

ARO Emergency Preparedness, Response & Incident Management Plan - Internal

(ISO 14001:2015, Clause 8.2)

Author	Greg Nott
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Table of Contents

Approval.....	4
Review.....	4
Change History.....	4
Associated Documents.....	4
Scope.....	5
Purpose.....	5
Procedure.....	5
Detection Phase.....	6
D1. Possible Environmental Incident Detected.....	6
D2. Incident Assessment.....	6
D3. Propose Environmental P1 Incident.....	7
D4. Confirm Environmental P1 Incident.....	7
D5. Mobilise Environmental Incident Team.....	7
D6. Complete First Management Bridge.....	7
D7. Notify Senior Stakeholders.....	8
D8. Send Internal P1 Incident Notification.....	8
Resolution Phase.....	8
R1. Develop Containment and Mitigation Plan.....	8
R2. Execute Containment and Mitigation.....	9
R3. Update Records.....	9
R4. Complete Management Bridge Status Update.....	9
R5. Send Incident Update(s).....	10
R6. Continuation Until Resolution.....	10
Resolved Monitoring Phase.....	10
M1. Stabilisation Confirmed.....	10
M2. Workaround Removal Plan.....	11
M3. Update Records.....	11
Post-Incident Phase.....	11
P1. Conduct RCA (Root Cause Analysis) and Lessons Learnt Incident Review.....	11
P2. Document Findings and Actions.....	12
P3: Distribute Post Incident Report (PIR).....	12
P4. Workaround Removal.....	12
P5. Assign Action Owners.....	12
P6. Update EMS Policies & Procedures.....	13

P7. Demobilise Environmental Incident Team	13
P8. Close Ticket	13
X. End Process	13
Deviation	13
Maintenance & Testing	13
APPENDIX A: Incident Classifications	14
APPENDIX B: Incident Severity & Priority Assignment.....	15
APPENDIX C: Incident Response Process Map.....	16
APPENDIX D: Responsibility Matrix.....	17
APPENDIX E: Site Emergency Response Coordinators (Primary Contacts)	18
APPENDIX F: Spill Response Checklist.....	19
APPENDIX G: FM-200 / Fire Suppression Discharge Checklist	22
APPENDIX H: Drill & Exercise Programme.....	22
APPENDIX I: Equipment & Supplies Inventory	25
APPENDIX J: Training & Competence	32
APPENDIX K: Legal & Regulatory Notification Guidance.....	35
Legal & Regulatory Notification Trigger Matrix.....	35

Approval

Author	Issue	Approved By	Date
Greg Nott	1.0	Amanda Lawson-Stoner	26-Mar-26

Review

Reviewer	Review Criteria	Issue	Date
Amanda Lawson-Stoner	ISO 14001:2015	1.0	26-Mar-26
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Change History

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Associated Documents

Document	Version
Critical Security Incident Response Procedure - Internal	4.0
Critical Operation Incident Response Procedure - Internal	1.0
Business Continuity Overlay	2.0

Scope

This document is part of the Integrated Management System (IMS) for ARO and is consistent with the standards listed below and describes the ARO Emergency Preparedness, Response & Incident Management Plan - Internal adopted by ARO.

- ISO 27001:2022 – Information Security Management Systems
 - ISO 27017:2015 – Code of Practice for Cloud Services
 - ISO 27018:2020 – Code of Practice of Personally Identifiable Information (PII)
- ISO 9001:2015 – Quality Management System
- ISO 14001:2015 – Environmental Management System
- ISO 45001:2015 – OHS Management System
- DSPT (Data Security and Protection Toolkit) for the NHS.
- Cyber Essentials Plus

This plan applies to all ARO sites (offices, warehouses, plant rooms, and data centres), all ARO personnel, and contractors and visitors under ARO control. It covers foreseeable environmental emergencies and abnormal operating conditions that could impact people, the environment, or operational continuity.

Purpose

Establish an aligned, repeatable, and auditable approach to environmental emergency preparedness and response that mirrors ARO's incident response structure. The plan provides detection, response, stabilisation, communication, recovery, and post-incident learning for environmental events (e.g., spills, releases, FM-200 discharge, fire, contaminated water, power/cooling failures with environmental impact).

Procedure

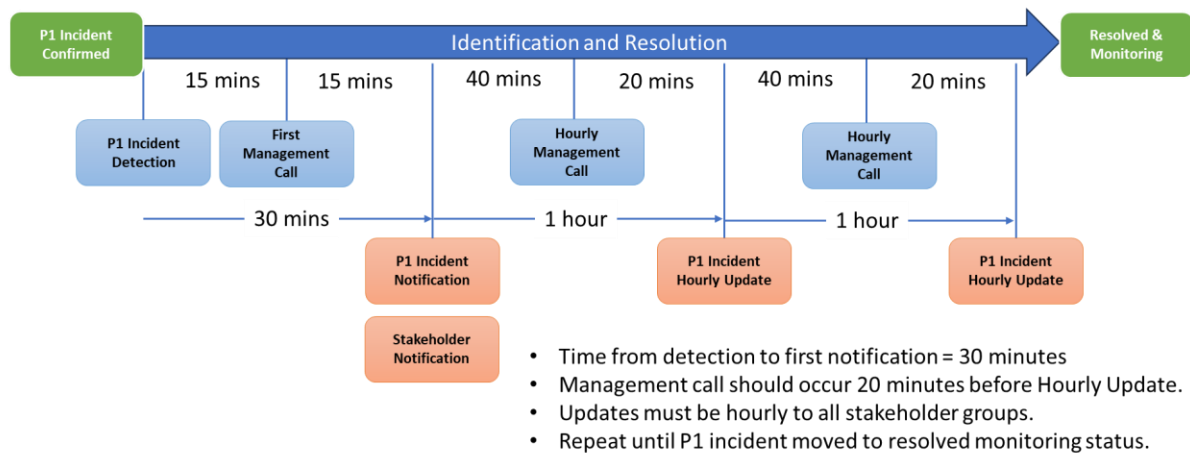
A simplified map of this process is available at Appendix C with responsibilities described throughout the process summarised at Appendix D.

The procedure consists of the following phases:

1. Detection
2. Resolution
3. Resolved and Monitoring
4. Post-Incident

The management and communication cycle through the Identification and Resolution phases is summarised as:

P1 Incident Management and Communication Timeline



Detection Phase

Business Continuity Note: If impact meets Extreme criteria, invoke BCP immediately. (See APPENDIX B: Incident Severity & Priority Assignment).

