Republic of Latvia
Cabinet
Regulation No. 365
Adopted 20 August 2002

Regulations On Utilisation, Monitoring and Control of Sewage Sludge and the Compost thereof

Issued pursuant to Section 9 , Clause 12 of the Law On Environmental Protection

I. General Provisions

1. These Regulations prescribe the procedures for the utilisation, monitoring and control of sewage sludge and the compost thereof.

2. Sewage sludge is colloidal sediment resulting from the treating of municipal, domestic and industrial sewage in treatment plants, as well as depositions from septic tanks and other similar plants for sewage treatment.

3. Sewage sludge compost is a decomposition product of sewage sludge and various materials of plant origin (peat, leaves, straw, saw dust and other landfill materials) that has been obtained as the result of an human impact on active microbiological activity.

4. Sewage sludge shall be divided as follows:

4.1. treated sludge – sludge which has been subject to at least one of the following types of processing:

4.1.1. storage, including in liquid form, for at least six months (cold fermentation) without mixing and movement during the period of storage;
4.1.2. mesophilic anaerobic decomposition 35°C ± 3°C, minimum duration of treatment - 21 ± 5 days;
4.1.3. thermophilic anaerobic decomposition 55°C ± 5°C, minimum duration of treatment -10 days;
4.1.4. thermophilic aerobic stabilisation 55°C ± 5°C, minimum duration of treatment -10 days;
4.1.5. composting during which the temperature inside the pile shall be no less than 40°C for at least five days and the temperature inside the pile shall be no less than 55°C for at least four hours;
4.1.6. lime treatment to pH12 or more, the temperature must be at least 55°C for no less than two hours following the treatment;
4.1.7. pasteurisation for at least 30 minutes at 70°C; and
4.1.8. drying approximately at 100°C until the dry matter in the sludge mass reaches 70%; and

4.2. non-treated sludge – sludge that has not been subject to any of types of treatment specified in Sub-paragraph 4.1 of these Regulations.

II. Determination of Quality of Sewage Sludge and the compost thereof

5. Determination of the quality of sewage sludge and the compost thereof shall be ensured by:

5.1. a producer of sewage sludge – a legal or natural person who manages sewage treatment plants in the technological processes of which sewage sludge is generated; and
5.2. a producer of sewage sludge compost – a legal or a natural person who utilises sewage sludge for the preparation of compost.

6. The quality of sewage sludge shall be determined in accordance with the procedures specified in Annex 1 of these Regulations for each batch of sewage sludge (mass of sewage sludge with uniform chemical composition, similar physical and other features) forming one average sample.

7. The quality of sewage sludge compost shall be determined for each batch of sewage sludge (the mass of the compost that is made up of sewage sludge and landfill materials of plant origin and does not exceed 1000 tons at the commencement of composting).

For determination of the quality of a compost batch not earlier than four months following the commencement of composting, one average sample shall be formed in which at least 25 individual samples are combined.

8. In a laboratory that has been accredited for the determination of the relevant parameters and in which the methods referred to in Annex 2 of these Regulations are utilised, the following shall be determined for the average sample of sewage sludge and the compost thereof:

8.1. mass concentration in dry matter of heavy metals – cadmium (Cd), chrome (Cr), copper (Cu), mercury (Hg), nickel (Ni), lead (Pb) and zinc (Zn);
8.2. agrochemical indicators – environment reaction and mass concentration of organic substance, nitrogen (N) and phosphorus (P) in dry matter; and
8.3. contents of dry matter.

9. If the load of sewage treatment plants does not exceed 5000 person equivalent (CE) and only municipal sewage is treated in them, the mass concentration of heavy metals in the sewage sludge and the compost produced of such sewage sludge need not be determined.

10. The producer of sewage sludge and the compost thereof, on the basis of the obtained quality indicators of the sewage sludge and the compost thereof, shall prepare a quality certificate for each batch of sewage sludge and the compost thereof (hereinafter – quality certificate) in accordance with Annex 3 and 4 of these Regulations. The quality certificate shall be prepared:

10.1. for sewage sludge – not later than 30 days following the formation of the average sample of the sewage sludge necessary for the determination of the agrochemical indicators of the batch of sewage sludge; and
10.2. for the compost of sewage sludge – not earlier than five months following the commencement of composting.

11. The producer of sewage sludge and the compost thereof shall issue a copy of the quality certificate to the user of the sewage sludge and the compost thereof – a legal or a natural person engaged in the storage, utilisation and burial of sewage sludge and the compost thereof

12. The producer of sewage sludge and the compost thereof shall:

12.1. register the quality certificate of each batch in a special register in conformity with Annex 5 of these Regulations;
12.2. keep the reports of the quality testing of sewage sludge and the compost thereof and the originals of quality certificates, as well as the registers following their completion for not less than ten years.

13. The classification of sewage sludge and the compost thereof is prescribed in Annex 6 of these Regulations. Sewage sludge of Class 5 shall be considered hazardous waste. All activities with sewage sludge of Class 5 shall be performed in conformity with the requirements prescribed in the Waste Management Law.

14. The class shall not be determined for sewage sludge obtained only by the treatment of municipal sewage and for the composts prepared from such sludge. In the quality certificate and the opinion regarding utilisation thereof, the column “klase” [class] shall contain - “sadzīves notekūdeņu dūņas” [municipal sewage sludge] or “sadzīves notekūdeņu dūņu komposts” [compost of municipal sewage sludge].

III. Temporary Storage of Sewage Sludge and the Compost thereof at a Place of Utilisation

15. If on the day of delivery it is not possible to utilise sewage sludge and the compost thereof for the intended purpose, they shall be placed for storage at the place of utilisation. Places for temporary storage of sewage sludge and the compost thereof and places for the preparation of sewage sludge compost may not be located:

15.1. in populated areas, as well as nearer than 150 m from the border of a populated area;
15.2. nearer than 150 m from residential houses and food undertakings;
15.3. in locations where it is prohibited in accordance with the regulatory enactments regarding protective territories;
15.4. in specially protected nature territories and micro-reserves, as well as nearer than 150 m from borders thereof;
15.5. nearer than 150 m from locations of water intakes;
15.6. in flood territories (endangered by floods); and
15.7. on slopes the gradient of which is more than 50.

16. Sewage sludge and the compost thereof shall be placed for temporary storage and sewage sludge compost shall be prepared for such purpose in stationary places specially provided and organised, preventing sewage sludge and the compost thereof and filtrating water from entering soil, surface waters and ground waters. In stationary places for temporary storage, sewage sludge and the compost thereof may be stored not longer than for three years following the placing thereof.

