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Hazardous Industry Planning Advisory
Paper No 12

Hazards-Related Conditions of Consent

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HIPAP 11: Hazards-Related Conditions of Consent
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Foreword

Since the 1980s, the New South Wales Department of Planning has promoted and implemented an integrated approach to the assessment and control of potentially hazardous development. The approach has been designed to ensure that safety issues are thoroughly assessed during the planning and design phases of a facility and that controls are put in place to give assurance that it can be operated safely throughout its life.

Over the years, a number of Hazardous Industry Advisory Papers and other guidelines have been issued by the Department to assist stakeholders in implementing this integrated assessment process. With the passing of time there have been a number of developments in risk assessment and management techniques, land use safety planning and industrial best practice.

In recognition of these changes, new guidelines have been introduced and all of the earlier guidelines have been updated and reissued in a common format.

I am pleased to be associated with the publication of this new series of Hazardous Industry Advisory Papers and associated guidelines. I am confident that the guidelines will be of value to developers, consultants, decision-makers and the community and that they will contribute to the protection of the people of New South Wales and their environment.

Director General

Contents

Executive Summary

Background

The orderly development of industry and the protection of community safety necessitate the assessment of hazards and risks. The Department of Planning has formulated and implemented risk assessment and land use safety planning processes that account for both the technical and the broader locational safety aspects of potentially hazardous industry. These processes are implemented as part of the environmental impact assessment procedures under the Environmental Planning and Assessment Act 1979.

The Department has developed an integrated assessment process for safety assurance of development proposals, which are potentially hazardous. The integrated hazards-related assessment process comprises:

- a preliminary hazard analysis undertaken to support the development application by demonstrating that risk levels do not preclude approval;
- a hazard and operability study, fire safety study, emergency plan and an updated hazard analysis undertaken during the design phase of the project;
- a construction safety study carried out to ensure facility safety during construction and commissioning, particularly when there is interaction with existing operations;
- implementation of a safety management system to give safety assurance during ongoing operation; and
- regular independent hazard audits to verify the integrity of the safety systems and that the facility is being operated in accordance with its hazards-related conditions of consent.

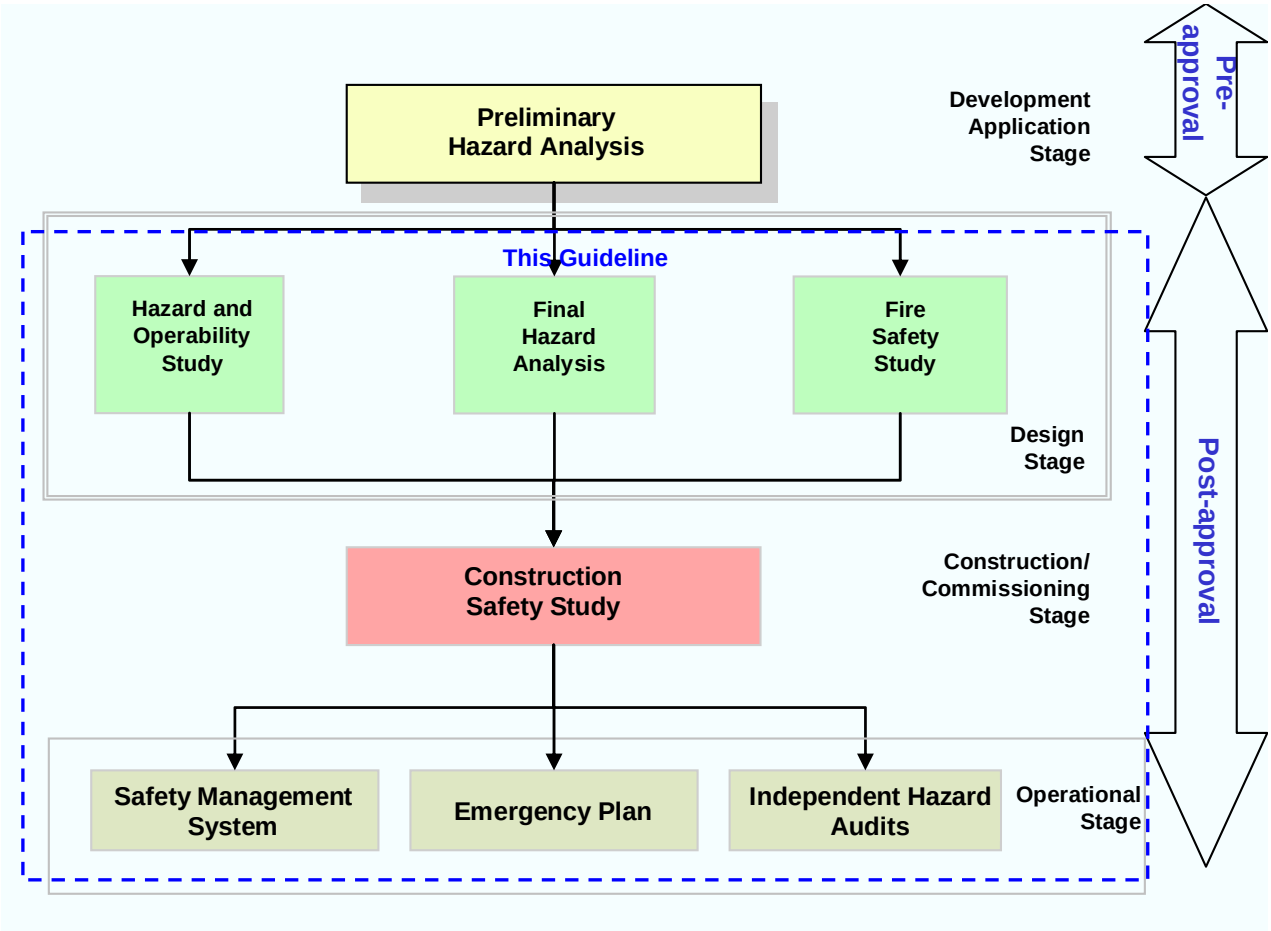
The process is shown diagrammatically in Figure 1.

