



Group Defined Operating Practice

Assessment, prioritization and management of risk.

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Implementation draft.

This Group Defined Operating Practice is issued for a period of 12 months from the issue date as a draft implementation document to assess the impact on the organization and to obtain feedback on the content. Following this period it will be revised and issued as an approved Group Defined Operating Practice.

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Summary

What does this Practice do?

This Group Defined Operating Practice aims to establish a consistent and complete BP Group process for assessing Health, Safety, Security, Environment and Operating (HSSE&O) risks and for prioritizing actions in support of the BP Group's HSSE goal of "no accidents, no harm to people and no damage to the environment" and adherence to regulatory and legislative requirements.

This Practice integrates the hazard evaluation and risk management tools already in use within BP (e.g., MAR, HAZOP, JHA, Security risk assessments, Healthmap to support overall risk assessment, prioritization, and management.

This Practice follows the Operating Management System (OMS) continuous improvement process depicted in Fig. 1.

This Practice does not address non operational risks within the organization such as commercial risks, risks projects or enterprise risks associated with joint ventures.



Fig 1: Continuous improvement process

This Practice includes a structured risk management process and consistent method of ranking the impacts and probability of potential HSSE&O risks. It seeks to help prioritize resource allocation and defines endorsement levels to manage levels of risk.

This Practice is aligned with the hazard evaluation and risk assessment techniques depicted in Fig. 2. It covers scenario development, risk assessment, prioritization and management, and it describes the techniques used to identify and assess risks.

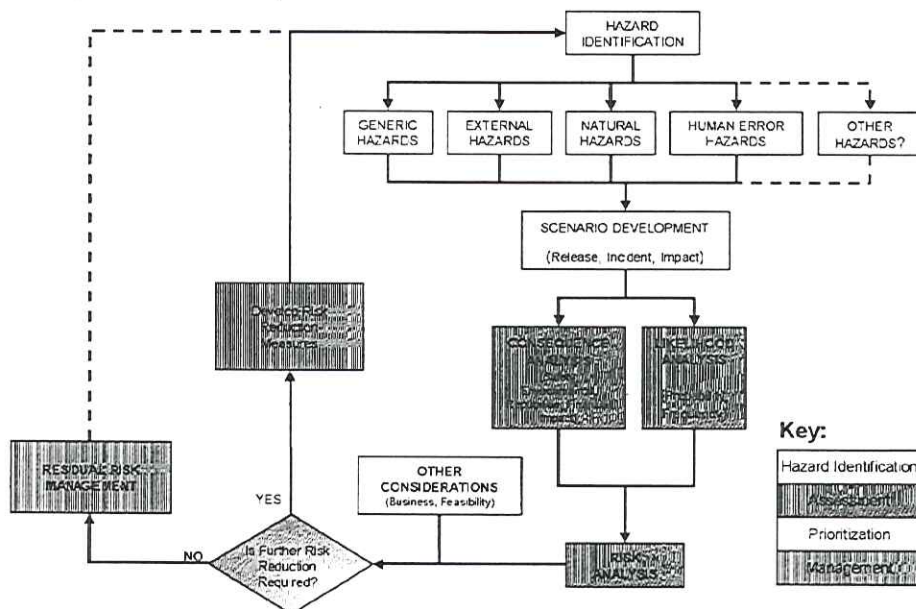




Fig 2: Risk process (From the Selection of hazard evaluation & risk assessment techniques Practice)

What is the process?

This Operating Practice requires each Entity to develop an HSSE&O risk management process to support continuous risk reduction that is integrated into business planning. Each Entity is required to implement the process summarized in Fig. 3 using 8 Elements, which are in turn supported by 12 Minimum Requirements. (The "Entity" may be an SPU or BU or similar organizational unit. See Appendix 5 for a full definition.)

To prioritize the management of risk each of the individual scenario risks should be viewed against the overall HSSE&O risks faced by an Entity. In this Practice the terms "Scenario risk" and "Entity risk" have been used to differentiate these risks.

- "Scenario risks" are among the many risks identified at an operating facility and are associated with a single scenario. (e.g., loss of containment from a specific vessel.)
- "Entity risks" are risks of higher significance to a particular Entity. These risks may consist of the most significant Scenario risks, an aggregation of a number of similar Scenario risks, or some of the broader range of risks faced by the Entity. (e.g., the loss of containment from multiple vessels at a site.)

