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If a whole or part of a paragraph has been amended, the date of the amending regulation appears in square brackets at the end of the paragraph. If a whole paragraph or sub-paragraph has been deleted, the date of the deletion appears in square brackets beside the deleted paragraph or sub-paragraph.

Republic of Latvia

Cabinet
Regulation No. 409
Adopted 12 June 2012

Regulation Regarding Environmental Protection Requirements for Service Stations, Oil Terminals and Tank Containers

Issued pursuant to
Section 11, Paragraph two, Clause 9 of the Law On Pollution

I. General Provisions

1. This Regulation prescribes the environmental protection requirements laid down for the operation of service stations, oil terminals and tank containers.

2. Terms used in this Regulation:

2.1. petrol throughput – largest total annual quantity of petrol loaded from an oil terminal or a service station into tank containers (Stage I petrol vapour recovery systems) during the three preceding years or the total annual quantity of petrol loaded from tank containers into a service station (Stage II petrol vapour recovery systems);

2.2. petrol vapour – any gaseous compound which evaporates from petrol;

2.3. intermediate storage of petrol vapour – intermediate storage of petrol vapour, which is intended for further transfer and recovery, in fixed roof tanks at an oil terminal; Transfer of petrol vapour from one tank to another at the same oil terminal or service station shall not constitute as intermediate storage of vapour;

2.4. petrol vapour recovery unit – equipment for the recovery of petrol from petrol vapour (including petrol vapour from any buffer reservoir systems at an oil terminal);

2.5. Stage I petrol vapour recovery system – a unit which recovers the petrol vapour displaced during the filling of a tank at a service station and transfers such vapour to a tank container used to deliver petrol vapour to an oil terminal for intermediate storage, recovery or incineration;

2.6. Stage II petrol vapour recovery system – a unit which recovers the petrol vapour displaced from the fuel tank of a motor vehicle during refuelling at a service station and transfers such vapour to a tank of the service station or back to the petrol dispenser for resale;

2.7. petrol vapour capture efficiency – the amount of petrol vapour (per cent) captured by the Stage II petrol vapour recovery system compared to the amount of petrol vapour that would otherwise be emitted to the atmosphere in the absence of such a system;

2.8. petrol – within the meaning of this Regulation it shall mean any petroleum derivative, with or without additives, having a reid vapour pressure of 27.6 kilopascals or more, which is intended for use as a fuel for motor vehicles, except liquefied petroleum gas (LPG);

2.9. working area – a place at a service station or oil terminal where activities characteristic to service stations or oil terminals are performed, for example, the filling of tank containers, fuel tanks of motor vehicles and portable fuel tanks with fuel, and the technical maintenance of motor vehicles;

2.10. fuel – within the meaning of this Regulation it shall mean petrol and diesel fuel (including blends with biofuel) used for the powering of positive-ignition and compression-ignition engines;

2.11. service station – any installation where fuel is dispensed to motor vehicle fuel tanks from stationary storage tanks;

2.12. oil terminal – any facility which is used for the storage and loading of fuel into tank containers, rail tankers, or vessels, including all storage and loading installations on the site of the facility;

2.13. tank container – any tank transported by road, rail or waterways and used for the transportation of fuel from one oil terminal to another or from an oil terminal to a service station;

2.14. anti-seepage cover – an overlay (cover) for the protection of soil and groundwater from the leakage of polluting substances;

2.15. tank – stationary fuel storage facility located on the surface, underground or on a floating structure at a service station or an oil terminal;

2.16. vapour/petrol ratio – the ratio between the volume of petrol vapour passing through the Stage II petrol vapour recovery system and the volume of petrol dispensed at atmospheric in accordance with the atmospheric pressure;

2.17. loading installation – any facility at a service station or oil terminal by means of which fuel is loaded into tank containers or fuel tanks of motor vehicles, or containers especially intended for such purpose. At an oil terminal loading installations for road tankers are one or several structures at which petrol can be loaded on to a single road tanker at any one time.

3. This Regulation shall not apply to the service stations or separate loading installations at which the biofuel, which is not blended with petrol or diesel fuel, is being loaded or stored.

II. Protection of Groundwater of Service Stations and Oil Terminals

4. When drawing up a building design of a service station or an oil terminal the operator of such service station or oil terminal (hereinafter – the operator) shall ensure the investigation of groundwater and soil by assessing the initial pollution against the quality standards of total petroleum hydrocarbons (C_{10}–C_{40} index of hydrocarbons), benzene, toluene, ethylbenzene and xylenes on the basis of criteria laid down in laws and regulations regarding the quality standards of soil and ground and regarding the quality of surface waters and groundwater. Report on the initial pollution shall be submitted by the operator to the State Environmental Service. The description of the groundwater observation system established on the basis of the results of groundwater investigation shall be included in the report.

5. The operator shall ensure the establishment of a groundwater observation system in accordance with Annex 1 to this Regulations and within three months after establishment of a borehole network shall submit to the State Environmental Service the technical passport of the borehole network for groundwater observation (Annex 2).

6. When performing groundwater observation during the operation of the service station or oil terminal in accordance with the characteristics of the groundwater observation system and requirements referred to in Paragraph 4 of and Annex 1 to this Regulation, the operator shall ensure measurements of the groundwater level and thickness of the floating petroleum

product layer, determine the total concentration of petroleum hydrocarbons (C_{10}–C_{40} index of hydrocarbons), benzene, toluene, ethylbenzene and xylenes in the groundwater samples or, if a groundwater sample cannot be technically acquired, measure the concentration of volatile petroleum products (benzene, toluene, ethylbenzene and xylenes) in the air of parent material. The operator shall, by 1 March each year, submit to the State Environmental Service the results of groundwater observation in the territory of the service station or oil terminal (Annex 3) for the previous year.

7. The operator shall ensure that the groundwater observation shall be performed at least once a year. If the groundwater observation has been performed for at least two consecutive years and during such observation no floating petroleum products have been detected in accordance with the pollution criteria laid down in the laws and regulations regarding the quality of surface waters and groundwater, and the total concentration of petroleum hydrocarbons (C_{10}–C_{40} index of hydrocarbons), benzene, toluene, ethylbenzene and xylenes does not increase and does not exceed the established pollution threshold, the State Environmental Service shall, upon receipt of an application from the operator, assess the results of observations and can take a decision to reduce the frequency of groundwater observations to at least once within two years.

8. If the service station or oil terminal is being closed or tanks are relocated elsewhere, the operator shall ensure the investigation of groundwater and soil on the basis of the assessment criteria for the soil and groundwater laid down in laws and regulations regarding the quality standards of soil and ground and regarding the quality of surface water and groundwater before the liquidation of the service station or oil terminal. Report on the investigation of the pollution of groundwater and soil shall be submitted by the operator to the State Environmental Service.

9. Paragraphs 5, 6 and 7 of this Regulation and also the requirements for the investigation of groundwater and establishment of observation systems referred to in Paragraphs 4 and 8 of this Regulation shall not apply to the service stations the total capacity of surface tanks of which is 30 m^3 or less and which stores in such tanks diesel fuel for their own needs.

10. The operator can submit the documents referred to in this Regulation to the State Environmental Service in printed form or in electronic form in accordance with the laws and regulations regarding the drawing up of electronic documents.

11. To ensure the fulfilment of the requirements for the investigation of groundwater and soil and establishment of observation systems referred to in Paragraphs 4, 5, 6 and 8 of this Regulation, the operator may invite a merchant, who holds a relevant licence for the use of entrails of the earth issued by the State Environmental Service, for the performance of the abovementioned works.