A number *of Hazardous Industry Advisory Papers (HIPAPS)* and other guidelines have been published by the Department to assist stakeholders in implementing the process. All existing HIPAPs have been updated or completely rewritten and three new titles (HIPAPs 10 to12) have been added.

A full list of HIPAPs is found at the back of this document.

The part of the process covered by this guideline is highlighted in Figure 1.

Figure 1: The Hazards-Related Assessment Process



Conditions of Consent

Hazards-related conditions of consent are imposed to ensure that the assessment process in Figure 1 is followed, so that safety is not compromised during the design, construction and ongoing operation of the development.

A similar process is followed for major projects assessed under Part 3A of the EP&A Act.

These conditions of consent require an Applicant to prepare a series of hazard study documents and submit these studies for the approval of the relevant consent authority.

While the use of a standardised set of conditions of consent promotes a consistent approach to assessment, it can lead to overly onerous requirements for low to medium hazard developments. It is important that the conditions be 'fit-for-purpose'.

These guidelines present an approach to tailoring the conditions of consent to the hazards and risks of a particular development, as assessed in the PHA.

Section 1 provides a general introduction and discusses broad options for framing conditions of consent that take account of the level of hazard or risk associated with a project.

The options presented range from simply requiring that relevant studies be carried out and their recommendations considered (Option 1), to requiring that the studies be carried out by an approved appropriately qualified and experienced person and submitted to the Director General, for approval (Option 4).

Section 2 sets out a framework for setting hazard-related conditions of consent. It takes into account:

- the level of risk to surrounding land uses from the development, as indicated by the results of the PHA; and
- the increase in risk that could result from work required by one or more of the conditions of consent being inadequately carried out.

Section 3 discusses the conditions of consent for each of the studies, and how they can be individually tailored, depending on the hazards and risks associated with the development.

The approach recognises that consent authorities may have limited expertise in the technical aspects of risk assessment. Guidance is given in differentiating between developments for which a simple, relatively standardised approach may be used to set the conditions of consent and those for which a more rigorous, risk-based method is desirable, drawing on external expertise, such as the Department of Planning's Major Hazards Unit.

Appendices detail recommended conditions of consent for various levels of hazard and risk.

1 Introduction

SECTION SUMMARY

Conditions of consent (COC) are imposed on potentially hazardous development, to ensure that safety is not compromised during design, construction and ongoing operation.

There is a need to tailor conditions of consent to match the level of hazards and risks posed by each development.

This section discusses a number of possible options.

Key Message

- Planning authorities should set conditions that will provide a level of regulatory control aligned to the level of hazard or risk associated with each development.

1.1 Past Practice

State Environmental Planning Policy (SEPP) No 33 requires an Applicant for a potentially hazardous industrial development to prepare and submit a PHA, which a consent authority must consider as part of the overall assessment of the development application.

A number of hazards-related conditions of consent (COC) have usually been imposed on such developments, depending on the outcome of the PHA, to ensure that safety is not compromised during the design, construction and ongoing operation of the development. These require Applicants to develop systems and conduct a series of hazard studies and submit reports for approval to the Director General. Certain stages in the project lifecycle of the proponent's development must not commence until the relevant approval has been given.

The process is as summarised above in Figure 1. A similar process is followed for major projects assessed under Part 3A of the EP&A Act.

The reports are assessed by the Department of Planning's Major Hazards Unit (MHU) on the basis of their consistency with the relevant Hazardous Industry Planning Advisory Papers (HIPAPs) and the extent to which they have addressed issues highlighted in the PHA or nominated in the relevant COC.

If the submitted document is satisfactory then the Applicant is advised in writing by the Director General's delegate or nominee. Otherwise, further clarification is sought before approval is given.

For local development[1] approvals, councils may reword the conditions of consent to require submission of documentation to, and approval by, a nominated Council officer instead of the Director General. Several Councils have exercised this option.

1.2 The Need for Change

The specific wording of the standard hazard-related conditions of consent has been modified since the guideline *Applying SEPP 33* was first published but the process has generally followed the sequence described above. Until now there have been no detailed guidelines for the setting of these conditions

While the standard conditions of consent promote consistency, their inflexible application can lead to overly onerous requirements for simple, low-hazard developments.

[1] I.e. development for which Council, rather than the Minister, is Consent Authority.

There is a need for systematic guidance in tailoring the requirements of the conditions of consent to match the level of hazards and risks posed by each development. For example, some conditions may not always be relevant and, for others, requiring approval by the Director General or Council may not add value.

1.3 Options for Setting Conditions of Consent

The Department has developed a number of options for tailoring the standard hazards-related conditions of consent to make them more 'fit-for-purpose. The objective is set conditions that will provide a level of regulatory control aligned to the level of hazard or risk associated with each development.

1.3.1 Possible options

Four broad options have been developed. They vary in the extent to which studies need to be carried out and the study documentation submitted to the Department (or consent authority) for review and/or approval.

Arranged in increasing order of regulatory oversight, they are:

1. Documentation Prepared but not Submitted to the Department or Council

The Applicant is required to conduct and document relevant studies. However, study reports do not need to be submitted to the Department or Council for approval. A Compliance Report is required to verify that the studies have been carried out and their recommendations considered.

2. Documentation Prepared and Submitted to the Department or Council – No Formal Approval Required

The Applicant is required to conduct and document relevant studies and submit them to the Department or Council for their information. However, formal approval is not required. This gives opportunity for the Department or Council to review the documentation and require additional work to be carried out by the Applicant, if warranted.

3. Documentation Prepared and Submitted for Approval by a Nominated Officer

The Applicant is required to conduct and document the relevant studies and submit the documentation to the Department or Council for approval by a nominated officer, such as the Director, Major Hazards Unit or a specific Council officer. The development cannot proceed further without approval by the relevant officer.

