



Environmental Protection Agency - Timis

ENVIRONMENTAL PERMIT

No. 10630 of 28.11.2011

Revised on 18.08.2014

Following the application submitted by SC PRO AIR CLEAN ECOLOGIC SA, registered office in Timisoara, 6B Sulina Str., tel./fax. 0256 306018/0256 290918, J35/1686/2012, RO 30428603, registered at the Environmental Protection Agency (APM) Timis under no. 5036RP of 9.07.2013, with completions added under no. 3404RP of 30.04.2014, and the examination of the submitted documentation and the site verification, pursuant to GD no. 1000/2012 on the reorganisation and operation of the National Environmental Protection Agency and its subordinate institutions, amended by GD 568/2013; GD no. 48/2013 on the reorganisation and operation of the Ministry of the Environment and Climate Change and the amendment of normative acts regulating the environmental and climate change field, with subsequent modifications and completions; GEO no.164/2008 on the amendment and completion of GEO no. 195/2005 on environmental protection, with subsequent amendments, approved by Law no. 265/2006 with subsequent amendments and completions; and MMDD Order no. 1798/2007 for the approval of the environmental permit issuing procedure, with subsequent amendments and completions, the following

ENVIRONMENTALM PERMIT

is issued for SC PRO AIR CLEAN ECOLOGIC Sa, Timisoara, Str. Sulina 6B. The permit provides for the following activities:

- collection and transport of hazardous waste and goods;
- temporary storage of hazardous and non-hazardous waste;
- incineration of waste under various states of aggregation (solid, liquid, pasty and gas);
- neutralization/treatment of hazardous and non-hazardous waste;
- dismantling of equipment containing hazardous substances;
- recovery of solvents by distillation;
- drying and classification of fine aggregates for the building materials industry;
- wholesale of waste and scrap;
- field activities of decontamination and greening.

The activity takes place in a space covering 10632 m².

- administrative wing - ground floor + first floor (S = 383.8 m²):
 - laboratories;



ENVIRONMENTAL PROTECTION AGENCY TIMIS

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The holder of this environmental permit must comply with all applicable legal provisions in the environmental protection field, such as:

- GEO no. 195/2005 on environmental protection, approved with amendments by Law no. 265/2006 with subsequent completions and amendments;
- NTPA 002 /2002 regulatory document approved by GD no. 188/2002 and amended by GD no. 352/2005, on conditions of waste water discharges;
- Law no.104/2011 on air quality;
- MAPPM Order no. 462/1993 – Technical conditions concerning air protection;
- STAS no. 12574/1987 – Air in protected areas – Quality conditions;
- STAS no. 10009/88 - “Acoustics in construction. Urban acoustics” – Permissible limits of noise level;
- Law no.211/2011 on waste management;
- GD no.1470 /2004 on the approval of the Waste Management National Strategy and the National Waste Management Plan, amended by GD no.358/2008;
- GD no. 856/2002 on waste management records and the approval of the list of waste, including hazardous waste;
- GD no. 273/2013 on industrial emissions;
- Order No. 756/2004 for the approval of the technical regulatory document on waste incineration;
- GD no. 235/2007 on used oil management;
- GD no. 170/2004 on used tyre management;
- GD no. 1132/2008 on batteries and accumulators and waste batteries and accumulators;
- GD no. 1037/2010 on WEEE;
- GD no. 1175/2007 for the approval of the norms for road transport of dangerous goods in Romania;
- GD no. 1453 for the amendment of GD no. 788/2007 on the measures for applying Regulation (EC) no. 1013/2006 of the European Parliament and of the Council on shipments of waste;
- GD no. 621/2005 on packaging and packaging waste management amended and completed by GD no.1872/2006;
- Ordinance no. 927/2005 on reporting procedure related to packaging and packaging waste;
- Order no. 219/2002 for the approval of the Technical norms on medical waste management and the Methodology of data collection for the medical waste national database;
- Regulation (EC) no. 1907/18.12.2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of chemicals (REACH) establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;
- Law no. 263/2005 for the amendment of Law no. 360/2003 on hazardous chemical substances and preparations;
- GD no. 1408/2008 on the classification, packaging and labelling of hazardous substances;
- Law no. 6/1991 for Romania’s accession to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal;
- Law no. 84/1993 for Romania’s accession to the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer;
- GD no. 58/2004 on the approval of the National Programme for the phase-out of ozone depleting substances;
- GD no. 173/2000 for the regulation of the special management and control regime of polychlorinated biphenyls and other similar compounds, with subsequent amendments and completions;
- GD no. 1061/2008 on the transport of hazardous and non-hazardous waste on Romania’s territory;
- Law no. 122/2002 on the approval of GO no.48/1999 concerning dangerous goods road transport;
- GD no. 1326/2009 on dangerous goods road transport in Romania, with subsequent amendments and completions;
- Law no. 105/2006 for the approval of GEO no. 196/2005 on the Environment Fund, with subsequent amendments and completions.