D1. Possible Environmental Incident Detected

Responsible: Incident Owner

Support: Site Emergency Response Coordinator

Description: A potential environmental incident can be identified through a number of channels:

- Observation
- Alarms (fire/FM-200/refrigerant/gas leak)
- Spill detection
- Containment failure
- Abnormal emissions
- Power / cooling failures threatening environmental control
- Reports from staff / contractors

D2. Incident Assessment

Responsible: Incident Owner

Support: Site Emergency Response Coordinator

Description: Assess if the incident is classed as P1 against the Environmental Severity Matrix (Appendix B) using substance type, volume, location, receptor proximity, exposure risk, and legal/reporting triggers.

- **Yes** – Continue procedure at D3
- **Maybe** - Continue procedure at D3
- **No** –End procedure at X.

D3. Propose Environmental P1 Incident

Responsible: Incident Owner

Support: EMS Manager

Description: Escalate to the EMS Manager for confirmation and classification.

D4. Confirm Environmental P1 Incident

Responsible: EMS Manager

Support: Incident Owner

Description: Confirm classification and priority using Appendix B

- **IF SEVERITY ASSIGNED EXTREME:** Invoke Critical Incident Response Continuity Response Overlay.

D5. Mobilise Environmental Incident Team

Responsible: EMS Manager

Support: Technical Lead(s)
Fire/Spill Responder(s)
Facilities & H&S Lead
Site Emergency Response Coordinator(s)
DPO (if data / waste implications)
Incident Owner

Description: The EMS Manager will confirm team roles and schedule first Management Bridge.

D6. Complete First Management Bridge

Responsible: EMS Manager

Support: Environmental Incident Team

Description: Within no more than 15 minutes from confirmation of P1 incident, the EMS Manager must start the management bridge.

It is mandatory that all team members attend the bridge to facilitate efficient pooling of knowledge, effective coordination, decision making and accurate communications.

Note: Not attending the call “because I’m fixing the problem” is a false economy and impacts the team’s ability to make decisions and communicating effectively with internal business units. At its worst it damages internal business unit satisfaction through poor quality updates, and extending the duration of the incident.

Management call agenda:

- Confirm roles and responsibilities
- Understand the P1 incident background
- Status – Understood current status, and actions to understand P1 incident status
- Impact – Understood impact and actions to understand P1 incident impact
- Internal
- Other internal / external parties
- Resolution - If sufficient information is known to determine resolution steps - Actions to begin resolution.
- Agree immediate internal and external comms. Time of 1st Comms send, time required for review/approval, and update frequency.
- Next status call and frequency. The default frequency should be no longer than 1 hour. The status call timing should precede comms updates, so facts can be established once for resolution and communication.

D7. Notify Senior Stakeholders

Responsible: EMS Manager

Support: N/A

Description: The EMS Manager will contact senior and other interested stakeholders to notify them of the P1 incident, confirm ownership and planned communications.

D8. Send Internal P1 Incident Notification

Responsible: EMS Manager

Support: Environmental Incident Team

Description: Notification of P1 incident communication should be sent within the first 30 minutes of confirmation. The EMS Manager will prepare and send the notification of P1 incident. All comms must be proofread and approved prior to sending out.

Resolution Phase

Business Continuity Note: If restoration of safe environmental conditions cannot be achieved within RTO/impact tolerances, invoke BC Overlay immediately. (See APPENDIX B: Incident Severity & Priority Assignment).

R1. Develop Containment and Mitigation Plan

Responsible: EMS Manager

Support: Environmental Incident Team

Description: Led by the EMS Manager, the Environmental incident team should establish, and continually review a plan that outlines specific steps and targeted timescales to identify, mitigate and resolve the incident.

As a minimum there should always be a “Plan A” and “Plan B”, describing the primary and secondary focus of investigation and resolution. A backlog of alternative plans should be managed and reviewed by the EMS Manager, to ensure that troubleshooting does not halt due to lack of direction.

Plans should include / consider:

- Spill containment (booms / absorbents)
- Drain covers
- Plant shutdown / isolation
- Air handling adjustments
- Ventilation
- Waste contractor engagement
- Safety per SDS
-

R2. Execute Containment and Mitigation

Responsible: EMS Manager

Support: Environmental Incident Team

Description: Implement agreed steps; record all actions, times, and outcomes.

R3. Update Records

Responsible: Environmental Incident Team

Support: N/A

Description: Record all containment steps, readings (air/oxygen/refrigerant), photos, volumes recovered, and waste arrangements in the system of record.

R4. Complete Management Bridge Status Update

Responsible: EMS Manager

Support: Environmental Incident Team

Description: Every hour, at the agreed time, the P1 incident management team must complete the management call to understand status, review and agree containment plan, and communications.

Note: The hourly bridge call must be maintained for a minimum of 3 hours before any different interval should be determined.

It is mandatory that all team members attend the bridge.

Agenda of Status Calls:

- Impact – Understood impact – has it changed?
- Technical Update
- Supplier Update
- Actions since last call
- Containment & Resolution - If sufficient information is known to determine resolution steps - Actions to begin resolution.
- Next actions
- Comms plan – confirm next update and any issues.
- Next status call time.

Status, decisions, and actions should be recorded.

Note: In the event the team feels that they do not have a clear way forwards, or are facing issues they are unable to address, they may choose to escalate to a Senior Stakeholder who can participate on the bridge.

R5. Send Incident Update(s)

Responsible: EMS Manager

Support: Incident Owner

Description: Issue updates at agreed cadence; coordinate any external statements with external comms; make regulatory notifications via H&S/Facilities where required.

R6. Continuation Until Resolution

Responsible: EMS Manager

Support: Environmental Incident Team

Description: Continue until containment verified, environmental readings normalised, waste removed via approved routes, and residual risk reduced to acceptable levels.

Business Continuity Note: If resolution steps cannot restore acceptable status within RTO, invoke BCP immediately. (See APPENDIX B: Incident Severity & Priority Assignment).

Resolved Monitoring Phase

Business Continuity Stand-down Criteria: Confirm normal operations restored and alternate processes deactivated before closure.

M1. Stabilisation Confirmed

Responsible: EMS Manager

Support: Incident Owner

Description: Confirm normal operations restored; verify air/water/area safe; confirm alternates deactivated; inform stakeholders.

M2. Workaround Removal Plan

Responsible: EMS Manager

Support: Environmental Incident Team

Description: Confirm action owners and target dates for removing alternates (temporary barriers, ventilation constraints). Track in action register.