4. Documentation Prepared and Submitted for Approval by the Director General or Council

The Applicant is required to conduct and document the relevant studies and submit the documentation to the Department or Council approval by the Director General or Council. The development cannot proceed further without approval by the Director General or Council.

It is noted that there may not be much practical difference between options 3 and 4, where the authority to approve a report may be by delegation.

1.3.2 Choosing a balanced approach

For projects where the hazards and risks are low, option 1 may be appropriate. It is generally consistent with the principle that: "primary responsibility for ensuring health and safety should lie with those who create risks and those who work with them." (Robens Committee)

However, where there are significant hazards, a consent authority may need greater assurance that the risks are being appropriately managed. Depending on the nature and extent of the risks imposed on the surroundings by the proposed development, one of the other options from 2 to 4 may be preferable, either alone or in combination.

The challenge is to establish what is an appropriate level of regulatory control for a particular development.

2 A 'Fit-For-Purpose' Framework

SECTION SUMMARY

This section sets out a risk-based rationale for imposing conditions of consent. The greater the hazards posed by a facility and the greater the risks of failure to impose or monitor apprpriate conditions, the greater the degree of regulatory control required.

On the other hand, imposition of conditions that do not contribute to safety does not add value and should be avoided.

The mutil-level risk assessment methodology is useful in establsihing the risk profile of a development.

Key Message

- Conditions of consent should be "fit-for-purpose" from the standpoints of both the developer and the regulator.

2.1 Rationale

Ideally, conditions of consent should take into account both the hazards associated with a development (i.e. the potential for harm) and the level of risk posed by the development (i.e. the likelihood that a particular level of harm will be realised).

In determining the extent of regulatory oversight needed, consideration should be given to the risks of non-imposition of a particular condition (illustrated in Figure 2).

The objective should be to set hazards-related conditions of consent that are "fit-for-purpose".

Figure 2: Implications of not imposing a condition

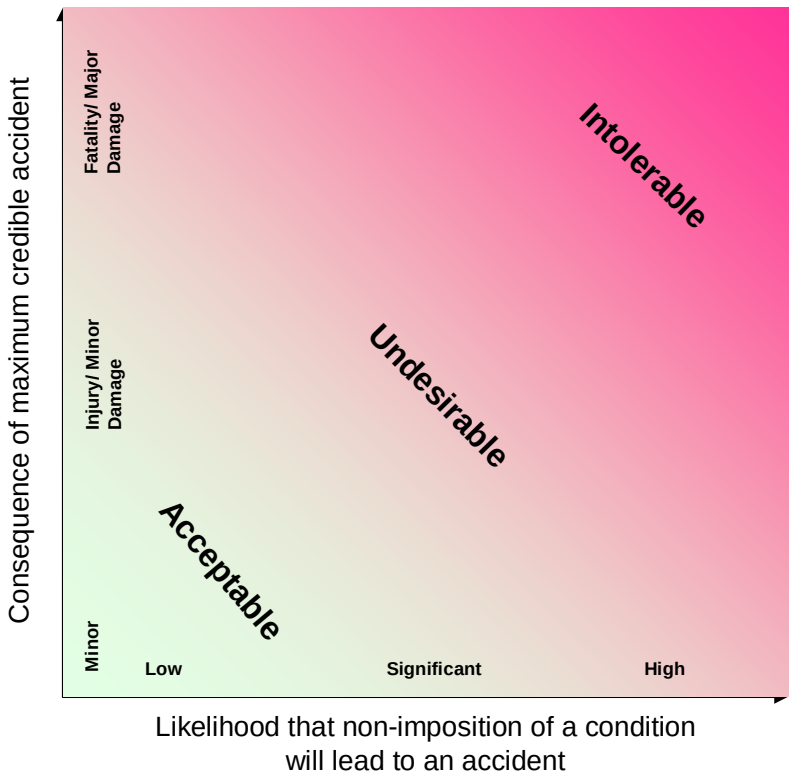


Table 1 suggests a relationship between level of risk and the basis for setting a condition of consent.

Table 1: Risk-based COC Options

Risk Level	Basis of Condition
Very Low	May not need to impose this condition[2], since it may not add value
Low	Impose the condition, using option 1
Medium	Impose the condition, using option 2
High	Impose the condition, using option 3 or 4
	Consider specific additional requirements to address identified issues
Very High	Impose the condition, using option 3 or 4
	Impose specific additional requirements to address identified issues

Previous attempts to tailor conditions of consent, based on the level of risk established in the preliminary hazard analysis, have been overly complex and difficult to implement, since they required an understanding of the techniques of risk assessment and management in order to interpret the results of the PHA.

2.1.1 Simplicity and Fitness for Purpose

To be practical, the process for setting the conditions of consent should be as simple as possible, while being fit-for-purpose. This approach is consistent with that recommended for risk assessment in the Department's *Multi-level Risk Assessment* guidelines. A risk assessment carried out using methodology consistent with those guidelines is a useful starting point for deciding which conditions should be imposed and the way in which the conditions should be framed (i.e. which of the options described in section 1.3.1 is the most appropriate).

The approach suggested in these guidelines is based on a "risk profile" of the development concerned.

2.2 Establishing the Overall Risk Profile

A multi-level risk assessment approach is typically used to broadly assess the level of risk associated with a development and thus the depth of analysis that should be undertaken in the PHA

The multi-level approach is described in the Department's guideline: *Multi-level Risk Assessment.* It is built around the consequence-based screening method set out in the Department's *Applying SEPP 33* guidelines and a rapid risk classification technique described in the United Nations *Manual for the classification and prioritization of risks due to major accidents in process and related industries* (the IAEA method)

The multi-level framework is aimed at providing consistency and an appropriate level of analysis and assessment. In each case, the objective is to progress the analysis and its assessment only as far as is needed to demonstrate that the operation being studied does not or will not pose a significant risk to surrounding land uses. This may be achieved by using a combination of qualitative and quantitative approaches.