17. If sewage sludge and the compost thereof are placed for temporary storage and the sewage sludge compost is prepared in places that do not comply with the requirements specified in Paragraph 16 of these Regulations, they shall be organised in accordance with the following procedures:

17.1. a level area shall be selected where the level of ground water is at least one meter from the ground surface during the storage of sewage sludge and the compost thereof and the preparation of compost;
17.2. prior to placing the sewage sludge or preparing the compost in places complying with the requirements referred to in Sub-paragraph 17.1 of these Regulations, an at least 30 cm thick mat of saw dust, peat, straw or other similar materials of plant origin shall be established.

18. At places of temporary storage and composting that are organised in conformity with the requirements specified in Paragraph 17 of these Regulations, sewage sludge and the compost thereof may be stored for not longer than one year.

19. Places for the temporary storage of sewage sludge and the preparation of sewage sludge compost that are organised in conformity with the requirements specified in Paragraph 17 of these Regulations may be utilised repeatedly. If such places are utilised at least twice and the utilisation thereof has been suspended, the user of sewage sludge or compost thereof shall co-ordinate the further utilisation of the relevant area with the regional environmental board, depending on the content of heavy metals in soil.

20. Treated sewage sludge the contents of dry matter of which at the moment of placement is not less than 25% or sewage sludge compost may be stored at a place for temporary storage of sewage sludge that complies with the requirements specified in Sub-paragraph 17.1 for no longer than one month. A place for temporary storage of sewage sludge shall be utilised only once for such purpose.

21. A legal or natural person in whose ownership or use is territory appropriate for the organisation of places for temporary storage (hereinafter – manager), prior to the selection and arrangement of places for the temporary storage of sewage sludge and the preparation of compost thereof shall:

21.1. receive a permit from the regional environmental board in accordance with the procedures specified in regulatory enactments regulating the issue of permits for the performance of polluting activities if the selection and organisation of places is performed in conformity with the requirements of Paragraph 16 of these Regulations;
21.2. co-ordinate this with the regional environmental board if the selection and organisation of places is performed in conformity with the requirements specified in Paragraph 17 of these Regulations (except cases specified in Paragraph 20 of these Regulations).

22. The manager shall mark places for the temporary storage of sewage sludge and the preparation of compost in the cartographic material and submit such materials to the regional environmental board.

23. Overgrowing with weeds of the sewage sludge and mass of compost thereof, as well as a 5 meters wide area adjacent thereto is not permissible in places for the temporary storage of sewage sludge and the compost thereof .

IV. Utilisation of Sewage Sludge and the Compost thereof for Soil Fertilisation of Agricultural Lands

24. Prior to the cultivation of sewage sludge and the compost in agricultural land, the user of the land shall ensure that a laboratory that has been accredited for the determination of relevant indicators and in which methods referred to in Annex 7 of these Regulations are used determines the following indicators in the average sample of surface layer of soil:

24.1. mass concentration of heavy metals – cadmium (Cd), chrome (Cr), copper (Cu), mercury (Hg), nickel (Ni), lead (Pb) and zinc (Zn);
24.2. mass concentration of agrochemical indicators – environment reactions, organic substances and accessible phosphorus (P).

25. An average sample of the surface layer of soil shall be formed by mixing not less than 25 individual samples taken from an area not exceeding 5 ha. Individual samples of soil shall be taken from the upper part of the humus horizon at a depth of 25 cm. If the humus horizon is thinner, individual samples shall be taken throughout its density, but not shallower than 10 cm. The granulometric composition group of the soil surface layer shall be determined concurrently with the taking of samples.

26. The concentration of heavy metals in soil shall be determined prior to the first, third and each subsequent cultivation of sewage sludge and the compost thereof.

27. If municipal sewage sludge from treatment plants is used for the fertilisation of soil, the load of which does not exceed 5000 person equivalent (CE), the mass concentration of heavy metals in soil need not be determined.

28. If the mass concentration of all heavy metals in soil prior to the first cultivation of sewage sludge and the compost thereof does not exceed 50% of the limit concentrations referred to in Annex 8 of these Regulations, when fertilising soil repeatedly with sewage sludge and the compost thereof, the mass concentration of heavy metals in soil may also not be determined prior to the third cultivation of sewage sludge and the compost thereof.

29. The concentration of heavy metals in the surface layer of soil:

29.1. may not exceed 70% of the limiting concentrations referred to in Annex 8 of these Regulations prior to the first cultivation of sewage sludge and the compost thereof; and
29.2. may not exceed the limiting concentrations referred to in Annex 8 of these Regulations following the cultivation of sewage sludge and the compost thereof.

30. Agrochemical indicators shall be determined prior to each cultivation of sewage sludge and the compost thereof. The most recent materials of agrochemical examination of soil may also be utilised for the acquisition of such indicators if such materials are not older than five years and the sewage sludge or the compost thereof has not been cultivated in the soil following the agrochemical examination.

31. Sewage sludge and the compost thereof may not be cultivated in soil the reaction pHkcl of which in the upper layer is less than 5.

32. Treated sewage sludge, as well as compost which has been prepared from treated and non-treated sewage sludge and the concentration of heavy metals in dry matter of which does not exceed the limit concentrations referred to in Annex 9 of these Regulations may be utilised for the fertilisation of soils in agricultural land. Sewage sludge and the compost thereof may also be utilised for the fertilisation of soils when the concentration of no more than three heavy metals exceeds the limiting concentration by not more than 10%.

33. The limit values of the annual emission of heavy metals, dry matter, total nitrogen and total phosphorus is the maximum mass of these substances which may be cultivated on average per year in one hectare of soil with sewage sludge and the compost thereof. The limit values of annual emissions of heavy metals are specified in Annex 10 of these Regulations, but the limit values of annual emission of dry matter, total nitrogen and total phosphorus – in Annex 11 of these Regulations.

34. Such mass of heavy metals (determined for each heavy metal separately), dry matter, total nitrogen and total phosphorus may be cultivated in soil at the same time with sewage sludge or the compost thereof that does not exceed the limit values of seven years.

35. The maximum portion of sewage sludge or the compost thereof to be cultivated at one time shall be calculated in compliance with the limit values of annual emission referred to in Annexes 10 and 11 of these Regulations and the requirements specified in Paragraph 34 of these Regulations. It is permitted to cultivate the least portion of the calculated portions of sewage sludge or the compost thereof in soil.

36. A decision regarding the utilisation of sewage sludge and the compost thereof for the fertilisation of soil shall be taken by the local government in the territory of which it is intended to cultivate sewage sludge or the compost thereof on the basis of the following documents:

36.1. a copy of the quality certificate of a batch of sewage sludge or the compost thereof – submitted by the producer of sewage sludge or the compost thereof;
36.2. cartographic material (scale 1:10000 or 1:5000) with the areas marked in which it is intended to cultivate sewage sludge or the compost thereof, and research materials of the soil of these areas in compliance with the requirements specified in Paragraph 24 of these Regulations – submitted by the user of sewage sludge or the compost thereof; and
36.3. an opinion regarding the previous cultivation of sewage sludge or the compost thereof in such area if sewage sludge or the compost thereof is cultivated repeatedly – submitted by the user of the sewage sludge or the compost thereof.

