE

'Independence' refers to a general requirement that HSE Assurances shall be led by auditors who are independent of the operation or installation being audited. 'Independence' is one of the key differences between 'Self-Appraisal' and 'Assurance' processes.

Source: These Guidelines

INDEPENDENT HSE ASSURANCE

Independent HSE Assurances are HSE Assurances led by assessors whose

competence requirements have been defined by Corporate HSE and who do not come from the OPU/JV being assessed. Thus, while all HSE assurances shall be independent (that is, the independence of the assessors shall be assured - refer to the definition of 'Independence' given above), not all will be Independent HSE Assurances. See also the definition of 'Independent HSE MS Assurances' given below.

Source: These Guidelines

INDEPENDENT HSE MS ASSURANCE (REFER ALSO TO SECTION 5 BELOW)

Independent HSE MS Assurances are a specific type of Independent HSE Assurance which has the entire HSE MS in question as their scope. As with all Independent HSE Assurances, they shall be led by an assessor approved by Corporate HSE and does not come from the assessed OPU/JV. OPU/JV Independent HSE MS Assurances provide independent HSE assurance to OPU/JV management. The results of Independent HSE MS Assurances, together with assurance information from the Annual HSE Letter of Assurance process are used by Business Heads to provide HSE Assurance to the PMC (PETRONAS Management Committee), principally via statements in the Business Annual HSE Letter of Assurance. Similar principles apply to Business and Group level Independent HSE MS Assurances.

Source: These Guidelines

INTERNAL HSE ASSURANCE

An Internal HSE Assurance is an HSE Assurance conducted by an assessor from within the PETRONAS Group who is independent of the operation or installation being assessed. An Internal HSE Assurance is performed to meet a Group (including an OPU/JV), as opposed to a third party, audit expectation.

Source: These Guidelines

MAJOR INSTALLATIONS

Major Installations are installations, which due to their size and/or the nature of the processes involved present significant HSE risks. It is a requirement of the Group Minimum Environmental Expectations that the environmental management system of Major Installations shall be externally certified and their HSE MSs are subject to more frequent Independent HSE MS Assurances. Operating Units determine which installations shall be considered Major Installations, but as a minimum they include all crude oil and natural gas export terminals, gas plants, offshore platforms, major flow stations, floating production and storage vessels, all PETRONAS operated refineries and chemicals manufacturing facilities or as defined under CIMAHS.

MANAGEMENT REVIEW