

Contaminated sites glossary:

As per: February 2015

Accident site

d: Unfallstandort

f: lieu d'accident

i: sito di un incidente

Site polluted at a result of extraordinary events including breakdowns [art. 2 para. 1 let. c CSO].

Assessment (e.g. whether monitoring and/or remediation necessary)

d: Beurteilung (z.B. Überwachungs- und Sanierungsbedürftigkeit)

f: évaluation (p.ex. des besoins de surveillance et d'assainissement)

i: valutazione (ad.ex. necessità di sorveglianza e di risanamento)

Assessment based on current legislation as to whether the site represents a hazard to the environment (groundwater, surface water, soil or the air).

Background level

d: Hintergrundswert

f: teneur naturelle

i: tenore naturale

Naturally occurring content of a substance or group of substances in the environment (soil, substratum, ground and surface waters, the air or organic matter).

Branch agreement

d: Branchenvereinbarung

f: accord sectoriel

i: accordo settoriale

Agreement concluded by the members of a branch between themselves (internal agreement). This should be taken into account when enforcing the contaminated sites legislation.

Collective agreement

d: Kollektivvereinbarung

f: accord collectif

i: accordo collettivo

Agreement between a branch or its member federations and an enforcement authority (Federation or canton). Prior to the agreement, a *branch agreement* must have been concluded in the industry.

Company site

d: Betriebsstandort

f: aire d'exploitation

i: sito aziendale

Sites whose pollution originates from inoperative or operative installations or companies, in which environmentally hazardous substances have been deployed [art. 2 para. 1 let. b CSO].

Containment

d: Sicherung

f: confinement

i: circoscrizione

Measures taken to ensure that the propagation of substances hazardous to the environment is prevented for an indefinite period and monitored [art. 16 let. b CSO].

Contaminated site

d: Altlast

f: site contaminé

i: sito contaminato Contaminated sites

are sites polluted with waste for which conclusive evidence is available that it causes harmful effects or nuisances, or for which there is a *substantial danger* that such effects will arise. For these, remediation is required [art. 2 para. 2 and 3 CSO].

Contaminated site management

d: Altlastenbearbeitung

f: gestion des sites contaminés

i: gestione dei siti contaminati

Management of a large number of *polluted sites* or *contaminated sites* based on the following stepwise scheme:

- *recording*
- *initial assessment*
- *preliminary investigation (past and technical investigations)*
- *detailed investigation*
- *remediation project*
- *remediation*
- *subsequent monitoring*

Continuous monitoring (according to TOW)

d: Nachsorge (nach TVA)

f: interventions ultérieures (selon OTD)

i: controllo ulteriore((OTR)

Monitoring of landfill sites comprises the installations, groundwater, waste water, gases emitted and fertility of the recultivable soil cover [art. 28 para. 2 and 3 TOW].

Declaratory order

d: Feststellungsverfügung

f: décision en constatation

i: decisione d'accertamento A declaratory order is issued by the authority responsible for the case and specifies whether or not a person (addressee) disposes of given rights and duties.

Decontamination

d: Dekontamination

f: décontamination

i: decontaminazione

Measures to eliminate substances hazardous to the environment from a *contaminated site* [art. 16 let. a CSO].

Derelict land (industrial and trades sectors) (brownfields)

d: Brachfläche (Industrie-, Gewerbebrache)

f: friche (industrielle, artisanale)

i: area dismessa (industriale o artigianale)

Premises in built-up areas that are either underused or have not been used for several years.

Detailed investigation

d: Detailuntersuchung

f: investigation de détail

i: indagine di dettaglio

Detailed determination of:

- type, location, quantity and concentration of the hazardous substances present in the *polluted site*
- type, flow and variation in time of the existing and possible impacts on the environment
- situation and importance of the endangered environmental areas.

This data provides the basis for defining the objectives and assessing the urgency of the remediation when preparing the risk assessment.

Detection limit

d: Nachweisgrenze

f: seuil de détection

i: limite di rilevazione

Lowest concentration at which a substance can be identified in a sample taken using a given method of analysis.

Determination

d: Erfassung

f: recensement

i: censimento

Determination of *polluted sites* by evaluation of existing information such as maps, registers and reports, including information obtained from the owners of the site or from third parties [art. 5 para 1 CSO].