In case the above-mentioned normative documents should be amended, the permit holder shall comply with the new provisions of the applicable normative documents that amend, complete or repeal the former normative documents.

- offices;
- meeting hall;
- access halls;
- bathrooms;
- mechanical workshop (S = 22 m²);
- mechanical workshop 2 (S =15 m²)
- waste reception and weighbridge facility (S = 45 m²):
 - offices;



- bathrooms;
- locker room and incinerator control room ($S = 105 \text{ m}^2$):
 - incinerator control room;
 - clean clothes locker;
 - dirty clothes locker;
 - interventions office;
 - bathrooms;
- ENDA analyzer technical facility ($S = 5 \text{ m}^2$);
- incineration plant facility ($S = 433.5 \text{ m}^2$);
- thermal medical waste treatment plant + water distillation + modular storage facility for raw materials and hazardous waste ($S = 882.3 \text{ m}^2$);
- waste water treatment plant facility ($S = 313.5 \text{ m}^2$);
- condenser decommissioning and solvent recovery facility ($S = 40 \text{ m}^2$);
- special waste storage facility ($S = 280 \text{ m}^2$);
- waste shredder facility ($S = 50 \text{ m}^2$);
- two-compartment storage facility ($S = 400 \text{ m}^2$);
- special waste storage facility ($S = 100 \text{ m}^2$);
- a 20 m^3 water tank and a pump station for emergencies ($S = 60 \text{ m}^2$);
- distillation plant for the recovery of liquid waste reusable components ($S = 80 \text{ m}^2$), equipped with an accidental leakage retaining system ($V = 1 \text{ m}^3$) and a draining system under the concrete platform ($V = 1 \text{ m}^3$);
- concrete platform ($S = 1250 \text{ m}^2$);

in order to perform the following activities (according to NACE codes):

- NACE code 9002 (rev.1), 9003 (rev.1), 3811 (rev. 2) – Collection of non-hazardous waste;
- NACE code 9002 (rev.1), 3812 (rev. 2) - Collection of hazardous waste;
- NACE code 9002 (rev.1), 3821 (rev. 2) - Treatment and disposal of non-hazardous waste;
- NACE code 9002 (rev.1), 3822 (rev. 2) - Treatment and disposal of hazardous waste;
- NACE code 2413 (rev.1), 2059 (rev. 2) - Manufacture of other chemical products n.e.c.;
- NACE code 5155(rev. 1), 4675 (rev. 2) - Wholesale of chemical products;
- NACE code 6024 (rev.1), 4941 (rev. 2) - Freight transport by road;
- NACE code 9001 (rev.1), 3700 (rev. 2) - Sewerage;
- NACE code 9003 (rev.1), 3900 (rev. 2) - Remediation activities and other waste management services;
- NACE code 9003 (rev.1), 8129 (rev. 2) - Other cleaning activities;
- NACE code 5157 (rev.1), 4677 (rev. 2) - Wholesale of waste and scrap;
- NACE code 3710 (rev.1), 3831 (rev. 2) - Dismantling of wrecks;
- NACE code 3710 (rev.1), 3832 (rev. 2) - Recovery of sorted materials;
- NACE code 7310 (rev.1), 7211 (rev. 2) - Research and experimental development in biotechnology;
- NACE code 7310 (rev.1), 7219 (rev.2) - Other research and experimental development on natural sciences and engineering.

