



Threshold Guidelines for Major & Minor Incidents

Question 12

Foreword

This document has the purpose to serve as a guideline for the identification of major and minor incidents in relation to the IPLOCA Environmental Statistics Return. It is to be used in the absence of national regulation or company established classification schemes. The thresholds within the document are based on the United Kingdom's Environmental Agency's Compliance Classification Scheme for business and industry.

Rev: 2.0

Classification of Major Incidents:

1) Impact on Water:

A persistent and/or extensive effect on water quality which has a serious effect on the quality or use of that water.

Persistent

- 'Persistent' means an effect is still evident within controlled water at least 7 days from the date that contamination enters the water.

Extensive

- For surface waters, 'extensive' means an effect over several kilometres of a watercourse or a large area of a still water or coastal waters. As a guide, use 1-2km, but some subjectivity may be applied. For example, a major deterioration in water quality or covering of silt over half a kilometre on a large important river would be a Major incident.
- For groundwater, 'extensive' refers to incidents that due to the volumes and concentrations involved are likely to result in a contamination plume extending beyond 50m in any aquifer.

Serious

- For surface waters, 'serious' effects include levels of dangerous substance(s) exceeding toxicity levels known to cause serious harm/death to aquatic life or dissolved oxygen levels falling to critical levels. It would not include minor impacts such as a slight drop in dissolved oxygen levels even if they extend over several kilometres.
- For groundwater, 'serious' effects is where contaminants are known to have caused or are in sufficient volume or concentration that they are likely to cause:
 - the serious effects described above for surface water as a result of contaminants being transmitted in the groundwater flow;
 - exceedance of any relevant quality standard for hazardous or non-hazardous pollutant at a borehole, well or spring supply used for human consumption; or
 - hazardous substances discernible above pre-existing levels in the groundwater beyond 50m in any aquifer.

2) Impact on the Ground (Spills / Waste)

2.1) Major Contamination of Land:

- Persistent and/or extensive contamination of land which has a major impact on the use or quality of that land and is likely to need extensive decontamination measures.

For flytipping/dumping incidents, this is likely to involve toxic/hazardous or infectious wastes with an immediate risk of serious pollution or harm to human.

Consider the damage to soil caused by decontamination activities. The need for extensive restoration would be regarded as a Major impact.

2.2) Major damage to terrestrial nature conservation

- Pollution or damage of the terrestrial environment that has a major adverse effect on a statutory protected site or on a species. Including:
 - destruction or major damage to part of a statutory protected site;
 - death or destruction of a protected species (on any stage of the life cycle) or habitat;
 - extensive damage to nationally protected species or habitat.

2.3) Major effect on amenity value

- Major adverse effect on an important recreation activity or public event prohibiting the normal range of activities. For example, the cancellation of a national sporting event following the fly-tipping of toxic/hazardous materials.

2.4) Major impact on property

- Serious damage or destruction to a site, residential housing and/or commercial buildings or renders them unusable. This is likely to be due to an explosion and/or large scale fire at a site, process or substance under regulation.
- The need to evacuate persons/and or restrict access over a wide area. For example, evacuation due to the build up of landfill gas in a property.

Usually record incidents as Major when levels of landfill gas exceed 1% v/v Methane/flammable gas or 1.5% Carbon Dioxide anywhere near a building. This includes general voids in an occupied area, unoccupied voids near occupied areas or points of ingress into occupied areas (such as service ducts). Any evacuation due to landfill gas will usually be regarded as a Major incident.

2.5) Major damage to agriculture/ commerce

- Major damage to agricultural activity such as the extensive contamination of crops or soil rendering them unfit for use and/or death or slaughter of livestock, due to airborne pollution.
- Major disruption to commercial interests such as extended closure (6 months +) of an industrial site serious interruption of production due to airborne pollution.

3) Impact on Air

3.1) Major effect on air quality

A persistent and/or extensive effect on air quality including:

- Release of materials which directly cause or will lead to significant exceedence of the standards in the air quality for a sustained period, over an extensive area.
- Extensive and significant deterioration in air quality from a release of large quantities of toxic materials. This may follow a serious loss of control, major fire or major equipment failure. Smoke and combustion products arising from a major fire may contain toxic materials.
- Release of very large quantities of materials which are prohibited in production and/or use (such as, CFCs linked to global warming or ozone depletion).

3.2) Major damage to nature conservation

Release causing damage that has a major adverse effect on a statutory protected site or on a species. Including:

- Destruction or major damage to part of a statutory protected site;
- Death or destruction of a European protected species (on any stage of the life cycle) or habitat;
- Extensive damage to nationally protected species or habitat.