37. If the decision referred to in Paragraph 36 of these Regulations is positive, the relevant local government shall prepare a written opinion in three copies in conformity with Annex 12 or 13 of these Regulations and submit one copy to the producer and one copy to the user of sewage sludge or the compost thereof. The opinion shall be accompanied by cartographic material of the relevant area (in scale of 1:10000 or 1:5000). If the decision is negative the local government shall notify the producer or the user of sewage sludge or the compost thereof.

38. Each opinion regarding the utilisation of sewage sludge or the compost thereof shall be registered in a special register (Annex 5). The producer of sewage sludge or the compost thereof shall maintain and store the register. The original copies of opinions and the register shall be kept for not less than ten years following the completion thereof.

39. The producer of sewage sludge and the compost thereof within a time period of 30 days prior to the cultivation of sewage sludge and the compost thereof shall ensure:

39.1. the determination of the contents of dry matter in sewage sludge or the compost thereof and the calculation of the maximum portion for the cultivation of naturally wet sewage sludge or the compost thereof; and
39.2. the repeated determination of agrochemical indicators in conformity with Annex 2 of these Regulations if more than 12 months have elapsed since the production of the batch of sewage sludge or the compost thereof intended for cultivation.

40. The producer of sewage sludge and the compost thereof shall notify the relevant local government regarding the indicators referred to in Paragraph 39 of these Regulations in order that it may make an entry in Paragraph 7 of the opinion referred to in Annex 12 or 13 of these Regulations.

41. The user of sewage sludge and the compost thereof shall submit quarterly the copies of the following documents to the regional environmental board:

41.1. an opinion regarding the utilisation of sewage sludge and the compost thereof; and
41.2. the cartographic material with the areas marked in which sewage sludge and the compost thereof has been cultivated.

42. Following dispersion on a field sewage sludge shall be cultivated in soil within a time period of three days, but from 1 November to 1 April – within 24 hours.

43. Sewage sludge and the compost thereof may not be dispersed and cultivated:

43.1. on slopes the sloping surface of which is more than 7 degrees.
43.2. on frozen or snow covered soil;
43.3. in flood and flood endangered territories;
43.4. nearer than 100 m to individual locations of water intakes;
43.5. nearer than 100 m to residential houses, food undertakings and open water sites; and
43.6. in locations where such is prohibited in accordance with the regulatory enactments regarding protection zones.

44. If agricultural areas are located in specially protected nature territories, the utilisation of sewage sludge and the compost thereof shall be co-ordinated with the regional environmental board.

45. Sewage sludge and the compost thereof may not be utilised:

45.1. for growing vegetables and berries in covered areas;
45.2. in allotments (except planting of greenery in compliance with the requirements specified in Sub-paragraph 63.1 of these Regulations);
45.3. as surface fertiliser and row fertiliser during the vegetation period of food and animal feed crops; and
45.4. as surface fertiliser in grazing in the year of use thereof, except for cases when sward is renewed by the re-ploughing of soil and the sewage sludge and the compost thereof are cultivated in the soil.

46. A time period between the cultivation of sewage sludge and the compost thereof in soil and the harvesting of agricultural plants shall not be less than:

46.1. ten months when growing fruits and berries in a field, as well as vegetables, potatoes and tuber roots that are in direct contact with soil; and
46.2. three months when growing other agricultural plants except perennial grasses which are utilised for mowing or grazing.

47. In areas of perennial grasses, which are utilised for mowing or pasturage, sewage sludge or the compost shall be dispersed following the last hay harvesting or grazing.

V. Utilisation of Sewage Sludge Compost in Forestry

48. Only sewage sludge compost may be utilised for the conditioning of soil and fertilisation in forestry.

49. For the characterisation of the quality of each batch of sewage sludge compost, only the contents of dry matter and mass concentration of heavy metals shall be determined in conformity with Annex 2 of these Regulations.

50. Such sewage sludge compost shall be utilised in forestry which has been composted for no less than four to five months and the mass concentration of heavy metals in dry matter of which does not exceed the limiting concentration specified in Annex 9 of these Regulations.

51. Sewage sludge compost shall be utilised in forestry for:

51.1. the afforestation of low fertility sands, degraded areas of forest soil and burned-out forests;
51.2. the afforestation of such land that is no longer utilised for agriculture;
51.3. the cultivation of plantation forests;
51.4. the fertilisation of soil of forest reproductive material nurseries and decorative planting stock nurseries; and
51.5. the establishment of plantations for the production of tree seeds.

52. When utilising sewage sludge compost in forestry the following conditions shall be taken into account:

52.1. that when cultivating forests and forming forest plantations, sewage sludge compost shall be cultivated in the planting areas; and
52.2. the utilisation of sewage sludge compost for surface fertilisation, as well as continuous dispersion and cultivation is not permissible (except forest reproductive material nurseries and decorative planting stock nurseries).

53. In afforestation, as well as in the establishment of forest plantations and plantations for the production of tree seeds, the limiting portion of dry matter of sewage sludge compost shall not be higher than 10 t/ha, but in forest reproductive material nurseries and decorative planting stock nurseries – not higher than 14 t/ha.

54. In compliance with the conditions referred to in Paragraph 53 of these Regulations the research of soil prior to the cultivation of sewage sludge compost and environment monitoring shall not be necessary.

55. Repeated utilisation of sewage sludge compost in forest reproductive material nurseries and decorative planting stock nurseries is only permissible after seven years.

56. A decision regarding the utilisation of sewage sludge compost for the fertilisation of soil in forestry shall be taken by a local government in the territory of which it is intended to cultivate the sewage sludge compost on the basis of:

56.1. indicators of the heavy metal concentration in the sewage sludge compost specified in the quality certificate of a compost batch (submitted by the producer of the sewage sludge compost); and
56.2. cartographic material (scale 1:10000 or 1:1500) with marked territories in which the cultivation of sewage sludge compost has been provided (submitted by the user of the sewage sludge).

57. If the area, which it is intended to fertilise with sewage sludge compost is located in a specially protected nature territory, the requirements specified in Paragraph 44 of these Regulations shall be complied with.

58. If the decision referred to in Paragraph 56 of these Regulations is positive, the relevant local government shall prepare a written opinion in three copies in conformity with Annex 13 of these Regulations and submit one copy of the opinion to the producer and one copy to the user of sewage sludge compost. The opinion shall be accompanied by the cartographic material of the relevant area (in scale of 1:10000 or 1:5000). If the decision is negative the local government shall notify the producer or user of sewage sludge compost thereof.