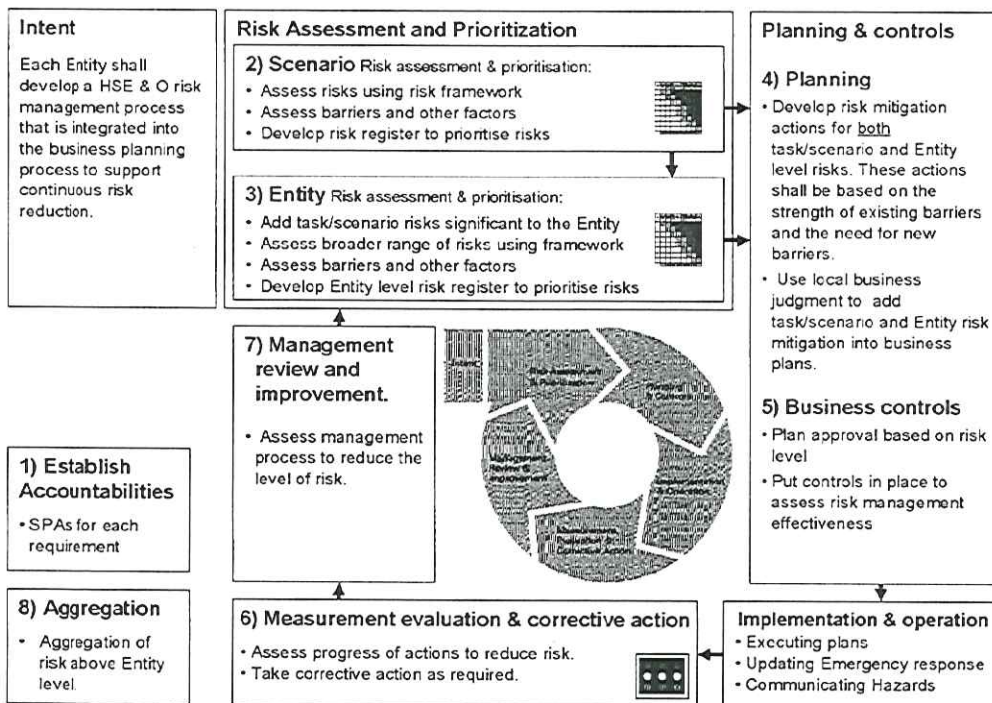


Fig 3: Risk assessment, prioritization and management process

Who is it for?

Management and line organizations, who need to understand the risk management process and their role in it. This Practice is for anyone who is involved in making decisions and prioritizing resources on HSSE&O risks and risk management throughout the organization.



1. Introduction

1.1 Intent and purpose

Description of Issue Inconsistent or ineffective identification and assessment of risk to health and safety of people, the environment and operating performance can create many issues for the organization:

- Serious injury or fatalities / significant damage to the environment
- Lack of common understanding of risks at a site resulting in conflicting management strategies or ineffective allocation of resources
- Difficulty in effectively and consistently communicating risks hinders the sharing of common good practice.

Intent

To provide a consistent approach to risk management to target resources most effectively for continuous risk reduction. This Practice assigns accountabilities for endorsement of HSSE&O risk management plans.

1.2 Scope and applicability

Scope

This Operating Practice shall be applied to Entities that are wholly owned and operated by BP, for assessment and prioritization of risks.

In the case of Joint Ventures the following shall apply:

- Where BP has operational control of a joint venture, BP shall, after an appropriate risk assessment, endeavor to adopt this Practice and shall, if necessary, seek to amend relevant agreements immediately or upon renewal.
- Where BP does not have operational control of a joint venture, BP shall, if necessary after an appropriate risk assessment, endeavor to ensure the operator adopts the intent of this Practice. Where this is not possible or feasible BP shall seek to influence or persuade the joint venture or contractor to adopt a set of principles based on this Practice.

This Practice is not a substitute for other specific risk management processes, e.g., MAR, those applied during daily operations (e.g., Job Safety Assessment), during construction activities, or during major projects, although the outputs of these other processes may be used as inputs into the identification of risks in this process.

In the event of a conflict between this Practice and a relevant law or regulation, the relevant law or regulation shall be followed. If the Operating Practice creates a higher obligation, it should be followed as long as full compliance with the law or regulation is achieved.



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1.3 Auditing, compliance and deviation

Auditing and Compliance

The monitoring of adoption of this Practice and reporting on implementation and progress on meeting targets shall be locally owned and included as part of an annual self-verification process for each Entity.

The minimum requirements of this Practice are an auditable part of the OMS.

Deviation from Minimum Requirements

Entities that are within the scope of this Operating Practice shall adopt or modify their procedures and practices to conform to the minimum requirements described in this Practice.

A decision not to conform to the minimum requirements of this Group Defined Operating Practice shall be based on a risk assessment that is formally justified, recorded and authorized by the relevant line Group Vice President, or equivalent BP operational leader, after consultation and approval from the Group Head of HSSE or his or her delegated nominee. This record shall, if requested, be made available to the Group Head of S&O Audit, for review and/or challenge as appropriate.