Major damage to nature conservation can arise from acute effects of a major toxic or radioactive release, although dispersion by wind of the pollutants even for large releases often ameliorates the impact of single major incidents.

Chronic effects can arise from sustained pollutant release although the full impact may only become evident some months or even years later

3.3) Major effect on amenity value

- Release resulting in a major adverse effect on an important recreation activity or public event prohibiting the normal range of activities. For example, cancellation a national sporting event following a release from a regulated site.
- Release resulting in danger to the public requiring action by the emergency services to advise the public on window closure, the need to remain indoors, closure of access roads or evacuation of property.

3.4) Major impact on property

- Release or significant fall out of material causing serious contamination of property requiring specialised remediation, decontamination or destruction of property.

3.5) Major damage to agriculture/ commerce

- Major damage to agricultural activity such as the extensive contamination of crops or soil rendering them unfit for use and/or death or slaughter of livestock, due to airborne pollution.
- Major disruption to commercial interests such as extended closure of an industrial site serious interruption of production due to airborne pollution.

4) Other impacts on environment

4.1) Major effect on human senses

Noise causing a serious and widespread effect on human senses.

- Serious effects include noise which is at a volume, duration or characteristic (intermittency, impulse or tone) that it is very offensive to human senses and prevents sleep.
- A widespread effect means affecting a lot of people in sensitive receptors, such as a large residential area or hospital.

4.2) Major effect on amenity value

Noise causing a major adverse effect on an important recreation activity or large public event.

- Noise at a sufficient volume, duration or characteristic that it significantly disrupts or closes the event.

Classification of Minor Incidents:

1) Impact on Water:

1.1) Minor effect on water quality

Limited and localised effect on water quality which has a minimal impact on the quality or use of that water.

- For surface waters, impacts are normally localised around the point of discharge, but could include an impact extending over a few kilometres of a stream (such as a thin oil sheen).
- For groundwater, impacts are normally localised around the point of discharge and the pollution unlikely to spread within geological strata. Minimal effects include:
 - where hazardous substances are unlikely to get into the groundwater or will only do so to a minimal extent;
 - where the impact of non-hazardous pollutants is unlikely beyond 50m and abstractors and other receptors, such as groundwater dependent terrestrial ecosystems, are not at risk.

2) Impact on the Ground (Spills / Waste)

2.1) Minor Contamination of Land

- Insignificant or temporary contamination of land having no overall effect on the use or quality of that land. For example, where a piece of land has been contaminated with small amounts of litter and causes minimal pollution.

2.2) Minor damage to terrestrial nature conservation

- Very limited damage to terrestrial fauna and flora, which is naturally repairable over a short timescale.
- No damage to populations of protected species.
- Reversible small-scale, short-term damage to habitats and species.

2.3) Minor effect on amenity value

Minor impact on aesthetic quality due to activity, for example small amounts of litter left behind after on the construction site.

2.4) Minor impact on property

- Minor damage or contamination to a site, housing and/or commercial building which is easily repaired or cleaned.

2.5) Minor damage to agriculture/ commerce

- Agricultural land or commercial site affected between 3-6 months, but not declared unfit for agricultural or commercial activity after this period. No waste, or contamination should remain after the construction activities.

3) Impact on Air

3.1) Minor effect on air quality

- Shorter term, local effect on air quality arising from smells or visible impact (smoke and dust).

3.2) Minor damage to local nature conservation

- Very limited damage to fauna and flora such as visible evidence of particulate or dust outside the site perimeter that requires minimal remedial action.
- No damage to populations of protected species.
- Reversible small-scale, short-term damage to habitats and species.

3.3) Minor effect on amenity value

- Minor transitory affect on the public nearby to the site. May be considered to be a minor nuisance, with minor effects on the normal range of daily activities

3.4) Minor impact on property

- Minor effect on property. This includes visible fallout of inert dust or particulate, onto car paintwork or buildings, but which causes no damage and is easily removed.

3.5) Minimal damage to agriculture/ commerce

- Minor damage to agriculture or commerce. Such as, inert dust or particulate fallout but which has minor effect on crops, livestock or commercial activity.

4) Other impacts on environment

4.1) Minor effect on human senses

Mildly offensive, short-term and/or intermittent noise that causes minimal effect on human senses.

- Usually involves a change in normal noise emissions which is short-term and/or intermittent and affects people outside buildings.

4.2) Minor effect on amenity value

Noise resulting in a minor or transitory effect on local amenities and leisure areas.

- Likely to involve amenities which aren't generally in tranquil areas, or a noise which does not restrict the use of the amenity. This includes children's playgrounds, sports pitches, public footpath and private gardens.