59. Within a time period of 30 days prior to the cultivation of sewage sludge compost the producer of the sewage sludge compost shall ensure the determination of contents of dry matter in the sewage sludge compost and the calculation of the maximum portion of naturally wet sewage sludge compost for cultivation. The producer of the sewage sludge compost shall notify the relevant local government regarding such indicators in order it may make an entry in Paragraph 7 of the opinion referred to in Annex 13 of these Regulations.

60. Each opinion regarding the utilisation of sewage sludge compost in forestry shall be numbered and registered in a special register which shall be maintained and kept in accordance with the procedures specified in Paragraph 38 of these Regulations.

61. The user of sewage sludge compost shall submit quarterly the copies of the following documents to the regional environmental board:

61.1. an opinion regarding the utilisation of sewage sludge compost; and
61.2. cartographic material with the areas marked in which sewage sludge compost has been cultivated.

VI. Utilisation of Sewage Sludge and the Compost thereof for Greening of Territories

62. Greening is the decorative arrangement or the arrangement for a special purpose of perennial grasses, trees, bushes and flower plantings

63. For the greening of territories the following may be utilised:

63.1. sewage sludge compost the mass concentration of heavy metals in dry matter of which does not exceed the second class indicators and the number of bacteria *Salmonella spp.* of which does not exceed the number specified in Annex 14 of these Regulations – in populated areas, parks, green territories, golf fields and sports complexes; and
63.2. sewage sludge compost and treated sewage sludge stored for no less than one year with dry matter content of at least 25% that do not have an unpleasant odour and the mass concentration of heavy metals in

dry matter of which does not exceed the limit concentrations specified in Annex 9 of these Regulations – outside populated areas.

64. If sewage sludge and the compost thereof are utilised for the greening of territories:

64.1. the limit values, referred to in Annex 10 of these Regulations, of an annual emission of heavy metals cultivated in soil with sewage sludge and the compost thereof may be increased to 50%; and
64.2. at any one time only such mass of heavy metals may be cultivated in soil that does not exceed the limit values of seven years emission.

65. Sewage sludge and the compost thereof utilised for greening of territories shall be cultivated in soil within a time period of three days following the dispersion, but in populated areas – on the day of dispersion thereof.

66. A territorial branch of the Public Health Agency shall take a decision on utilisation of sewage sludge or the compost thereof for greening within a time period of 30 days prior to the cultivation thereof on the basis of the documents submitted by the producer of sewage sludge or the compost thereof:

66.1. a quality certificate of a batch of sewage sludge or the compost thereof (copy);
66.2. a testing report on number of bacteria *Salmonella spp.* in sewage sludge compost (necessary in cases referred to in Sub-paragraph 63.1 of these Regulations); and
66.3. a testing report on the contents of dry matter in sewage sludge or the compost thereof.

67. The cartographic material (in scale of 1:500 or 1:1000) of the relevant territory with the areas marked in which it is intended to cultivate sewage sludge or the compost thereof shall be necessary in addition to the documents referred to in Paragraph 66 of these Regulations for taking a decision on the utilisation of sewage sludge or the compost thereof for greening. The cartographic material shall be submitted by the user of sewage sludge or the compost thereof.

68. If the decision referred to in Paragraph 66 of these Regulations is positive, the territorial branch of the Public Health Agency shall prepare a written opinion in three copies in conformity with Annex 12 or 13 of these Regulations and submit one copy to the producer and one copy to the user of sewage sludge or the compost thereof. The opinion shall be accompanied by the cartographic material of the relevant area (in scale of 1:500 or 1:1000). If the decision is negative the territorial branch of the Public Health Agency shall notify the producer or user of sewage sludge or the compost thereof.

69. Each opinion regarding the utilisation of sewage sludge and the compost thereof for greening shall be numbered and registered in a special register which shall be maintained and kept in accordance with the procedures specified in Paragraph 38 of these Regulations.

70. The user of sewage sludge and the compost thereof shall submit quarterly the copies of the following documents to the regional environmental board:

70.1. an opinion regarding the utilisation of sewage sludge and the compost thereof; and
70.2. cartographic material with the areas marked in which sewage sludge or the compost thereof has been cultivated.

VII. Utilisation of Sewage Sludge and the Compost thereof for Recovery of Degraded Areas

71. Degraded areas are areas with destroyed soil cover that have resulted from the mining of loam, sand, gravel and other mineral resources by an open-cut method (in quarries), performing earthworks in construction, as well as other work related to the destruction of soil cover.

72. Recovery is a combination of amelioration, clearing of land and agrotechnical measures in order to renew the soil cover of degraded areas.

73. Such sewage sludge and the compost thereof may be utilised for the recovery of degraded areas the mass concentration of heavy metals in dry matter of which does not exceed the limit concentrations referred to in Annex 9 of these Regulations.

74. Prior to the deposition of sewage sludge and the compost thereof in relevant areas, the manager of the degraded areas shall ensure the specification of the following indicators:

74.1. the granulometric composition group of the soil surface layer of 25 cm;
74.2. the environment reaction pHkcl.

75. Sewage sludge and the compost thereof may not be utilised for the recovery of degraded areas if:

75.1. the reaction indicator pHkcl of the soil surface layer is less than 5.0; or
75.2. the area to be recovered is permanently or temporary flooded.

76. Portions of dry matter of sewage sludge and the compost thereof not exceeding the limit portions referred to in Annex 15 of these Regulations may be utilised for the recovery of degraded areas.

77. If in a worked-out peatery there is still at least 5-cm thick peat layer prior to the cultivation of sewage sludge and the compost thereof, when recovering such areas:

77.1. environment reaction pHkcl shall be separately determined separately for the remaining peat layer and for the mineral soil beneath it; and
77.2. the granulometric composition group shall be determined for mineral soil.

78. For the recovery of the areas referred to in Paragraph 77 of these Regulations no more than 50% of the limiting dry matter portions of sewage sludge and the compost thereof specified in Annex 15 of these Regulations that are permissible for the relevant granulometric composition group of the mineral soil may be utilised.

79. The State Geology Service shall take a decision regarding the utilisation of sewage sludge or the compost thereof for the recovery of degraded areas on the basis of a copy of the sewage sludge or the compost quality certificate submitted by the manufacturer of sewage sludge or the compost thereof, as well as regarding the following documents submitted by the user of sewage sludge or the compost thereof:

79.1. research materials of granulometric composition of soil surface layer and environment reaction pHkcl of the degraded area;
79.2. materials of hydro-geological research of the degraded area (lithological features of soil for aeration zone and confining bed, flow direction of underground waters, consumers of ground waters within a radius of 0.5 km); and
79.3. cartographic material of the territory (in scale of 1:100 or 1:2000) in which the degraded area intended for recovery has been marked.