12. Samples of groundwater and soil may be taken by accredited laboratories and accredited merchants. The analysis of the abovementioned samples in this field may be performed by laboratories which are accredited in the national accreditation institution in accordance with the laws and regulation regarding the evaluation, accreditation and supervision of conformity assessment institutions, or by laboratories and merchants which are accredited in another European Union member state, Turkey or in a state of the European Economic Area.
[28 June 2016]

13. If the groundwater quality analysis indicates that the concentration of pollutants exceeds the thresholds laid down in the laws and regulations regarding the quality of surface waters

and groundwater, the operator shall immediately ensure repeated analysis of the groundwater quality. If repeated analyses confirm that the concentration of pollutants exceeds the threshold value, the operator shall:

13.1. inform the State Environmental Service regarding the results of the groundwater quality analysis;

13.2. ensure the investigation of the polluted areas to identify the source of pollution and inform the State Environmental Service regarding the results of the investigation;

13.3. if the source of pollution is the activities performed at the service station or oil terminal, the operator shall ensure the elimination of pollution and remediation of polluted sites.

14. The operator shall immediately notify the State Environmental Service if:

14.1. water has appeared in a tank due to fuel leakage;

14.2. floating petroleum products have appeared in the groundwater observation boreholes;

14.3. a petroleum product film has appeared in the groundwater;

14.4. leakage of fuel from a tank or pipeline has been detected.

15. After detection of fuel leakage the operator shall ensure:

15.1. suspension of the operation of the damaged tanks and pipelines until the cause of the leakage is discovered and eliminated;

15.2. emptying of the damaged tanks and pipelines in order to prevent further leakage of petroleum products;

15.3. the inspection of the leak-tightness and durability of tanks and pipelines in accordance with the laws and regulations regarding the technological supervision of the technological equipment of service stations and regarding the technical supervision of reservoirs for the storage of flammable, explosive and harmful substances. If non-compliance with the requirements of the abovementioned laws and regulations is not established in the inspection, the operation of the relevant tanks and pipelines may be continued;

15.4. investigation of groundwater if it the inspection has established that the leak-tightness and durability of the relevant tanks and pipelines is not sufficient or if the leak-tightness and durability of the tanks and pipelines is sufficient, but the environment is polluted with petroleum products;

15.5. performance of the measures necessary to eliminate further leakage of fuel and release thereof into the environment if the source of the fuel leakage is identified during the investigation of groundwater. The operator shall immediately determine the spread of pollution in the groundwater in order to assess the harm caused to the environment;

15.6. further operation of tanks and pipelines if the concentration of pollutants established in the assessment of groundwater is lower than the threshold value laid down in accordance with the regulations regarding the quality of surface waters and groundwater.

16. If the fuel leakage has caused or may cause harm to the environment, the emergency and rehabilitation measures shall be performed in accordance with the laws and regulations regarding the preventative and rehabilitation measures and the procedures for the evaluation of environmental damage and calculation of costs of preventative, emergency and rehabilitation measures.

III. Anti-seepage Cover

17. Reinforced vacuum concrete or reinforced hydro concrete with expansion joints which are filled with hydro mastic, polymeric materials, asphalt concrete or other materials shall be used

for the laying out of the anti-seepage cover in one or more layers by ensuring that the filtration coefficient does not exceed 10^{-9} m/s.

18. To protect soil and groundwater from fuel leakage the operator shall ensure:

18.1. covering of the working area around fuel loading installations and tank loading areas with a water and fuel anti-seepage cover in accordance with the requirements referred to in Annex 4 to this Regulation, and also discharge of water from the area covered with the anti-seepage cover to petroleum product treatment devices;

18.2. use of methods (systems) for the protection against fuel leakage and detection thereof for surface and underground tanks and pipelines in accordance with the requirements referred to in Annex 5 to this Regulation.

19. The compliance of the filtration coefficient of the anti-seepage material with the requirements of this Regulation shall be certified with a testing report or a relevant justification of the manufacturer regarding the compliance of coefficient parameters. Testing may be performed by laboratories which are accredited in the national accreditation institution in accordance with the laws and regulations regarding the evaluation, accreditation and supervision of conformity assessment institutions, or by laboratories which are accredited in another European Union member state, Turkey or in a state of the European Economic Area.
[28 June 2016]

IV. Stage I and Stage II Petrol Vapour Recovery Systems at Service Stations

20. If the actual or intended petrol throughput at a service station:

20.1. is greater than 500 m^3 per annum, the service station shall be equipped with a Stage II petrol vapour recovery system;

20.2. is greater than 100 m^3 per annum and it is situated under permanent living quarters or working areas, the service station shall be equipped with a Stage II petrol vapour recovery system;

20.3. is greater than 100 m^3 per annum, the service station shall be equipped with a Stage I petrol vapour recovery system;

21. The operator shall ensure the establishment and operation of Stage I and Stage II petrol vapour recovery and control systems in accordance with the requirements referred to in Annex 6 to this Regulation and the instructions of the manufacturer.

22. The Stage I and Stage II petrol vapour recovery systems shall comply with the following conditions:

22.1. total losses of fuel in a Stage I petrol vapour recovery system resulting from the loading of tanks of a service station shall not exceed 0.01 weight percentage of petrol throughput in one year;

22.2. the petrol vapour capture efficiency of a Stage II petrol vapour recovery system shall be 85 % or more. The Stage II petrol vapour recovery systems installed after 12 May 2016 have been certified by the manufacturer in accordance with the standard LVS EN 16321-1:2014 “Petrol vapour recovery during refuelling of motor vehicles at service stations. Part 1: Test methods for the type approval efficiency assessment of petrol vapour recovery systems”. The ratio of the vapour and petrol recovered and returned back to a storage container shall be in the range of 0.9–1.05.
[28 June 2016]

23. The operator shall ensure the efficiency assessment of a Stage II petrol vapour recovery system in accordance with the standard LVS EN 16321-2:2014 “Petrol vapour recovery

during refuelling of motor vehicles at service stations. Part 2: Test methods for verification of vapour recovery systems at service stations" by fulfilling the following conditions:

23.1. testing shall be carried out by accredited conformity assessment institutions which are accredited in the national accreditation institution in accordance with the laws and regulations regarding the evaluation, accreditation and supervision of conformity assessment institutions, or by laboratories which are accredited in another European Union member state, Turkey or in a state of the European Economic Area;

23.2. the date, results and name of the relevant conformity assessment institution shall be entered into the maintenance log of the service station;

23.3. if deficiencies have been detected in the operational verification of the relevant system, the operator shall implement the measures necessary for the elimination thereof and indicate such measures in the maintenance log of the service station;

23.4. if automatic monitoring systems have been installed for the control of a Stage II petrol vapour recovery system, the petrol vapour capture efficiency shall be tested once within three years. Such automatic monitoring system identifies deficiencies in the operation of a Stage II petrol vapour recovery system and automatic monitoring system, indicates such deficiencies for the operator and automatically stops the flow of petrol from the damaged petrol dispenser if the identified deficiencies have not been eliminated within seven days.
[28 June 2016]

24. At the service stations in which a Stage II petrol vapour recovery system has been installed the operator shall ensure placement of a plate, label or other type of announcement on or close to the fuel loading installation which informs consumers that this filling station is equipped with a Stage II petrol vapour recovery system.

25. The requirements for Stage II petrol vapour recovery and control systems referred to in Paragraph 20, 21, 22, 23 and 24 of this Regulation shall not apply to the service stations exclusively used in association with the construction and delivery of new motor vehicles.

V. Capture, Recovery and Storage of Petrol Vapour at Oil Terminals and during the Transportation of Fuel from a Service Stations to an Oil Terminal

26. Requirements of this Section shall apply to oil terminals and tank containers intended for the storage, distribution or transporting of fuel within the Latvian territory and domestic internal waters.