Disposal

d: Entsorgung

f: élimination

i: smaltimento

The disposal of waste comprises its recycling or depositing in a landfill, and includes the preliminary stages of collection, transport, intermediate storage and treatment [art. 7 para. 6^{bis} sentence 1 LPE].

Domestic waste

d: Siedlungsabfälle

f: déchets urbains

i: rifiuti urbani

Waste from households and other waste of similar composition [art. 3 para. 1 TOW].

Downstream groundwater

d: Abstrombereich

f: zone en aval

i: corrente a valle

Groundwater area over which the substances released from the site can disperse.

Eluate (according to CSO)

d: Eluat (nach AltIV)

f: lixiviat (selon OSite)

i: eluito (secondo l'OSiti)

Aqueous sample derived from a substance sample taken at the polluted site and prepared by a leach-

ing or extraction test in the laboratory according to app. I para. 2 CSO. For sites with particularly heterogeneous pollution (e.g. waste disposal sites), if samples can be obtained from the seepage water, these may be regarded as equivalent to an eluate [app. 1 para. 3 CSO].

Elution

d: Elution

f: lixiviation

i: eluizione

Leaching or extraction of a sample (solid matter, soil, sludge) using aqueous solutions.

Emission from polluted site

d: Emmission aus belastetem Standort

f: émission provenant d'un site pollué

i: emissione proveniente de un sito inquinato

Environmentally hazardous substances from a polluted site.

Excavated material

d: Aushubmaterial

f: matériaux d'excavation

i: materiale di scavo

Excavated material, quarried material and spoil originating from building and civil engineering works including tunnel, cavern and shaft construction. It comprises:

1. loose rock
2. broken rock

material from previous building construction or *polluted sites*.

Excavated material, polluted

d: Aushubmaterial, verschmutzt

f: matériaux d'excavation pollués

i: materiale di scavo inquinato

Excavated material is regarded as polluted if it is contaminated to such an extent with substances hazardous to the environment that its use is not permissible without prior treatment. As specified in the TOW and, where appropriate, the VVS (VeVa?), the material must be moved, treated and then recycled or deposited in a landfill conforming to the TOW.

Excavated material, tolerated

d: Aushubmaterial, tolerierbar

f: matériaux d'excavation, tolérés

i: materiale di scavo inquinato in modo tollerabile

Excavated material is regarded as tolerable if its natural composition has been changed chemically by

human action or by the addition of extraneous matter (*domestic waste*, green waste or other building waste), whereby the contamination with substances hazardous to the environment is only slight, so that its restricted use is permissible from considerations of environmental protection.

Excavated material, unpolluted

d: Aushubmaterial, unverschmutzt

f: matériaux d'excavation, non pollués

i: materiale di scavo non inquinato

Excavated material is regarded as unpolluted if its natural composition has been changed neither chemically nor by the addition of extraneous material through human action (e.g. *domestic waste*, green waste or other building waste).

Excavated soil

d: Bodenaushub

f: matériaux terreux

i: materiale di sterro

Material originating from *soil* excavation, i.e. the unsealed top layer of land where plants may grow. This comprises the topsoil (A horizon) and the subsoil (B horizon).

Exposure

d: Immission

f: immission

i: immissione

Substances originating from polluted sites that are present at the point of impact (protected entities).

Exposure of the natural resources

d: Exposition der Schutzgüter

f: exposition des biens à protéger

i: esposizione dei beni da proteggere

Vulnerability of the *protected entities* to possible impacts from polluted sites and their influence on the extent of possible damage.

Flow

d: Fracht

f: charge

i: carico

Input of dissolved, emulsified or suspended substances to a body of water expressed in mass flow per unit of time (e.g. kg/d).

Hazard

d: Gefährdung

f: mise en danger

i: minaccia

A danger whose type, direction and time of occurrence are specified.

Historical investigation

d: Historische Untersuchung

f: investigation historique

i: indagine storica

Determination of possible causes for the pollution of a site. This involves past events, the temporal and spatial history of developments at the site, and the procedures used for handling environmentally hazardous substances [art. 7 para. 2 CSO].

Immediate measures

d: Sofortmassnahmen

f: mesures urgentes

i: provvedimenti urgenti

Measures for the immediate elimination of an acute danger to the environment (e.g. prohibition of use, sealing or removal of pollutants, evacuation).

Initial assessment

d: Erstbewertung

f: évaluation préliminaire

i: valutazione preliminare

Qualitative assessment of the need to investigate the *polluted sites* recorded in the register. Specification of an order of priority (*list of priorities*) for the sites to be investigated.