80. If the decision referred to in Paragraph 79 of these Regulations is positive, the State Geology Service shall prepare a written opinion in three copies in conformity with Annex 12 or 13 of these Regulations and submit one copy to the producer and one copy to the user of sewage sludge or the compost thereof. The opinion shall be accompanied by the cartographic material of the relevant area (in scale of 1:1000 or 1:2000). If the decision is negative the State Geology Service shall notify the producer or user of sewage sludge or compost thereof regarding such.

81. Within a time period of 30 days prior to the deposition of sewage sludge or the compost thereof the producer of the sewage sludge or the compost thereof shall ensure the determination of contents of dry matter in the sewage sludge or the compost thereof and the calculation of the maximum cultivation portion of naturally wet sewage sludge or the compost thereof. The producer of sewage sludge or the compost thereof shall notify the State Geology Service regarding such indicators.

82. Each opinion regarding the utilisation of sewage sludge or the compost thereof for the recovery of degraded areas shall be numbered and registered in a special register which shall be maintained and kept in accordance with the procedures specified in Paragraph 38 of these Regulations.

83. The user of sewage sludge or the compost thereof shall submit quarterly the copies of the following documents to the regional environmental board:

83.1. an opinion regarding the utilisation of sewage sludge or the compost thereof; and
83.2. cartographic material with marked recoverable areas in which sewage sludge or the compost thereof has been utilised.

VIII. Utilisation and Burial of Sewage Sludge and the Compost thereof in Municipal Waste Landfill Sites and Dumps

84. Sewage sludge and the compost thereof in municipal waste landfill sites and dumps may be:

84.1. utilised for the recovery (covering) following the complete or partial closure of waste landfill sites and dumps; and
84.2. buried in the waste mass.

85. Sewage sludge and the compost thereof may be utilised for the recovery of municipal waste landfill sites and dumps, as well as buried in the waste mass if the mass concentration of heavy metals in the dry matter of which does not exceed the limit concentrations referred to in Annex 9 of these Regulations.

86. Sewage sludge may be utilised for the recovery of municipal waste landfill sites and dumps, as well as buried in the waste mass if the dry matter content of sewage sludge is no less than 20%.

87. Sewage sludge or the compost thereof may be utilised for the recovery of municipal waste landfill sites and dumps following their complete or partial closing by depositing a more than 20 cm thick covering layer above the anti-filtration layer.

88. Municipal waste landfill sites and dumps may be covered by sewage sludge and the compost thereof from the beginning of the vegetation period up to 15 August. Within a time period of three days following the laying down of the covering layer a mix of perennial grasses shall be sown for the establishment of a lawn.

89. If the concentration of heavy metals in the dry mass of waste in municipal waste landfill sites and dumps is higher than in the dry matter of sewage sludge or the compost thereof to be buried, it shall be buried in accordance with the following procedures: and

89.1. following each 2 m thick layer of waste, a layer of sewage sludge or the compost thereof no more than 50 cm thick shall be laid down ;
89.2. prior to the deposition of an anti-filtration layer for levelling out the waste surface, a layer of sewage sludge or the compost thereof no more than 50 cm thick shall be laid down .

90. If the concentration of heavy metals in the dry matter of waste in a municipal waste dump is lower than in the dry matter of sewage sludge or the compost thereof to be buried, or the mass concentration of heavy metals in the mass of municipal waste has not been determined, it is permitted to bury in the dump:

90.1. the mass of dry matter of sewage sludge or the compost thereof of the first and second class that does not exceed 5% of the dry waste mass; or
90.2. the mass of dry matter of sewage sludge or the compost thereof of the third and fourth class that does not exceed 3% of the dry waste mass.

IX. Environmental Monitoring of Utilisation of Sewage Sludge and the Compost thereof

91. If sewage sludge of the third and fourth class and the compost thereof is utilised for the fertilisation of agricultural land the producer of sewage sludge and the compost thereof shall ensure the performance of monitoring.

92. In degraded areas for the recovery of which sewage sludge and the compost thereof is utilised, the monitoring of ground waters shall be performed only if it has been provided for in the recovery project of such areas.

93. In agricultural areas for the fertilisation of which sewage sludge and the compost thereof is utilised, the minimum number of monitoring observation sites and procedures for taking of samples is specified in Annex 16 of these Regulations.

94. In a laboratory accredited for the specification of the relevant indicators the following shall be determined in the average samples of environmental components taken at monitoring observation sites.

94.1. mass concentration of heavy metals in soil surface layer of 25 cm– cadmium (Cd), chrome (Cr), copper (Cu), mercury (Hg), nickel (Ni), lead (Pb) and zinc (Zn) utilising the methods referred to in Annex 7 of these Regulations;
94.2. mass concentration of heavy metals in basic production of cultivated plants – cadmium (Cd), chrome (Cr), copper (Cu), mercury (Hg), nickel (Ni), lead (Pb) and zinc (Zn), as well as arsenic (As) - utilising the methods referred to in Annex 17 of these Regulations; and
94.3. mass concentration of drainage waters or biogenic substances of ground waters – nitrogen (N, N-NO3) and phosphorus (P, P-PO4) – utilising the methods referred to in Annex 17 of these Regulations.

95. The Latvian Environment Agency shall administer the methodology for the environmental monitoring of the utilisation of sewage sludge and the compost thereof, compile and evaluate information and compile it in the relevant database.

X. Records of Produced Mass, Quality and Utilisation of Sewage Sludge

96. The producer of sewage sludge shall maintain records of the mass, quality and utilisation of each batch of sewage sludge and enter the relevant data in a register that has been specially drawn up.

97. The register shall contain individual record sheets in which data shall be entered regarding:

97.1. the mass, quality and utilisation of each batch of sewage sludge produced in the accounting year in conformity with Annex 18 of these Regulations; and
97.2. the utilisation (burial) of sewage sludge produced in previous years in the accounting year in conformity with Annex 19 of these Regulations.

98. The register shall be kept for not less than ten years following completion thereof.

99. In conformity with data entered in the register the producer of sewage sludge shall prepare and submit to the regional environmental board a summary regarding:

99.1. the mass, quality and utilisation or burial of sewage sludge produced during the accounting year;
99.2. the mass of dry matter of treated or non-treated sewage sludge at the end of the accounting year, as well as the type of sewage sludge treatment;
99.3. the mass of dry matter of the fifth class sewage sludge produced during the accounting year;
99.4. the utilisation or burial of the mass of sewage sludge in the accounting year that was produced but not utilised or buried in previous years, as well as the remainder thereof at the end of the accounting year; and
99.5. the results of environmental monitoring of the utilisation of sewage sludge and the compost thereof.

100. Regional environmental boards shall prepare the data summary referred to in Paragraph 99 of these Regulations and submit it to the Latvian Environment Agency for the collation of information.

XI. Control

101. The Ministry of Environmental Protection and Regional Development shall perform the supervision and control of the storage and utilisation (burial) of sewage sludge and the compost thereof in the area of compliance with the requirements of environmental protection.

