	<b>Procedure</b>	
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Title: **Environmental Incident Management Procedure**

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Area of Applicability: **Eskom Holdings SOC Ltd**

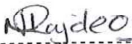

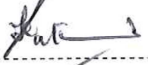
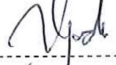
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## 1. Introduction

The effective management of environmental incidents is required so as to achieve Eskom's SHEQ Policy principles that underpin the way in which Eskom approaches incident management. The aims and objectives of incident management are as follows:

- a) Reduce risk and prevent any recurrence of incidents.
- b) Ensure that incidents are managed effectively.
- c) Ensure that incidents are classified and recorded accurately.
- d) Ensure prompt and appropriate investigation.
- e) Share incident information.
- f) Report to external and internal stakeholders, as appropriate.
- g) Promote the analysis of trends, and review practices accordingly.

Incident management is not a mechanism for assigning blame or monitoring staff performance, but rather a way of identifying and addressing areas for improvement in order to reduce environmental impacts, risks and improve environmental compliance. Eskom is committed to Zero Harm to people and the environment as an Eskom value, which forms an integral part of its operations.

## 2. Supporting Clauses

### 2.1 Scope

#### 2.1.1 Purpose

This document describes the high-level intention and requirements for the effective management of environmental incidents that occur during the course of Eskom's business; that result in any unplanned event that could, or does, result in a negative environmental impact. This procedure excludes emergency situations as specified in section 30A of the National Environmental Management Act, however guidance in terms of identifying an emergency situation and the reporting thereof is provided in Appendix D. In addition to the requirements set in this document all incidents must be reported and assessed according to the requirements of applicable legislation or permits such as the NWA and WUL or the PFMA as this is not covered as a requirement within the scope of this document.

#### 2.1.2 Applicability

This document shall apply throughout the Divisions of Eskom Holdings SOC Limited.

#### 2.1.3 Effective date

The document is applicable from 01 April 2018.

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## 2.2 Normative/Informative References

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

### 2.2.1 Normative

- [1] 32-727: Eskom, Safety, Health, Environment, and Quality Policy
- [2] 240-51122806: Process Control Manual (PCM) for Incident Management
- [3] 240-81320273: Process Control Manual (PCM) for Perform Incident Investigation
- [4] National Water Act 36 of 1998
- [5] National Environmental Management Act 107 of 1998
- [6] National Environmental Management: Air Quality Act 39 of 2004

### 2.2.2 Informative

- [7] ISO 14001 Environmental Management System Standard
- [8] 32-123: Eskom Emergency Planning Procedure
- [9] 32-256: Emergency Response Procedure – Communications
- [10] 240-131863738: Eskom Emergency Response Procedure
- [11] 240-52599304: Process Control Manual (PCM) for Environmental Management
- [12] ISO 9001 Quality Management Systems
- [13] Aviation Act 74 of 1962
- [14] National Environmental Management: Biodiversity Act 10 of 2004
- [15] National Forests Act 84 of 1998
- [16] National Environmental Management: Waste Act 59 of 2008

**The legislation is not exhaustive and/ or not limited to the legislation listed above.**

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## 2.3 Definitions

**2.3.1 Ash spillage:** Refers to the spillage of ash (residue remaining from the burning of coal) or water containing ash, whether it is in its dry form or in the form of a slurry from any ashing activity on site that is released into the environment (including land or water, but excluding atmospheric and fugitive emission), which could or does result in an environmental impact.

**2.3.2 Breach:** Refers to the noncompliance with requirements of environmental legislation (including provincial legislation and District/Municipal bylaws), authorisations, permits and licenses. Note: The total number of breaches reported includes environmental legal contravention-incidents (as defined in this document) and administrative non-compliances (as established through reviews or audits etc.).

**2.3.3 Classification:** A process of determining whether the incident is an environmental legal contravention - incident, environmental legal contravention - incident in terms of the OHD or an environmental event.

**2.3.4 Corrective actions:** Actions identified to correct and/or prevent the reoccurrence of an incident.

**2.3.5 Environment:** Surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans and their interrelationships (ISO 14001:2015).

**2.3.6 Environmental event:** refers to all incidents that are not classified as an environmental legal contravention - incident and/or an environmental legal contravention – incident in terms of the OHD when the classification criteria are applied.

**2.3.7 Environmental Impact:** Change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects (ISO 14001:2015).

**2.3.8 Environmental Incident:** An unplanned event that could, or does result in an environmental impact.

**2.3.9 Environmental legal contravention – incident:** An incident where a provision of environmental legislation (national, provincial, or local) and/or condition of an environmental approval (for example, environmental authorisation, water use license, waste licence, licence in terms of the National Forests Act) or any other legal document issued in terms of environmental legislation is contravened. (An environmental legal contravention – incident is considered a breach in terms of compliance reporting).

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**Note:** Environmental legislation refers to legislation or legal requirements that has/have, or potentially has/have, an impact on activities interacting with the physical environment as defined in NEMA, including, but not limited to, events that result in either air pollution, sterilising the soil, or destroying rare, endangered, or protected fauna or flora (as set out in the NEMA: Biodiversity Act or provincial environmental ordinances) or result in making any water resource unfit for its original purpose, such as domestic, agricultural, or industrial use, or reduce the water quality to such a state that human intervention is required to restore it to its original quality.

**2.3.10 Environmental legal contravention - incident in terms of the OHD:** These are specific cases of environmental legal contravention- incidents that are considered to be of very high significance in terms of its environmental impact and/or Eskom in that they have a material business impact and illustrate a significant failure of business systems. Within the above principles they are identified in terms of the criteria below. If any one of the criteria specified in appendix C as well as the principle defined is relevant to a specific contravention of environmental legislation, then that environmental legal contravention - incident is a potential “environmental legal contravention - incident in terms of the OHD”.

**2.3.11 Hydrocarbon spill:** Refers to the release of liquid petroleum hydrocarbon (oil, diesel, jet fuel, etc.) spillage into the environment (includes soil and water) which could or does result in environmental damage, and/or pollution or degradation.