The documentation includes:

- description and statement prepared by SC PRO AIR CLEAN ECOLOGIC SA Timisoara;
- development site plan, installation plan of waste management and related areas, 3.5-t steam boiler plan installation plan, storage tank plan, thermo-mechanical scheme, isometric scheme,
- announcement published in Agenda newspaper on 3.05.2013;
- *the following regulatory documents issued by other authorities:*
 - Real Estate Register Excerpt no. 403668 issued by the Timis County Office of Cadastre and Land Registration;
 - Confirmation of company details 16.05.2013 issued by the Trade Register Office attached to Timis Court;



- Registration Certificate Series B of 18.07.2012 issued by the Trade Register Office attached to Timis Court;
- Water Rights Permit no. 466/28.09.2011 issued by Water Management Banat Timisoara Branch;
- Contract no. 3207 / 28.03.2013 signed with SC AQUATIM Timisoara for water supply and sewerage;
- Co-operation Contract no. 76/03.01.2011 signed with PPM ENERGIA – Baia Mare Branch SRL for oils reception (environmental permit no. 09 – 21/03.02.2009);
- Service Contract no. 903/18.08.2009 and no. ROE 197/16.02.2002 signed with SC RO ECOLOGIC SRL Slobozia for WEEE reception;
- Service Contract no. 3513/28.06.2013 signed with SC VIVANI SALUBRITATE SA Slobozia for industrial waste reception;
- Service Contract no. 121/28.06.2013 signed with SC PRO AIR CLEAN SA Stejarul for industrial waste reception;
- Contract no. S100700716/06.09.2010 signed with SC ASA SERVICII ECOLOGICE SRL Arad;
- Purchase and Sale Agreement no. 65/26.10.2012 signed with SC CELULOZA SI OTEL SA Timisoara for recoverable waste reception;
- Purchase and Sale Agreement no. 113TM/04.04.2012 signed with SC REMATINVEST SRL Cluj Napoca for recoverable waste reception;
- Service Contract no. BE 3038/31.12.2012 signed with ECOIND for analytical investigations of environment, water, soil and air factors and the measurement of the noise level;
- Service Contract no. 1143/13.03.2013 signed with SC TOTAL RECOVER SRL Timisoara for recoverable waste reception;
- Contract no. 9/18.12.2012 for providing official sanitary-veterinary control, signed with the Sanitary-Veterinary and Food Safety Directorate Timis;
- Sanitary-Veterinary Permit no. RO –TM-053-INCP 1/2/3/28.11.2012 issued by the Sanitary-Veterinary and Food Safety Directorate Timis;
- Official letter no. 90/28.01.2013 issued by Timis County Public Health Directorate, on the approval of the 7 routes used for transporting hazardous waste produced by sanitary units to the final place of disposal by incineration at SC PRO AIR CLEAN ECOLOGIC SA in the city of Timisoara;
- Notification no. 3/22.01.2013 issued by Timis County Public Health Directorate on the compliance with the hygienic standards related to NACE code 3822 activity - treatment and disposal of hazardous waste;
- Fire safety clearance no. 834185/08.04.2010 issued by Banat Inspectorate for Emergency Situations – Timis County,
- Transport licence no. 0156093 of 06.12.2012, issued by the Romanian Road Transport Authority - ARR Timis Branch;
- Vocational training certificates issued by the Ministry of Transport for dangerous goods safety adviser;
- Certificate of Proficiency in domestic and international road freight transport no. 0017255/21.06.2008, issued by the Romanian Road Transport Authority - A.R.R. Timis Branch;
- ADR driver training certificates for dangerous goods transport, issued by the Romanian Road Transport Authority – ARR;
- Driver Certificate of Professional Competence APCA no. 0241036 /28.01.2007, issued by the Romanian Road Transport Authority - ARR Timis Branch, for road goods transport with vehicles whose maximum authorised mass is over 3.5 t;