27. The operator shall ensure:

27.1. storage of petrol and petrol vapour and compliance of petrol vapour storage tanks with the requirements referred to in Annex 7 to this Regulation, and also that the losses of petrol during the storage and loading of the tanks of oil terminal would not exceed 0.01 weight percentage of petrol throughput in one year;

27.2. compliance of petrol vapour recovery systems and units with the requirements referred to in Annex 8 to this Regulation, and also that the losses of petrol during the loading and emptying of tank containers at an oil terminal would not exceed 0.005 weight percentage of petrol throughput in one year;

28. After coordination with the State Environmental Service other technical solutions may be used to reduce the losses of petrol referred to in Sub-paragraphs 27.1 and 27.2 of this Regulation if they comply with the requirements referred to in Annex 7 or 8 to this Regulation or are more effective.

29. If there is a loading installation for road tankers at an oil terminal, the operator shall ensure that, when pumping petrol, it shall be operated by means of such gantry which conforms to the technical requirements for such road tankers that are bottom-loaded (Annex 9).

30. At oil terminals where ships are loaded for transportation of petrol from the oil terminal to another oil terminal or service station the petrol vapour recovery unit may be replaced by a petrol vapour incineration plant, if the recovery of petrol vapour is dangerous or technically impossible due to petrol vapour return.

31. If the petrol throughput of an oil terminal is less than 25 000 tons per year, the immediate recovery of petrol vapour at the oil terminal may be replaced by intermediate storage of petrol vapour if the technical solutions for vapour recovery have been coordinated with the State Environmental Service.

32. If the petrol throughput of an oil terminal in operation is less than 10 000 tons per year, the operator may, upon coordination with the State Environmental Service, no apply the requirements referred to in Sub-paragraph 27.2 and Paragraph 29 of this Regulation, if the restriction of petrol vapour leakage ensures such air quality which complies with the requirements laid down in laws and regulations regarding ambient air quality

33. The operator of tank containers shall ensure that the petrol vapour filled into the fixed roof tanks of service stations or oil terminals for intermediate storage is returned along an leak-tight cable to the tank container which delivered the fuel.

34. The operator of tank containers shall ensure that the tank containers which deliver petrol to service stations and oil terminals are designed and operated in conformity with the requirements referred to in Annex 10 to this Regulation. Requirements of this Paragraph shall apply to the following tank containers:

34.1. road tankers, rail tankwagons and hulls of ships;

34.2. rail tankwagons and cargo hulls of ships put into operation before 1 March 2001 if they are loaded at an oil terminal which is subject to the requirements referred to in Sub-paragraph 27.2 of this Regulation;

34.3. already operational road tankers that have been transformed into bottom loaded road tankers in accordance with the requirements referred to in Annex 9 to this Regulation.

35. The operator of tank containers who carries fuel shall ensure inspection of the leak-tightness of tank containers and operation of the vacuum/pressure relief valve thereof in accordance with the requirements laid down in the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) or in the Annex of Appendix C "Regulation concerning the International Carriage of Dangerous Goods by Rail (RID)" to the Protocol of Modification of 3 June 1999 of the Convention concerning International Carriage by Rail (COTIF) of 9 May 1980, and also laws and regulations regarding procedures for technical supervision of road transport tanks intended for the carriage of dangerous goods and conformity assessment of tanks and containers intended for the carriage of dangerous goods by rail.

VI. Environmental Requirements for Service Stations intended for the Fuelling of Yachts and Other Small-size Vessels

36. Fuel loading installation, tank and equipment which ensures operation of the service station intended for the fuelling of yachts and other small-size vessels (hereinafter – the

floating service station) may be located on a floating structure that is registered in the Latvian Ship Register in accordance with the laws and regulations regarding registration of ships.

37. The operator of the floating service station shall ensure:

37.1. operation of the service station in accordance with the requirements referred to in Paragraph 11 of this Regulation;

37.2. application of methods (systems) for the protection against fuel leakage and detection thereof to tanks and pipelines located on the floating structure in accordance with the requirements referred to in Annex 5 to this Regulation;

37.3. compliance of the external and internal shell (tank) of the floating service station with the requirements of laws and regulations regarding the designing, installation and compliance assessment of reservoirs for the storage of flammable, explosive and harmful substances and also requirements of the market surveillance;

37.4. periodical inspections of operation in accordance with the relevant laws and regulations regarding the technical surveillance of hazardous equipment.

38. It is prohibited to fuel small crafts and yachts if the wave height in the relevant water body is more than one meter or the wind speed exceeds 10 m/s.

39. The operator of the floating service station shall immediately notify the State Environmental Service if water has gotten into the tank or leakage of petroleum products from the service station is detected, or, by applying the relevant method (system), leakage of fuel has been detected in the tank or pipeline.

40. After detection of fuel leakage the operator shall ensure:

40.1. suspension of the operation of the damaged tanks and pipelines until the cause of leakage is discovered and eliminated;

40.2. emptying of the damaged tanks and pipelines in order to prevent further leakage of petroleum products;

40.3. inspection of the leak-tightness and durability of tanks and pipelines in accordance with the laws and regulations regarding the technological supervision of the technological equipment of service stations and regarding the technical supervision of reservoirs for the storage of flammable, explosive and harmful substances. If non-compliance with the requirements of the abovementioned laws and regulations is not established in the inspection, the operation of the relevant tanks and pipelines may be continued;

40.4. investigation of surface waters if the inspection has found that the leak-tightness and durability of the relevant tanks and pipelines is not sufficient or if the leak-tightness and durability of the tanks and pipelines is sufficient, but the environment is polluted with petroleum products;

40.5. implementation of the measures necessary to terminate further leakage of fuel and release thereof into the environment, if the source of the petroleum product leakage has been discovered, and also measures for the elimination of petroleum product pollution.

41. If after fuel leakage more than 100 litres of petroleum products are released in the environment, the operator shall, within two weeks after detection of leakage, submit to the State Environmental Service a report on the leakage relief measures (by indicating in such report the place and time of leakage, the amount of leaked petroleum products and other information related to relief measures in such case).

42. Section II and the requirements referred to in Sub-paragraphs 45.6, 46.1, 46.2, 46.3 and 46.4 of this Regulation shall not apply to the floating service stations.

VII. Operation of Tanks and Pipelines of Service Stations and Oil Terminals

43. The operator shall ensure:

43.1. loading and operation of tanks in accordance with the requirements referred to in Paragraph 12 of this Regulation;

43.2. use only of such tanks that comply with the laws and regulations regarding the designing, installation and compliance assessment of reservoirs for the storage of flammable, explosive and harmful substances and also requirements of the market surveillance;

43.3. periodical inspections of tanks in accordance with the relevant laws and regulations regarding the technical surveillance.

44. Two weeks before transforming the tanks and pipelines in a state which makes them unfit for further use and relocation thereof the operator shall notify the State Environmental Service on the commencement of such works.

45. Four weeks after completion of the works referred to in Paragraph 44 of this Regulation the operator shall submit to the State Environmental Service a report in which the following shall be indicated:

45.1. former layout of the relocated tanks;

45.2. fuel brands stored in the tanks;

45.3. material and capacity of the tanks;

45.4. technical state of the tanks;

45.5. type and place of the liquidation of the tanks;

45.6. results of the investigation of soil or groundwater.

VIII. General Environmental Protection Requirements for the Operation of Service Stations and Oil Terminals

46. The operator shall ensure the existence and storage of the following documents:

46.1. report on the initial investigation of groundwater and soil;

46.2. results of the groundwater observation for the last five years;

46.3. results of the investigation of soil and groundwater in the following cases:

46.3.1. leakage of fuel;

46.3.2. liquidation of a service station;

46.3.3. removal of tanks;

46.3.4. liquidation of a service station and removal of tanks;

46.4. data on the application of sediment and petroleum product removal treatment in the waste water treatment plants;

46.5. plan of action if the fuel has leaked;

46.6. information on the removal of tanks and transformation thereof into unusable state.

