

Explanation of Disposal and Recovery Codes (TFS Regulation)

This information is provided as a source of reference for operators completing surveys for the *National Waste Report 2010*. Under each of the disposal and recovery codes there are some examples of the types of activities that fall within the code. This is not an exhaustive list.

This information is sourced from the 'Manual on waste statistics - a handbook for data collection on waste generation and treatment (2010 edition)', Eurostat (<http://epp.eurostat.ec.europa.eu/portal/page/portal/waste/methodology>).

D Codes		Description and Examples of Disposal Codes
D1	Landfill	Deposit into or onto land, (e.g. landfill, etc.) - deposit of overburden, waste rock and tailings on heaps in the extractive industry.
D2	Land treatment	Land treatment, (e.g. biodegradation of liquid or sludgy discards in soils, etc.) - spreading of waste on land, often followed by the incorporation of the waste into the soil, which does not result in benefit to agriculture or other ecological improvements. Generally applies to non-hazardous sludge and liquid wastes, e.g. disposal of dredging sludge.
D3	Injection	Deep injection, (e.g. injection of pumpable discards into wells, salt domes of naturally occurring repositories, etc.) - injection of waste into natural and artificial cavities (e.g. salt domes, wells, mines), and porous formations of rock not covered by Directive 1999/31/EC.
D4	Surface impoundment	Surface impoundment, (e.g. placement of liquid or sludge discards into pits, ponds or lagoons, etc.) - the deposit of waste in natural or engineered ponds, pits or lagoons (impoundment), which is the predominant method for the management of tailings in mining operations; impoundment of dredging sludge.
D5	Engineered landfill	Specially engineered landfill, (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.) - landfills for inert waste, non-hazardous waste and hazardous waste above ground.
D6	Release to waters	Release into a water body except seas/oceans - deposit of non-hazardous dredging sludge and other non-hazardous sludge in surface water including the bed and the subsoil.
D7	Release to sea	Release into seas/oceans including sea-bed insertion - discharge of waste at sea in accordance with the OSPAR Convention (e.g. discharge of fish processing waste and inert materials of natural origin).
D8*	Biological treatment	Biological treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1- D12 -biological-mechanical treatment of municipal waste; <input type="checkbox"/> biological treatment of contaminated soil, sludges or mineral

		wastes, if followed by disposal.
D9*	Physico chemical treatment	<p>Physico chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1-D12 (e.g. evaporation, drying, calcination, neutralization, precipitation, etc.)</p> <p>-physico-chemical treatment is typically deployed for: <input type="checkbox"/> emulsions and oil/water mixtures; neutral aqueous organics and inorganics (production specific waste water, leachate, etc.); cyanides; acids and alkalis. Typical treatment steps are detoxification (oxidation/reduction), precipitation, neutralisation, emulsion separation, immobilisation, electrolysis and osmosis.</p>
D10	Incineration on land	<p>Incineration on land</p> <p>- municipal solid waste incineration plants for incineration of MSW, hazardous waste, sewage sludge, clinical waste, animal carcasses.</p>
(D11)	(Incineration at sea)	<p>(Incineration at sea)</p> <p><i>This operation is prohibited by EU legislation and international conventions.</i></p>
D12	Permanent storage	<p>Permanent storage (e.g. emplacement of containers in a mine, etc.)</p> <p>- landfills for the underground storage of waste.</p>
D13*	Blending or mixing prior to submission to any of the operations numbered D1-D12	<p>Blending or mixing prior to submission to any of the operations numbered D1-D12</p> <p>basic sorting activities; <input type="checkbox"/> crushing and shredding of waste in order to reduce the volume of waste for transport or landfilling; mixing and blending of waste (e.g. mixing of similar wastes from different waste generators); <input type="checkbox"/> homogenisation, conditioning and solidification.</p>
D14*	Repackaging prior to submission to any of the operations numbered D1-D13	<p>Repackaging prior to submission to any of the operations numbered D1-D13</p> <p>transfer and compaction of waste; <input type="checkbox"/> <input type="checkbox"/> packaging of asbestos.</p>
D15*	Storage pending any of the operations numbered D1-D14	<p>Storage pending any of the operations numbered D1-D14</p> <p>Does not apply to storage of waste prior to collection at the site at which it was generated. Temporary storage of waste prior to disposal is limited to a period of <1 year. Otherwise the provisions of the Landfill Directive apply (Directive 1999/31/EC, Article 2(g)).</p>

* These codes (D8, D9, D13, D14, D15) refer to pre-treatment operations, which must be followed by one of the other recovery or disposal operations.