**2.3.12 NEMA section 30 incidents:** An unexpected, sudden and uncontrolled release of a hazardous substance, including from a major emission, fire or explosion, that causes, has caused or may cause significant harm to the environment, human life or property.

**2.3.13 NWA section 20 incident:** Includes any incident or accident in which a substance -

- a) pollutes, or has the potential to pollute, a water resource or
- b) has, or is likely to have, a detrimental effect on a water resource.

**2.3.14 Repeat Environmental incident:** Any environmental incident where there is clear evidence that the incident is of the same type and with the same cause(s) within the same OU/BU.

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**2.3.15 Repeat Environmental legal contravention – incident:** An environmental legal contravention – incident that occurred within 12 months of the previous environmental legal contravention – incident, occurred within the same OU/BU, is related to the same section of legislation and/or license condition, has the same root cause and the corrective and preventative actions identified have been implemented by the agreed timeframes such that there was an opportunity to prevent the present environmental legal contravention – incident.

**Note:** The process flow provided in Appendix A must be used to determine repeat environmental legal contravention – incidents.

**2.3.16 Wildlife:** Refers to birds, wild-game, non-domesticated animals, marine and freshwater fish. Note: this definition is only applicable to the incident management procedure in order to enable practitioners to categorise biodiversity incidents into wildlife or vegetation types.

## 2.4 Abbreviations

Abbreviation	Explanation
AEL	Atmospheric Emission License
CoE	Centre of Excellence
CIR	Central Incident Register
DEA	Department of Environmental Affairs
EICC	Environmental Incident Classification Committee
EMS	Environmental Management System
ESC	Environmental Steering Committee
Eskom	Eskom Holdings SOC Limited
EWT	Endangered Wildlife Trust
INO	Initial Notification of Occurrence
LC	Environmental Legal Contravention – Incident
NEMA	National Environmental Management Act
NEM:BA	National Environmental Management Biodiversity Act
NWA	National Water Act
OU/BU	Operating Unit/Business Unit
PCM	Process Control Manual
SAP	Systems, Applications, and Products in Data Processing
SAP EH&S	SAP Environmental Health and Safety (system)
SHEQ	Safety, Health, Environment and Quality
S	Section of applicable legislation
SOC	State owned Company
SS:EM	Sustainability Systems Environmental Management

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## 2.5 Roles and Responsibilities

Eskom and its subsidiaries shall take all reasonably practicable steps to prevent all incidents that could or do result in an environmental impact.

The responsible managers shall be responsible for implementing, communicating and monitoring the implementation of this procedure. The responsible manager must ensure that consequences of non-compliance to this procedure are communicated to all staff and that staff understands environmental duty of care.

## 2.6 Process for Monitoring

Compliance with the requirements of this procedure shall be audited as per the audit/review process. The OU/BU is responsible for its own monitoring known as level one reviews and/or self-assessments; all other assurance providers will monitor compliance with this procedure as per agreed assurance plans.

## 2.7 Related/Supporting Documents

For the following types of incident refer to the following documents for additional process clarification.

Environmental incident type	Supporting document
All incident types	Environmental Incident Management Procedure - <a href="#">240-133087117</a>
Ash spills	Position Paper on Ash Spillages – Document Number <b>ENV16 – L009</b> .
AEL NEMA S30	<ol style="list-style-type: none"> <li>1. AEL incidents: Initial report in terms of NEMA section 30 – Document Number <b>240-7667761</b>.</li> <li>2. Atmospheric Emission License Practice Note - <b>ENV15-R071</b>.</li> <li>3. Guidance Note: Emission Related NEMA section 30 Incident Interpretation and Reporting Requirement – <b>ENV16-L423</b>.</li> <li>4. Guidance Note: Internal and External Reporting of SO<sub>2</sub> Emission Limit Exceedances Related to High Sulphur Content in Coal – <b>ENV17-L279</b>.</li> </ol>
NEMA Section 30 Incidents	NEMA section 30 (Control of Incidents) Report Template – can be obtained from the DEA website <a href="https://www.environment.gov.za/documents/forms#legal_authorisations">https://www.environment.gov.za/documents/forms#legal_authorisations</a> .
Wildlife incidents	Wildlife Interaction and Management Standard <b>32-829</b> .
Protected Tree	Emergency tree cutting: Government Gazette No. 773 Issued by the

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cutting	Department of Water Affairs – 24 August 2007 Exemptions in terms of sections 7(1) and 15(1) of the National Forests Act, 1998 (Act No. 84 of 1998), as amended.  Briefing Report: Guidelines for protected tree cutting applications – dated 12 April 2013.
Hydrocarbon Spills	Spill Assessment Table – Document Number <b>240-47176039</b> .
Environmental Legal Contravention Incidents (LC) –	<ol style="list-style-type: none"> <li>1. EICC Environmental Legal Contravention - Incident Closure Certificate – Document Number <b>240-76507067</b>.</li> <li>2. Decision Record for the Eskom Environmental Incident Classification Committee (EICC): Ownership and accountability of environmental incidents in areas of shared responsibilities between Eskom and Eskom owned Entities or Contractors dated 11 January 2016.</li> <li>3. Environmental Incident Classification Committee TOR – <b>240-67689003</b></li> </ol>

### 3. Environmental Incident Management Process

The following steps describe the process of environmental incident management and are described in detail in the remainder of the document:

1. Incident identification.
2. Initiation and execution of emergency response.
3. Notification and reporting to relevant stakeholders.
4. Incident prioritisation.
5. Classification and recording of incidents.
6. Incident investigation.
7. Management of corrective actions - Implementation and monitoring of incident corrective actions.
8. Incident Close-out.
9. Incident Communication – occurs throughout the incident management process.

#### 3.1 Incident Identification

There are two ways of identifying or recognising an environmental incident, namely, direct and indirect observation.

- Direct observation includes seeing the incident happening or being involved in the incident.

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- Indirect observation includes learning of the incident through, for example, complaints, feedback, or information provided by internal stakeholders (for example, Eskom employees or contractor employees) or external stakeholders (for example, authorities, members of the public, landowner, Endangered Wildlife Trust (EWT) fieldworker etc.). Incidents are also identified indirectly through audits, reviews, monitoring reports, a compliance notice, a directive, a fine (including a section 24(g)) and/or prosecution from the authority.