- Declaration of locations for operations involving 2nd and 3rd-category substances, issued by the General Inspectorate of the Romanian Police - National Anti-Drug Agency Bucharest;
- Technical Report no. 3/13.09.2011, issued by the National Institute of Public Health, Regional Centre Timisoara – Department of Health and the Environment – Commission for the notification of vehicles used for the transport of medical hazardous waste;
- Technical Report no. 2/12.09.2011, issued by the National Institute of Public Health, Regional Centre Timisoara – Department of Health and the Environment – Commission for the notification of vehicles used for the transport of medical hazardous waste;
- Technical Report no. 4/13.09.2011 issued by the National Institute of Public Health, Regional Centre Timisoara – Department of Health and the Environment – Commission for the notification of vehicles used for the transport of medical hazardous waste;
- Service Contract no. 18/07.01.2010, signed with SC PREMIUM TRUCK SERVICE SRL, for services of vehicles owned by SC PRO AIR CLEAN SA;
- Material Safety Data Sheets;
- Accreditation Certificate no. LI 1004 din 22.10.2013, issued by the Romanian Accreditation Association – RENAR;
- Metrology Report no. 0051570/06.02.2014, issued by the Romanian Bureau of Legal Metrology – Timisoara Laboratory;
- Metrology Report no. 0105454/02.07.2014, issued by the Romanian Bureau of Legal Metrology – Timisoara Laboratory;
- Metrology Report no. 0113909/09.09.2013, issued by the Romanian Bureau of Legal Metrology – Timisoara Laboratory;
- Metrology Report no. 0053029/26.02.2014, issued by the Romanian Bureau of Legal Metrology – Timisoara Laboratory;
- Action Scenario against accidental pollution on the platform and during transport;
- Internal Manual of Fire Prevention – specific documents;
- Receipts no. 7651, 7329/30.08.2011 for the payment of the tariff and the environmental permit tax, issued by the APM Timisoara; receipt no. 7329/30.08.2013 for the payment of the permit review issued by APM Timisoara

This environmental permit is issued under the following conditions:

- the environmental permit holder shall notify APM Timis of the occurrence of any new developments unknown at the date the regulatory document was issued, as well as of any change in the permit release conditions, prior to the application of the change; until APM Timis has made a decision that the permit is valid as it is or it must to be reviewed, the holder is forbidden to perform any activity or execute any project, plan or programme that might result from the changes mentioned in the notification;
- specialised internal structures shall be organised for environmental protection;
- the environmental permit holder shall assist the persons empowered to conduct verification, inspection and control activities; the holder shall provide them with its own measurements records and all other relevant documents and shall facilitate activity control, as well as sample collection;
- APM Timis and the Office of Environmental Police - Timis County Commissioner’s Office (GNM CJ) shall be informed immediately (maximum 2 hours) of any accidental release of pollutants in the environment, accident or incident that may cause danger of accidents;
- in compliance with GEO no. 195/2005 on environmental protection, approved with subsequent amendments by Law no. 265/2006, with subsequent amendments and completions, if the activity holder is to perform or be subject to a procedure of selling the majority shares package or assets, or in case of merger, division, concession or any situation that involves the change of the activity holder, as well as in case of dissolution followed by liquidation, bankruptcy or cessation of activity, the activity holder shall notify the competent



environmental protection authority, i.e. the issuer of this permit, for the purpose of establishing the environmental obligations;