47. The requirements regarding the groundwater referred to in Sub-paragraph 46.2 and 46.4 and also Sub-paragraph 46.3 of this Regulation shall not apply to the service stations referred to in Paragraph 9 of this Regulation.

48. The operator shall ensure the availability of the information referred to in Paragraph 46 of this Regulation to the State and local government control bodies.

IX. Closing Provisions

49. Cabinet Regulation No. 400 of 16 May 2006, Regulations Regarding Environmental Quality Requirements for Service Stations, Oil Terminals and Mobile Containers (*Latvijas Vēstnesis*, 2006, No. 98; 190, 2008, No. 61, 2009, No. 118, 146), is repealed.

50. If on the day when this Regulation comes into force an already operational service station has not been equipped with a Stage II petrol vapour recovery system, the operator shall ensure equipping thereof with the abovementioned system after reconstruction of the relevant service station if its actual or intended petrol throughput corresponds to the amount referred to in Sub-paragraph 20.1 or 20.2 of this Regulation.

51. If the petrol throughput of a service station exceeds 3 000 m^3 per year, the operator shall ensure equipping thereof with the Stage II petrol vapour recovery system not later than by 31 December 2018.

52. The operator shall ensure the compliance of the anti-seepage cover of the oil terminal or service station put into operation before 1 March 2009 with the requirements referred to in Paragraphs 17, 18 and 19 of this Regulation after the reconstruction of the relevant oil terminal or service station.

53. The requirements regarding the total petroleum hydrocarbons (C_{10}–C_{40} index of hydrocarbons) referred to in Paragraphs 4, 6 and 7 of and also Annexes 1, 2 and 3 to this Regulation shall come into force on 1. January 2014.

Informative Reference to Directives of the European Union

[28 June 2016]

The Regulation includes legal norms arising from:

1. the European Parliament and Council Directive 94/63/EC of 20 December 1994 on the control of volatile organic compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations;

2. the European Parliament and Council Directive 2009/126/EC of 21 October 2009 on Stage II petrol vapour recovery during refuelling of motor vehicles at service stations;

3. the Commission Directive 2014/99/EU of 21. October 2014 amending, for the purposes of its adaptation to technical progress, Directive 2009/126/EC on Stage II petrol vapour recovery during refuelling of motor vehicles at service stations.

Prime Minister V. Dombrovskis

Minister for Environmental Protection and Regional Development E. Sprūdžs

Annex 1
Cabinet Regulation
No. 409 of 12 June 2012

Groundwater observation system

1. At service stations or oil terminals a groundwater observation system shall be established for the identification of fuel leakage and controlling of the spread of polluted groundwater.

2. The observation borehole network consists of at least three boreholes placed in the potential migration directions of petroleum products and also by taking into account the characteristics of the groundwater flow. If the direction of the groundwater flow does not change during the year and can be precisely identified according to the existing data, the number of observation boreholes may be reduced upon coordination with the State Environmental Service.

3. The filter part of a borehole must be at least two meters long and must cross the groundwater level taking into account the seasonal fluctuation thereof. The placement of the filter part of a borehole under the groundwater level is permitted if rocks with filtration coefficient of less than 1×10^{-5} cm/s are characteristic to the fluctuation range of the groundwater level and the rocks which are embedded deeper have significantly better filtration properties. If the requirements for the placement of the filter part of a borehole are not complied with then reasoned argumentation and actual data on the filtration capabilities of rocks shall be included in the report on the establishment of borehole network.

4. After drilling the borehole shall be decanted and levelled, and the water inflow rate thereof shall be identified to check if the borehole is suitable for the taking of water samples. In order to determine the water inflow rate the water shall be pumped out of the borehole by controlling the fall of the water level or the renewal rate thereof. Such data shall be indicated in the report on the drilling of an observation borehole. Measurements of the floating petroleum product layer shall be taken not earlier than 10 days after the drilling and treatment of observation boreholes.

5. During the operation of a service station or oil terminal the groundwater level and thickness of the floating petroleum product layer shall be measured in all boreholes. Groundwater samples for the determination of the concentration of total petroleum hydrocarbons (C_{10}–C_{40} index of hydrocarbons), benzene, toluene, ethylbenzene and xylenes shall be taken from the representative boreholes on the basis of the characteristics of the groundwater flow.

6. If the borehole has a good inflow of water, before taking the groundwater sample the water shall be pumped out of the borehole until the pH and electrical conductivity has stabilised.

7. If the inflow of water in the borehole is weak, all water shall be pumped out of the borehole before taking the groundwater sample. Time period from the last water pumping to sampling shall not exceed 24 hours. The electrical conductivity and pH shall be determined during the second pumping before and after taking of the sample by indicating average values thereof in the report.

8. Groundwater samples shall not be taken from the boreholes in the following cases:

8.1. from the boreholes having a layer of floating petroleum products. Groundwater samples for the determination of the fractional composition of total petroleum hydrocarbons (C_{10}–C_{40} index of hydrocarbons), benzene, toluene, ethylbenzene and xylenes or floating oil products shall be taken only for the purpose of investigation by preventing the mixing of floating petroleum products and groundwater in the sample;

8.2. from the boreholes the inflow of water of which is very weak and in which the water level renewal rate exceeds 24 hours after the pumping out due to low filtration capabilities of rocks (filtration coefficient is lower than 1×10^{-5} cm/s).

9. If the groundwater level is deeper than 10 meters boreholes with a small diameter (bore wells) may be drilled instead of observation boreholes for the determination of the concentration of volatile petroleum products (benzene, toluene, ethylbenzene and xylenes) in the air of parent material. The filter part of the bore wells shall be places in a depth of 0,5 metres or, if necessary, deeper under the technogenic sediments. The concentration of volatile petroleum products in the air of parent material shall be determined on the spot by pumping the gas out of the bore well and ensuring that the gas in the borehole has changed at least ten times, and also by preventing the release of atmospheric air into the gas to be pumped.

10. If rocks with filtration coefficient of less than 1×10^{-5} cm/s are widespread to a depth of 10 meters and an underground drainage is installed in the service station or oil terminal, groundwater samples may be taken from the drainage system. Use of an artificial underground drainage system instead of observation boreholes shall be coordinated with the State Environmental Service, if based on the actual observation data it is proved, that the drainage system covers the whole flow of the potentially polluted groundwater.

11. If groundwater pollution with a tendency to increase is determined in two observation cycles, the source for the increase of pollution shall be identified, the existing borehole network shall be reviewed and, if necessary, additional observation boreholes shall be drilled.

12. If downward filtration of polluted groundwater is possible at the territory of the service station or oil terminal at least one additional observation borehole shall be drilled the filter part of which shall be in the deepest aquifer.

Minister for Environmental Protection and Regional Development E. Sprūdžs

Annex 2
Cabinet Regulation
No. 409 of 12 June 2012

Technical Passport of the Borehole Network for Groundwater Observation

I. Location and Ownership of the Service Station or Oil Terminal

Name and number _____

Address _____

Name of the operator (firm) _____

Registration number of the operator _____

Contact person and phone number _____

II. The Merchant – establisher of the observation borehole network

Name (firm) _____

Registration number _____

Licence number for the establishment of an observation borehole network _____

Contact person and phone number _____

III. Description of Boreholes

No.	Indicators		1. borehole	2. borehole	3. borehole	4. borehole
1.	Date of fitting					
2.	Coordinates according to LKS–92 system	X				
		Y				
3.	The absolute value of earth's surface at the place of the borehole	metres above sea level				
4.	Filter range (from–to)	meters from the land surface				

5. Material of the casing pipe:

☐polyvinyl chloride
☐steel
☐galvanized iron

6. Structure and material of the filter:

☐capron sieve
☐brass sieve
☐perforated or slotted pipe

☐other (please specify) ☐other (please specify)

7. Internal diameter of _____ mm and cementation of the casing pipe _____

(exists/absent)

8. Information on the established observation borehole network:

8.1. cross-section of boreholes in graphic or text form;

8.2. layout of the service station or oil terminal in which the potentially polluting objects (for example, fuel tanks), observation boreholes and hypsometric characteristics of groundwater levels is indicated.