### 3.2 Initiation and Execution of Emergency Response

- a) Initiation and execution of emergency response includes, but is not limited to, the following:
- i. Rescue operations.
  - ii. Ensuring that the scene is safe during and after the incident.
  - iii. Providing emergency care where necessary and/or applicable.
  - iv. Initiating environmental emergency controls and responses in terms of the site emergency preparedness plan/procedure. Implementing reasonable measures to contain the incident and/or prevent pollution, environmental degradation and/or loss of species from occurring, continuing or recurring.

### 3.3 Notification and Reporting

All environmental incidents must be reported within 24 hours internally to all relevant stakeholders and externally to relevant interested parties affected by the incident as identified in terms of the site Environmental Management System (EMS). The readily available information must be used for the initial notification and reporting.

An alarm report (also known as a formal INO) in terms of NEMA section 30 control of incidents (referred to as NEMA S 30 incidents from hereon in the document) and an initial notification in terms of NWA section 20 control of emergency incidents (referred to as NWS S 20 in the document) must be submitted to the relevant authority within 24 hours or as soon as reasonably practicable after knowledge of the incident, as specified in Appendix D.

All potential environmental legal contravention – incidents (LCs) must be reported to the relevant authorities within 24 hours and interested and affected parties as stipulated in the condition of a license/authorisation and/or legislation.

#### a) Internal Stakeholders

- Supervisor and/or Responsible Manager.
- Environmental Department or SHEQ Department.
- Emergency Control Department if required.
- Sustainability Systems Environmental Management Department (SS: EM) for potential legal contravention – incidents and/or NEMA s30 incidents or NWA s20 incidents.

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- All AEL emission exceedance incident notifications and investigation reports must be submitted to the SS: EM for review prior to reporting and submitting all documents to the authorities. Reference Document: Initial Report in Terms of NEMA s30 – Document Number **240-7667761**.

#### **b) External Stakeholders and Interested Parties**

- Relevant Government Department.
- Local and District Municipality.
- Interested parties such as neighbouring farmers, communities etc. if potentially affected by the incident.
- Endangered Wildlife Trust (EWT) for all wildlife incidents.
- External interested parties as identified in terms of the site EMS (e.g. surrounding communities, funders etc.).

### **3.4 Capture Initial Notification**

- a) Initial reports are reports that are submitted by any individual who is reporting an incident to the relevant OU/BU Environmental Department. These can be provided through any method, for example, email, OU/BU internal flash report or INO.
- b) Initial reports are brief and limited to an outline of the known facts (that is, date, time, place, what happened, immediate actions taken, photographic evidence and preliminary findings).
- c) Eskom's environmental practitioner shall, where reasonably practicable, be responsible for initially assessing the environmental damage arising out of the incident.
- d) EWT will register wildlife incidents on EWT's Central Incident Register (CIR) System and provide an incident number as a reference to the relevant individual or OU/BU reporting the incident.

### **3.5 Incident Prioritisation**

#### **3.5.1 Consequence and Priority Rating**

Environmental incidents must be prioritised in order to determine the potential consequences and actions required to mitigate the incident timeously. The consequence of an incident must be checked against Table 3.5.1 and the incident prioritised using the allocated priority ratings within the table.

EWT will use their incident investigation decision tool, to determine and prioritise wildlife incidents for further detailed investigation or monitoring for recurrence.

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Table 3.5.1 Consequence and Priority Rating Table

Consequence Categories	Low/minimum	Minor	Moderate	Major	Critical
<b>Consequences</b>	Little or no ecological effect and no measurable impact on human health.	Minor ecological effect. Ecological damage can be remedied within six months. Minor hazard to humans in the immediate vicinity.	Incident could/does result in a moderate uncontained or sustained environmental release, impacting the local environment only. Ecological damage can be remedied in less than one year. Health hazard to humans in the immediate vicinity, but not resulting in critical or fatal injury/illness.	Incident could/does result in a major uncontained or sustained environmental release, impacting the regional environment only. Ecological damage can be remedied within 1 year. Health hazard to humans in the immediate vicinity resulting in critical or fatal injury/illness.	Incident has a recognised global environmental impact. Widespread or permanent local ecological damage. Remediation would take longer than one year. Could result in a major public health hazard. Magnitude is unknown.
<b>Environmental Priority Rating</b>	<b>Low</b>	<b>Moderate</b>		<b>High</b>	<b>Extreme</b>

**Note: If the incident is considered a potential LC or LC in terms of the OHD, the incident must automatically be prioritised as high and extreme respectively regardless of the actual consequence.**

### 3.5.2 Action and responsibility requirements

All environmental incidents must be reported within 24 hours of the incident occurring or as soon as becoming aware of the incident as specified in legislation and/or conditions of applicable licenses/authorisations. The INO process must be followed where an email, flash report, etc. is sent to internal and external stakeholders and interested parties. The responsible manager must ensure that the initial notification is communicated as per the time frames specified in this document.

Table 3.5.2 Action and Responsibility Table

Environmental Priority Rating	Low	Moderate	High	Extreme
<b>Levels of management to be informed</b>	Middle manager and environmental practitioner	OU/BU management. OU/BU environmental manager/practitioner	Those specified under moderate plus the divisional EICC representative and SS: EM.	Inform those specified under high and the senior environmental manager