M3. Update Records

Responsible: EMS Manager

Support: Environmental Incident Team

Description: Ensure records, timelines, decisions and comms are complete with cross-references, for regulatory compliance and stakeholder review.

Post-Incident Phase

Business Continuity Note: Include BC lessons learned and confirm any BCP invocation effectiveness.

P1. Conduct RCA (Root Cause Analysis) and Lessons Learnt Incident Review

Responsible: EMS Manager

Support: Environmental Incident Team

Description: EMS Manager shall conduct a review within 2 working days of resolution of the incident including:

- **Incident Review** - Thorough Root Cause Analysis (RCA) to determine the underlying causes of the incident, including contributing factors and environmental impact assessment.
- **Incident Process Review** - Lessons Learnt to determine how well the incident process worked, any failures and any improvements to be implemented.

Agenda for the review:

- Incident Review
 - Review of P1 incident timeline and issues
 - Impact – internal business unit services.
 - Impact – internal CG services.
 - Root cause analysis – things that should have worked.
 - Service improvements – improvements to avoid issues again.

- Incident Process Review
 - P1 incident process walkthrough and issues. Did we follow process?
 - Failures and improvements
- Key risks for risk register.
- Action plan and suggested owners

P2. Document Findings and Actions

Responsible: EMS Manager

Support: Environmental Incident Team

Description: EMS Manager must document the findings of the RCA and Lessons Learnt Review including the identified root causes, contributing factors, and recommended corrective actions. Lessons Learnt including what worked well, failures, and recommended improvements.

P3: Distribute Post Incident Report (PIR)

Responsible: EMS Manager

Support: Environmental Incident Team

Description: The EMS Manager shall produce a Post Internal P1 Incident Report and distribute within 5 working days of resolution of the incident including thorough Root Cause Analysis (RCA) to determine the underlying causes of the incident.

The PIR should be distributed to all internal business units who have requested a PIR, senior internal stakeholders.

P4. Workaround Removal

Responsible: EMS Manager

Support: Environmental Incident Team

Description: The EMS Manager should ensure that plans to remove the workaround are in place before the closure of the incident. This would be completed during the Review and Closure phase, by agreeing ownership of the workaround removal plan. Include BC lessons learned and confirm any BCP invocation effectiveness.

P5. Assign Action Owners

Responsible: EMS Manager

Support: Environmental Incident Team

Description: The EMS Manager assigns responsibility for implementing the recommended corrective actions and improvements identified during the RCA and Lessons Learnt. Recommended corrective actions shall be communicated to all stakeholders and agreed. If necessary, the EMS Manager should setup one or more action reviews, to monitor action progress. Critical actions should be completed within 5 working days.

P6. Update EMS Policies & Procedures

Responsible: EMS Manager

Support: N/A

Description: Update COSHH, aspects & impacts register, SOPs, site plans, and training content as needed.

P7. Demobilise Environmental Incident Team

Responsible: EMS Manager

Description: The EMS Manager ensures the orderly demobilisation of the Environmental Incident Team, releasing team members from their incident response roles.

P8. Close Ticket

Responsible: EMS Manager

Description: The EMS Manager shall formally close the incident record, indicating that the incident response process is complete.

X. End Process

Responsible: EMS Manager

Description: The EMS Manager concludes the incident response process.

Deviation

Dependent upon the classification, severity, and scope of the incident it may be appropriate to deviate from the above plan, for instance combining containment and recovery steps into a single plan. This may happen where urgency of action dictates or where planned steps act to achieve multiple results.

If deviation from this plan is appropriate, it must be agreed by the EMS Manager. Any deviation from the plan must be documented fully within the ticket.

Maintenance & Testing

It is the responsibility of the EMS Manager to maintain and update this procedure. The procedure and its components shall be tested no less than annually to ensure its effectiveness.

Testing methods should include:

- Fire & evacuation drills
- Spill response drills (table-top and practical where safe)
- FM-200 discharge response (table-top)
- Power/cooling failure scenarios (desktop / BCP exercises)
- Post-drill reviews and actions.

APPENDIX A: Incident Classifications

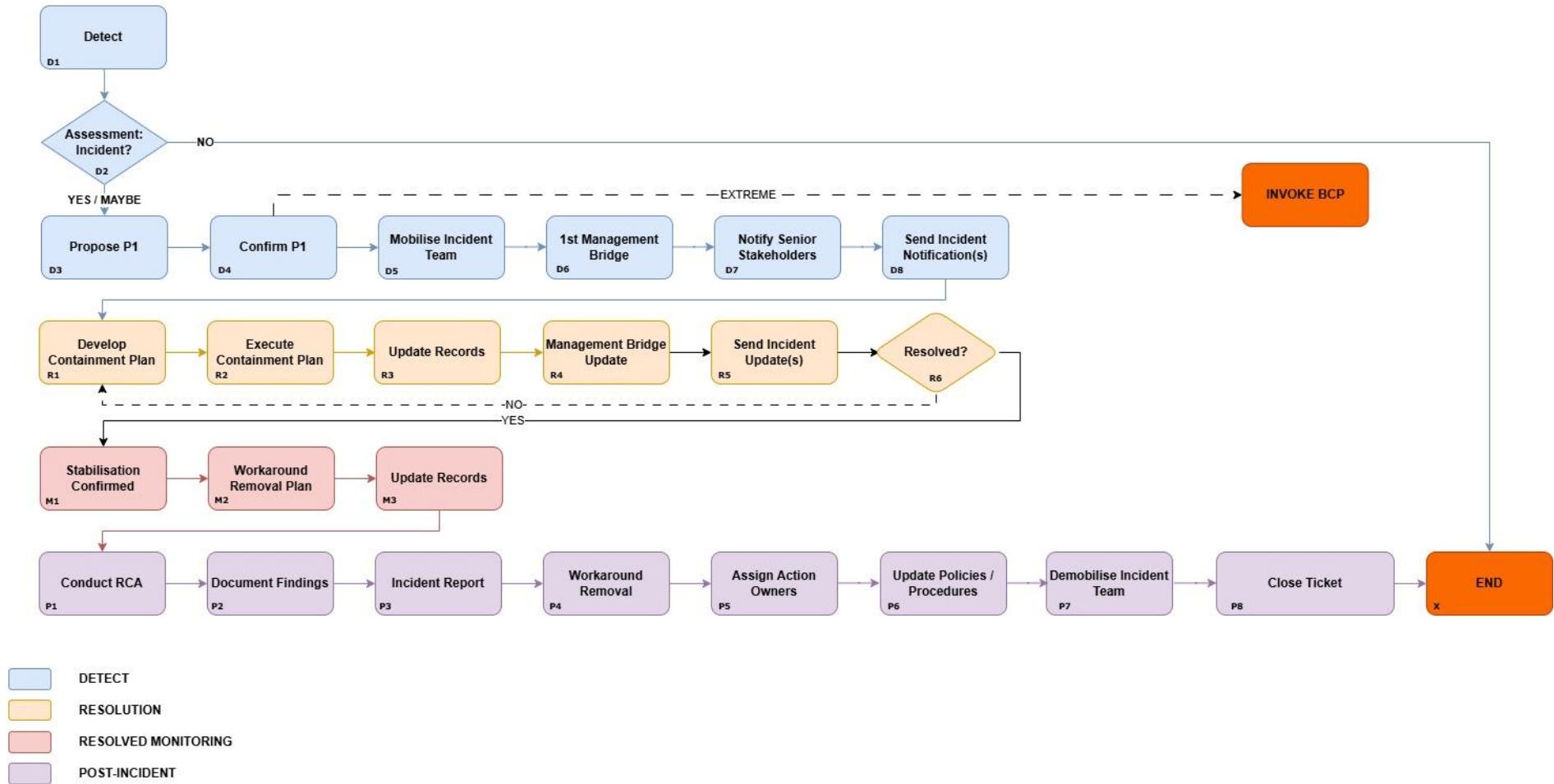
Classification	Description
SPILL – Hazardous Substance	Diesel, chemicals, battery electrolyte, refrigerants; potential harm to people/environment; SDS applies.
WASTE CONTAINMENT FAILURE	Bund overflow, container breach, uncontrolled run-off or drain entry risk.
FM-200 DISCHARGE	Inert gas discharge; evacuation; oxygen level checks; re-entry controls.
FIRE / EXPLOSION RISK	Activation of alarms; evacuation; firefighting by trained persons only if safe.
POWER / COOLING FAILURE (Environmental)	Environmental risk to assets leading to abnormal temperatures, leaks, or emissions.
CONTAMINATED WATER	Condensate or other contaminated water exposure threatening drains/land.
MEDICAL (Environmental Exposure)	Exposure to chemicals/fumes; first aid and emergency services as needed.