1.4 Administration and authorization

Administration and Authorization

Administration and authorization responsibilities for this Operating Practice are:

Content Owner: Group Head HSSE, S&O

Maintainer: Director OMS Knowledge Management

Approver: EVP S&O

The Content Owner is responsible for confirming the accuracy and integrity of content and proposed changes to the Practice.

The Maintainer is responsible for the upkeep and continued integrity of the Practice, including regular reviews and audits.

The Approver is responsible for authorizing and approving changes to the Practice.

Interpretation

Questions of interpretation should be directed in writing to the Content Owner or Maintainer of this Practice.

Changes and Amendments

Any suggested changes or amendments to this Practice should be forwarded to the document Maintainer and Content Owner along with the reasons for suggesting them.

All suggestions shall be acknowledged and, if rejected, the reasons given for their rejection.

Accepted changes shall be administered through the document change control system employed by Group Safety & Operations.



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**Document Control
and Review**

This Practice shall be held and controlled in the Safety & Operations website until the OMS Library is available.

This Practice is subject to regular review and also to review whenever circumstances dictate. All reviews, regular and otherwise, shall be initiated by the Content Owner.



2. The Practice structure

2.1 Minimum requirements and recommendations

Minimum requirements and recommendations

The Minimum Requirements set out below describe the minimum processes and activities that shall be completed to deliver the intent of this Practice. Subject to the "Scope" provisions in Section 1.2, these Minimum Requirements will form the basis for S&O audit protocols.

Recommendations provide guidance as to how to meet the Minimum Requirements and are based on good practice – both internal and external to BP. Adherence to recommendations in this Practice is not required.

2.2 Language

Shall, Should and May

Throughout the BP Group Practices the following words have specific meanings:

- **'Shall'** is used where a provision is mandatory.
- **'Should'** is used where a provision is preferred.
- **'May'** is used where alternatives are equally acceptable.

2.3 References and responsibilities

References

References, where appropriate, are made to other relevant Group Standards, Operating Practices, operating standards, guidelines, procedures and documents to support this Practice.

Responsibilities

Where appropriate, roles and responsibilities to deliver any process/activities required within this Practice are clearly defined. Delivery of these responsibilities shall be locally assigned.



3. Group Defined Operating Practice Elements and Minimum Requirements

3.1 Element 1: Establish accountabilities

Intent	To define roles and responsibilities to help ensure that the risk management process is robust and that action is taken to support continuous HSSE&O risk management.
Minimum Requirements	1. For each Entity, authorities for undertaking each of the Minimum Requirements of this Practice shall be delegated, documented, and agreed. Competency for these roles shall be defined and assessed.
Recommendations	<ul style="list-style-type: none">Given the significant legal and compliance issues inherent in the risk assessment and planning process, a BP legal representative shall be consulted each year at the start of the process described in this Practice and as required. (To advise on the HSSE&O risk management activities, any confidentiality or legal privilege issues, and on the extent of BP Legal involvement in those activities).Defined roles should include a manager accountable for the effective use of this Practice and a manager accountable for incorporating the output into business plans.

3.2 Element 2: Scenario level risk assessment

Intent	To promptly identify, assess and document HSSE&O Scenario risks.
Minimum Requirements	2. Each Entity shall have a process in place to identify and maintain an up-to-date record of its Scenario risks. The following factors shall be among those considered when initially identifying risks and as potential triggers for updating them. For example: <ul style="list-style-type: none">Audit / incident findings, HAZOP/HAZID assessments;Excursions outside safe operating limits;Changes to facilities, or onsite/offsite populations, new projects;Employee concerns; andSecurity concerns. Scenario risks shall be documented in a risk register as follows: <ul style="list-style-type: none">The scenario descriptions, (i.e. descriptions of a scenario, its causes and undesired outcomes);The barriers that are in place, their effectiveness, and the other factors that could change the probability of a risk or its impact;Probability and impact, taking into account the quality of barriers and other factors that change the probability of a risk or its impact. (All new assessments shall use the Risk Matrix described in Appendices 1-4. Existing safety studies that assess risk using a different matrix can be used until they are updated through their periodic review).Person accountable for managing the risk; andActions to reduce the level of risk, with action owners and completion dates (see Element 4).



Notes on how to record a risk scenario:

For each hazard, multiple scenarios can exist, each with potential impacts and associated probabilities. The highest risk scenario shall be selected and recorded as the representative risk. i.e., the risk in the area of the risk framework with the highest score. (See Fig. 4.)

Example: Road traffic accidents can result in a range of potential impacts, from frequent low-impact events such as minor vehicle damage, to less likely, severe impacts such as multiple fatalities. The representative risk is the highest-risk scenario.