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<b>Classification and recording requirements</b>	Initial classification and recording of all incidents must be done on SAP EH&S within 48 hours. Any change in classification must be done immediately when new information is available. Confirm classification during the investigation process.			
<b>Investigation Requirements</b>  <i>Investigations must be completed as specified within legislation, licenses and using this table.</i>  <i>*Refer to Appendix E for investigation cause guidance</i>	Initiate investigation process within 7 working days. Complete investigation within 30 calendar days.	Initiate investigation process within 7 working days. Complete investigation within 30 calendar days.	Initiate investigation process within 48 hours. Complete investigation within 45 calendar days.	Initiate investigation process within 24 hours. Complete investigation within 45 calendar days.
	Investigation team shall be determined by OU/BU, in consultation with the OU/BU environmental practitioner.		Investigation team and chairperson shall be determined by OU/BU, in consultation with the divisional EICC representative, where needed, and/or SS: EM.	
	A basic investigation that determines the direct cause of the incident (assessment)	An investigation that determines the apparent cause including processes and organisational issues (evaluation).	A full detailed investigation to establish the root causes and/or organisational weaknesses of the incident and the appropriate preventative and corrective actions (analysis).	
<b>Incident communication</b>	Notify the environmental department and line management in writing immediately or no later than 24 hours.		Notify the environmental department, line management and/or EICC representative for LCs in writing immediately or no later than 24 hours.	
	Communicate the SAP EH&S Flash Report to the relevant person(s) at the OU/BU within 48 hours <sup>1</sup> .			
	The lessons learnt may be shared within the OU/BU on a six monthly basis when necessary.	The individual trends for moderate incident lessons learnt must be shared within the OU/BU on a quarterly basis.	Case studies with lessons learnt, using the Eskom template, for all LCs must be compiled and submitted to SS: EM in order to be shared Eskom-wide within 3 months of the incident being classified. Case studies for all other incidents rated high and extreme must be shared within the OU/BU and Division if required within 1 month after the investigation.	
<b>Environmental Priority Rating</b>	<b>Low</b>	<b>Moderate</b>	<b>High</b>	<b>Extreme</b>

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**Note**<sup>1</sup> Environmental incidents that occur over weekends, days off (example pay weekend) and holidays will not be considered as late captures during audits and reviews when assessing the capturing of incidents onto SAP EH&S. These incidents should be captured within 48 hours upon return to a working day.

### 3.6 Classification and Recording of Incidents

Environmental incidents must be prioritised, classified, and recorded in the SAP EH&S system according to the CARAT principles. The SAP EH&S system is the only acceptable system for the capturing of incidents excluding wildlife incidents which will be recorded on EWT's CIR.

#### 3.6.1 Classification

All environmental incidents must be classified using the definitions provided above and criteria in the table in Appendix C in order to determine if the incident is an environmental event, LC or LC in terms of the OHD. NEMA s30 incidents and NWA s20 incidents must be classified using the guidance provided in Appendix D. The outcome of the classification must then be completed on SAP EH&S.

If the environmental incident is classified by the OU/BU as an LC or an LC in terms of the OHD, the incident must be reported to EICC via the divisional EICC representative, within the same month that the incident occurred, where practicable. EICC will review and confirm the LC and LC in terms of the OHD.

#### Specific incidents:

- a. **Hydrocarbon spill incidents:** In terms of classifying oil spill incidents, the spill classification form must be completed and electronically attached to the incident in SAP EH&S. The form is registered as a spill assessment table (Document Number 240-47176039). This table must be completed for all hydrocarbon spills and electronically attached to the incident in the SAP EH&S document management system.
- b. **Ash spill incidents:** All ash spill incidents must be assessed using the ash spill assessment form as provided in Appendix A of the Position Paper on Ash Spillages – Document Number **ENV16 – L009** in addition to Appendix C of this document and NEMA s30 (control of incidents) requirements and NWA s20 (control of emergency incidents) requirements.
- c. **Emergency tree cutting incidents:** these will be classified using **Government Gazette No. 773** issued by the Department of Forestry – 24 August 2007 Exemptions in terms of sections 7(1) and 15(1) of the National Forests Act, 1998 (Act No. 84 of 1998), as amended.
- d. **Dust fall out exceedances:** All dust fall out exceedances must be reported as incidents on SAP EH&S.

An LC in terms of the National Dust Control Regulations (GNR 827, 1 November 2013) is incurred if there is a contravention of or failure to comply with a provision of regulation 4(2) and (3), 6(1); (3) and (4) or 7 of the said Regulations.

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- e. **Wildlife incidents:** Incidents will be assessed on species significance in accordance with the **NEM: BA, GNR 255 of 2015** –Threatened or Protected Species Regulations (as amended) and the International Union for the Conservation of Nature (IUCN) Red List categorisation.
- f. **Grass fires:** All grass fires which occurred within the protected areas (a); (b) and (d) of the National Environmental Management: Protected Areas Act and/or in terms of NEMA s30, as a result of Eskom activities must be classified as environmental incidents and managed in terms of this procedure and prioritised as a high or extreme incident depending on the extent of damage.
- g. **Fires:** All fires, as a result of Eskom activities, that occurs outside of a NEM: PAA defined protected area with known indigenous and/or protected species must be recorded as an environmental incident. These incidents must be prioritised initially as low or moderate depending on the extent of the damage and/or and significance of species loss incurred by the incident although their classification may be increased based on the outcome of the investigation.
- h. **Incidents with an OHS and Environmental consequence:** these incidents will be managed in line with the requirements of this procedure and 32-95 revision 7. A joint investigation must be conducted and the information provided to the OHS and environmental practitioners for updating on SAP EH&S accordingly. The OU/BU shall determine internally who captures the incident on SAP EH&S.

#### 3.6.1.1 Reclassified incidents

Reclassified environmental incidents must be communicated by means of an updated SAP EH&S Flash Report to relevant internal stakeholders, together with an explanation for the reclassification. Supporting documentation or proof must be made available for verification and audit purposes and electronically attached to the incident in SAP EH&S.

#### 3.6.1.2 Classification dispute and appeal process

Disputes or appeals regarding classification of environmental incidents must be submitted to the Eskom Environmental Manager by the respective Divisional Business Partner. The Eskom Environmental Manager will review the incident information provided and will decide on the incident classification. Should the Eskom Environmental Manager require input into the decision, the ESC may be consulted. The final incident classification will be communicated to the respective Business Partner who is responsible for communicating the decision to the EICC.

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### 3.6.2 Recording

All incidents must be recorded on SAP EH&S, the incident management tool or the EWT CIR for wildlife incidents. The date the incident occurred is the date that must be used as the incident date, unless a different decision is provided for incidents that are identified later and the actual incident date is unknown. In instances such as these, the date of identification will be used, unless specified differently by the EICC for LCs.