IV. Data on the Soil Pollution

No.	Parameters		1. borehole	2. borehole	3. borehole	4. borehole
1.	Sampling depth (from–to)	meters from the land surface				
2.	smell of petroleum products	exists/absent				
3.	Date when the analysis was performed at laboratory					
4.	Laboratory	name				
		accreditation certificate number				
		testing report number				
5.	Total petroleum hydrocarbons (C_{10}–C_{40} index of hydrocarbons)	mg/kg				
		method of analysis				
6.	Benzene	mg/kg				
7.	Toluene	mg/kg				
8.	Ethylbenzene	mg/kg				
9.	Xylenes	mg/kg				
10.	Other soil pollution indicators	mg/kg				
		…				

V. Inspection of boreholes and the first sampling

No.	Parameters		1. borehole	2. borehole	3. borehole	4. borehole
1.	Field data on the inspection of boreholes and groundwater					
1.1.	water level before pumping	meters from the land surface				
1.2.	the depth of the surface of floating hydrocarbon layer	absent/meters from the land surface				
1.3.	borehole depth	meters from the land surface				
1.4.	date of sampling					
1.5.	type of sampling*					
1.6.	fumes and film in the water to be pumped	exists/absent				
1.7.	electrical conductivity	mS/cm				
		standard t^{o} C of the meter				
1.8.	pH level					
2.	Laboratory and results of sample testing					
2.1.	date when the analysis was performed at laboratory					
2.2.	laboratory	name				
		accreditation certificate number				
		testing report number				
2.3.	total petroleum hydrocarbons (C_{10} – C_{40} index of hydrocarbons)	µg/l				
		method of analysis				
2.4.	benzene	µg/l				
2.5.	toluene	µg/l				
2.6.	ethylbenzene	µg/l				
2.7.	xylenes	µg/l				
2.8.	other water quality parameters	mg/l				
		…				

Note.
* Types of groundwater sampling methods:
1. From a "continuous flow of water" – water is continuously pumped out with a deep water pump until the water in the borehole has changed at least three times to remove the suspended particulates from water and to stabilise the pH level and electrical conductivity thereof (for *boreholes with good inflow of water*).
2. Water is continuously pumped out with a sampler until the water in the borehole has changed at least three times to remove the suspended particulates from water and to stabilise the electrical conductivity thereof (for *boreholes with good inflow of water*).
3. The borehole is pumped out twice until it has been completely drained and the sample is taken during the third pumping out, which is performed immediately after fill-up thereof with fresh water, using a sampler or deep water pump by controlling the electrical conductivity before and after the sampling (for *boreholes with weak inflow of water*).
4. The borehole is pumped out until it has been completely drained and the sample is taken during repeated pumping, which is performed in the days following the fill-up thereof with fresh water, using a sampler or deep water pump by controlling the electrical conductivity before and after the sampling (for *boreholes with very weak inflow of water*).

VI. Additional information and assessment of the executor

1. Assessment of the groundwater pollution with petroleum products based on the laws and regulations regarding the quality of surface waters and groundwater:

☐pollution has not been detected
☐pollution not exceeding the guidance value has been detected
☐pollution exceeds the guidance value, but does not exceed the threshold value
☐pollution exceed the threshold value

2. Special features of the groundwater flow are determined by:

☐the local underground drainage
☐local ditches
☐river (lake) _____ located _____ meters from the object

3. Possibilities for pollution of artesian waters:

☐the polluted groundwater cannot filter itself in the deepest aquifers as the water level therein is higher than the groundwater level
☐the polluted groundwater cannot filter itself in the deepest aquifers as they are securely isolated with a thick layer of sediments with low permeability
☐the release of the polluted groundwater in the deepest layers is unlikely as they are relatively securely isolated with sediments with low permeability
☐the polluted groundwater is likely to be released in the deepest layers
☐pollution of artesian waters has been discovered

4. Boreholes of water supply at the service station or oil terminal or in the vicinity thereof (exists/absent) _____

5. The connection between a service station or oil terminal and the protected areas referred to in the Water Management Law or protection zones laid down in the Protection Zone Law:

☐located at a protection zone around a water-supply point _____

(name)

☐located at a surface water body protection zone

(name)

☐located at other protected area referred to in the Water Management Law

(name)

☐is not located at a protection zone of the abovementioned objects

Notes.

Passport prepared by

(given name and surname) (signature*)

The Merchant – establisher of the observation borehole network

(given name, surname of the representative) (signature*)

Place for a seal*

Note. * The document details "signature" and "place for a seal" shall not be completed if the electronic document has been prepared in accordance with the laws and regulations on the drawing up of electronic documents.

Minister for Environmental Protection and Regional Development E. Sprūdžs

Annex 3
Cabinet Regulation
No. 409 of 12 June 2012

Results of Groundwater Observation in the Territory of the Service Station or Oil Terminal for the Year _____

I. Location and Ownership of the Service Station or Oil Terminal

Name and number _____

Address _____

Name of the operator (firm) _____

Registration number of the operator _____

Contact person and phone number _____

II. Observer

Name (firm) _____

Registration number _____

Number of the licence for the performance of observations _____

Contact person and phone number _____

Note. Information on the results of observation shall be accompanied by a layout of the location of boreholes drilled at the service station or oil terminal by indicating therein also the polluting objects (for example, fuel tanks) and hydro-hypsometriof characteristics of groundwater levels.

III. Methodology of the Monitoring Cycle and Actual Data for Year _____

No.	Parameters		1. borehole	2. borehole	3. borehole	4. borehole
1.	Description of the borehole – inspection data					
1.1.	closing of the borehole (cover)	exists/absent				
1.2.	cementation of the casing pipe of the borehole	exists/absent				
1.3.	water level before pumping	meters from the land surface				
1.4.	thickness of the	thickness of the				

	floating petroleum product layer	layer of floating oil products				
1.5.	borehole depth	meters from the land surface				
1.6.	filter range	meters from the land surface				
2.	Monitoring methodology and field data on the groundwater pollution					
2.1.	date of pumping out the stale water from the borehole					
2.2.	date of sampling					
2.3.	type of sampling*					
2.4.	fumes and film in the water to be pumped	exists/absent				
2.5.	electrical conductivity	mS/cm				
		standard t^{o} C of the meter				
2.6.	pH level					
3.	Laboratory and results of sample testing					
3.1.	date when the analysis was performed at laboratory					
3.2.	laboratory	name				
		accreditation certificate number				
		testing report number				
		method of analysis				
3.3.	total petroleum hydrocarbons (C_{10}–C_{40} index of hydrocarbons)	µg/l				
3.4.	benzene	µg/l				
3.5.	toluene	µg/l				
3.6.	ethylbenzene	µg/l				
3.7.	xylenes	µg/l				
3.8.	other water quality parameters	mg/l				

Note.
* Types of groundwater sampling methods:

1. From a “continuous flow of water” – water is continuously pumped out with a deep water pump until the water in the borehole has changed at least three times to remove the suspended particulates from water and to stabilise the pH level and electrical conductivity thereof (for *boreholes with good inflow of water*).

2. Water is continuously pumped out with a sampler until the water in the borehole has changed at least three times to remove the suspended particulates from water and to stabilise the electrical conductivity thereof (for *boreholes with good inflow of water*).