APPENDIX B: Incident Severity & Priority Assignment

	Occurrence Patterns	Environmental Impact	Human Impact	Regulatory / Contractual Impact	Recovery Timeframes & Resources	Projected Financial Costs	Assigned SLA Priority
Insignificant	Historical Not Recurring	No release; contained within tray; no receptor risk	None	None	Regular	Negligible	P4
Low	Current Isolated	Minor spill (<1L) contained; no drain risk	Minimal	None	Regular	Minimal	P3
Medium	Current Limited	Partial loss to surface; potential drain proximity; minor odour	Moderate	Possible minor duty/contract trigger	Supplemented	Moderate	P2
High	Current Widespread	Release threatens drains/soil; significant odour/fumes; FM-200/fire interaction	Significant	Likely external notification / breach risk	Extended	Significant	P1
Extreme	Current Rapid Escalation	Uncontrolled release to environment / confirmed drain entry / major fire/fumes	Severe	Regulator exposure/mandatory notification	Irreversible effects	Severe	INVOKE BCP

APPENDIX C: Incident Response Process Map

Environmental Incident Response Process Map



APPENDIX D: Responsibility Matrix

Detection Phase		Incident Owner	EMS Manager	Technical Lead(s)	Fire/Spill Responder(s)	Facilities lead	Site Response Coordinator(s)	DPO
D1	Possible Environmental Incident Detected	●					●	
D2	Incident Assessment	●					●	
D3	Propose Environmental P1 Incident	●	●					
D4	Confirm Environmental P1 Incident	●	●					
D5	Mobilise Environmental Incident Team	●	●	●	●	●	●	●
D6	Complete First Management Bridge		●	●	●	●	●	●
D7	Notify Senior Stakeholders		●					
D8	Send Internal P1 Incident Notification		●	●	●	●	●	●
Resolution Phase								
R1	Develop Containment and Mitigation Plan		●	●	●	●	●	●
R2	Execute Containment and Mitigation Plan		●	●	●	●	●	●
R3	Update Records		●					
R4	Complete Management Bridge Status Update		●	●	●	●	●	●
R5	Send Incident Update(s)	●	●					
R6	Continuation Until Resolution		●	●	●	●	●	●
Resolved Monitoring Phase								
M1	Stabilisation Confirmed	●	●					
M2	Workaround Removal Plan		●	●	●	●	●	●
M3	Update Records		●	●	●	●	●	●
Post-Incident Phase								
P1	Conduct RCA (Root Cause Analysis)		●	●	●	●	●	●
P2	Document Findings and Actions		●	●	●	●	●	●
P3	Distribute Post Internal P1 Incident Report		●	●	●	●	●	●
P4	Workaround Removal		●	●	●	●	●	●
P5	Assign Action Owners		●	●	●	●	●	●
P6	Update EMS Policies & Procedures		●					
P7	Demobilise Environmental Incident Team		●					
P8	Close Ticket		●					
End								
X	End Process		●					

- = Responsible Action Owner
- = Mandatory Support
- = Optional Support

APPENDIX E: Site Emergency Response Coordinators (Primary Contacts)

Site	Primary	Deputy / Notes
Liverpool	Sue Woodrow (Office) / Phill Wagstaff (DC)	Deputies TBC
Aberdeen	Wayne MacKay	Deputy TBC
Glasgow	Joseph Young	Deputy TBC
Leeds	Adam Butler	Deputy TBC
Ewloe	Sarah Hulligan	Deputy TBC
Cardiff	Julia Cox	Deputy TBC
London	Joseph Letras	Deputy TBC
Farnborough	Helen Long	Deputy TBC

APPENDIX F: Spill Response Checklist

This checklist provides structured, practical steps for responding safely and effectively to spills involving hazardous substances, oils, fuels, chemicals, refrigerants, contaminated water, and other materials that could cause pollution to land, water, drains, or air. It is intended for **initial responders, spill responders, Facilities & H&S, and Site Emergency Response Coordinators.**

1. Stop work immediately (if safe) and raise the alarm

- Cease all activity in the affected area without putting yourself or others at risk.
- Verbally alert nearby personnel and activate any relevant local alarms.
- Enforce a “clear zone” and prevent untrained persons approaching the spill.
- Identify ignition sources (if flammable substance) and isolate them if safe.