All incidents must also reflect the applicable legislation or permit and the applicable section within the respective legislation that was contravened for LCs.

#### 3.6.2.1 Recording of biodiversity incidents

All vegetation - related incidents will be recorded on SAP EH&S. All wildlife incidents (as per the definition for the purpose of this document) will be recorded by EWT on the CIR. In the event of an insurance or third - party claim for a wildlife incident, such incident shall be captured on SAP EH&S to facilitate the insurance or third - party claim process.

#### 3.6.2.2 Recording of emission incidents

All emission exceedances that exceed the periods allowed for start-up, maintenance, upset conditions and shut-down as specified in the station specific AELs must be reported and managed as incidents, as detailed in the Atmospheric Emission License Practice Note.

### 3.7 Incident investigation

All incidents must be investigated as per the action required table. Where investigations take longer than the allocated timeframe within the action required table, a written motivation must be sent by the OU/BU Manager to the respective Business Partner to request for an extension at least 7 calendar days prior to the timeframe requirement in the document. Investigation reports must be treated with controlled disclosure as per the Eskom documentation processes.

- a. All investigations for environmental incidents shall evaluate the actual environmental impact that occurred and ensure that all license and permit requirements in terms of investigations are covered in the investigation.
- b. The focus of the investigation for LCs, LCs in terms of the OHD, NWA s20 and NEMA s30 should be the reason or root cause, direct cause, and contributory cause for the incident as well as the environmental impact. The investigation shall also include which legislation/permit (including the specific section within legislation) was contravened in addition to the technical details of the incident.

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- c. The investigation team/committee and chairperson for LC shall be appointed by the OU/BU, in consultation with the EICC divisional representative. The investigation team will require input from the OU/BU SHEQ or environmental manager as well as involvement of relevant internal stakeholders such as engineers, contractor representatives, etc., where applicable. External stakeholders such as subject matter specialist(s) and consultants for particular fields may also be required for certain incident investigations as advised by the EICC representative with the OU/BU manager. The respective EICC representatives shall be involved in the investigation as deemed necessary.
- d. A detailed investigation report should be generated and captured on SAP EH&S and circulated to the divisional EICC representative. **Note:** For investigations of LCs in terms of the OHD, the respective EICC representatives shall be involved.
- e. Investigations of environmental events shall involve the environmental practitioner(s) of the OU/BU as well as the relevant supervisor or contractor representative where the incident occurred. Expertise from relevant fields can be requested, depending on the type of incident that is being investigated.
- f. Where incidents occur in areas of an Eskom subsidiary or contractor responsibility, joint investigations shall be carried out where responsible managers and the environmental team from Eskom and the Eskom subsidiary or contractor are present. The outcome from this investigation shall be considered as final and used for classification purposes at EICC. The investigation lead shall be from the Eskom Division or Eskom subsidiary or contractors depending on who is responsible for the incident or where the incident occurred. Should either party receive an invite for an investigation for an LC, they shall accept and attend the investigation.
- g. Wildlife incidents:
  - i. The incident investigation shall be initiated either by EWT or the Eskom BU. The site investigation team shall be comprised of representatives from EWT and the Eskom OU/BU and/or Environmental Department and if applicable, the external stakeholder that reported the incident.
  - ii. A detailed investigation report including recommendations/corrective actions shall be generated by EWT. The Eskom OU/BU must accept the recommendations/corrective actions in terms of technical acceptance. In the event of a dispute between the Eskom OU/BU and EWT, the relevant Business Partner and Biodiversity CoE will assist in resolving disputes.

The investigation report must include the following:

- a. The details of the incidents (type of incident, what occurred, sequence of events when and where the incident occurred).
- b. The legislation applicable to the incident and what if any legislation contravention has occurred.
- c. Incident consequences and impacts.
- d. Direct or immediate cause(s).

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- e. Root causes, taking into consideration human, workplace, and natural factors (who, what, and why).
- f. Identify system failures (procedure non-conformance, training, plant failure, etc.).
- g. Corrective and preventative actions to remedy and prevent a reoccurrence of the incident.
- h. Lessons learnt and recommendations.

### 3.8 Management of Corrective Actions

- a) There must be at least one corrective action for each root cause identified during the investigation.
- b) The Investigation Committee must consider the following hierarchy of control when formulating corrective actions:
  - i. Engineering control for the purpose of designing/redesigning in order to eliminate the risk.
  - ii. Administrative control, ensuring procedures are updated to prevent incidents from occurring.
  - iii. Substitution or elimination by removing the aspect that may result in an environmental incident and thus actual environmental impact.
- c) Planned start and completion (end) dates for all corrective actions must be clearly defined and must be (SMART):
  - i. Specific;
  - ii. Measureable;
  - iii. Achievable;
  - iv. Realistic, with clearly allocated responsibilities; and
  - v. Timeous, with clear deadlines.
- d) All actions once completed must be verified by the person responsible in order to determine effective implementation. Documentary evidence of the implemented corrective action must be available and attached electronically to the incident in SAP EH&S before it is closed on SAP EH&S.
- e) Where a corrective action that has been implemented is deemed ineffective and, therefore, unsuccessful, the corrective action(s) must be revised. An alternative corrective action must be identified to address the root cause(s).
- f) If a corrective action for an LC incident requires revision and/or the due date will not be met, the respective OU/BU must follow the internal OU/BU process for approval and in addition submit that request in writing for approval to amend the corrective actions and/or due date from their respective Business Partner. Due date extension requests must be submitted to the Business Partner at least 2 weeks prior to the actual initial due date. Once approval is obtained, the original action must be closed on SAP EH&S as 'not implemented to requirements' and a new action captured on SAP EH&S with the approved revised action date.

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- g) To ensure the prompt follow-up and close-out of corrective action from an incident investigation report, periodic status reports must be provided from SAP EH&S to site management until all recommendations have been acted on and closed out.
- h) The EICC meetings shall also track the corrective actions for incident LCs and incident LC in terms of the OHDs as part of the monthly meetings.
- i) Wildlife incidents: Recommendations/corrective actions shall be implemented by the Eskom OU/BU as per the applicable and approved timelines and related divisional key performance indicators (KPI's) for bird incidents. For other wildlife incidents, the timelines as per the recommendations/corrective actions shall be adhered to.
- j) All investigation reports (including wildlife incidents) should be finalised and signed within 14 calendar days of completing the investigation.
- k) The corrective actions for all incidents (excluding wildlife incidents which will be captured by EWT on the CIR) must be captured on SAP EH&S within 7 calendar days from the date of signing the investigation report.