In situ remediation measures

d: In-situ-Sanierungsmassnahmen

f: mesures d'assainissement in situ

i: misure di risanamento in-situ

With in situ remediation measures, the polluted soil or substratum is treated without excavating it.

Interstitial air (in soil)

d: Porenluft (Bodenluft)

f: air interstitiel (air du sol)

i: aria contenuta nei pori del suolo

Interstitial air is the gas mixture situated in the pore volume of the *substratum* above the groundwater table having no direct contact or exchange with the atmospheric air.

Landfill for domestic waste

d: Siedlungsabfalldeponie

f: décharge pour déchets urbains

i: discarica per rifiuti urbani

Landfill in which mainly *domestic waste* has been deposited [art. 32e para. 3 let. c LPE]. This is typified by the customary 'public' municipal or waste tip (former landfill class III as specified in the Federal Guideline relating to Landfills of March 1976).

Legal liability

d: Haftpflicht

f: responsabilité civile

i: responsabilità civile

Liability to pay for damage caused to a person by pollution.

List of priorities

d: Prioritätenordnung

f: liste de priorités

i: ordine di priorità

Order of priority of *polluted sites* based on the *initial assessment* according to *hazard* and urgency of further action. The type and quantity of the waste disposed of at the site, the likelihood of substances being released and the importance of the environmental areas affected are taken into account [art. 5 para. 5 CSO]. Based on the list of priorities, the authority orders a *preliminary investigation* to be carried out for the affected sites.

Monitoring

d: Überwachung

f: surveillance

i: sorveglianza

Periodic observation of the *substance transport* between the polluted site and the environment using scientific and technical methods.

Types of monitoring:

- at sites in need of monitoring
- during remediation
- on completion of remediation (subsequent monitoring)

Need for investigation

d: Untersuchungsbedürftigkeit

f: besoin d'investigation

i: necessità di indagine

Assessment of the necessity for monitoring or remediation of a site. Sites in need of investigation are those at which harmful effects or nuisances cannot be excluded on the basis of the data contained in the register [art. 5 para. 4 CSO].

Obligation to bear costs

d: Kostentragungspflicht

f: obligation de supporter les frais

i: obbligo d'assunzione dei costi

Obligation to bear the costs arising from the investigation, monitoring or remediation of polluted sites.

Owner

d: Inhaber

f: détenteur

i: titolare

The owner of a plant or site is defined as the person (e.g. possessor, holder, leaseholder or tenant) who is in fact in a position to effect the necessary measures.

Off-site remediation measures

d: Off-site-Sanierungsmassnahmen

f: mesures d'assainissement hors site

i: misure di risanamento off-site

With off-site remediation measures, polluted material is excavated and transported to another site for treatment.

On-site remediation measures

d: On-site-Sanierungsmassnahmen

f: mesures d'assainissement sur site

i: misure di risanamento on-site

With on-site remediation measures, polluted material is excavated and treated at the site itself.

Performance specifications

d: Pflichtenheft

f: cahier des charges

i: capitolato d'oneri

The performance specifications are based on the insights gained in the *historical investigation*, and applied to the planning and configuration of the *technical investigation*. The specifications summarise the object, scope and intended procedures of the *technical investigation* [art. 7 para. 3 CSO].

Persistently contaminated sites

d: Persistente Altlasten

f: sites contaminés persistants

i: siti contaminati da sostanze persistenti

Contaminated sites with a high percentage of pollutants with long degradation times whose presence cannot be reduced to an acceptable level within 1 to 2 generations through natural degradation and legally tolerated leaching processes.

Person liable to bear costs

d: Kostentragungspflichtiger

f: personne tenue de supporter les frais

i: persona tenuta ad assumersi i costi

The person legally obliged to pay for the necessary measures (i.e. the polluter according to art. 32d para. 1 LPE).

Person obliged to take measures

d: Realleistungspflichtiger

f: personne tenue de fournir une prestation

i: persona tenuta a fornire una prestazione reale

The person legally obliged to take necessary measures.

Polluter

d: Störer

f: perturbateur

i: perturbatore

Person who caused the disorder or danger, or who has authority over the persons and objects that caused the unlawful condition [BGE 91 I 295 E. 3b]. The distinction is made here between a *polluter by virtue of misconduct* and a *polluter by virtue of circumstance*.