Regulators emphasise prompt containment and hazard awareness to prevent worsening environmental effects.

2. Use appropriate PPE and identify the substance

- Put on the correct PPE based on the Safety Data Sheet (SDS), COSHH assessment, or site-specific chemical hazards (e.g., gloves, goggles, chemical suit, respirator).
- Locate the label, SDS, or container markings to identify the substance and hazard class.
- Assess:
 - **Source** of the spill (active leak, overflow, container rupture)
 - **Estimated volume** (small / moderate / significant release)
 - **Potential receptors** (drains, soil, plant equipment, personnel)
 -

UK regulators expect responders to gather this essential information to support incident triage and reporting.

3. Prevent entry to drains, soil, or waterways

- Immediately block any nearby surface water or foul drains using drain covers, rubber mats, clay mats, or foam socks.
- Deploy booms/absorbent snakes around the spill perimeter to contain further spread.
- Prevent tracking of spilled substance on footwear/equipment beyond containment lines.
- If spill is outdoors, assess slope, weather effects, and risk of run-off.

Preventing pollution at source is a primary requirement under UK environmental incident guidance.

4. Isolate the area and establish a safe working zone

- Cordon off the affected area using barriers, cones or signage.
- Prevent access except for trained spill responders and the Site Emergency Response Coordinator.
- Stop or isolate plant/equipment feeding the leak if safe (e.g., shut valves, stop pumps).
- Ensure ventilation systems are not drawing fumes into occupied spaces.

5. Use spill kits to contain and absorb the substance (if trained and safe)

- Select the correct type of spill kit:
 - **Chemical** (yellow) for corrosives and hazardous chemicals
 - **Oil/fuel** (white) for hydrocarbons
 - **General purpose** (grey) for non-hazardous liquids
- Apply absorbents, pads, granules, or neutralisers based on SDS guidance.
- Work from the **outside-in**, pulling the spill toward the centre to avoid spreading.
- For flammable vapours, avoid actions that could generate sparks.

6. Ventilate the area and monitor air quality (where equipment exists)

- If fumes or odours are present, increase ventilation using mechanical extraction or opening safe airflow routes.
- Use portable gas detectors/air monitors where available (oxygen levels, refrigerant detectors, volatile gases).
- Withdraw immediately if vapour concentrations exceed safe working levels.

7. Collect and containerise waste safely

- Gather absorbed material, used absorbents, contaminated PPE, and any impacted debris.
- Place waste into suitable containers:
 - UN-approved drums
 - Hazardous waste bags
 - Sealed tub containers
- Clearly **label** materials with:
 - Substance name
 - Hazard classification
 - Date and incident reference
- Store waste in a secure location awaiting collection.

Regulators expect correct waste handling and hazardous waste controls following any pollution event.

8. Notify Facilities & H&S and engage the approved waste contractor

- Contact the Facilities & H&S Lead and provide a clear situation update (substance, volume, risks, current controls).
- Where required, H&S/Facilities will:
 - Arrange collection by an **approved hazardous waste contractor**
 - Issue or request hazardous waste consignment notes
 - Confirm whether regulator notification is required (e.g., EA, SEPA, NRW)
- For spills entering drains/watercourses, the environmental regulator **must** be notified immediately via hotline.
 - EA (England): **0800 80 70 60**
 - SEPA (Scotland): **0800 80 70 60**
 - NRW (Wales): **0300 065 3000**

9. Record all relevant information thoroughly

- Update the parent incident record with:
 - Time spill was discovered
 - Substance + estimated volume
 - Photos and diagrams
 - Actions taken and by whom
 - PPE used
 - Waste volumes and container numbers
 - Regulator references (if any)
- Maintain all logs to support post-incident reporting and regulatory requirements.

10. Inspect the area and remove controls when safe

- Confirm:
 - No remaining residue
 - Area is dry and safe
 - Drains and surfaces are clean
 - No signs of continued leakage or equipment faults
- Remove temporary barriers, absorbents, signage and return the space to normal use.

- Ensure the cause of the spill has been resolved before resuming operations.

11. Conduct a Root Cause Analysis (RCA) and capture lessons learned

- Environmental Incident Manager leads a post-incident review within required timelines.
- Identify:
 - Underlying/root causes
 - Immediate and systemic failures (equipment, storage, training, housekeeping)
 - Required corrective and preventive actions
- Update:
 - COSHH assessments
 - Aspects & Impacts Register
 - Training materials
 - Emergency response procedures
- Communicate lessons learned to relevant teams and store all documentation in the EMS.

APPENDIX G: FM-200 / Fire Suppression Discharge Checklist

This checklist applies to any **FM-200 (HFC-227ea)** or equivalent clean-agent fire suppression release—whether accidental, system-initiated, or manual. These systems rapidly reduce oxygen concentration and may pose **asphyxiation risks** in protected rooms. FM-200 is also a **regulated fluorinated greenhouse gas (F-gas)** in Great Britain, requiring responsible handling and recording.

1. Evacuate immediately upon alarm, discharge, or suspicion of release

- Treat **all alarms**, including pre-alarms, discharge alarms, and pressure-drop alerts, as **real** until confirmed otherwise.
- Instruct all personnel to leave the protected enclosure **without delay**.
- Do **not** attempt to locate the source of fire or malfunction during discharge.
- **Do not re-enter** the protected area—even for a moment—until authorised.
- Report to the muster point and await instructions.

UK environmental and fire guidance stresses immediate hazard isolation and evacuation when there is potential danger to life or environmental harm.

2. Prevent re-entry and secure the affected area

- Cordon off and lock the room if possible.
- Post **"Do Not Enter – Gas Discharge"** signage.
- Ensure no contractors, cleaning staff, or uninformed personnel enter the hazard zone.
- If there is still an active fire hazard, request Fire & Rescue via **999**.

Regulators advise preventing further risk to life and contamination of equipment during environmental/fire emergency response.

3. Verify atmosphere safety before any entry occurs

Re-entry is **strictly prohibited** until the atmosphere is confirmed safe by qualified personnel:

- A **competent engineer** (usually the fire system maintainer) must perform:
 - Oxygen level testing
 - Gas concentration checks
 - Visual safety assessment
- If Fire & Rescue is present, they control re-entry.
- Mechanical ventilation may be needed to restore safe oxygen levels.
- Only authorised personnel may enter wearing full PPE if oxygen levels are uncertain.

FM-200 displaces oxygen; ensuring a breathable environment is required before safe re-entry.