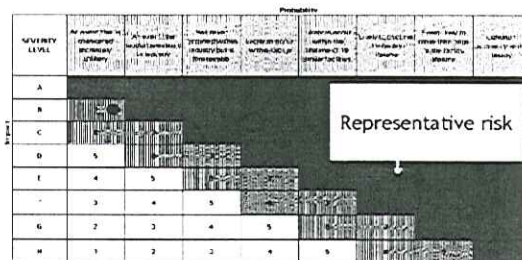


Fig 4: Risk Matrix

If multiple risk scenarios exist for a particular risk, then consideration should be given to viewing these as separate risks. This is particularly important if a high potential impact is identified.

Recommendations

- The Guide for the Selection of Hazard Evaluation and Risk Assessment Techniques should be used to support the selection of tools for evaluating (identifying and understanding) hazards and characterizing risks.
- When a risk has been identified with the potential for multiple fatalities, a more in depth analysis should be used such as Major Accident Risk assessment (MAR) or a Quantitative Risk Analysis (QRA).
- Risk registers may include more detailed information associated with the risk event, the process(es) or part(s) of the operation where the risk is present, specific links to action plans associated with the risk, references to other documentation, associated risks and action plan status.
- Some countries, (e.g. Germany), may require adaptation of Appendices 1-4 to accommodate local legal circumstances; local legal advice should be sought. Any adaptation requires a deviation to be approved.
- When generic industry data is used to support the assessment of a risk, consideration should be given to the factors that could alter its impact or the probability and the reasons for any differences documented, e.g., the effectiveness of the barriers that are in place or organizational change.
- Tools to simplify the capture of information (including a recommended risk register with integrated action tracking and examples of risk matrices and manageability matrices) are provided on the OMS Practice SharePoint site. (https://vss2.bp.com/HSE2/oms_Practices/Risk_Assessment/).

References

A Hazard and Risk Register shall be developed for each BP Operation. A summary of the Hazard and Risk Register shall be included in the Annual Engineering Plan (**Integrity Management Standard, Part 3.3**; "BP Operations", in that Standard, means BP Business Units, projects, facilities, sites and operations).



3.3 Element 3: Entity level risk assessment

Intent

To identify, assess and document HSSE&O Entity risks so that they can be managed effectively.

Minimum Requirements

3. Each Entity shall have a process in place to identify and record its Entity risks. These risks shall be identified as described below from both the known Scenario risks and the broader range of risks faced by the Entity:

- Individual Scenario risks that would require endorsement of the risk management plan at operational leader level or higher. (e.g., PUL/BUL or Works General Manager or higher, see minimum requirement 7.)
- Aggregation of a number of similar lower-level Individual Scenario risks that, when aggregated, would require endorsement of the risk management plan at operational leader level or higher. (e.g., PUL/BUL or Works General Manager or higher, see minimum requirement 7.)
- Other Scenario risks which (individually or when aggregated) merit inclusion as Entity risks.
- Consideration of the broader range of risks faced by the Entity, e.g.:
 - Risks identified from investigations, audits and incident findings;
 - Natural environment (e.g., hurricane, earthquake);
 - Health risks (e.g., pandemics, occupational exposure); and
 - External events (e.g., regulatory changes, security).

4. Each Entity shall document its Entity level risks in a risk register, this shall include the following information:

- The scenario descriptions, (i.e. descriptions of a scenario, its causes and undesired outcomes);
- The barriers that are in place, their effectiveness, and the other factors (e.g., organizational change, regulatory regime) that could change the probability of a risk or its impact;
- Probability, impact and manageability, taking into account the quality of barriers and other factors that change the probability of a risk or its impact. (All new assessments shall use the Risk Matrix described in Appendices 1-4. Existing safety studies that assess risk using a different matrix can be used until they are updated through their periodic review).
- Person accountable for managing the risk; and
- Actions to reduce the level of risk with action owners and completion dates (see Element 4).

5. At Entity level, HSSE&O risks shall be plotted graphically to support the understanding and communication of these risks. The impact on the health and safety of people and on the environment shall be clearly distinguished from business impacts so that managing HSE risks may be effectively prioritized. To do this:

- A matrix showing HSE impacts (see Appendix 1) vs probability shall be prepared, and a matrix showing risk vs manageability should be prepared.
- A matrix showing Business impacts (see Appendix 2) vs probability shall be prepared, and a matrix showing Business risk vs manageability should be prepared.



6. The Entity level risks shall be updated annually as part of the planning cycle and/or if there is change that adds new risk or materially changes an existing risk. The following factors shall be among those considered when initially assessing risks and as potential triggers for updating them. For example:

- Organization change;
- Physical changes to facilities;
- Regulatory changes; and
- New standards (internal and external).