XII. Closing Provision

102. Cabinet Regulation No. 316 of 9 September 1997, Regulations On Utilisation of Sewage Sludge for Soil Fertilisation and Improvement of Territories (*Latvijas Vēstnesis*, 1997, No. 225; 2002, No. 32) is repealed.

Prime Minister A. Bērziņš

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 1
Cabinet Regulation No. 365
20 August 2002

Procedures for Formation of Average Sample of Sewage Sludge in Treatment Plants

No.	Load of sewage treatment plants HE (human equivalent)	Number of average samples per year	Time period for the formation of average sample (in months)	regularity of the taking of individual samples	Number of samples to be tested per year		
					heavy metals	agrochemical indicators	contents of dry matter**
1	<2000	1	12	twice a month	1*	1	2
2	2001-5000	1	12	twice a month	1*	1	4
3	5001-10000	2	6	three times a month	2	1	6
4	100001-50000	3	4	once a month	3	2	12
5	50001-100000	4	3	every third day	4	3	24
6	>100000	12	1	every day	12	4	52

Notes.
* If treatment plants treat only municipal sewage, the mass concentration of heavy metals shall not be determined.
** The dry matter contents in individual samples shall be determined immediately following the collection thereof.

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 2
Cabinet Regulation No. 365
20 August 2002

Quality Indicators and Testing Methods to be determined in Average Sample of Sewage Sludge and Its Compost Batch

Table 1

No.	Heavy metals	Methods*	
		for the preparation of samples	for testing
1	Cadmium (Cd)	LVS ISO 11466	LVS ISO 11047
2	Chrome (Cr)	LVS ISO 11466	LVS ISO 11047
3	Copper (Cu)	LVS ISO 11466	LVS ISO 11047
4	Mercury (Hg)	LVS 346	LVS 346
5	Nickel (Ni)	LVS ISO 11466	LVS ISO 11047
6	Lead (Pb)	LVS ISO 11466	LVS ISO 11047
7	Zinc (Zn)	LVS ISO 11466	LVS ISO 11047

Note.
* Other atomic absorption spectrophotometry methods may also be utilised the detecting limits of which are not higher than Cd - 1 mg/kg, Cr - 12 mg/kg, Cu - 5 mg/kg, Ni - 12 mg/kg, Pb - 15 mg/kg, Hg – 0.2 mg/kg and Zn - 10 mg/kg.

Table 2

No.	Agrochemical indicators	Testing methods
1	Environment reaction (pHkcl)	LVS EN
2	Organic substances in dry matter (%)	LVS EN
3	Nitrogen (N) in dry matter (g/kg)	LVS EN
4	Phosphorus (P) in dry matter (g/kg)	LVS 398
5	Dry matter (%)	LVS EN

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 3
Cabinet Regulation No. 365
20 August 2002

Sewage Sludge Quality Certificate

Batch No. _____

_____ _____

(place) (date)

Producer of sewage sludge _____

(name)

Registration number of undertaking (company) _____

Number and date of issue of permit to use water _____

_____

(regional environmental board which issued the permit to use water)

Beginning of sewage sludge batch accumulation period _____

(date)

end _____

(date)

Mass of the batch of sewage sludge (tons) – naturally wet _____

dry matter _____

Place of storage of sewage sludge at the moment of drawing up the quality certificate

_____

(name)

Sewage sludge quality indicators

Table 1

No.	Agrochemical indicators	Test results
1.	Environment reaction (pHkcl)	
2.	Organic substances in dry matter (%)	
3.	Nitrogen (N) in dry matter (g/kg)	
4.	Phosphorus (P) in dry matter (g/kg)	
5.	Dry matter (%)	

Tested in _____ laboratory

for the year 200__ _____ Test report No. _____

Table 2

	Heavy materials	Contents in dry matter (mg/kg)
1.	Cadmium (Cd)	
2.	Chrome (Cr)	
3.	Copper (Cu)	
4.	Mercury (Hg)	
5.	Nickel (Ni)	
6.	Lead (Pb)	
7.	Zinc (Zn)	

Tested in _____ laboratory

for the year 200__ _____ Test report No. _____

Class of sewage sludge _____

(in words)

Producer of sewage sludge _____

(signature and full name of official)

Minister for Environmental Protection and Regional Development V. Makarovs

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Annex 4
Cabinet Regulation No. 365
20 August 2002

Sewage Sludge Compost Quality Certificate
Batch No. _____

_____ _____

(place) (date)

Producer of sewage sludge compost _____

(name)

Registration number of undertaking (company) _____

Components of sewage sludge compost: _____

sewage sludge _____

(producer, batch number)

additional materials _____

ratio of sewage sludge and additional materials _____

Beginning of the preparation of sewage sludge compost _____

(date)

end _____

(date)

Mass of the batch of sewage sludge compost (tons) – naturally wet _____

dry matter _____

Place of storage of sewage sludge compost at the moment of drawing up the quality certificate_____

(name)

Sewage sludge compost quality indicators

Table 1

No.	Agrochemical indicators	Test results
1.	Environment reaction (pHkcl)	
2.	Organic substances in dry matter (%)	
3.	Nitrogen (N) in dry matter (g/kg)	
4.	Phosphorus (P) in dry matter (g/kg)	
5.	Dry matter (%)	

Tested in ———————————————————————— laboratory

for the year 200__ _____ Test report No. _____

Table 2

	Heavy materials	Contents in dry matter (mg/kg)
1.	Cadmium (Cd)	
2.	Chrome (Cr)	
3.	Copper (Cu)	
4.	Mercury (Hg)	
5.	Nickel (Ni)	
6.	Lead (Pb)	
7.	Zinc (Zn)	

Tested ——————————————————————————— laboratory in

for the year 200__ _____ Test report No. _____

Class of sewage sludge _____

(in words)

Producer of sewage sludge _____

(signature and full name of official)

Minister for Environmental Protection and Regional Development V. Makarovs

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Annex 5
Cabinet Regulation No. 365
20 August 2002

Register of Quality Certificates of Sewage Sludge and Compost Batches Thereof and Opinions for Utilisation (Burial) of Sewage Sludge and Composts Thereof

Producer of sewage sludge and the compost thereof _____

_____

(name and registration number of undertaking (company)

Number of permit to use water* _____

Date of issue of permit to use water* _____

_____

(regional environmental board which issued a permit to use water*)

Register commenced _____

(date)

Register completed _____

(date)

I certify the accuracy of entries in the Register _____

(signature and full name)

name of document	Serial number of sewage sludge and the compost thereof	Date of drawing up of document	Recipients of document copies		
			legal or natural person	address	signature:
1	2	3	4	5	6

Note.
*** Not to be completed by the producer of sewage sludge compost.**

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 6
Cabinet Regulation No. 365
20 August 2002