3. The borehole is pumped out twice until it has been completely drained and the sample is taken during the third pumping out, which is performed immediately after fill-up thereof with fresh water, using a sampler or deep water pump by controlling the electrical conductivity before and after the sampling (for *boreholes with weak inflow of water*).

4. The borehole is pumped out until it has been completely drained and the sample is taken during repeated pumping, which is performed in the days following the fill-up thereof with fresh water, using a sampler or deep water pump by controlling the electrical conductivity before and after the sampling (for *boreholes with very weak inflow of water*).

IV. Conclusions of the Observer

1. State of the observation borehole network:

☐Number, layout and structure of the boreholes allows to determine the direction of the groundwater flow, control pollution thereof with petroleum products, taking of representative samples and measuring the thickness of the floating petroleum product layer in a reliable manner.
☐Separate boreholes structure of which does not comply with the requirements for groundwater observation must be re-drilled (structural deficiencies of boreholes must be indicated):
borehole no. _____
☐the groundwater level is located deeper than the filter range for a lengthy period (the borehole is not deep enough)
☐the groundwater level is located higher than the filter range for a lengthy period (the borehole is not long enough)
☐very weak inflow of groundwater into the borehole due to structural deficiencies (the borehole is not deep enough, long enough or wide enough)
☐the borehole has caved in or filled up, or has other significant damages that cannot be repaired
☐Additional boreholes must be drilled.
☐New observation borehole network must be established as the existing observation borehole network is not appropriate for the observation of groundwater.

2. Pollution of groundwater with petroleum products based on the laws and regulations regarding the quality of surface waters and groundwater:

☐pollution has not been detected
☐pollution not exceeding the guidance value has been occasionally observed
☐pollution not exceeding the guidance value has been regularly observed
☐pollution exceeds the guidance value with a tendency to decrease
☐pollution exceeds the guidance value with a tendency to increase
☐pollution exceeds the threshold value with a tendency to decrease
☐pollution exceeds the threshold value without a distinct tendency to decrease or increase

☐pollution exceeds the guidance value without a distinct tendency to decrease or increase ☐pollution exceeds the threshold value with a tendency to increase

3. Direction of the groundwater flow according to the observation data:

☐remained stable throughout the year when observations were made
☐was fluctuating throughout the year when observations were made
☐it is not certain due to the deficiencies of the borehole network

V. Changes in the Activity of the Object, Hydrogeological Situation and Conducting of Observations

1. Observation cycle was not conducted in year (years) _____ because _____

(reason must be stated)

2. Since _____ the service station or oil terminal has ceased its activity.

(date)

3. From _____ (date) until _____ (date) groundwater rehabilitation measures were carried out, resulting in positive changes which were observed in _____ (number) boreholes No. _____

4. From _____ (date) until _____ (date) leakage of petroleum products or emission of other types of polluting substances in the environment occurred, resulting in negative changes which were observed in _____ (number) boreholes no. _____

5. _____ (year, month) an object having an effect on the flow of groundwater has been established, – _____ (object, for example – a ditch), and changes in the groundwater level associated therewith have been observed in _____ (number) boreholes no. _____

6. From _____ (date) until _____ (date) were established _____ (number) additional observation boreholes no._____

7. _____ (date) observation boreholes No._____ were re-drilled

8. _____ (date) observation boreholes No._____ were eliminated

Notes.

Form filled in by _____ (given name and surname) _____ (signature*)

Operator _____ (given name, surname of the representative) _____ (signature*)

Place for a seal*

Note. * The document details “signature” and “place for a seal” shall not be completed if the electronic document has been prepared in accordance with the laws and regulations on the drawing up of electronic documents.

Minister for Environmental Protection and Regional Development E. Sprūdžs

Annex 4
Cabinet Regulation
No. 409 of 12 June 2012

Anti-seepage Cover Around Fuel Loading Installations and Tank Loading Areas

1. Soil and groundwater shall be protected against fuel leakages with an anti-seepage cover, which shall be laid out on the soil around the fuel loading installation and elevations thereof, and also around tank loading areas.

2. The anti-seepage cover shall be placed at fuel loading installations in accordance with the following requirements:

2.1. width –- in the length of the loading pipeline (on the access side of the vehicle) plus one metre, but not less than 3.5 m from each elevation of the fuel loading installation;

2.2. length – not less than 7.5 metres.

3. The anti-seepage cover shall be placed at tank loading areas in accordance with the following requirements:

3.1. width – not less than 3 metres from the loading pipelines (on the access side of the vehicle);

3.2. length – not less than 5 metres to either side of the loading pipelines (on the access side of the vehicle).

Minister for Environmental Protection and Regional Development E. Sprūdžs

Annex 5
Cabinet Regulation
No. 409 of 12 June 2012

Methods (Systems) for the Protection against Fuel Leakages and Detection Thereof

I. Methods (Systems) for the Detection of Fuel Leakage

1. In order to detect leakage of fuel from underground and surface tanks, one or several of the following methods (systems) may be applied:

1.1. partition observation system if the tank has double-walls;

1.2. the leak-tightness of tanks shall be inspected at least once in every two years;

1.3. automatic fuel balance control system;

1.4. mechanical fuel balance control method;

1.5. other method for the detection of fuel leakage coordinated with the State Environmental Service.

2. The system for the detection of fuel leakage shall be established, operated and maintained in accordance with the instructions of the manufacturer.

II. Inspection of Surface Tanks and Pipelines

3. At least once a month all visible surfaces of tanks and pipelines shall be visually inspected to detect signs of fuel leakage (moisture of fuel, spots) and also signs of fuel leakage on a concrete surface, in the soil and the like.

4. To prevent leakage of fuel from surface fuel tanks, pipelines and equipment thereof into the environment, the operator may, as an alternative to the methods (systems) referred to in Paragraph 1 of this Annex, use a fuel leakage collector complying with the following requirements:

4.1. the fuel leakage collector must have enough capacity to collect not less than a full throughput of the largest tank placed in the collector;

4.2. the fuel leakage collector must be manufactured from a material equivalent to the anti-seepage cover;

4.3. the drainage shall be placed in the fuel leakage collector in the direction from the tank to the drainage well;

4.5. the drainage well shall be equipped with a fuel detection system that signals fuel leakage;

4.6. waste water shall be pumped out of the drain or, by means of a siphon, drawn over the edge of the fuel leakage collector to the rain wastewater treatment plants of the oil terminal or service station.

III. Inspection of Tanks and Pipelines Located on Floating Structures

5. In order to detect fuel leakage from tanks located on floating structures (the floating service stations) the following shall be used:

5.1. partition (between the tank and external shell of the floating structure) observation and gas diagnostic system ensuring continuous control of the leak-tightness of the tanks of the

floating structure by inspecting the leak-tightness of the partitions of the floating structure at the beginning of the navigation season;

5.2. other method for the detection of leakage from loading installations coordinated with the State Environmental Service.

6. Indications regarding the time (date) when the leak-tightness of the partitions of the floating service station was controlled and results thereof shall be made in the maintenance log of the service station.

Minister for Environmental Protection and Regional Development E. Sprūdžs

Annex 6
Cabinet Regulation
No. 409 of 12 June 2012

Stage I and Stage II Petrol Vapour Recovery Systems of Service Stations

I. Stage I Petrol Vapour Recovery System

1. Stage I petrol vapour recovery system consists of:

1.1. leak-tight fuel vapour return pipeline that has been installed from a tank or the valve of a tank of the service station to the road tanker;

1.2. control systems to prevent a dangerous increase of pressure in tanks. By utilising a pressure/vacuum valve it shall be ensured that the operating pressure of the equipment is not exceeded;

1.3. other petrol vapour recovery and control systems that can ensure at least a similar result.

2. Nozzles of the loading pipeline of a tank and petrol vapour recovery pipeline shall be manufactured so that during the loading of a tank it shall not be possible to replace a loading pipeline with a petrol vapour recovery pipeline.