### 3.8.1 Documentation management

The OU/BU is responsible for scanning and attaching all relevant documentation (for example, the initial notification report, SAP EH&S system-generated flash report, corrective action implementation, investigation report, spill assessments, etc.) as soon as the documents are completed and are available.

### 3.9 Incident close-out

- a) Close-out is the final step in the incident management process. The action of closing out an incident signifies that all corrective actions have been effectively implemented, case studies effectively communicated and all relevant documents attached.
- b) The incident must then be closed out in SAP EH&S as an action.
- c) All LCs and LCs in terms of the OHD must have a signed closure certificate uploaded (Document Number 240-76507067).
- d) Wildlife incidents: Eskom OU/BU and/or Environmental Manager shall inform EWT when all recommendations/corrective actions have been implemented with all the related documented information as evidence. An incident will be closed on the EWT CIR by capturing the date the recommendations were implemented and completed. If the incident was reported by an external stakeholder (public or landowner), EWT may contact the stakeholder to confirm if mitigation has been implemented.

### 3.10 Incident Communication

Incident communication occurs through-out the incident management process. Various levels of communication are identified and specified in the Action Required Table of this document.

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#### 4. Acceptance

This document has been seen and accepted by:

Name	Designation
Deidre Herbst	Eskom Environmental Manager
Dave Lucas	Corporate Specialist
Bryan McCourt	Middle Manager – RAS CoE
EICC Members	Eskom Incident Classification Committee Members (Divisional Business Partners included).
ESC Members	Environmental Steering Committee members
SS Manco Members	Sustainability Systems Management Committee
R&S Manco Members	Risk and Sustainability Management Committee

#### 5. Revisions

Date	Rev.	Compiler	Remarks
November 2017	1	N Rajdeo	New document for environmental incident management that was previously included in 32-95.

#### 6. Development Team

The following people were involved in the development of this document:

- Dave Lucas
- Bryan McCourt
- EICC Committee Members (represented by all divisions)
- Inba Pillay

#### 7. Acknowledgements

None

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## Appendix A: Process Flow to Determine Repeat Environmental Incidents

### Questions to be asked:

Did the incident take place within 12 months of the previous environmental legal contravention - incident?

Yes   No (then not a repeat)

Did environmental legal contravention-incident take place within the **same BU** (for example, Transmission grid, Distribution operating unit, power station, Group Capital project, etc.)?

Yes   No (then not a repeat)

Is the environmental legal contravention - incident related to the **same section of legislation and/or** the same license condition, previously classified as a legal contravention - incident?

Yes   No (then not a repeat)

Is the environmental legal contravention -incident related to the same **root cause**?

Yes   No (then not a repeat)

Have the safety measures (corrective and preventive actions) identified to address the previous incident been implemented as per the agreed time frames, such that there was an opportunity to prevent the present environmental legal contravention - incident?

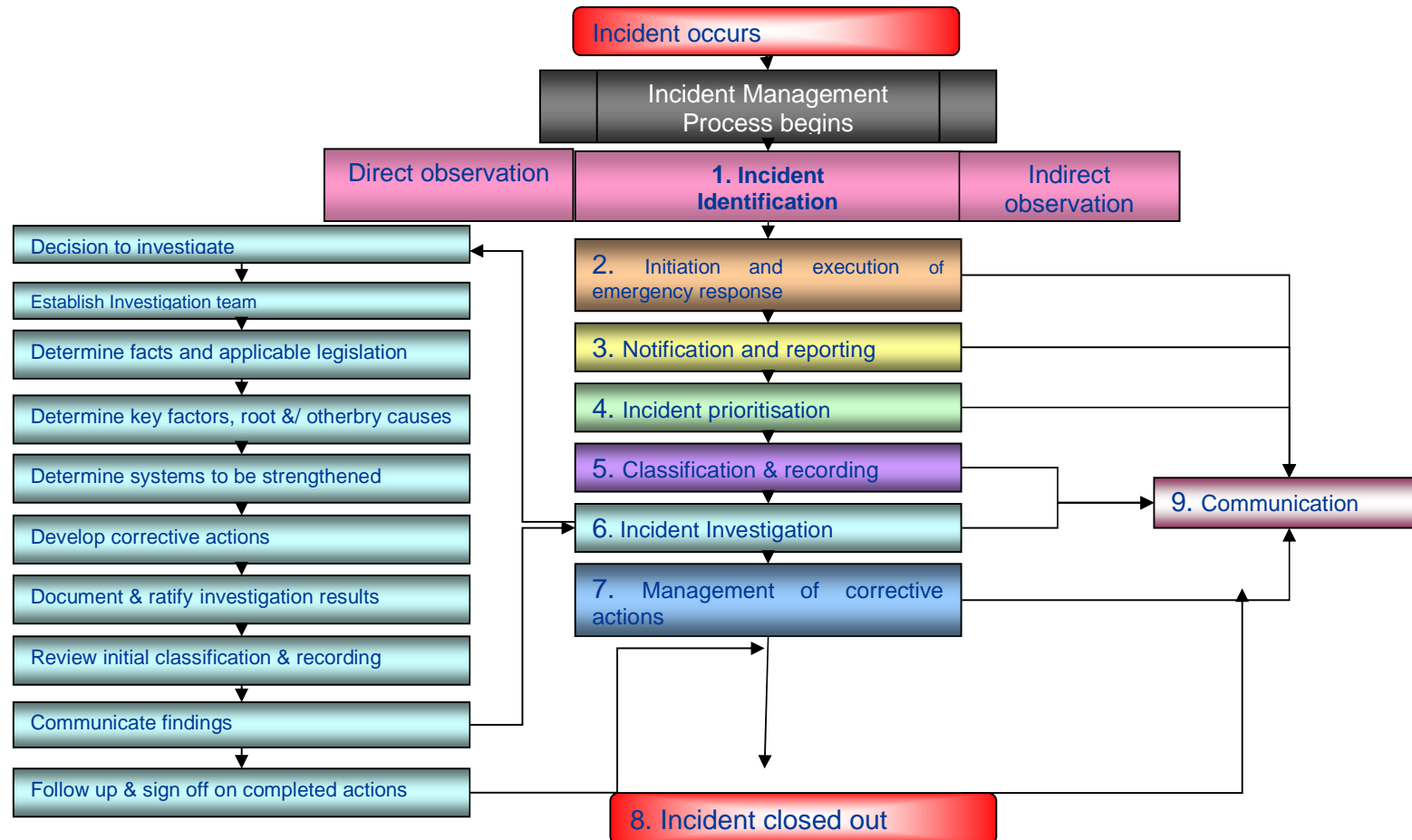
 Yes (then a repeat)  No (then not a repeat)