R Codes		Description and Examples of Recovery/Recycling/Re-Use Codes
R1	Use as fuel	Use as a fuel (other than in direct incineration) or other means to generate energy - use of tyres, waste oils, or spent solvents in cement kilns; co-incineration of sewage sludge or refuse-derived fuel (RDF) from municipal waste in power stations.
R2	Solvent reclamation/regeneration	Solvent reclamation/regeneration - re-refining of solvents in order to separate contaminants and to restore the solvent to its original quality or to a lower grade product (e.g. lacquer thinner); preparation of secondary liquid fuels (SLF), usually by blending with other liquid wastes.
R3	Organic substance recycling/reclamation	Recycling/reclamation of organic substances which are not used as solvents - recycling of waste paper and board; reprocessing and recycling of plastic waste; composting of bio waste and green waste; fermentation of biodegradable waste for biogas production (biogas plants).
R4	Metal recycling/reclamation	Recycling/reclamation of metals and metal compounds - recycling of scrap and production waste in steelworks; shredding and reprocessing of ELVs and WEEE; thermal treatment of cables or oil-contaminated metals; battery recycling; electrolytic recovery of silver from photo chemicals.
R5	Inorganic substance recycling/reclamation	Recycling/reclamation of other inorganic materials - reprocessing of construction and demolition waste; reprocessing and recycling of glass waste; use as secondary raw material in cement kilns; asphalt mixing plants; use for underground stowage in mines.
R6	Regeneration of acids or bases	Regeneration of acids or bases - re-concentration of spent acids; the thermal decomposition of spent sulphuric acid for use as feedstock in sulphuric acid production.
R7	Recovery of components used for pollution abatement	Recovery of components used for pollution abatement - regeneration of activated carbon from water purification and flue gas treatment, mainly by thermal treatment; the regeneration of resins by solvent washing.
R8	Recovery of components from catalysts	Recovery of components from catalysts -regeneration of catalysts to be reused as catalysts; the recovery of catalyst components, mainly of metal components, e.g. recycling of precious metals from catalytic converters in vehicle exhausts.
R9	Used oil refining or other reuses of previously used oil	Used oil re-refining or other reuses of previously used oil - Re-refining into base oils which can be used to manufacture lubricating products; use to generate fuel which can be used as a substitute for coal, diesel and light fuel.
R10	Landspreading	Land treatment resulting in benefit to agriculture or ecological improvement - use of sewage sludge in agriculture in compliance with the Sewage Sludge Directive; the spreading on land of compost from the treatment of separately collected biowaste; the use of manure in compliance with agricultural

		regulations; the use of mineral wastes as fertilisers in compliance with national legislation; landscape restoration, e.g. as final landfill cover; restoration of old disused quarries.
R11	Use of residuals	Uses of residual materials obtained from any of the operations numbered R1-R10 - energy recovery of sorting residues, shredder light fraction, or distillation sludge from oil-refining; the use of slag from co-incineration for underground stowage.
R12*	Waste Exchange prior to recovery	Exchange of wastes for submission to any of the operations numbered R1-R11 - basic sorting activities; mixing of waste from different generators before it is sent to a recovery facility; transfer and compaction of waste; shredding of wood waste prior to energy recovery.
R13*	Storage prior to recovery	Accumulation of material intended for any operation numbered R1-R12 - interim storage of waste prior to recovery is limited to a period of <3 years, otherwise storage is subject to provisions of Landfill Directive.

* These codes (R12, R13) refer to pre-treatment operations, which must be followed by one of the other recovery or disposal operations.