4. Coordinate immediate inspection, system isolation, and reset

Engage the **fire suppression system provider** as soon as practicable:

- Confirm the cause of discharge (fire, fault, human activation, detector failure).
- Inspect:
 - Cylinders, piping, and pressure gauges
 - Nozzles and actuation components
 - Fire alarm/detection inputs
- Ensure:
 - The system is safely isolated if required
 - Cylinders are weighed to verify agent loss
 - Resetting is performed only by certified technicians
- Ensure the system is placed in **fault/disabled** mode in fire monitoring systems until restored.

Industry norms require a certified engineer to inspect, reset, and make safe any fire suppression system after actuation.

5. Assess environmental and operational impacts

Although FM-200 is a clean agent designed to leave no residue, the **incident may still create environmental or operational impacts**:

- Check for:
 - Over-pressure or blast effects on equipment
 - Movement of dust/particulates that may contaminate IT hardware
 - Damage to tiles, cable trays, sensors, or containment systems
 - Accidental release due to equipment fault (this may constitute an environmental incident)
- If any discharge is suspected to contribute to **pollution, accidental emissions**, or **risk to drains, watercourses, or air**, Facilities & H&S should consider notifying the relevant UK environmental regulator:
 - **England – Environment Agency**
 - **Wales – Natural Resources Wales**
 - **Scotland – SEPA**
- Confirm whether the release needs to be recorded under F-gas management rules (maintenance logs, leak records, etc.).

6. Document the full sequence of events

Accurate documentation is vital for compliance and post-incident review:

- Record:
 - Time of alarm activation

- Time of discharge (if known)
- Staff present / evacuated
- Any Fire & Rescue involvement
- System provider arrival and actions
- Photos of equipment, system indicators, and impact areas
- Update the parent incident record with:
 - Atmospheric readings
 - Cylinder pressure readings
 - Engineering reports
 - Regulator references (if notified)

Incident logs and records support regulatory obligations and internal audits.

7. Resume operations only after full authorisation

Before returning the area to service:

- Obtain written “safe to occupy” confirmation from:
 - Fire system provider
 - Facilities & H&S
 - Fire & Rescue (if they attended)
- Confirm:
 - Air quality is normal
 - Systems and equipment are safe to power on
 - The FM-200 suppression system has been either:
 - Fully restored and tested **OR**
 - Deliberately isolated with compensating controls in place
- Communicate re-opening to stakeholders and log the closure of the incident.

8. Conduct root cause analysis and lessons learned

Within required timelines, complete a formal RCA:

- Identify root and contributing causes (sensor malfunction, equipment issue, false alarm, real fire, etc.).
- Review adequacy of:
 - Detector placement
 - Maintenance schedules
 - Ventilation and containment
 - Escape routes and signage
- Implement corrective and preventive actions.
- Update SOPs, training, and EMS controls as needed.

APPENDIX H: Drill & Exercise Programme

A structured and repeatable programme of environmental emergency drills is essential to ensuring ARO's readiness to prevent, respond to, and recover from environmental incidents. Drills will be **planned, risk-based, proportionate to site hazards**, and fully documented within the IMS. Outcomes feed directly into **continuous improvement, training, and resource planning**, in alignment with ISO 14001:2015 requirements for emergency preparedness and response.

1. Annual Environmental Tabletop Exercise (ETE)

Frequency: *At least annually*

Participants: Site Emergency Response Coordinators, Environmental Technical Leads, Facilities & H&S, senior stakeholders, Comms Leads, Supplier Manager.

Purpose

Test the organisation's capability to respond to realistic environmental scenarios, including:

- Chemical/diesel/refrigerant spills
- FM-200 or fire-related environmental issues
- Contaminated-water events or drainage pollution
- Waste containment failures
- Power/cooling failures with environmental impacts
- Reinforce correct escalation to environmental regulators when pollution or risk of pollution is suspected, as required by the Environment Agency, Natural Resources Wales, and SEPA.

Format

- Facilitated scenario walkthrough.
- Participants talk through actions using the Detection → Resolution → Monitoring → Post-Incident framework.
- Include regulator notification decision-making.

Outputs

- Tabletop report
- Lessons learned
- Improvement actions assigned in IMS

2. Semi-Annual Practical Spill Response Drill

Frequency: *Twice per year (or more in high-risk sites)*

Participants: Spill responders, Facilities, H&S, Site ERCs

Critical Equipment: Spill kits, drain covers, booms, PPE

Purpose

- Ensure responders can effectively:
 - Identify substances
 - Use spill kits and neutralisers
 - Protect drainage systems (e.g., drain covers, bunding)
 - Contain, collect, and store waste
- Aligns with regulator expectations for preventing pollution to watercourses, foul drains, and land.

Format

- Simulated spill using water or inert fluid
- Deployment of spill kit in real time
- Demonstrate drain-protection measures
- Evaluate PPE selection and communication procedures

Outputs

- Completion checklist
- Photos/video evidence
- Improvement actions

3. Semi-Annual Drain Protection Drill (where safe and feasible)

Frequency: *Twice per year (may be combined with Spill Drill)*

Purpose:

- Test readiness for rapid drain-protection deployment.
- Ensure teams can prevent accidental pollution entry—an explicit requirement in regulatory guidance.

Outputs

- Documentation of timing and effectiveness
- Maintenance updates for drain covers/booms

4. Annual Communications Drill (Environmental & BC Integration)

Frequency: *Annual*

Participants: Comms Leads, Environmental Incident Manager, BC Ops Lead, Executive Comms Approvers

Purpose

- Exercise communication channels used in real environmental emergencies:
 - Internal alerting
 - Regulator notification simulation (no real call)
 - Executive updates
 - Customer/partner messaging
 - Bridge call operation
- Tests ability to quickly prepare factual, high-quality briefings.

Outputs

- Comms drill report
- Updated templates where required
- Confirmation of bridge link/functionality

5. Annual Business Continuity (BC) Overlay Exercise – Environmental Focus

Frequency: *Annual*

Purpose

- Validate alignment between the Environmental Incident Response Plan and the BC Overlay.
- Exercise:
 - Incident escalation from Severe → Extreme
 - BC bridge activation
 - Cross-functional resource mobilisation
 - Alternative workarounds for site shutdown or environmental exclusion zones

Outputs

- BC exercise report
- Gaps and dependencies documented
- Updates to BC strategy where needed

6. Post-Drill Review, Corrective Actions & Continual Improvement

Applies to: *All drills and exercises*

Requirements

- ARO must review each exercise and document:
 - Key observations
 - Gaps in response
 - Delays or escalation issues
 - Equipment, training, or resourcing shortcomings
- Assign corrective actions within the IMS.
- Track actions to closure and present them at Management Review in accordance with ISO 14001 continual improvement obligations.
- Update training matrices, emergency plans, spill-kit inventories, and regulator contact references as required.

