

Risk Assessment Methodology

Scoring Methods Used

Each aspect/impact is given a score, dependant on its potential risk to the environment. Each aspect/impact is assessed under normal, abnormal and emergency conditions, where each is defined as follows:

Normal

- Day to day working
- Machinery/plant working
- Correctly trained operators using correct equipment
- Normal weather
- Usual controls in place.

Abnormal

- Shift change over/out of hours operation
- Machinery break down
- Inexperienced operators
- Out of the ordinary activities or conditions
- Reasonably foreseeable.

Emergency conditions

- Conditions before/during/after an actual accident/incident
- Unexpected sudden/severe environmental impact could occur.

Scoring System

Potential for a legislation breach (LBM)

1. No environmental legislation relevant to this issue
2. Potential for environmental legislation breach if control measures fail.

Probability (P)

1. Insignificant risk/probability of impact occurring
2. Low risk/probability of impact occurring – improbable
3. Moderate risk/probability of impact occurring – likely to happen
4. High risk/probability of impact occurring – certain to happen.



Severity (S)

1. No environmental damage possible
2. Limited environmental damage or problems – trivial/insignificant effect
3. Moderate environmental damage or problems – significant on environmental (may be reportable)
4. Potentially major environmental damage.

Calculation and Assessment of Significance

$$\text{Significance} = P \times S \times \text{LBM}$$

Results

To assess how significant the impact is (or could be under abnormal and emergency situations), the following chart of action should be followed as necessary:

Recommended action	
Score	Action
1	No action required. Not significant
2–4	Environmental risks at this score may be acceptable without additional mitigation
6–12	Review process or operation and consider if additional mitigation could assist in reducing the significance
16–24	Take steps to reduce the significance by reducing either the likelihood of the event happening or the severity of outcome (or both)
32	Stop the process immediately