Polluted site

d: Belasteter Standort

f: site pollué

i: sito inquinato

Polluted sites are those whose pollution originates from waste and that are restricted in area [art. 2 para. 1 CSO]. They comprise landfills, works and accident sites.

Polluted soil

d: Belasteter Boden

f: sol dégradé

i: suolo contaminato Soil whose natural composition has been physically, chemically or biologically modified [art. 7 para. 4bis sentence 1 LPE]. Polluted soils are only regarded as *polluted sites* if the pollution stems from waste and they cover a defined area.

Polluter by virtue of circumstance

d: Zustandsstörer

f: perturbateur par situation

i: perturbatore per situazione Person disposing of the legal or factual authority over the polluted site that is causing the illegal condition. In the case of contaminated sites, this is the owner (possessor, leaseholder, tenant, representative, etc.) at the site.

Polluter by virtue of misconduct

d: Verhaltensstörer

f: perturbateur par comportement

i: perturbatore per comportamento

Person who directly caused the illegal contamination of the site, either through his/her own actions or those of persons in his/her charge.

Pollution path

d: Wirkungspfad

f: voie de contamination

i: via di contaminazione

Possible or actual path taken by a substance hazardous to the environment between a *polluted site* and the point where it affects, or has a possible effect on, a *protected entity*, whereby both the *site* and the *protected entity* are included in the path.

Pollution potential

d: Schadstoffpotenzial

f: potentiel de pollution

i: potenziale di inquinamento

Type, location, quantity and concentration of the environmentally hazardous substances at a polluted site.

Potential danger

d: Gefahr, abstrakt

f: danger, abstrait

i: pericolo astratto

Often referred to simply as danger. This expresses the fact that although a danger exists, the probability of its occurrence is low.

Preliminary investigation

d: Voruntersuchung

f: investigation préalable

i: indagine preliminari

Phase of an investigation in which the information necessary for the assessment of the need for monitoring or remediation of a *polluted site* is obtained and the hazard to the environment determined. It usually consists of a *historical investigation* and a *technical investigation* [art. 7 CSO].

Propagation of pollutants

d: Schadstoffausbreitung

f: propagation des polluants

i: diffusione degli inquinati

Dispersal of pollutants by convection and diffusion, whereby sorption and transformation processes are taken into account.

Protected entity

d: Schutzgut

f: bien à protéger

i: beni da proteggere

An object whose safeguarding and conservation is in the public interest, such as

- human health
- the environmental media water, soil, air
- plant and animal organisms and their ecosystems.

Real danger

d: Gefahr, konkret

f: danger, concret

i: pericolo, concreto

Situation that sooner or later, and assuming events take their normal course, is likely to lead to detrimental effects on the environment occurring, the probability of which is high.

Register of polluted sites

d: Kataster der belasteten Standorte

f: cadastre des sites pollués

i: catasto dei siti inquinati

Register of *polluted sites* and *contaminated sites* accessible to the public. Contains data where available on: location, type and quantity of wastes delivered to the site; deposition period, period of operation, or time of accident; investigations and measures already taken for the protection of the environment; previously determined impacts; endangered environmental areas; particular events such as waste incineration, landslides, floods, fires or major accidents [art. 5 CSO].

Release potential

d: Freisetzungspotenzial

f: potentiel de dissémination

i: potenziale di emissione

Speed, distance, quantity and transport paths of hazardous substances that may be released to the environment. To determine the release potential, data on retention, degradation and possible transport paths of the substance (i.e. from geology, hydrogeology, soil science, etc.) are required.

Remediation

d: Sanierung

f: assainissement

i: risanamento Performance of decontamination and containment measures or restrictions on soil use, in order to ensure that the contaminated site has no short or long-term illegal impact on the environment (thereby eliminating the need for remediation).

Remediation objective

d: Sanierungsziel

f: objectif d'assainissement

i: obiettivo di risanamento

Intended result of a *remediation* derived from the protection objectives for the case at hand. The minimum objective of the remediation is to ensure that the harmful or undesired effects of a site on the *protected entities* is reduced to a level at which the need for remediation according the CSO is no longer given.

Remediation project

d: Sanierungsprojekt

f: projet d'assainissement

i: progetto di risanamento

The remediation project contains the information in comprehensive and clearly set out form required by the authorities to decide on the remediation objectives and completion periods. The remediation project consists of the following steps:

- preparation of basic information and project definition
- project organisation
- preliminary study of remediation variants
- remediation study

proposal for ecologically sound, technically realisable and economically acceptable measures.