[2] However, as discussed in the text, the requirements for a Safety Management System and periodic independent Hazard Audits should always be imposed.

The *Multi-level Risk Assessment* guidelines set out criteria for using the results of the screening, classification and prioritisation steps to determine which of the three levels of analysis is appropriate.

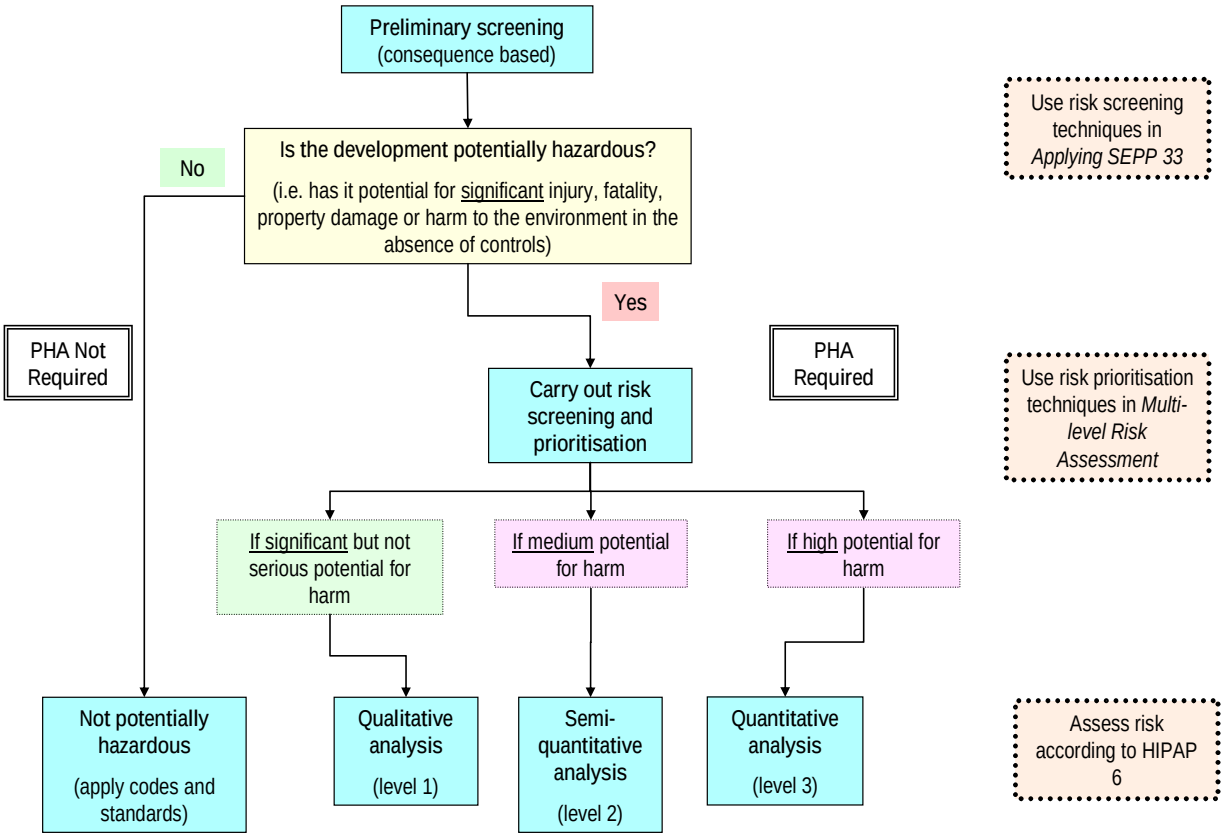
Level 1 is an essentially qualitative approach based on comprehensive hazard identification to demonstrate that the activity does not pose a significant risk.

Level 2 supplements the qualitative analysis by sufficiently quantifying the main risk contributors to show that risk criteria will not be exceeded.

Level 3 is a full quantitative analysis.

The decision-making process is summarised in section 2.3.

Figure 3: The Multi-level Risk Assessment Framework



The outcome of this assessment process leads to an understanding of the nature of the hazards associated with the development and the broad level of consequences and risk.

This can be used to guide the selection of studies to be imposed by way of conditions of consent and the way in which the conditions are framed (i.e. what model should be followed). This is discussed in the next section.

2.3 Selecting a Condition of Consent Option

The multi-level risk assessment process leads to three broad conclusions about the level of risk:

1. Worst-case consequences of a potential accident are unlikely to lead to a major accident. A **qualitative** assessment of the risk is appropriate in carrying out the PHA (Level 1 Assessment).

2. Worst-case consequences of a potential accident could lead to a major accident. However, the hazards and the risk controls are well-understood. A **semi-quantitative** assessment of the risk is appropriate in carrying out the PHA (Level 2 Assessment).
3. Worst-case consequences of a potential accident could lead to a major accident. Detailed analysis is required to ensure that the hazards and risks are well understood, and the risk controls are linked to the hazards and risks. A **quantitative** assessment of the risk (QRA) is appropriate in carrying out the PHA (Level 3 Assessment).

The following sections suggest options for framing the conditions of consent, based on this broad categorisation of hazards and risks.

It is worth noting that, in some cases, the level of assessment actually used in carrying out a PHA may be more rigorous that suggested by the multi-level risk assessment approach. For example, some quantification of consequences may have been carried out, even though initial screening indicated that a qualitative analysis would be sufficient. Similarly, a full QRA may have been carried out, rather than partial quantification

The choice of option, as described below, should reflect the characteristics of the risk, as described above, rather than being based only on the level of assessment actually carried out. Where there is uncertainty, a conservative approach should be followed.