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### Appendix B: Incident Management Process Flow



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### Appendix C: <sup>2</sup>Classification Criteria for Environmental Incidents

EICC criteria for classification of environmental incidents			
Element	N/a	Yes	No
1. Did the incident result in a contravention of any environmental legislation and/or condition of a license, authorisation or permit?			
2. Environmental duty of care (Section 28 of NEMA) - Did the incident result in either sterilising the soil or destroying rare, endangered, or protected fauna or flora?			
3. Environmental duty of care and prevention of pollution (Section 28 of NEMA and Section 19 of NWA) - Did the incident result in making any water resource unfit for its original purpose such as domestic, agricultural, or industrial use or reduce the water quality to such a state that human intervention is required to restore it to its original quality?			
4. Environmental duty of care and prevention of pollution (Section 28 of NEMA and Section 19 of NWA) - Did Eskom fail to take reasonable measures to prevent pollution or degradation from occurring?			
5. Environmental duty of care and prevention of pollution (Section 28 of NEMA and Section 19 of NWA) - Did Eskom fail to prevent pollution or degradation from continuing?			
6. Environmental duty of care and prevention of pollution (Section 28 of NEMA and Section 19 of NWA) - Did Eskom fail to implement measures to prevent pollution or degradation from recurring?			
Specify legislation, applicable section within legislation, and license condition that were contravened.			
<b>Classification</b> If "Yes" to any of the questions, classify incident as legal contravention, if "No" to all of the questions, classify as an event.			

**If classified as a legal contravention, check against the following criteria to determine whether the incident is an OHD.**

Criteria	Yes	No
1. The environmental legal contravention - incident results in formal censure from government. These are a compliance notice, a directive, a fine (including a NEMA section 24g application), prosecution.		
2. The environmental legal contravention - incident is not reported through the initial notification to the applicable department as per this procedure (240-133087117).		
3. The environmental legal contravention - incident is considered a repeat environmental legal contravention (using the process flow found in Appendix A of this document). Note: This criterion can only apply if the previous incident was classified as an environmental legal contravention.		
4. The corrective action(s) for the legal contravention- incident is not implemented within 30 days after the due date as per this procedure (240-133087117).		
<b>OHD event (any shaded area marked)</b>		

<sup>2</sup> The above criteria are applied in conjunction with the definitions for LCs and OHDs, taking into account the associated principles.

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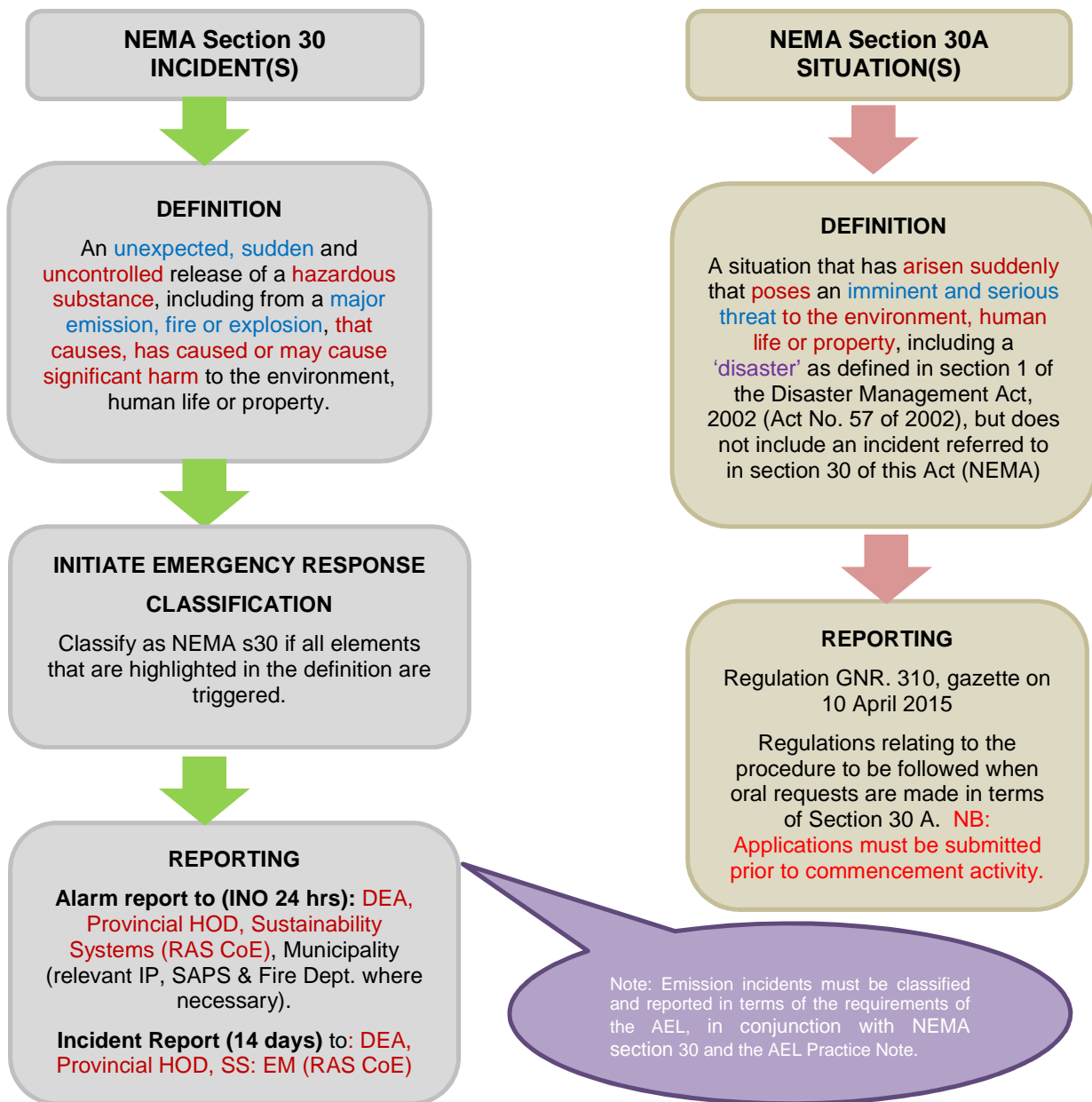
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**Appendix D: NEMA Section 30 Control of Incidents and NWA Sc 20 Control of Emergency Incident Classification and Reporting Guidance**