3. When connecting the Stage I petrol vapour recovery system prior to the loading of a tank the following procedures shall be complied with:

3.1. first the petrol vapour recovery pipeline shall be connected to the petrol vapour recovery pipeline of the fuel tank and afterwards the fuel pipeline shall be connected to the loading pipeline of the fuel tank;

3.2. when disconnecting the Stage I petrol vapour recovery system, the fuel pipeline shall be disconnected first and only then the petrol vapour recovery pipeline shall be disconnected.

II. I. Stage II Petrol Vapour Recovery System

4. At a service station all necessary Stage II petrol vapour recovery and control systems shall be installed and all changes necessary for the maintenance of the abovementioned systems in accordance with the instructions of the manufacturer shall be performed.

5. Stage II petrol vapour recovery systems and components thereof shall be installed and maintained so as to prevent any accumulation of liquids that may create obstructions in vapour return pipelines:

5.1. soil petrol vapour extraction pipelines shall be installed so as to ensure a gradient from the loading installation to underground tanks, or such pipelines shall be fitted with a condensate non-return valve that allows the fuel to accumulate without obstructing vapour return pipelines;

5.2. all condensate non-return valves of vapour return pipelines shall be easily accessible so that they could be emptied periodically.

6. The Stage II petrol vapour recovery system shall be visually inspected at least once a day to ensure the leak-tightness and efficiency thereof. Damaged components of the Stage II petrol vapour recovery system shall be disconnected, until the system is repaired.

Minister for Environmental Protection and Regional Development E. Sprūdžs

Annex 7
Cabinet Regulation
No. 409 of 12 June 2012

Storage of petrol fumes in tanks

1. The external surface and roof of surface tanks shall be painted in such colour as ensures that the total heat reflection grade is 70 % and more.

2. The requirements referred to in Paragraph 1 of this Annex shall not apply to tanks connected to a vapour recovery unit.

3. External floating roofs of tanks shall be equipped with a primary closing seal to seal off the contact surface between the wall of the tank and the outer periphery of the floating roof, and with a secondary closing seal that shall be located above the primary seal. Seals shall be built in so that they reduce the possibility of petrol vapour leakage by 95 % or more as compared with a similar fixed roof tank that has only a vacuum/pressure relief valve.

4. Tanks to witch the requirements for the collection and processing of petrol vapour referred to in these Regulations apply shall be installed in accordance with the following requirements:

4.1. fixed roof tanks shall be connected to a petrol vapour recovery unit;

4.2. tanks with an internal or external floating roof shall be equipped with the primary and secondary closing seals, which comply with the requirements referred to in Paragraph 3 of this Annex.

5. Tanks which have been put into operation or the construction permit of which is issued until 1 March 2000 shall be installed by complying with the following requirements:

5.1. fixed roof tanks shall be connected to a petrol vapour recovery unit;

5.2. tanks with an internal floating roof shall be equipped with a primary closing seal that has been designed so as to reduce the possibility of petrol vapour leakage by 90 % or more.

6. The requirements for the restriction of petrol vapour leakage referred to in Paragraphs 4 and 5 of this Annex do not apply to fixed roof tanks at oil terminals where the intermediate storage of vapour is permitted in accordance with the requirements specified in Paragraph 31 of this Regulation.

Minister for Environmental Protection and Regional Development E. Sprūdžs

Annex 8
Cabinet Regulation
No. 409 of 12 June 2012

Petrol Vapour Recovery Systems and Units

1. Petrol vapour from a tank container loaded at an oil terminal by means of a hermetically sealed pipeline shall be discharged into a petrol vapour recovery unit.

2. Requirements laid down for the restriction of petrol vapour leakage from petrol vapour recovery units shall apply also to petrol vapour incineration plants.

3. The average hourly concentration of petrol vapour for emissions into the air from a petrol vapour recovery unit (with a correction for dilution in the process of recovery) may not exceed 35 g per normal (273 K, 101.3 kPa) cubic meter (Nm^3).

4. The concentration of petrol vapour shall be determined with a gas analyser:

4.1. by taking measurements during a full working day (at least seven hours);

4.2. by taking measurements continuously or discontinuously;

4.3. if measurements are taken discontinuously, by taking at least four measurements every hour;

4.4. the maximum permissible error of measurements resulting from the inaccuracy of equipment, calibration gas or procedure may not exceed 10 % of the measured value;

4.5. the measuring instrument must ensure sensitivity of 3 g/Nm^3 in at least 95 % of cases.

5. To avoid leakage of petrol vapour, connections and pipelines shall be inspected once a year according to the instructions of the manufacturer.

6. If leakage of petrol vapour is detected, loading shall be immediately stopped. Equipment for the stopping of loading shall be installed at the gantry.

7. In the oil terminals and service stations at which the intermediate storage of petrol vapour is carried out, the petrol vapour delivered into the storage facilities of service stations and fixed roof tanks which are used for intermediate storage of petrol vapour must be returned along a leak-tight pipeline by means of which petrol is supplied. Filling operations may be commenced only when all the necessary devices are operating.

Minister for Environmental Protection and Regional Development E. Sprūdžs

Annex 9
Cabinet Regulation
No. 409 of 12 June 2012

Bottom-Loading, Petrol Vapour Collection and Prevention of Overfill of Road Tankers

I. Couplings

1. The coupling of the fuel supply pipeline must be a female coupler which must mate with the 4 inch API (101.6 mm) male coupler (adapter) of the road tanker as laid down in the instruction (API Recommended Practice 1004, Seventh Edition, November 1988) *Bottom loading and vapour recovery for MC-306 tank motor vehicles* (Section 2.1.1.1 – Type of adapter used for bottom loading).

2. The coupling of the vapour recovery pipeline must be a cam-and-groove female coupler which must mate with a 4 inch (101.6 mm) cam-and-groove male coupler (adapter) located on the road tanker as laid down in the instruction (API Recommended Practice 1004, Seventh Edition, November 1988) *Bottom loading and vapour recovery for MC-306 tank motor vehicles* (Section 4.1.1.2 – Vapour-recovery adapter).

II. Loading Conditions

3. The normal fuel loading rate from each fuel loading pipeline shall be 2 300 litres per minute, the maximum – 2 500 litres per minute.

4. When the oil terminal is operating at peak demand, the maximum permissible back pressure for the petrol vapour recovery systems, including vapour recovery units, in the vapour collection adapter located on the road tanker shall be 55 millibar.

5. All bottom-loading road tankers shall carry a plate indicating the maximum number of fuel loading pipelines that can be operated simultaneously in order to ensure that no petrol vapours are released through P and V valves and the maximum back pressure of 55 millibar is not exceeded.

6. The loading of fuel may not be started before the petrol vapour collection pipeline is connected to a road tanker and the petrol vapour can flow freely from the road tanker to the petrol vapour recovery system of the oil terminal.

III. Connection of Systems for Earth/Overfill Detection of Road Tankers

7. The gantry shall be equipped with an overfill warning control system, which, when connected to a road tanker, provides a signal for a safe loading, provided that none of the overfill sensors of the compartment indicates a high level.

8. Road tankers shall be connected to the control system of the gantry by means of a 10-pin industry standard electric connector. The male type coupler shall be mounted on the road tanker.

9. Overfill sensors on road tankers shall be either two-wire thermistor sensors, two-wire optical sensors, five-wire optical sensors or a compatible equivalent guaranteeing safe operation of the equipment (thermistor sensors must have a negative temperature coefficient).

10. The control system of the gantry must be suitable for two-wire or five-wire systems of road tankers.

11. The road tanker shall be connected to a gantry with a joint earth cable. The tenth pin of the male coupler (needle) located on a road tanker shall be connected to the chassis of the road tanker. The tenth pin of the female coupler (needle) shall be connected to the casing of the control system, which in turn shall be connected to the gantry earth.