Where hazards are high and the consent authority has limited expertise in risk assessment, it would be prudent to seek independent advice in framing the conditions.

2.3.1 Options for Developments Subject to Level 1 Assessment (Qualitative)

Since a level 1 assessment is only considered appropriate for developments with relatively low worst-case accident consequences, it is suggested that Option 1 should usually suffice for all of the conditions applied, unless there is a sensitive adjacent land use (e.g. school, hospital or sensitive ecosystem).

In such a case, Option 2 should be considered.

2.3.2 Options for Developments Subject to Level 2 Assessment (Semi-quantitative)

Because these developments have a potential for major accidents (even though the risk may be low), Option 1 may not provide an adequate level of assurance, in which case option 2 would generally be appropriate. Using the suggested risk-based approach, the consent authority should consider whether Option 3 should be adopted for certain elements, such as the safety management system or hazard audit, in recognition of their importance in giving ongoing safety assurance.

For local development, documents should be submitted to a nominated Council officer. For a Major Project, the documents should be submitted to a nominated Department of Planning officer.

2.3.3 Options for Developments Subject to Level 3 Assessment (Quantitative)

The level of complexity and/or potential accident consequences of development for which a level 3 assessment has been carried out warrants a greater level of scrutiny of the documents supplied in response to the conditions of consent. This will usually require approval of the relevant documents at Council level (local development) or departmental level (Major Project).

Option 3 would usually be considered appropriate for local development. Whether option 3 or 4.is adopted for a Major Project is a matter for case by case judgement.

For a Major Project, which is, or is potentially, a Major Hazard Facility (MHF), option 4 should be adopted, with the precise wording of the conditions agreed in consultation with the Department's Major Hazards Unit and WorkCover NSW.

3 Individual Conditions of Consent

SECTION SUMMARY

Having established a rationale for setting conditions of consent, as a whole, this section examines the conditions, individually.

Guidance is given as to what "standard" conditions of consent are likely to be required for various types of development and how those conditions should be imposed.

Key Message

- Conditions of consent should not be imposed as a standard set. Each individual condition should be considered on its merits and should only by applied if it adds value.

3.1 Principles

The risk-based tailoring of the conditions as a whole and of individual conditions is discussed in the following sections.

As a general rule, if a condition of consent does not add value, it should not be imposed. In the context of the hazards-related conditions of consent, this means that a link needs to be established between the hazards and risks actually posed by the development and the nature of the controls or safeguards, which the individual conditions of consent represent,

Risk factors are also influenced by both the type and scale of the development and its surrounding land use.

Table 2 indicates with an "X" which of the standard hazards-related conditions of consent would typically be expected to be applied to various types of development.

While the table provides a useful starting point, it is not exhaustive and the requirements should not be regarded as being absolute. A condition need not be imposed if assessment of the PHA clearly demonstrates that the particular hazards which the condition is intended to address are not present to any significant degree.

Issues specific to the individual conditions are discussed in sections 3.2 to 3.9.

It should be stressed that, where a condition requires review or approval by the consent authority of a specialised study, such as a HAZOP, that review or approval should not be carried out or given by a private accredited certifier, unless the private accredited certifier has relevant skills and experience.

In cases where the consent authority may not be the principal certifying authority, it may be desirable to nominate a specific officer to whom the reports should be submitted for review or approval.

The individual conditions are discussed in the following sections.

Table 2: Standard Conditions of Consent for Various Types of Development

Type of Development (Listed in alphabetical order)	Emergency Plan	Final Hazard Analysis[3]	Fire Safety Study	Hazard and Operability Study	Construction Safety Study	Safety Management System	Hazard Audit	Transport of Hazardous Materials[4]
Aluminium dross processing and handling	X	X		X[5]	Construction Safety Study should be specified for all instances where construction is taking place on a site where there is existing potentially hazardous development. Otherwise, only a Commissioning Safety Study should be required.	X	X	X
Chemical manufacture and handling (including resins, pesticides, fertilisers)	X	X	X	X		X	X	X
Coal handling (pulverised coal)	X		X			X	X	
Food processing involving significant dangerous goods[6]	X	X	X			X	X	
Grain handling (conveying, silos)	X	X	X			X	X	
Industrial gas storage and processing (toxic, flammable, large-scale cryogenic)	X	X	X	X		X	X	X
LPG retail outlet for motor vehicle refuelling						X[7]		
LPG processing, storage and handling	X	X	X	X[8]		X	X	X
Metal foundries	X	X	X			X	X	
Oil and gas extraction and processing	X	X	X	X		X	X	
Paints and surface coatings (solvent based)	X	X	X	X[9]		X	X	
Petrochemical processing, storage and handling	X	X	X	X		X	X	X
Petroleum refining	X	X	X	X		X	X	X
Pool chemicals storage depots	X		X			X	X	X
Smelting	X	X	X			X	X	
Vegetable/mineral oil processing and/or reprocessing	X	X	X	X		X	X	
Water/sewage treatment[10]	X	X	X	X		X	X	

[3] The FHA is only required when the detailed design is not finalised at the time of DA determination

[4] Required if significant quantities of dangerous goods or hazardous materials are being transported (see the SEPP 33 application guidelines – Table 2.)

[5] For emission control equipment

[6] Examples are ammonia refrigeration and LPG based heating. Only applies if quantities exceed SEPP 33 screening thresholds.

[7] The SMS should incorporate fire safety elements and the emergency plan.

[8] Not for developments which are primarily storage, rather than processing.

[9] For emission control equipment.

[10] Using chlorine or other dangerous goods in significant quantities.

3.2 Hazard and Operability Study

A Hazard and Operability (HAZOP) study is a hazard identification tool designed to identify deviations from normal operation that could lead to hazardous conditions. The HAZOP technique is well suited to the examination of processing facilities.