Recommendations

- The Entity risk assessment should be generated at an appropriate time in the business planning cycle to allow actions to be aggregated into plans at appropriate levels.
- The Entity should actively seek to identify potential risks where the workforce may have become accustomed to the presence of the risk, or weaknesses in barriers. e.g., housekeeping, pump leaks, faulty instrumentation.
- To identify and assess the risks, the Entity should use a facilitated discussion with participants familiar with and accountable for the Entity's day-to-day operations. Consider engaging expertise external to the Entity to provide alternate perspectives. BP Legal should be given the opportunity to participate in the process (including activities such as workshops, risk documentation and review of outcomes).
- The Entity should use broad open questions to expand thinking on the range of risks that can be identified. The OMS sub-element principle statements (see OMS Part 2) should be used as a guide to ensure that all sources of risk are considered. Some possible data sources (including other specific risk processes – MAR, HAZOP, ISO, etc.) for identification of risks associated with each element of operating are presented in Fig 5.

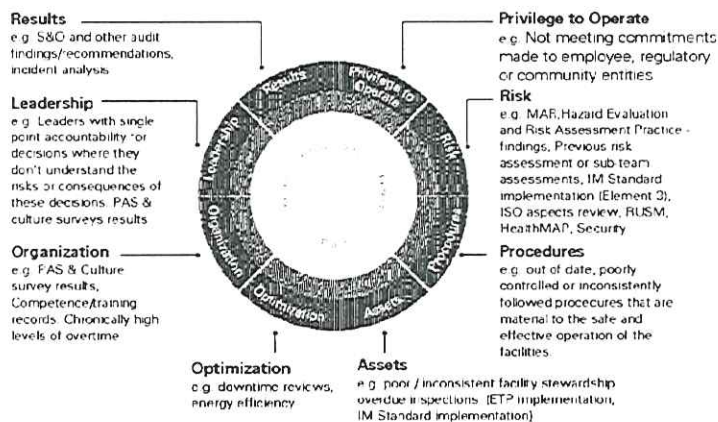


Fig 5: Elements of operating - example prompts

- There may be cases where the manager accountable for incorporating risk management plans into overall business planning may also elect to accept, transfer (or share) or terminate the risk.
- The manageability matrix should be used as part of the process to understand how risks can be reduced and may help to determine circumstances where it is more appropriate to reduce the impact of an event rather than reducing its probability of occurrence.



3.4 Element 4: Planning

Intent

To prioritize actions and to incorporate them into business plans.

Minimum Requirements

- 7. Actions to manage the identified risks shall be determined using the principle of continuous risk reduction and local business judgment, and:**
- Potential actions to address Scenario and Entity level risks shall be prioritized and assessed considering a range of risk reduction measures, strength of existing barriers and addition of new barriers.
 - A decision shall be taken, based on the level of risk, as to whether short term risk mitigation is needed while longer term risk reduction measures are put in place (see Minimum Requirement 8).
 - Risk reduction measures should be considered in the following order of preference: Elimination, Prevention, Control, Mitigation, Emergency Response.
 - Controls should be considered to have the following order of reliability: Passive measures, Active measures, Administrative or Procedural controls.
- These actions shall be incorporated into business plans or local operating management systems.**

Notes on prioritizing actions:

Risk reduction actions should be assessed on their effectiveness based on the following guide:

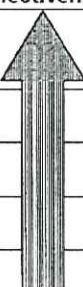
Risk Reduction type	Examples	Increasing Effectiveness
Elimination	Eliminated by use of substitution (e.g. use of different chemical reactants, cancelling an activity or deferring or limiting an activity to reduce the exposure to hazards)	
Prevention	Prevented at source (e.g. use of alloys that are more resistant to corrosion)	
Control	Controlled through design features or administrative procedures (e.g. fire/gas detection and emergency shutdown)	
Mitigation	Mitigated by protection of personnel (e.g. use of Personal Protective Equipment (PPE))	
Emergency Response	Mitigated through effective Emergency Response (e.g. firewater)	

Fig 6: Effectiveness of risk reduction measures

Controls should be assessed according to their reliability based on the following guide. Reliance upon administrative or procedural controls alone may be appropriate for interim short-term interventions, but should not form the basis for longer term risk reduction plans.

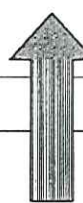
Control types	Examples	Increasing reliability
Passive measures	Preventing a shore tank overflowing during a discharge operation from a ship by installing a tank that is larger than the ship's capacity.	
Active measures	Preventing a shore tank overflowing during a discharge operation from a ship by installing a high level shutdown system.	
Administrative or procedural controls	Preventing a shore tank overflowing during a discharge operation from a ship by relying on operator monitoring and control.	