12. All bottom-loading road tankers shall carry a plate indicating the type of the overfill sensor installed (two-wire or five-wire).

IV. Location of Connections

13. Connections of fuel loading and petrol vapour recovery unit systems shall be placed on road tankers by complying with the following requirements:

13.1. the height of the centre line of fuel adapters – not higher than 1.4 metres (unloaded) and lower than 0.5 metres (loaded), the recommended height being 0.7–1 metres;

13.2. horizontal spacing of adapters – not less than 0.25 metres (the recommended minimum spacing is 0.3 metres);

13.3. all connections of a fuel loading cable shall be located in one area that is not longer than 2.5 metres;

13.4. the recommended location of petrol vapour collection adapters shall be to the right of the connections of fuel loading cables and at a height not exceeding 1.5 metres (unloaded) and not less than 0.5 metres (loaded).

14. Earth and overfill connection shall be located only on one side of the machine – on the right side of the fuel and vapour collection adapters – at a height not exceeding 1.5 metres (unloaded) and not less than 0.5 metres (loaded).

V. Operation of Earth and Overfill Control Systems

15. It is prohibited to commence loading until a permissive signal is given by the joint earth and overfill control system.

16. If there is overfilling of fuel or the earth of a road tanker is lost, the supply of fuel for the earth/overfill control system must be disconnected.

Minister for Environmental Protection and Regional Development E. Sprūdžs

Annex 10
Cabinet Regulation
No. 409 of 12 June 2012

Restriction of Petrol Vapour Leakage from Tank Containers

1. Tank containers, in which fuel is delivered to service stations and oil terminals, shall be designed and operated so that after the fuel is poured out the petrol vapour would remain in the tank container and so that the tank would collect and retain the return vapour from service stations and tanks of oil terminals until the tank is repeatedly loaded at an oil terminal.

2. The requirements referred to in Paragraph 1 of this Annex shall apply to:

2.1. operational road tankers if such have been reconstructed for the bottom-loading in accordance with the requirements of this Annex;

2.2. such rail tankwagons in which the petrol is delivered to service stations or oil terminals at which the intermediate storage of petrol vapour is carried out.

3. The requirements referred to in Paragraph 1 of this Annex shall not apply to:

3.1. leakages of petrol vapour through pressure relief valves of the tank container and losses of petrol vapour during the measuring process when using a measuring rod which is verified in accordance with laws and regulations regarding the list of measuring instruments subject to the State metrological control and regarding subsequent verification, verification certificates and verification marks of measuring instruments;

3.2. tank containers which have been brought into operation before 1 March 2000.

4. If, after the pouring out of fuel, a tank container is used to store other substances than fuel and the recovery of petrol vapour or intermediate storage thereof is impossible, the ventilation of petrol vapour shall be permissible in places where leakage of petrol vapour cannot cause harm to the environment or human health.

Minister for Environmental Protection and Regional Development E. Sprūdžs

Annex 11
Cabinet Regulation
No. 409 of 12 June 2012

Environmental Requirements for Service Stations intended for the Fuelling of Yachts and Other Small-size Vessels

1. The following shall be stored in a readily accessible place and with an appropriate marking at the service stations intended for the loading of yachts and other small-size vessels (the floating service stations):

1.1. booms and absorbent carpets. The operator shall store booms, to ensure that if petroleum products have leaked the booms can be laid out in the length of at least 20 meters and that the stored absorbents would cover an area of at least 50 m^2. The booms and absorbents must ensure absorption of not less than 100 litres of petroleum products;

1.2. tissues and (or) cloths with which smears of petroleum products can be cleaned off surfaces of small-size vessels and yachts and also other surfaces involved in the loading of fuel.

2. Working area of the floating service station (platform from which the fuel is loaded) must not be lower than 0.65 meters and higher than 1.5 meters from the water surface of the relevant watercourse.

3. The floating service stations comply with the following requirements:

3.1. they shall be secured with an external shell that comes into contact with water of the relevant aquatorium and an internal shell (tank) in which is the reservoir for the storage of fuel;

3.2. the fuel loading installation shall be located in an emergency fuel discharge tank from which the spilled fuel can flow into a fuel collection tank. The capacity of the fuel collection tank must be at least 200 litres;

3.3. the fuel loading installation and relevant equipment shall be located under a waterproof roof by ensuring that the rainwater does not come into contact with the deck of the service station and flows freely from the roof into the relevant aquatorium;

3.4. they shall be secured with a vacuum system by means of which the petrol vapour or spilled-over fuel is pumped back from the ventilation system of the fuel tank of a floating structure to a tank of the service station or a container of the vacuum system.

Minister for Environmental Protection and Regional Development E. Sprūdžs

Annex 12
Cabinet Regulation
No. 409 of 12 June 2012

Operation of Tanks and Pipelines of Service Stations and Oil Terminals

I. Loading of Tanks

1. The surface or underground tanks or the tanks located on a floating structure are equipped with a device which protects tanks from overfilling. The device shall give a signal and terminate the supply of fuel when the tank is filled by the maximum authorised loading level laid down in technical documentation.

2. When connecting the loading pipeline of the road tanker or disconnecting it from a road tanker and the tank loading pipeline, the engine of the road tanker must be turned off.

3. Prior to the loading of petrol the pipelines of the Stage I petrol vapour recovery system must be connected in accordance with the requirements of Annex 6 to this Regulation.

4. When loading a fuel tank from a road tanker, the removal of static electricity shall be provided as follows:

4.1. prior to connecting a loading pipeline the road tanker shall be earthed;

4.2. the earth shall be disconnected after the disconnection of the loading pipeline.

5. Connections of the loading pipelines of tanks with the loading pipelines of road tankers shall be hermetically sealed in order to avoid the leakage of fuel or vapour.

II. Inspection

6. Until the tank is excavated and (or) removed from the territory, the concentration of highly flammable and combustible vapour shall be regularly inspected in the tank and its vicinity.

7. Concentration of the vapour in the tank shall be inspected by placing the probe of a measuring instrument for explosive gases into the loading opening. Measurements shall be taken at the bottom, in the middle and in the upper part of the tank. If a tank is equipped with a non-removable loading pipe, measurements shall be taken through another opening of the tank.

8. In order to determine the concentration of oxygen in the tank, a measuring instrument for oxygen concentration shall be used. Prior to lifting out the tank the concentration of oxygen shall be measured therein, in order to ascertain that the reservoir does not contain such concentration of oxygen as might create flammable circumstances.

III. Removal of Petrol Vapour from Tanks

9. The highly flammable vapour shall be removed from tanks. Prior to the commencement of work a measuring instrument shall be placed in the vicinity of the tank or directly on it to assess the concentration of vapour in the tank and around it.

10. Vapour shall be released from a tank at least 3–5 metres above the ground or at least one metre above any of the surface constructions that are situated closer than 50 metres. The working territory must be free from sources of ignition.

11. When the vapour is removed from the tank, the accumulated liquid shall be pumped out of it and delivered to waste water treatment plants.

IV. Storage of Used Tanks

12. Prior to the placement of a tank at a storage site the vapour, as well as liquids and sediments shall be removed therefrom. Used tanks shall be stored in specially designed and enclosed territories under the supervision of the responsible persons who are familiar with the potential risks. Such tanks may not be freely available to third persons.

V. Disposal of Used Tanks

13. Tanks shall be disposed of if highly flammable or combustible substances can no longer be stored therein and if the tanks cannot be used for other purposes. When disposing of tanks (including when discarding as scrap metal or placing in a relevant site where the pollution cannot spread) they shall be transformed so as to render them unfit for further use (for example, by cutting or by drilling holes in them).

Minister for Environmental Protection and Regional Development E. Sprūdžs