However, in some cases, more or less sophisticated techniques may be used to supplement or replace the HAZOP. A number of these are suggested in HIPAP 8, including:

- Computer HAZOP (CHAZOP);
- Fault and event trees;
- Failure Modes and Effects Analysis (FMEA); and
- "What-if" Studies

A more recent alternative to the CHAZOP, used where safe operation of a process plant is reliant on sophisticated automated control systems, is a consideration of the required Safety Integrity Level (SIL) in order to determine whether specialised Safety Instrumented Systems (SIS) are required[11].

In many cases it may be possible for the consent authority to reach agreement with the Applicant on the most appropriate form of review, during the framing of the conditions of consent.

In cases where the type of study that would need to be employed is not clear, the requirement for a HAZOP may be satisfied by an equivalent study to be agreed during the design process.

Techniques such as HAZOP, CHAZOP, FMEA and SIL/SIS are specialised studies and need to be conducted by qualified and experienced people, who should also be independent of the facility being studied.

3.3 Final Hazard Analysis

The main issue for the Final Hazard Analysis (FHA) is the extent to which detailed design of the development is likely to have added to the understanding of the risks. This is of particular importance if the PHA indicated that any of the Department's risk criteria were close to being exceeded.

In those instances where the risks were initially estimated to be well within the established criteria and are unlikely to be impacted by detailed design issues, there will not usually be a need to impose this condition. This situation could apply to a development where the PHA has been based on a substantially complete design.

The FHA should focus on changes to the understanding of risk as presented in the PHA.

Where review of the PHA has identified specific aspects of the risk calculations that require clarification during the detailed design, the wording of the condition may be expanded to ensure that these issues are addressed in the PHA

3.4 Fire Safety Study

The need for a Fire Safety Study (FSS) will be determined by the extent to which flammability risks contribute to the overall risk from the facility.

However, even when the primary risk is one of toxicity, rather than flammability, there may be a need for a FSS to ensure that a fire does not lead to loss of containment of toxic materials or the formation of toxic combustion products.

[11] This is described in ISA standard ISA-S84.01-1996, *Application of Safety Instrumented Systems for the Process Industries*.

In general, a FSS should be required unless it is clearly unnecessary.

Where the PHA has identified fire risks that may require specialised fire-fighting measures, the wording of the condition may be expanded to ensure these matters are specifically addressed in the FSS. The NSW Rural Fire Service should be consulted in bushfire prone areas.

3.5 Emergency Plan

An Emergency Plan should always be required for potentially hazardous development, although it may be relatively simple for a small facility with no major hazards.

If facility emergencies can have off-site impacts, the section of the plan that deals with the safety of people outside the development must be consistent with the NSW emergency management arrangements and recognise the responsibilities and statutory powers of the relevant authorities, such as the NSW Police and Fire and Rescue NSW. The section of the plan dealing with external emergencies should be prepared in consultation with the relevant Council and Local Emergency Management Committee (LEMC)

Where the PHA has identified significant events that may require a specialised emergency response, the wording of the condition may be expanded to ensure these emergencies are specifically addressed in the Plan.

3.6 Construction Safety Study

The scope of the Construction Safety Study (CSS) will be determined by the nature of the site on which the development is being constructed (i.e. is it a “greenfield” site or are there existing operations) and whether or not there are potential commissioning issues.

Some relevant considerations are:

- for projects with a long construction period, it is permissible for the commissioning phase of the study to be conducted during the latter stages of the construction period; and
- for projects constructed on greenfield sites, the study may focus on commissioning alone, rather than construction and commissioning safety.

Where there are known existing site vulnerabilities, the wording of the condition may be amplified to ensure that the CSS includes measures to ensure the protection of these specific vulnerable areas and systems.

3.7 Safety Management System

Whereas other studies required by the conditions of consent represent a “snapshot” of the status of the development at the time the work was carried out, the SMS represents the key framework for managing the ongoing integrity of the development’s safety-related technical and procedural systems.

A Safety Management System (SMS) should always be required for potentially hazardous development, although it may be relatively simple for a small facility with no major hazards. The key requirement is that it be “fit-for-purpose” as described in HIPAP 9.

It needs to be stressed that a SMS is much broader in its scope than systems typically developed to manage occupational health and safety (OHS), including many elements related to process safety not usually found in OHS systems.

Where the safety of a facility is critically dependent on identified technical and procedural controls, such as those identified in a HAZOP, additional wording may be

included in the condition of consent to ensure that the SMS addresses the critical issues.

3.8 Transport of Hazardous Materials

The need for a Transport of Hazardous Materials study is dependent on the number of traffic movements generated by the development that include significant quantities of hazardous materials.

The Department's Hazardous Industry Planning Advisory Paper No. 11, 'Route Selection', provides a basis for minimising transport risks by evaluating alternative transport routes on the basis of road and traffic factors, environmental and land use safety and transport economics.

This condition should be imposed if the hazardous material traffic movements are above the annual or weekly cumulative vehicle movements shown in Table 2 of the Department's *Applying SEPP 33* guidelines, unless there are clearly no viable route alternatives.

3.9 Hazard Audit

The independent Hazard Audit is the primary means of verifying the integrity of the safety systems and that the facility is being operated consistent with its hazards-related conditions of consent.

For this reason, a periodic Hazard Audit should always be required. Where other conditions have been framed on the basis of Option 1 (i.e. documents are not required to be submitted to the consent authority), it is particularly important that the initial Hazard Audit include a verification that those conditions have been satisfied, including consideration and implementation of study recommendations.

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Appendix 1

Conditions of Consent for Potentially Hazardous Development (Low Hazard)

Notes:

Section 3 of this guideline, particularly Table 2, should be consulted in deciding which of the following conditions should be imposed.

In the case of Major Projects under Part 3A of the EP&A Act, references to "development" should be changed to "project", "conditions of consent" should be changed to "conditions of approval" and references to "Council" should be changed to "Director General or his nominee".