Classification of Sewage Sludge and the Compost thereof

Class*	Mass concentration of heavy metals in dry matter (mg/kg)						
	Cd	Cr	Cu	Hg	Ni	Pb	Zn
I.	£ 2.0	£ 100	£ 400	£ 3.0	£ 50	£ 150	£ 800
II.	2.1-5.0	101-250	401-500	3.1-5.0	51-100	151-250	801-1500
III	5.1-7.0	251-400	501-600	5.1-7.0	101-150	251-350	1501-2200
IV	7.1-10	401-600	601-800	7.1-10	151-200	351-500	2201-2500
V	>10	>600	>800	>10	>200	>500	>2500

Note.
*** If the mass concentration of only one heavy metal exceeds the relevant indicator of the highest class by no more than 30%, such sewage sludge and the compost thereof shall be included in the highest class.**

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 7
Cabinet Regulation No. 365
20 August 2002

Indicators to be Determined in Average Sample of Soil Surface Layer and Testing Methods in Agricultural Areas prior to Cultivation of Sewage Sludge and the compost thereof

Table 1

No.	Heavy metals	Methods*	
		for preparation of samples	for testing

1.	Cadmium (Cd)	LVS ISO 11466	LVS ISO 11047
2.	Chrome (Cr)	LVS ISO 11466	LVS ISO 11047
3.	Copper (Cu)	LVS ISO 11466	LVS ISO 11047
4.	Mercury (Hg)	LVS 346	LVS 346
5.	Nickel (Ni)	LVS ISO 11466	LVS ISO 11047
6.	Lead (Pb)	LVS ISO 11466	LVS ISO 11047
7.	Zinc (Zn)	LVS ISO 11466	LVS ISO 11047

Note.
***Other atomic absorption spectrophotometry methods may also be utilised the limit values of analysis methods of which are not higher than Cd – 0.10 mg/kg, Cr – 1.0 mg/kg, Cu – 1.5 mg/kg, Hg – 0.10 mg/kg, Ni – 2.0 mg/kg, Pb – 3.5 mg/kg un Zn – 5.0 mg/kg.**

Table 2

No.	Agrochemical indicators	Methods
1.	Environment reaction (pHkcl)	LVS ISO 10390
2.	Organic substances (%)	LV ST ZM 80-97
3.	Accessible phosphorus (P) (g/kg)	LV ST ZM 82-97
4.	Dry matter (%)	LVS ISO 11465

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 8
Cabinet Regulation No. 365
20 August 2002

Mass Concentration of Heavy Metals Limiting Cultivation of Sewage Sludge and the Compost thereof in Soil Surface Layer (mg/kg)

No.	Metals	pHkcl 5-6		pHkcl 6,1-7		pHkcl >7	
		sand, sandy loam	loamy soil, loam	sand, sandy loam	loamy soil, loam	sand, sandy loam	loamy soil, loam
1.	Cadmium (Cd)	0.50	0.60	0.60	0.70	0.80	0.90
2.	Chrome (Cr)	40	50	60	70	80	90
3.	Copper (Cu)	15	25	35	50	55	70
4.	Mercury (Hg)	0.10	0.20	0.25	0.35	0.40	0.50
5.	Nickel (Ni)	15	25	35	50	60	70
6.	Lead (Pb)	20	25	25	30	35	40
7.	Zinc (Zn)	50	65	70	80	90	100

Note.

If the contents of organic substances in the soil surface layer (25 cm) exceeds 5%, the indicators of loamy soil and loam granulometric composition of the relevant group of soil reaction shall be utilised.

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 9
Cabinet Regulation No. 365
20 August 2002

Limit Mass Concentration of Heavy Metals in Sewage Sludge and the compost thereof Intended for Fertilisation of Soil and Recovery or Burial in Municipal Waste Landfill Sites and Dumps

No.	Heavy metals	Mass concentration in dry matter (mg/kg)
1.	Cadmium (Cd)	10
2.	Chrome (Cr)	600
3.	Copper (Cu)	800
4.	Mercury (Hg)	10
5.	Nickel (Ni)	200
6.	Lead (Pb)	500
7.	zinc (Zn)	2500

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 10
Cabinet Regulation No. 365
20 August 2002

Limit Values of Annual Emission of Heavy Metals in Agricultural Land

No.	Heavy metals	On average for a period of seven years (g/ha per year)*	
		sand, sandy loam	loamy soil, loam
1.	Cadmium (Cd)	30	35
2.	Chrome (Cr)	600	700
3.	Copper (Cu)	1000	1200
4.	Mercury (Hg)	8	10
5.	Nickel (Ni)	250	300
6.	Lead (Pb)	300	350
7.	Zinc (Zn)	5000	6000

Note.

*** If the contents of organic substances in the sand and sandy loam surface layer (25 cm) exceeds 5%, emission limit values of loamy soil and loam granulometric composition group may be utilised.**

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 11
Cabinet Regulation No. 365
20 August 2002

Annual Emission Limit Values of Dry Matter of Sewage Sludge and the compost thereof, Total Nitrogen and Total Phosphorus in Agricultural Land

1. The annual emission limit value of dry matter of sewage sludge and the compost thereof shall be 2 t/ha per year.

2. If the mass concentration of total nitrogen (N) in dry matter of sewage sludge and the compost thereof is less than 3 g/kg and the mass concentration of total phosphorus (P) is less than 20 g/kg, the annual emission limit value of dry matter referred to in Paragraph 1 of this Annex may be increased by 30%.

3. The annual emission limit value of total nitrogen (N) shall be 100 kg/ha per year.

4. Annual emission limit values of total phosphorus (P) shall be as follows:

	Mass concentration of accessible phosphorus (P) in soil surface (25 cm) layer (mg/kg)	**Emission limit value (kg/ha per year)**
4.1.	<43	40
4.2.	>43	30

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 12
Cabinet Regulation No. 365
20 August 2002

Opinion No. _____

regarding utilisation of sewage sludge _____

(type of utilisation)

_____ _____

(place) (date)

_____

(name of institution)

1. Producer of sewage sludge _____

(sewage treatment plant, undertaking (company))

_____

(position, name, surname)

2. User of sewage sludge _____

(holding, undertaking (company), local government)

_____

(address)

_____

(position, name, surname)

3. Sewage sludge batch _____ , _____

(batch number) (class in words)

_____ permitted to utilise for _____

is/is not (purpose)

4. In a land parcel identified by the user of sewage sludge in the area of _____ ha indicators

of soil characteristics _____ with the requirements on utilisation

(comply/do not comply)

of sewage sludge for _____

(purpose)

5. Sewage sludge will be cultivated for the _____ time.

(in words)

6. Maximum portion of dry matter of sewage sludge for cultivation in the specified area is ____ t/ha.

7. The content of dry matter of sewage sludge prior to cultivation* is _____ %. The maximum portion for cultivation of naturally wet sewage sludge is _____ t/ha.