This section must be read in conjunction with NEMA Section 30 (control of incidents) and NWA Section 20 (control of emergency incidents). The emergency response plan or procedure must be initiated for all NEMA s30 and NWA s20 incidents.

**Classification and Reporting Guidance**

For an incident to be a NEMA S 30 incident, the following elements highlighted within the definition of an incident must be triggered:



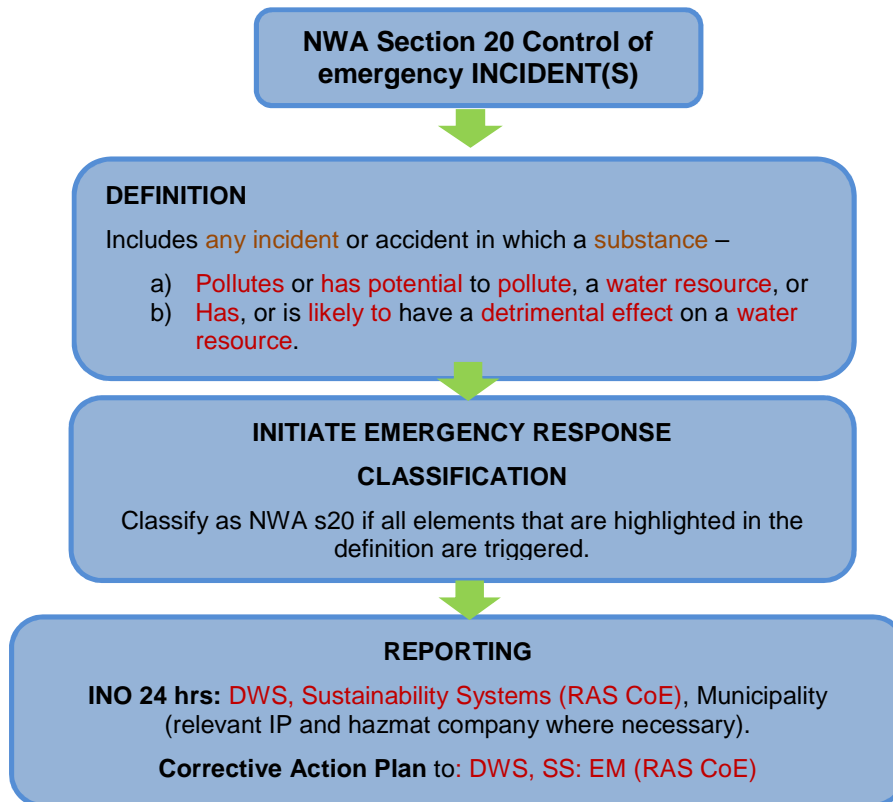
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For an incident to be a NWA s20 incident, the following elements highlighted within the definition of an incident must be triggered



### Action required for NEMA Section 30 Incidents (control of incidents) and NWA Section 20 Incidents (control of emergency incidents)

1. Determine if the incident is a NEMA s30 or NWA s20 incidents by using the Appendix D above, applicable legislation and by consulting the SS: EM.
2. Submit initial notification to the SS: EM, DEA and/or DWS.
3. Notify relevant stakeholders as prescribed in this procedure and process flow in Appendix D Initiate investigation within 24 to 48 hours. Investigations for NEMA s30 incidents must be completed within 14 calendar days.
4. Submit investigation report to DEA and SS: EM on the DEA template within 14 days of the NEMA s30 incident occurring. For NWA s20 incidents, a follow-up letter containing investigation results and corrective actions must be completed and submitted to the DWS as soon as the investigation is concluded. SS: EM must be consulted prior to final reports being communicated to the authorities.

Provide additional information to authorities once investigation is concluded and/or corrective and preventative actions are implemented.

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### Appendix E: Investigation Requirements Guidance

This Section provides guidance on the types of causes (adapted from the SAP QIM procedure) required for the various levels of investigations as per the priority rating in Table 3.5.2.

<b>Apparent Cause</b>	Causes identified through the facts of an incident and if corrected will <b>reduce the consequence of future similar incidents</b> . Recurrence is not expected and the emphasis is mainly to correct this present incident.
<b>Contributory Cause</b>	Causes that contribute to the incident occurring but is not the only cause of the incident. If the cause is corrected, it would not prevent the incident from occurring. However it is important enough to be identified and corrective actions determined to improve the quality of the process in order to prevent future incidents from occurring.
<b>Direct Cause</b>	These are direct or immediate reasons why the incident occurred.
<b>Root Cause</b>	Refers to the fundamental issue(s) which can reasonably be identified through a root cause analysis process. Root causes may be within management control or as an external factor. Effective corrective action(s) for the <b>prevention of reoccurrence</b> can be generated for those causes that are within the control of management, such that if the cause was removed would have prevented the incident from occurring and if eliminated/rectified would prevent reoccurrence.

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