Fig 7: Reliability of controls



3.5 Element 5: Business controls

Intent	To ensure that plans have business approval appropriate to the level of risk and to identify the criteria to assess risk management effectiveness.
Minimum Requirements	<p>8. The organizational level responsible for endorsing plans shall be based on risk, and take the requirement for short term risk mitigation into account. (See chart in Appendix 3 and the table in Appendix 4.)</p> <p>9. Each Entity shall establish a performance management process that monitors the closure of actions relating to Entity risks and the effectiveness of these actions.</p>

3.6 Element 6: Measurement, evaluation and corrective action

Intent	To assess performance of the risk management plans and to initiate corrective action if required.
Minimum Requirements	<p>10. HSSE&O risk reduction actions shall be assessed (annually as a minimum), to determine if the risk reduction actions have been progressed and if the risk has been adequately reduced. Necessary corrective action shall be taken.</p>
Recommendations	<ul style="list-style-type: none">• The Scenario risk register and Entity risk register should be reviewed on an ongoing basis to ensure that risk management activities are having the desired effect and that work is prioritized properly.• Share successes with other similar operations (at meetings, workshops, conferences, or when meeting to discuss aggregation of risks to higher levels of the organization)

3.7 Element 7: Management review and improvement.

Intent	To assess performance of the risk management process and to initiate corrective action if required.
Minimum Requirements	<p>11. Each Entity shall assess the effectiveness of its risk assessment, prioritization and management process, and if required, take corrective action and update the Local Operating Management system (LOMS), or its equivalent until the LOMS is in place.</p>
Recommendations	<ul style="list-style-type: none">• As part of the annual or triggered review each part of the OMS continuous improvement process should be assessed to make the risk assessment, prioritisation and management process as effective as possible. In addition, the following areas should be assessed to identify potential areas of improvement.<ul style="list-style-type: none">• Consistency of risk assessment within the Entity.• Which management strategies worked well and which strategies could be improved.• The approval process (what does and does not work well)• Availability of competent people to support the activities• Selection of performance metrics to improve visibility• Successes should be shared with other similar BP operations.



3.8 Element 8: Aggregation of risk above Entity level

Intent

To generate an aggregated view of risks above the Entity level to facilitate strategic management of risk and allocation of resources across the organization.

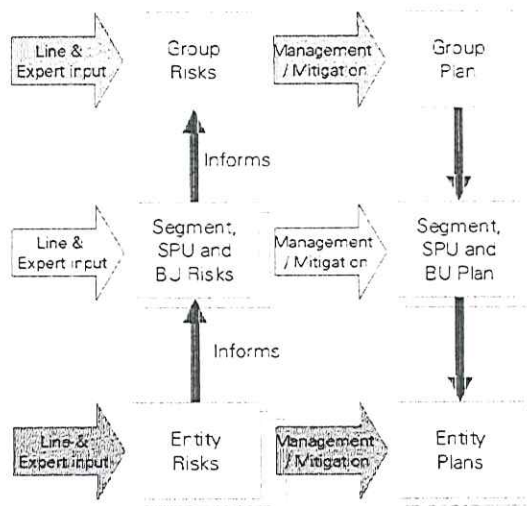


Fig 8: Aggregation of risk based plans

Minimum Requirements

12. Above Entity level, risks shall be aggregated annually as part of the planning cycle to allow strategic management of risks and to prioritize resource allocation at the appropriate level of aggregation (e.g., SPU, Segment, Region, or Group).

Recommendations

- When aggregating similar risks (i.e., risks involving sufficiently similar types and scales of potential impacts) the following steps may be used:
 - Agree on a common description of the risk event for the similar risks being aggregated at the higher level.
 - Based on the number of sites where the risk event may occur, an overall probability at the aggregated level can be determined. Where there are more sites at which the risk may occur, the probability will be higher. As a rule of thumb, the probability levels are factors of 10 (i.e., if there are 10 sites where the event may occur, then the probability will be one level higher, or 2 levels higher for 100 sites, etc.).
- Consideration should be given to the generic issues/weaknesses that may only be seen when considering multiple sites (e.g., weaknesses in key skills may be more visible when viewed at an SPU level).