- in accordance with MMDD Order no. 1798/2007 for the approval of the environmental permit release procedure, with subsequent amendments, if the permit holder changes its name and/or legal form of organisation, the holder shall request the transfer of the environmental permit to the new holder or the new name of the company, if proof is given that the activities are performed under the same conditions based on which the permit has been issued;
- the environmental permit holder shall apply for a permit review every time there is a substantive change in the data based on which this regulatory document has been issued;
- the application for a new environmental permit shall be submitted minimum 45 days prior to the expiry of the current permit;
- keeping and/or extending the validity of all documents, clearances and authorisations based on which this environmental permit has been issued;
- the environmental permit holder is responsible for the accuracy and correctness of the data made available to the competent authority for environmental protection and the public;
- the responsibility for the accuracy of the results concerning pollutant concentrations in the analysed environmental samples lies with the party that collects the samples and the laboratory that performs the tests;
- in compliance with Law 211/2011 art. 22, par. (3) and (4), economic operators holding environmental permits have the obligation to assign a person who will check the compliance with the obligations specified in the above-mentioned law and who is trained in the waste management field, or to delegate this obligation to a third party;
- the necessity to fill in the statement regarding the payment of obligations to the environmental fund;
- waste transport shall comply with GD no. 1061/2008 on the transport of hazardous and non-hazardous waste on Romania's territory;
- non-hazardous waste shall not be mixed with hazardous waste;
- the company premises and the neighbouring areas shall be kept clean at all times;
- vehicles shall not leave company premises with dirty body and/or wheels;
- abandon, removal or uncontrolled disposal of waste or the performance of any unauthorised operations involving waste is totally forbidden;
- chemical substances and preparations shall be stored according to chemical compatibilities and the conditions imposed by the supplier;
- waste delivery contracts shall be concluded strictly with authorised units for waste recovery/disposal, according to Law no. 211/2011 on waste management, given that recovery is a priority in waste management and comes before disposal;
- the personnel shall wear protective outfit required by the labour safety legislation and use adequate fire prevention equipment;
- ***before waste is taken to the incineration chamber, the following must be done:***
 - 1. the mass of every category of waste shall be determined;***
 - 2. the following information is required: useful data about the waste generation process, physical and chemical composition and all the data needed to evaluate waste behaviour during the incineration process, dangerous characteristics of waste, substances that cannot be mixed together and the precautions to be taken by the operator while manipulating waste;***
 - 3. the following reception procedures must be followed:***
 - ***checking the documents accompanying the waste and those required in the regulatory acts that concern waste transport and the dangerous good transport regulations;***
 - ***collection of representative samples before unloading, except for cases in which this is not possible (samples shall be kept for at least a month after incineration);***
 - ***wastes that are stored temporarily before their recovery shall be stored separately from waste stored temporarily before their disposal; hazardous waste shall be stored separately from non-hazardous waste;***



- storage areas must be protected against precipitations;
- different storage areas shall be provided for organic liquid waste, inorganic liquid waste, powder waste and solid waste; the same applies to the temporary storage of wastes that are to be treated on site;
- on receiving waste for temporary storage, the waste storage record shall be completed and kept; the record shall include data on waste reception date, source and code and the deadline for waste removal from site;
- wastes shall be positioned so as to ensure their stability and managed based on the principle "first in-first out"; permanent access to all stored wastes shall be provided;
- wastes shall be packed so as to prevent any content loss during handling and transport;
- recipients used to store hazardous waste shall be checked periodically and measures will be taken if they are damaged (overpackaging shall be ensured; transfer of hazardous waste from one recipient to another is not allowed);
- measures will be taken not to exceed the authorised storage capacity for all waste types/activities performed on site;
- the vehicles for hazardous waste transport, the personnel employed for transport and the waste packaging shall be transported according to the ADR norms; the technical inspection of the company's means of transport shall take place on the dates set in the applicable norm;
- each transport of hazardous, non-hazardous or medical waste shall comply with GD no. 1061/2009 on the transport of hazardous and non-hazardous waste on Romania's territory;
- the shortest routes or the routes that involve the lowest health risk for the population and the environment and have been approved by the Inspectorate for Emergency Situations shall be taken; waste stability and packaging tightness shall be ensured during transport;
- the incineration plant shall so be operated that flue gas emissions will not exceed the limits set in Annexe 7 of GD no. 7 of HG 128/2000 with subsequent completions and amendments;
- the incineration plant shall function in such a way that the incineration level ensures a less than 3% total organic carbon (TOC) concentration in the slag and bottom ash or the loss on ignition is lower than 5% of the dry weight of the material;
- the flue gas must reach, in a controlled and homogeneous manner, after the last combustion air injection, even under the most unfavourable conditions, a temperature of 850°C for two seconds, as measured near the inner wall or at another representative point of the combustion chamber, as authorised. If hazardous waste of over 1% concentration of halogenated substances expressed as chlorine is incinerated, the temperature must reach at least 1100°C for minimum two seconds.
- each combustion chamber of the waste incineration plant is equipped with at least one auxiliary burner that starts automatically when the flue gas temperature falls below 850°C or 1100°C after the last injection of air combustion. Auxiliary burners are used both at start-up and shutdown operations, to ensure that these temperatures are maintained at all times during these operations and as long as there is unburned waste in the combustion chamber;
- medical infectious waste with a high risk of infection must be placed straight in the kiln, without being first mixed with other waste categories and without direct handling;
- the automatic measuring systems shall be subject to annual control and surveillance tests;
- the automated emission measuring systems shall be subject to control by means of parallel measurements with the reference methods at least once a year.
- the incineration plant shall have an automatic system to prevent waste feed;
 - (a) at start-up, until the temperature reaches 850 °C or 1100 °C, as applicable;
 - (b) whenever the temperature of 850 °C or 1100 °C, as applicable, is not maintained;
 - (c) whenever the continuous measurements required by GD no. 128/2002 with subsequent completions and amendments indicate that any emission limit value is exceeded due to disturbances or failure of the environmental remediation equipment;