Pre-construction

1. The Applicant shall prepare the studies set out under subsections 1(a) to 1(d) (the pre-construction studies). Construction, other than of preliminary works that are outside the scope of the hazard studies, shall not commence until study recommendations have been considered and, where appropriate, acted upon.

   (a) FIRE SAFETY STUDY

   A Fire Safety Study for the proposed development. This study shall cover the relevant aspects of the Department of Planning's Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines' and the New South Wales Government's 'Best Practice Guidelines for Contaminated Water Retention and Treatment Systems'. The study shall meet the requirements of Fire and Rescue NSW.

   (b) HAZARD AND OPERABILITY STUDY

   A Hazard and Operability Study for the proposed development, chaired by an independent qualified person. The study shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines'.

   (c) FINAL HAZARD ANALYSIS

   A Final Hazard Analysis of the proposed development, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'.

   (d) CONSTRUCTION SAFETY STUDY

   A Construction Safety Study, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 7, 'Construction Safety'.

Pre-commissioning

2. Prior to commissioning, the Applicant shall develop and implement the plans and systems set out under subsections 2(a) to 2(c).

   (a) TRANSPORT OF HAZARDOUS MATERIALS

   Arrangements covering the transport of hazardous materials including details of routes to be used for the movement of vehicles carrying hazardous materials to or from the proposed development. The routes selected shall be consistent with the Department of Planning's Hazardous Industry Planning

Advisory Paper No. 11, 'Route Selection'. Suitable routes identified in the study shall be used except where departures are necessary for local deliveries or emergencies.

(b) EMERGENCY PLAN

A comprehensive Emergency Plan and detailed emergency procedures for the proposed development. The plan shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'.

(c) SAFETY MANAGEMENT SYSTEM

A comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials. The Safety Management System shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'.

Pre-startup

3. PRE-STARTUP COMPLIANCE REPORT

(a) The Applicant shall submit to Council a report detailing compliance with conditions 1 and 2 one month prior to the commencement of operation of the development.

Ongoing

4. HAZARD AUDIT

Twelve months after the commencement of operations of the proposed development and every three years thereafter, the Applicant shall carry out a comprehensive Hazard Audit of the proposed development consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines'.

The audit shall be carried out by a qualified person or team, independent of the development.

Appendix 2

Conditions of Consent for Potentially Hazardous Development (Medium Hazard)

Notes:

Section 3 of this guideline, particularly Table 2, should be consulted in deciding which of the following conditions should be imposed.

In the case of Major Projects under Part 3A of the EP&A Act, references to "development" should be changed to "project", "conditions of consent" should be changed to "conditions of approval" and references to "Council" should be changed to "Director General or his nominee".

Pre-construction

1. The Applicant shall prepare the studies set out under subsections 1(a) to 1(d) (the pre-construction studies). Construction, other than of preliminary works that are outside the scope of the hazard studies, shall not commence until study recommendations have been considered and, where appropriate, acted upon. The Applicant shall submit the studies to Council no later than one month prior to the commencement of construction of the proposed development (other than preliminary works), or within such further period as Council may agree.

   (a) FIRE SAFETY STUDY

   A Fire Safety Study for the proposed development. This study shall cover the relevant aspects of the Department of Planning's Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines' and the New South Wales Government's 'Best Practice Guidelines for Contaminated Water Retention and Treatment Systems'. The study shall meet the requirements of Fire and Rescue NSW.

   (b) HAZARD AND OPERABILITY STUDY

   A Hazard and Operability Study for the proposed development, chaired by a qualified person, independent of the development. The study shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines'.

   (c) FINAL HAZARD ANALYSIS

   A Final Hazard Analysis of the proposed development, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'.

   (d) CONSTRUCTION SAFETY STUDY

   A Construction Safety Study, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 7, 'Construction Safety'.

Pre-commissioning

2. Prior to commissioning, the Applicant shall develop and implement the plans and systems set out under subsections 2(a) to 2(c). The Applicant shall submit to Council documentation describing the plans and systems no later than two months prior to the commencement of commissioning of the proposed development, or within such further period as Council may agree.

(a) TRANSPORT OF HAZARDOUS MATERIALS

Arrangements covering the transport of hazardous materials including details of routes to be used for the movement of vehicles carrying hazardous materials to or from the proposed development. The routes selected shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 11, 'Route Selection'. Suitable routes identified in the study shall be used except where departures are necessary for local deliveries or emergencies.

(b) EMERGENCY PLAN

A comprehensive Emergency Plan and detailed emergency procedures for the proposed development. This plan shall include detailed procedures for the safety of all people outside of the development who may be at risk from the development. The plan shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'.

(c) SAFETY MANAGEMENT SYSTEM

A document setting out a comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. The Safety Management System shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'. Records shall be kept on-site and shall be available for inspection by Council upon request.

Pre-startup

3. PRE-STARTUP COMPLIANCE REPORT

One month prior to the commencement of operation of the development, the Applicant shall submit to Council, a report detailing compliance with conditions 1 and 2, including:

(a) dates of study/plan/system completion, commencement of construction and commissioning; and

(b) actions taken or proposed, to implement recommendations made in the studies/plans/systems; and

(c) responses to each requirement imposed by Council under condition 6.

Post-startup

4. POST-STARTUP COMPLIANCE REPORT

Three months after the commencement of operation of the development, the Applicant shall submit to Council, a report verifying that:

(a) transport routes specified under condition 2(a) are being followed;

(b) the Emergency Plan required under condition 2(b) is effectively in place and that at least one emergency exercise has been conducted; and

(c) the Safety Management System required under condition 2(c) has been fully implemented and that records required by the system are being kept.

Ongoing

5. HAZARD AUDIT

Twelve months after the commencement of operations of the proposed development and every three years thereafter, or at such intervals as Council may agree, the Applicant shall carry out a comprehensive Hazard Audit of the proposed development and within one month of each audit submit a report to Council.