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Appendices 1- 5



Appendix 1 – Risk framework – HSE impact levels

SEVERITY	HEALTH AND SAFETY	ENVIRONMENTAL
A Levels A-C maintain the visibility of risks with the potential for catastrophic impact even if their probability of occurrence is extremely low. The upper level of this framework is defined by the most severe level of impact ever seen in industry	Comparable to the most catastrophic health/ safety incidents ever seen in industry. The potential for 200 or more fatalities (or onset of life threatening health effects) shall always be classified at this level.	<ul style="list-style-type: none"> Future event, e.g. unintended release, with widespread damage to any environment and which remains in an 'unsatisfactory' state for a period > 5 years. Future event with extensive damage to a sensitive environment and which remains in an 'unsatisfactory' state for a period > 5 years. Future event with widespread damage to a sensitive environment and which can only be remediated to a 'satisfactory' / agreed state in a period of 2 - 4 years.
	Catastrophic health/ safety incident causing very widespread fatalities within or outside a facility The potential for 50 or more fatalities (or onset of life threatening health effects) shall always be classified at this level.	<ul style="list-style-type: none"> Future event with extensive damage to a non-sensitive environment and which remains in an 'unsatisfactory' state for a period > 5 years. Future event with extensive damage to a sensitive environment and which can only be remediated to a 'satisfactory' / agreed state in a period of 2 - 4 years. Future event with widespread damage to a non-sensitive environment and which can only be remediated to a 'satisfactory' / agreed state in a period of 2 - 4 years. Future event with widespread damage to a sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of 1 year.
	Catastrophic health/ safety incident causing widespread fatalities within or outside a facility. The potential for 10 or more fatalities (or onset of life threatening health effects) shall always be classified at this level.	<ul style="list-style-type: none"> Future event with extensive damage to a non-sensitive environment and which can only be remediated to a 'satisfactory' / agreed state in a period of 2 - 4 years. Future event with widespread damage to a non-sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of 1 year. Future event with extensive damage to a sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of 1 year. Future event with widespread damage to a sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of months.
BP's commitment to health, safety and the environment is paramount; this is reflected in BP's HSE goal of 'No Accidents, No Harm to People, and No Damage to the Environment'. No accident, injury, or loss of containment causing damage to the environment is ever "acceptable" to BP. BP is using this framework (equivalents of which are used throughout industry) to support the consistent prioritization of actions to eliminate or mitigate HSE risk.		
D	Very major health/ safety incident <ul style="list-style-type: none"> The potential for 3 or more fatalities (or onset of life threatening health effects) shall always be classified at this level. 30 or more injuries or health effects to BP workforce, either permanent or requiring hospital treatment for more than 24 hours. 	<ul style="list-style-type: none"> Future event with extensive damage to a non-sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of 1 year. Future event with localized damage to a sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of 1 year. Future event with widespread damage to a non-sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of months. Future event with extensive damage to a sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of months.
E	Major health/ safety incident <ul style="list-style-type: none"> 1 or 2 fatalities, acute or chronic, actual or alleged. 10 or more injuries or health effects to BP workforce, either permanent or requiring hospital treatment for more than 24 hours. 	<ul style="list-style-type: none"> Future event with localized damage to a non-sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of 1 year. Future event with extensive damage to a non-sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of months. Future event with localized damage to a sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of months. Future event with extensive damage to a sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of days or weeks.
F	High impact health/ safety incident <ul style="list-style-type: none"> Permanent partial disability(ies) Several non-permanent injuries or health impacts. DAFWC 	<ul style="list-style-type: none"> Future event with localized damage to a non-sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of months. Future event with immediate area damage to a sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of months. Future event with extensive damage to a non-sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of days or weeks. Future event with localized damage to a sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of days or weeks.
G	Medium impact health/ safety incident <ul style="list-style-type: none"> Single or multiple recordable injury or health effects from common source/event. 	<ul style="list-style-type: none"> Future event with immediate area damage to a non-sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of months. Future event with localized damage to a non-sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of days or weeks. Future event with immediate area damage to a sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of days or weeks.

H	Low impact health/ safety incident <ul style="list-style-type: none"> • First aid • Single or multiple over-exposures causing noticeable irritation but no actual health effects 	<ul style="list-style-type: none"> • Future event with immediate area damage to a non-sensitive environment and which can be remediated to a level which restores its environmental amenity in a period of days or weeks
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Appendix 2 – Risk framework – Business impact levels

SEVERITY	PRIVILEGE TO OPERATE	EQUIPMENT DAMAGE, BUSINESS VALUE LOST
A	Global outrage, global brand damage and/or affecting international legislation. * Prolonged international media coverage.	>\$10 billion
B	* Regional outrage, for example North America, Europe. * Regional brand damage. * Likely to lead to change of regulations at regional level. * International media coverage prolonged Regional media coverage.	\$5 billion - \$10 billion
C	* Public outrage in major markets, eg. North America, Europe. * Limited regional/ national brand damage. * Actual or threatened loss of privilege to operate (license suspension) for major operation in a significant market. * Likely to lead to change of national/(state in USA) regulations. * Public outrage in other major markets where we have presence or aspiration.	\$0.5 billion - \$5 billion
D	* Regional or prolonged local media coverage or severe national outrage. * Actual or threatened loss of License to Operate for affected business/site. * Likely to lead to change of regulations * Localized or limited "interest group" outrage in major market.	\$100 m to \$0.5 billion
E	* Public or investor outrage in non-major markets. * Significant enforcement action against one or more material assets in a significant market (e.g. US, Europe)	\$5m - \$100 m
F	* Prolonged local media attention. * Other enforcement action against one or more material assets in other market (not US or Europe) with a foreseeable end date. * Short term local media coverage.	\$500k-\$5m
G	* Some disruption to day to day lives (e.g. loss of single road access less than 24 hours) * Fines or other penalties significant to a BU. * Isolated and short term complaints from neighbors (e.g. complaints about specific noise episode)	\$50k - \$500k
H	* Code of Conduct violation which does not lead to higher severity level consequence * No community notification required.	<\$50k