- *the measurements for the determination of concentrations of air and water polluting substances have to be taken representatively. Sampling and analysis of all pollutants including dioxins and furans as well as reference measurement methods to calibrate automated measurement systems shall comply with the CEN standards. If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall apply.*
- *in the case of a breakdown, operation shall be stopped as soon as possible, until normal operation can be resumed;*
- *if the emission limit values are exceeded, the incineration plant shall under no circumstances continue to incinerate waste for a period of more than four hours uninterruptedly. The cumulative duration of operation under such conditions over one year shall be less than 60 hours. The 60-hour duration applies to those lines of the entire plant that are linked to one single flue gas cleaning device. The total dust content of the emissions into the air of an incineration plant shall under no circumstances exceed 150 mg/m³ expressed as a half-hourly average; moreover the air emission limit values for CO and TOC shall not be exceeded.*
- *medical infectious waste with a high risk of infection must be placed straight into the kiln, without being first mixed with other waste categories and without direct handling;*
- *to establish the quality of the bottom ash and the gas filtering ash, the total organic carbon (TOC), the total soluble fraction and the heavy metals soluble fraction as well as the leachability test shall be carried out, according to Order no. 95/2005 (the composition of the ash resulted from the incineration of all types of waste shall be determined quarterly.)*
- *transport and intermediate storage of dry residues in the form of dust, such as ash and dry residues from the treatment of flue gas, shall take place in such a way as to prevent dispersal in the environment;*
- *measures will be taken to prevent risks of accidents, such as: denial of unauthorised access inside the incinerator facility, workplace hygiene, elimination of the risk of fire and explosion through training, periodical check of the blocking and warning systems, provision of emergency water reserve for interventions, fire extinguishing equipment, protection equipment, preparation and review/updating of intervention plans in case of accidents and breakdowns that can have a major impact on human health and the environment and in compliance with the measures included in these plans;*
- *the adequate storage capacity of water resulted from fire extinguishing operations shall be provided;*
- *a complete register of problems related to the management practices and operations of the waste on site shall be kept and made available any time to the persons authorised to control it. The register shall contain minimum details about the amounts of waste managed on site, coded according to GD 856/2002, the identification data of the waste carrier and the waste recovery/disposal operator, including details of their authorisation;*
- *a copy of the Waste Management Register shall be submitted to APM Timis as part of the Annual Environmental Report for the site;*
- *qualified employees shall be made available in sufficient number at all times; proper assimilation of tasks and ongoing personnel training and development shall be ensured; all employees whose tasks are related to any of the environmental permit conditions shall be provided with a copy of the environmental permit;*
- *empty packaging shall be cleaned and reused; if this is not possible, it shall be treated thermally to remove substances that adhered to its interior surface;*
- *an adequate number of absorption devices and a corresponding amount of adequate absorption substances for the absorption of any loss caused by accidental leak shall be provided;*
- *APM Timis and the Environmental Police Office shall be notified, by fax and/or telephone or electronically, of any of the following situations: any air emission exceeding the limit*



values set in the permit, from any potential emission point; any malfunction or breakdown of the monitoring equipment that may lead to loss of control of any pollution reduction system on site; any incident leading to the potential contamination of surface or underground water or may pose an environmental threat to the air or soil; any emission that does not meet the permit requirements;