8. Repeat cultivation of sewage sludge in the specified area is permitted following

_____ years.

(in words)

Responsible official _____
(signature and full name)

Note.
***Content of dry matter shall be determined, the portion shall be calculated and the relevant entry shall be made within a time period of 30 days prior to the cultivation of sewage sludge.**

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 13
Cabinet Regulation No. 365
20 August 2002

Opinion No. _____

regarding utilisation of sewage sludge compost _____

(type of utilisation)

_____ _____

(place) (date)

_____

(name of institution)

1. Producer of sewage sludge compost _____

(natural or legal person)

_____

_____

(position, name, surname)

2. User of sewage sludge compost _____

(holding, undertaking (company), local government)

_____

(address)

_____

(position, name, surname)

3. Sewage sludge compost batch _____ , _____

(batch number) (class in words)

_____ permitted to be utilised for _____

is/is not (purpose)

4. In a land parcel identified by the user of sewage sludge compost in the area of _____ ha indicators of _____

soil characteristics _____ with the requirements regarding the

(comply/do not comply)

utilisation of sewage sludge for _____

(purpose)

5. Sewage sludge compost will be cultivated for the _____ time.

(in words)

6. Maximum permissible portion of dry matter of sewage sludge compost for cultivation in the specified area is ____ t/ha.

7. The content of dry matter of sewage sludge compost prior to cultivation* is _____%. The maximum permissible portion for cultivation of naturally wet sewage sludge compost is _____t/ha.

8. Repeat cultivation of sewage sludge compost in the specified area is permissible

following_____ years.

(in words)

Responsible official _____

(signature and full name)

Note.

***Content of dry matter shall be determined, the portion shall be calculated and the relevant entry shall be made within a time period of 30 days prior to the cultivation of sewage sludge compost.**

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 14
Cabinet Regulation No. 365
20 August 2002

Limiting Number of Bacteria *Salmonella spp*. and Testing Methods for the compost of Sewage Sludge to be Utilised in Greening of Territories

Parameter to be determined	Testing methods	Cultivation limit number in 10 grams of dry matter of compost
Salmonella spp.	LVS ISO 6340:1995 APHA 912 A-C, 1985	<100 VIS*

Note.
Maximum number.

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 15
Cabinet Regulation No. 365
20 August 2002

Limit Proportions of Dry Matter of Sewage Sludge and the compost thereof for Recovery of Degraded Areas (t/ha)

Sludge class	Gravel, sand, sandy loam	Loamy soil, loam
I	250	350
II.	140	200
III	90	130
IV	60	90

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 16
Cabinet Regulation No. 365
20 August 2002

Minimum Number of Observation Sites for Environmental Monitoring of Utilisation of Sewage Sludge and the compost thereof, and Procedures for Taking Samples

1. Minimum number of observation sites

	Area fertilised with sewage sludge and the compost thereof in a year (ha)	Minimum number of observations
1.1.	30-100	1
1.2.	101-200	2
1.3.	>200	3

2. Procedures for taking of samples

	Environmental components	Time period of taking of samples	Minimum number of samples in a year	
			individual	average
2.1.	soil	following harvesting	25	1
2.2.	basic production of cultivated plants	phase of commercial readiness	25	1
2.3.	drainage waters or ground waters	during a period of drainage operation	6	2

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 17
Cabinet Regulation No. 365
20 August 2002

Testing Methods of Indicators to be Determined in Basic Production of Cultivated Plants, Drainage Waters or Ground Waters

1. For the determination of mass concentration of heavy metals the mineralization of samples of cultivated plant basic production shall be performed by aqua regia. Atomic spectrophotometry methods shall be utilised for testing the detection limits of which are not higher than Cd-0.02 mg/kg, Cu – 0.3 mg/kg, Hg – 0.01 mg/kg, Pb – 0.1 mg/kg, Zn – 0.6 mg/kg and As – 0.01 mg/kg.

2. Biogenic substances in drainage waters or ground waters

	Parameters	Methods
2.1.	nitrogen:	
2.1.1.	N total	LVS 340
2.1.2.	$N\text{-}NO_3$	LVS 339
2.2.	phosphorus:	
2.2.1.	P total	LVS EN 1189
2.2.2.	$P\text{-}PO_4$	LVS EN 1189

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 18
Cabinet Regulation No. 365
20 August 2002

Mass, Quality and Utilisation (Burial, Placement) of Sewage Sludge Batch No. _____ Produced in an Accounting Year

Beginning of the accumulation period of the batch of sewage sludge ————————————

(date)

end ————————————

(date)

Table 1

Mass of sewage sludge

No.	Naturally wet (t)	Average content of dry matter of naturally wet sludge (%)	Dry matter (t)
1	2	3	4

Table 2

Quality of sewage sludge

No.	Parameters and units of measurements	Mass concentration of parameters in dry matter	Sample testing laboratory	Methodology of sample testing	Report number of sample testing	Date of issue of sample testing report
1	2	3	4	5	6	7
1.	Reaction (pHkcl)					
2.	Organic substances, %					
3.	Nitrogen (N) g/kg					
4.	Phosphorus (P) g/kg					
5.	Cadmium (Cd) mg/kg					
6.	Chromium (Cr) mg/kg					
7.	Copper (Cu) mg/kg					
8.	Mercury (Hg), mg/kg					
9.	Nickel (Ni) mg/kg					
10.	Lead (Pb) mg/kg					
11.	Zinc (Zn) mg/kg					

Table 3

Utilisation (burial) of sewage sludge

No.	Type of utilisation	Content of dry matter prior to utilisation of sludge	Sludge mass utilised (t)		User of sewage sludge (receiver)	
			naturally wet	dry matter	natural or legal person	address
1	2	3	4	5	6	7
1.	In agriculture for soil fertilisation					
2.	For recovery of degraded areas					
3.	Buried in waste dumps					
4.	In temporary storage of sludge producer					
5.	For the composting					

6.	Other					

Minister for Environmental
Protection and Regional Development V. Makarovs

Annex 19
Cabinet Regulation No. 365
20 August 2002

Utilisation (Burial) of Sewage Sludge Produced in Previous Years in Accounting Year

No.	Type of utilisation	Batch number.	Batch accumulation period	Sludge mass utilised (buried)(t)		User of sewage sludge (receiver)	
				naturally wet	dry matter	natural or legal person	address
1	2	3	4	5	6	7	8
1.	In agriculture for soil fertilisation						
2.	For recovery of degraded areas						
3.	Buried in waste dumps						
4.	For greening						
5.	For the composting						
6.	Other						
7.	In temporary storage of sludge producer						

Minister for Environmental
Protection and Regional Development V. Makarovs