Appendix 3 – Risk and manageability Matrices

Risk Matrix

		Probability							
		1	2	3	4	5	6	7	8
SEVERITY LEVEL		An event that would be unlikely in industry	Has never occurred within industry	Similar event has occurred somewhere in industry	Similar event has occurred somewhere within Group	Likely to occur within the lifetime of 10 similar facilities	Likely to occur in the facility lifetime	Event likely to occur more than once in the facility lifetime	Common occurrence at the facility
A	Impact	8	9						
B					10	11	12	13	14
C						10	11	12	13
D							10	11	12
E		4						10	11
F		3	4						10
G		2	3	4					
H		1	2	3	4				
		$< 10^{-6}$ /YR	10^{-6} to 10^{-5} /YR	10^{-5} to 10^{-4} /YR	10^{-4} to 10^{-3} /YR	10^{-3} to 10^{-2} /YR	10^{-2} to 10^{-1} /YR	10^{-1} to 1 /YR	

Manageability Matrix

		Manageability		
		Low	Medium	High
Very High				
High				
Med				
Risk				
Low				
		Outside influence Can only reduce impact	Within influence Can influence probability and impact	Within control Can exert a high degree of control over probability and impact



Appendix 4 – Risk based plan endorsement levels

Individual Task/ Scenario risks	Risk aggregated to Entity level	Required action
10 to 15	11 to 15	<p>For continued operation the appropriate Segment EVP, SPJ leader and the Segment HSE VP shall be promptly notified.</p> <p>A short term risk mitigation plan shall be implemented promptly while the Segment EVP's approval is obtained for a longer term risk mitigation plan.</p>
6 to 9	9 to 10	<p>For continued operation the appropriate operations leader (e.g. PUL/BUL or WGM) shall be promptly notified.</p> <p>A short term risk mitigation plan shall be implemented promptly while the appropriate operations leader's approval is obtained for a longer term risk mitigation plan.</p>
5 to 7	7 to 8	<p>Short term risk mitigation shall be implemented while the appropriate operations leader's approval is obtained to manage the risk as part of an overall program of continuous risk reduction.</p>
1 to 5	1 to 6	<p>Continuous risk management must be embedded in the business's HSE and Operations activity in pursuit of the Group's HSE Goals of 'No accidents, no harm to people, no damage to the environment'.</p>



Appendix 5 – Definitions

The following terms are used with the following meanings in this Practice. The principal focus of this Practice is the management of threats to health, safety, environment and operations, in the context of the Group's HSSE goals. For this reason, the term "risk" as used in this Practice is confined to threats rather than opportunities.

Barriers	Barriers are the tangible Plant, Process, People risk reduction measures that are intended to prevent the incident occurring and/or control its impact or frequency and/or mitigate its effect on people, the environment, or our business.
Entity	An organizational unit within BP which may be a Performance Unit, Business Unit, Strategic Performance Unit, Segment or some logical subgroup of one of these, defined by the Segment, Function or Region. Each Entity will have a consistent Local Operating Management System documented in an OMS Handbook.
Entity risk	A risk of higher significance to the Entity.
Event	Occurrence of a particular set of circumstances.
Hazard	A condition or practice with the potential to cause harm to people, environment, or business performance.
Impact	The loss / harm to people, environment or business performance if a risk event should occur.
Manageability	The degree of control that BP can exert in the circumstances surrounding an event.
Plan	HSSE& O plan - the plan put in place by a site to address HSSE&O risks. Business plans - the overall plan for an Entity that includes business and HSSE and operational actions. Action plan – the plan put in place to address a specific risk or number of risks.
Probability	Likelihood of occurrence of an event (taking into account existing barriers that are in place, and usually considered over a 1 year period).
Risk	A measure of loss / harm to people, the environment, compliance status, Group reputation, assets or business performance in terms of the product of the probability of an event occurring and the magnitude of its impact. Throughout this Practice the term "risk" is used to describe health, safety, Security environmental and operational (HSSE&O) undesired events.
Risk assessment	The process by which the impact and probability of a risk is assessed.
Risk management	The process by which the results of a risk assessment are used to make decisions regarding risk reduction strategies.
Residual risk	The level of risk that remains when barriers are taken into account.
Scenario risk	An individual undesired risk.
A scenario	The description of an individual undesired event with specific causes and impact.