UK environmental agencies emphasise learning from pollution-related drills and incidents and implementing remedial actions to prevent future environmental harm.

7. Multi-Site and Multi-Agency Optional Exercises

Where appropriate, ARO may engage with:

- **Local authorities** for odour/noise/waste-related incident practice
- **Water companies** for sewer-pollution coordination
- **Regulators (EA/SEPA/NRW)** in large-scale, non-live simulation contexts

These exercises strengthen readiness for rare but high-impact events and help align with expectations for rapid reporting and pollution containment.

APPENDIX I: Equipment & Supplies Inventory

Each ARO site must maintain a **minimum standard set of environmental emergency response equipment**, appropriate to the environmental aspects, risks, and operational profile of the location. These items must remain **accessible, stocked, functional, and clearly signed**, ensuring rapid deployment during spills, leaks, fires, environmental releases, or potential contamination events.

The inventory supports the legal and operational duty to prevent pollution to land, drains, and waterways, a central requirement of UK environmental incident guidance.

1. Spill Kits (Absorbents, Neutralisers, Granules)

Purpose: First-line containment and absorption of hazardous substances.

Minimum requirements:

- **General-purpose absorbent pads and rolls**
- **Chemical absorbents** suitable for corrosives, acids, alkalis (yellow)
- **Oil-only absorbents** for hydrocarbons (white)
- **Granules / neutralising agents**, as specified in SDS
- **Disposable bags** for safe waste containment
- **Instructions for use** attached to each station

Notes:

Spill response equipment must be compatible with the substances present onsite, based on COSHH assessments and SDS requirements. Responders must be trained in their correct use.

2. Drain Protection Equipment (Drain Covers, Seals, Mats)

Purpose: Prevent environmental pollution by blocking or diverting spills away from surface water or foul drainage.

Minimum requirements:

- **Rubber drain covers**, reusable where appropriate
- **Single-use clay mats**
- **Magnetic or neoprene covers** for metallic surfaces
- **Drain-surround socks** to manage flow
- **Portable drain-blocking wedges**

Notes:

Environmental regulators expect organisations to prevent pollutants entering drains, particularly during spills or firefighting run-off. Immediate drain protection is considered best practice.

3. Containment Booms (Absorbent or Non-Absorbent)

Purpose: Create a barrier around spills to stop lateral spread.

Minimum requirements:

- **Oil-only booms** for hydrocarbon containment
- **Chemical-compatible booms** (yellow)
- **Weighted booms** for improved stability
- **Boom ties / connectors**

Notes:

Used for perimeter control, especially around leaks near drains, plant equipment, or storage areas. Booms should match the chemicals and fuels stored onsite.

4. Personal Protective Equipment (PPE)

Purpose: Protect responders from exposure during spill and environmental emergency response.

Minimum requirements:

- Chemical-resistant gloves
- Disposable coveralls or chemical suits (depending on SDS risk ratings)
- Chemical splash goggles / face shields
- Safety footwear
- Respiratory protective equipment where required by COSHH
- Disposable PPE waste bags

Notes:

PPE requirements must follow SDS and COSHH controls. PPE must be stored in dry, clean, accessible locations.

5. Portable Gas / Oxygen Monitors (Where Applicable)

Purpose: Ensure safe atmospheric conditions following FM-200 discharge, refrigerant releases, or confined-space spill events.

Minimum requirements:

- **Oxygen monitors** (for safe re-entry following inert gas suppression discharge)
- **Refrigerant leak detectors** where RACHP systems are installed
- **VOC meters** if relevant to site chemistry
- Calibration dates clearly displayed

Notes:

UK regulators highlight the need to assess air quality when incidents may release gases or fumes. Gas monitors support safe re-entry and verification.

6. Labelled Containers for Waste (Hazardous & Non-Hazardous)

Purpose: Temporary safe containment of contaminated absorbents, debris, waste liquids, or damaged materials.

Minimum requirements:

- **UN-approved sealed drums** or jerricans
- **Hazardous waste bags** (red/yellow)
- **Strong, sealable plastic tubs**
- **Clear hazard and content labels**
- **Secondary containment trays**

Notes:

All waste from spills is classified according to SDS and environmental legislation. Waste must be stored safely and transferred only by registered waste carriers, as required by NRW and EA guidance.

7. Storage, Accessibility & Identification Requirements

Each site must ensure:

- Equipment is stored in **clearly marked Spill Stations** near high-risk areas (plant rooms, fuel storage, chemical cupboards, DC critical infrastructure).
- Spill kit locations are shown on **site emergency plans** and **induction materials**.
- Drain covers, booms, and PPE are easily reachable without requiring special access.
- Gas/oxygen monitors are charged, calibrated, and available to authorised staff.

APPENDIX J: Training & Competence

ARO maintains a structured and documented training and competence framework to ensure that all personnel—employees, contractors, fire wardens, first aiders, spill responders, and Site Emergency Response Coordinators—have the knowledge, skills, and confidence required to respond effectively to environmental emergencies.

Training requirements are aligned with ISO 14001:2015 Clause 7.2 (Competence) and Clause 8.2 (Emergency Preparedness & Response), as well as UK regulator expectations for preventing pollution, safely handling hazardous substances, and ensuring appropriate incident notification.

1. Mandatory Environmental Emergency Awareness (Induction Training)

Applicability: All ARO employees, temporary staff, contractors during site induction

Objective: Provide baseline awareness of environmental hazards, emergency actions, and reporting pathways.

Content includes:

- Key environmental risks present at the site (chemicals, diesel, refrigerants, drainage pathways, waste storage risks)
- How to recognise environmental incidents (spills, leaks, fumes, contamination, drain breaches)
- Immediate actions: raise the alarm, evacuate if required, prevent further harm
- Location of environmental emergency stations and PPE
- How to report near misses, unsafe conditions, and environmental hazards

Evidence retained:

- Induction attendance records (logged in IMS)

2. Role-Specific Environmental Emergency Response Training

Specialist training is provided to individuals with defined emergency duties.