Restrictions on soil use

d: Nutzungseinschränkung beim Boden

f: restriction d'utilisation du sol

i: restrizioni all'uso del suolo

Restrictions on the types of use permitted in the zone (e.g. decorative plants instead of crops), rezoning of the polluted area under development planning (e.g. uncultivated open area in place of agricultural zone), or general prohibition of use.

Risk assessment

d: Gefährdungsabschätzung

f: estimation de la mise en danger

i: valutazione della minaccia

Assessment of the risk situation at a *polluted site* with regard to its pollutant content and release potential, and possible adverse effects on the protected entities, based on data available from the investigations (preliminary and/or detailed investigation according to the CSO).

Seepage water

d: Sickerwasser

f: eau de percolation

i: acqua d'infiltrazione

Water that permeates a site and can absorb substances hazardous to the environment.

Site polluted with excavated material from building construction

d: Bauherrenaltlast

f: site pollué avec projet de construction

i: sito inquinato con progetto di costruzione

Polluted site not in need of remediation at which contaminated excavated material arises in connection with building construction.

Separate agreement

d: Einzelvereinbarung

f: accord individuel

i: accordo particolare

Agreement between an individual owner (company, private person) and the enforcement authority.

Soil

d: Boden

f: sol

i: suolo

The unsealed top layer of land where plants may grow [art. 7 para. 4^{bis} sentence 2 LPE].

Statement of compliance

d: Erfolgskontrolle

f: contrôle des résultats

i: controllo dei risultati

Statement by the person responsible for remediation that the remediation has been completed and that the remediation objectives have been achieved [art. 19 para. 1 CSO].

Subsequent monitoring

d: Nachkontrolle

f: suivi

i: verifica

Follows the *remediation*. It is necessary if a danger may arise in the future to protected entities from pollutants remaining at the site, e.g. in connection with remediation measures. Subsequent monitoring is an integral part of the *remediation project*.

Substances hazardous to the environment

d: Umweltgefährdende Stoffe

f: substances dangereuses pour l'environnement

i: sostanze pericolose per l'ambiente

Chemical elements and their compounds (including mixtures and objects) that cause direct or indirect biological effects, and thereby represent a hazard to the environment [art. 7 para. 5 LPE].

Substitutive measure, precautionary

d: Ersatzvornahmen, antiziperte

f: exécution par substitution anticipée

i: esecuzione sostitutiva anticipata

Duty of the authorities to perform the necessary urgent measures to eliminate the unlawful conditions in cases where the polluter does not wish to, or cannot, do so.

Substitutive measure

d: Ersatzvornahme, gewöhnliche

f: exécution par substitution usuelle

i: esecuzione sostitutiva ordinaria

Measure taken by the authority to eliminate the unlawful conditions in cases where the person obliged to do so does not honour the obligation.

Substratum

d: Untergrund

f: sous-sol

i: sottosuolo

Totality of the loose and solid rock below the *soil* cover.

Technical investigation

d: Technische Untersuchung

f: investigation technique

i: indagine tecnica

In the technical investigation, the type and quantity of the substances at the site, the likelihood of their release and the importance of the affected environmental areas are determined [art. 7 para. 4 CSO].

Treatment

d: Behandlung

f: traitement

i: trattamento

Treatment is any physical, chemical or biological modification of waste [art. 7 para. 6^{bis} sentence 2 LPE].

Upstream groundwater

d: Oberstrombereich

f: zone en amont

i: corrente a monte

Groundwater area upstream of a *polluted site*. The substances originating from the site can be identified and quantified from the difference between the substance concentrations in the upstream and *downstream groundwater areas*.

Unsaturated zone

d: Ungesättigte Zone

f: zone non saturée

i: zona insatura

Region of the substratum between the surface of the ground and the surface of the zone saturated with water (groundwater table).

Waste

d: Abfälle

f: déchets

i: rifiuti

Moveable materials of which the owner rids himself/herself, or whose disposal is necessary in the public interest [art. 7 para. 6 LPE].

Waste disposal site

d: Ablagerungsstandort

f: site de stockage définitif

i: siti di deposito

Inoperative or operative landfills and other disposal sites. Excepted are sites at which only *unpolluted excavated material* or spoil has been deposited [art. 2 para. 1 let. a CSO].