- the notification shall include the date and time of the incident, details about the nature of any emission and risk caused by the incident and the measures taken to minimize the emissions and prevent their reoccurrence;

- the operating report shall be submitted annually;

- wastes to be incinerated shall be recorded in the register of incinerated waste management, which is kept for minimum 5 years;

- to prevent accidental pollution, during the environmental remediation operations, the soil shall be sealed with impermeable foil around tanks, decanters etc. If accidentally polluted areas are detected, the areas shall be stripped and the soil shall be disposed of as hazardous waste;

- the environmental remediation/decontamination operations shall comply with the labour safety conditions provided for in the applicable legislation;

- non-hazardous packaging waste shall be incinerated on condition their incineration leads to energy recovery; used oils shall be incinerated only if contamination makes them unrecoverable through regeneration or co-incineration;

- battery and industrial and car accumulators waste shall not be disposed of by incineration. Battery and accumulator residues that have been both treated and recycled can be incinerated;

- only electrical and electronic components and/or equipment waste that cannot be recovered shall be incinerated;

- in temporary storage, waste can be stored for maximum one year if they are to be disposed of and maximum three years;

- waste shall be delivered only to authorised economic operators, on a contract basis, for recovery or disposal, in compliance with GD no.1061/2008;

- different categories of hazardous waste shall be stored according to their physical-chemical properties and compatibilities and the nature of the extinguishing substances that can be used for each waste category in case of a fire;

- waste managed in temporary storage shall be kept separately from waste stored for further treatment on site;

- in case of permanent cessation of the whole activity or any activity performed on site, APM Timis shall be notified and the Closure Plan shall be submitted;

- a record of the generated, temporarily stored and disposed of waste and the amounts of waste that are managed shall be reported on a monthly basis according to APM Timis requests;

- abandon, removal or uncontrolled disposal of waste or performance of any unauthorised waste-involving operations is forbidden;

- the company premises and the neighbouring areas shall be kept clean at all times;

- in compliance with GD no. 1037/2010 on electrical and electronic equipment waste, art. 7, par. 1, producers, collective organisations acting on behalf of producers and economic operators that hold environmental permits for WEEE treatment and recovery shall fulfil the following objectives for treated WEEE according to art. 6:

a) WEEE falling under categories 1 and 10 of Annex IA:

1. a recovery rate of minimum 80% of the average weight per appliance;

2. component, material and substance re-use and recycling rate shall be minimum 75% of the average weight per appliance;

b) WEEE falling under categories 3 and 4 of Annex IA:

1. a recovery rate of minimum 75% of the average weight per appliance;



- 2. component, material and substance re-use and recycling rate shall be minimum 65% of the average weight per appliance;*
- c) *WEEE falling under categories 2, 5, 6, 7 and 9 of Annex IA:*
- 1. the recovery rate shall be increased to a minimum of 70 % by an average weight per appliance;*
 - 2. component, material and substance re-use and recycling rate shall be minimum 50% of the average weight per appliance;*
- d) *for gas discharge lamps, the component, material and substance re-use and recycling shall reach a minimum of 80% by weight of the lamps.*
- keeping and/or extending the validity of all documents, clearances and authorisations based on which this environmental permit has been issued;
 - the environmental permit holder is responsible for the accuracy and correctness of the data made available to the competent authority for environmental protection and the public;
 - the responsibility for the accuracy of the results concerning pollutant concentrations in the analysed environmental samples lies with the party that collects the samples and the laboratory that performs the tests;

This permit is valid from 18.08.2014, the revision date, to 28.11.2021.

Failure to comply with the permit provisions results in the suspension and/or cancellation of the permit, as appropriate. Any activity is prohibited during the permit suspension period.