2.1 Fire Wardens / Marshals

- Fire detection and evacuation procedures
- Understanding environmental consequences of firewater run-off and how to minimise pollution
- Awareness of when Fire & Rescue and environmental regulators may need to be notified (e.g., contaminated water entering drains)

2.2 Spill Responders

- Hands-on spill kit deployment (chemical, general, hydrocarbon)
- Use of drain covers, booms, and containment equipment
- Identification of hazards from SDS and COSHH assessments
- Safe collection and segregation of contaminated waste
- Understanding when regulators must be notified (pollution or risk of pollution) based on EA/NRW/SEPA guidance
- Post-incident recording requirements

2.3 First Aiders

- Responding to chemical exposure or inhalation incidents
- Safe treatment areas away from spill zones
- Escalation to emergency services and Facilities & H&S

2.4 Environmental Incident Managers

- Full briefing on their environmental emergency responsibilities
- Running environmental incident bridges
- Regulatory decision-making (when to notify EA/SEPA/NRW) based on pollution-risk triggers
- Applying the Detection → Resolution → Monitoring → Post-Incident framework
- Leading RCA and ensuring corrective actions are closed out

3. Contractor Competence Verification

Before commencing work, contractors with potential environmental responsibilities must be assessed for competence aligned to their duties.

Verification includes:

- Evidence of suitable training (spill response, waste handling, chemical safety)
- Qualifications or certifications relevant to hazardous materials, F-gas handling, or waste management
- Confirmation of awareness of site-specific environmental risks
- Review of method statements and risk assessments
- Agreement to comply with ARO's environmental emergency procedures

Where contractors handle fuels, chemicals, or plant capable of causing environmental harm, the regulator expects organisations to ensure they are trained accordingly.

4. Refresher Training Cadence

To maintain competence and comply with ISO 14001 continual improvement expectations, refresher training is delivered at defined intervals.

Minimum cadence:

- **Annual refresher:**
 - Spill Responders
 - Site Environmental Incident Managers (ERCs)
 - Fire Wardens / Marshals
 - First Aiders (aligned to H&S schedule but including environmental scenarios)
- **Biennial refresher:**
 - All staff environmental awareness training
 - Site induction updates (or sooner if material changes occur)

Triggered retraining occurs when:

- An incident reveals procedure or knowledge gaps
- New equipment, chemicals, or environmental risks are introduced
- Changes occur in regulatory expectations (e.g., reporting thresholds, regulator procedures)

5. Training Records & Competence Management

All training is recorded within the IMS and made available for audit.

Records include:

- Attendance logs and completion certificates
- Competence assessments for role-specific duties
- Training materials, scenario scripts, and exercise outputs
- Competence matrices per site
- Gaps and remedial actions identified during drills or incidents

This meets the expectations of environmental regulators that organisations maintain clear records demonstrating that staff are competent to protect the environment and respond effectively to pollution events.

APPENDIX K: Legal & Regulatory Notification Guidance

Where an environmental release or risk may require external notification (e.g., regulator, local authority, landlord), the EMS Manager consults Facilities & H&S to determine obligations using site permits, SDS, and contracts. Notifications, if required, are issued promptly via agreed channels, with records retained.

Legal & Regulatory Notification Trigger Matrix

This matrix is guidance to help decide who to notify, when and how during environmental incidents. It does not replace statutory duties. Where a site holds an environmental permit, also follow any permit-specific notification conditions (typically immediate / within 24 hours for breaches).

Scenario / Trigger	Where	Who to Notify	How (contact)	When	Notes / Records
Pollution or risk of pollution to rivers, streams, lakes, canals, coastal waters (incl. fish in distress, unusual discolouration/smell)	England	Environment Agency (EA)	Incident Hotline 0800 80 70 60 (or GOV.UK online reporting where applicable)	IMMEDIATELY (on discovery)	Record time, location, photos/video, substance/volume if known; obtain EA incident reference; continue updates via bridge.
Pollution or risk of pollution to rivers/land/air (Scotland)	Scotland	Scottish Environment Protection Agency (SEPA)	Pollution Hotline 0800 80 70 60 or SEPA online form (office hours)	IMMEDIATELY (on discovery)	Provide details and risk to receptors; obtain SEPA ref.
Pollution or risk of pollution to rivers/land/air (Wales)	Wales	Natural Resources Wales (NRW)	24/7 0300 065 3000 or NRW incident report form	IMMEDIATELY (on discovery)	Provide details and risk to receptors; obtain NRW ref.
Spill or discharge entering foul sewer or likely to impact sewers / treatment works	England / Wales / Scotland	Local water company / sewerage undertaker	Company emergency pollution line (on bill/website); plus inform EA/SEPA/NRW if risk to environment	IMMEDIATELY	Engage Fire & Rescue via 999 where life/property at risk; follow Water UK contaminated water protocol where applicable.

Major fire / hazardous materials with contaminated run-off or need to contain firefighting water	All UK	Fire & Rescue Service; EA/SEPA/NRW (environmental incident)	999 (Fire); then regulator hotline	IMMEDIATELY	Deploy drain covers/booms; coordinate contaminated water disposal under agreed protocol; retain volumes and disposal records.
Breach or likely breach of an Environmental Permit condition (if ARO holds a permit at the affected site)	England / Wales / Scotland	Regulator per permit (EA/NRW/SEPA) as specified in permit conditions	Permit Schedule notification route (usually email/phone) + follow-up within 24 hours with details	IMMEDIATE / <24 hours (per permit)	Log as permit non-compliance; complete CAR/CCS/incident forms as required; keep monitoring data.
Significant refrigerant (F-gas) leak from RACHP systems	GB (England/Wales/Scotland)	No routine regulator notification; MUST repair without undue delay and record. Notify EA/SEPA/NRW only if environmental harm or permit requires.	Certified engineer leak check/repair; maintain F-gas records (CO2e thresholds)	ASAP (repair) + per inspection frequency	Follow GB F-gas rules incl. periodic leak checks based on CO2e thresholds; retain servicing and recovery records.
Uncontrolled release of a substance creating risk of injury to a person (dangerous occurrence)	All UK	HSE (or relevant authority) under RIDDOR	Report online via HSE RIDDOR (dangerous occurrences)	WITHOUT DELAY (do not wait for full investigation)	Coordinate with H&S to confirm reportability and time limits; keep copy of RIDDOR report.
Persistent odour nuisance (from non-EA regulated activity) affecting neighbours	England / Wales / Scotland	Local Authority Environmental Health	Local council environmental health contact	PROMPTLY (if complaints received / impact evident)	If odour from EA/SEPA/NRW regulated site/process, notify the regulator as pollution/amenity incident.