The audits shall be carried out at the Applicant's expense by a qualified person or team, independent of the development, prior to commencement of each audit and

shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines'.

6. FURTHER REQUIREMENTS

The Applicant shall comply with all reasonable requirements of Council in respect of the implementation of any measures arising from the reports submitted in respect of conditions 1 to 5 inclusive, within such time as Council may agree.

Appendix 3

Conditions of Consent for Potentially Hazardous Development (High Hazard)

Notes:

Section 3 of this guideline, particularly Table 2, should be consulted in deciding which of the following conditions should be imposed.

In the case of Major Projects under Part 3A of the EP&A Act, references to "development" should be changed to "project", "conditions of consent" should be changed to "conditions of approval" and references to "Council" should be changed to "Director General or his nominee".

Pre-construction

1. At least one month prior to the commencement of construction of the proposed development (except for construction of those preliminary works that are outside the scope of the hazard studies), or within such further period as Council may agree, the Applicant shall prepare and submit for the approval of Council the studies set out under subsections 1(a) to 1(d) (the pre-construction studies). Construction, other than of preliminary works, shall not commence until approval has been given by Council and, with respect to the Fire Safety Study, approval has also been given by Fire and Rescue NSW.

   (a) FIRE SAFETY STUDY

   A Fire Safety Study for the proposed development. This study shall cover the relevant aspects of the Department of Planning's Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines' and the New South Wales Government's 'Best Practice Guidelines for Contaminated Water Retention and Treatment Systems'. The study shall also be submitted for approval to Fire and Rescue NSW.

   (b) HAZARD AND OPERABILITY STUDY

   A Hazard and Operability Study for the proposed development, chaired by a qualified person, independent of the development, approved by Council prior to the commencement of the study. The study shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines'. The study report must be accompanied by a program for the implementation of all recommendations made in the report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.

   (c) FINAL HAZARD ANALYSIS

   A Final Hazard Analysis of the proposed development, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'.

   (d) CONSTRUCTION SAFETY STUDY

   A Construction Safety Study, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 7, 'Construction Safety'. For developments in which the construction period exceeds six (6) months,

the commissioning portion of the Construction Safety Study may be submitted two months prior to the commencement of commissioning.

Pre-commissioning

2. The Applicant shall develop and implement the plans and systems set out under subsections (a) to (c). No later than two months prior to the commencement of commissioning of the proposed development, or within such further period as Council may agree, the Applicant shall submit, for the approval of Council, documentation describing those plans and systems. Commissioning shall not commence until approval has been given by Council.

   (a) TRANSPORT OF HAZARDOUS MATERIALS

   Arrangements covering the transport of hazardous materials including details of routes to be used for the movement of vehicles carrying hazardous materials to or from the proposed development. The routes selected shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 11, 'Route Selection'. Suitable routes identified in the study shall be used except where departures are necessary for local deliveries or emergencies.

   (b) EMERGENCY PLAN

   A comprehensive Emergency Plan and detailed emergency procedures for the proposed development. This plan shall include consideration of the safety of all people outside of the development who may be at risk from the development. The plan shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'.

   (c) SAFETY MANAGEMENT SYSTEM

   A document setting out a comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records shall be kept on-site and shall be available for inspection by Council upon request. The Safety Management System shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'.

Pre-startup

3. PRE-STARTUP COMPLIANCE REPORT

   One month prior to the commencement of operation of the development, the Applicant shall submit to Council, a report detailing compliance with conditions 1 and 2, including:

   (a) dates of study/plan/system submission, approval, commencement of construction and commissioning;

   (b) actions taken or proposed, to implement recommendations made in the studies/plans/systems; and

   (c) responses to each requirement imposed by Council under condition 6.

Post-startup

4. POST-STARTUP COMPLIANCE REPORT

   Three months after the commencement of operation of the development, the Applicant shall submit to Council, a report verifying that:

(a) transport routes specified under condition 2(a) are being followed;

(b) the Emergency Plan required under condition 2(b) is effectively in place and that at least one emergency exercise has been conducted; and

(c) the Safety Management System required under condition 2(c) has been fully implemented and that records required by the system are being kept.

Ongoing

5. HAZARD AUDIT

Twelve months after the commencement of operations of the proposed development and every three years thereafter, or at such intervals as Council may agree, the Applicant shall carry out a comprehensive Hazard Audit of the proposed development and within one month of each audit submit a report to Council.

The audits shall be carried out at the Applicant's expense by a qualified person or team, independent of the development, approved by Council prior to commencement of each audit. Hazard Audits shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines'.

The audit report must be accompanied by a program for the implementation of all recommendations made in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.

6. FURTHER REQUIREMENTS

The Applicant shall comply with all reasonable requirements of Council in respect of the implementation of any measures arising from the reports submitted in respect of conditions 1 to 5 inclusive, within such time as Council may agree.

Additional Information

Relevant DoP Publications

Hazardous Industry Planning Advisory Papers (HIPAPs):

No. 1 - Emergency Planning
No. 2 - Fire Safety Study Guidelines
No. 3 - Risk Assessment
No. 4 - Risk Criteria for Land Use Safety Planning
No. 5 - Hazard Audit Guidelines
No. 6 - Hazard Analysis
No. 7 - Construction Safety
No. 8 - HAZOP Guidelines
No. 9 - Safety Management
No. 10 - Land Use Safety Planning
No. 11 - Route Selection
No. 12 - Hazards-Related Conditions of Consent

Other Publications:

Applying SEPP 33: Hazardous and Offensive Development Application Guidelines

Multi-level Risk Assessment

Locational Guideline: Liquefied Petroleum Gas Automotive Retail Outlets

Locational Guideline: Development in the Vicinity of Operating Coal Seam Methane Wells

Electronic copies of some of these publications are available at:
www.planning.nsw.gov.au