This environmental permit shall not hold the activity holder harmless in case of accidents occurring during the performance of the activity for which the permit has been issued.

Litigations arising from the release, review, suspension or cancellation of this permit shall be resolved by competent administrative courts, in compliance with the administrative Law no. 554/2004, amended and completed by Law no. 262/2007.

I. Authorised activity:

1. Facilities (installations, tools, means of transport):

The incineration line has the following main components:

- primary incineration chamber;
- thermal reactor (post-combustion chamber);
- O₂ injection plant in the post-combustion chamber;
- heat exchanger – recuperator;
- CFC injection plant;
- gas conditioning tower (cooling);
- gas treatment reactor;
- final gas filtration system;
- main control panel.

Vertical cryogenic storage tank type T18V30:

- storage volume: 3000 l;
- maximum allowable pressure: 18 bar;
- height: 4200 mm;
- diameter: 1600 mm;
- weight empty: 4185 kg;
- weight full: 6695 kg.

The storage tank is equipped with:

- perlite and vacuum insulation to avoid losses through thermal transfer;
- safety valves;
- level indicator in Nm³;
- mobile foundation;
- air-heated vaporiser L 40-8f2.5;



- *L 40-8F2.5 vaporiser:*
 - capacity: 130 Nm³/h;
 - maximum allowable pressure: 40 bar;
 - height: 3850 mm;
 - diameter: 670 mm;
 - length: 1220 mm;
 - weight empty: 150 kg;
 - weight full: 550 kg.

The storage tank and the vaporiser are installed in a concrete retention vat.

- *O₂ measurement system outside the post-combustion chamber*
 - probe type: Zr, with membrane;
 - maximum allowable temperature 750-1500°C;
 - measuring range: O₂ 0.01 - 21.64% vol.;
 - analyzer type KS 20 – E2000P;
 - electrical characteristics 25 VA; 220 V; 50 Hz;
- *CFC tank:*
 - length: 2030 mm;
 - diameter: 800 mm;
 - diameter over strengthening rings: 870 mm;
 - weight empty: 244 kg;
 - weight full: 503 kg;
 - operating pressure: 16 bar;
 - operating temperature: max. 50°C; min. - 50°C;
- *The CFC injector in the post-combustion chamber is lance-like, 1 m long:*
 - interior CFC pipe;
 - exterior pipe for oxygen-rich air;
 - gas mixture chamber;
 - gas mixture nozzle;
- *steam boiler and water distillation column:*
 - steam boiler:
 - steam flow: 3500 kg/h;
 - nominal pressure: 12 bar;
 - testing pressure: 24 bar;
 - water volume: 13,8 m³;
 - feed water temperature: 105°C;
 - steam temperature: 190°C;
 - maximum entry gas temperature: 1200°C;
 - maximum exit gas temperature: 230°C°
 - maximum flue gas flow: 14000 Nm³/h;
 - boiler feed water softening plant;
 - thermal deaerator:
 - total volume: 5 m³;
 - deaeration tower volume: 1,15 m³;
 - operating pressure: 1,25 bar;
 - maximum allowable pressure: 1,50 bar;
 - operating temperature: 105°C;
 - minimum deaerated water volume: 0,6 m³/h;
 - maximum deaerated water volume: 6 m³/h;
 - minimum inlet temperature: 50°C;
 - 1 m³ condensing tankⁱ
 - condenser recirculation pumps (Q = 4,5 m³/h, H= 40 m, P= 1,5 kW);
 - air heating diffusers for the sand drying plant;



- heat absorption boilers for supplying heat to buildings in the cold season and domestic hot water;

- water distillation plant.

- *CLAVE 1000 system for medical waste thermal treatment:*

- pressure resistant container;
- electrical control unit;
- control computer;
- container lifting device;
- frequency converter;
- compressor;
- cooling water container;
- crushing jaw;
- quick-action steam generator;
- odour filtering hood;
- two 0.5 m³ tanks for treated and stabilized waste collection;
- discharged waste water collection system.

- *PCB-containing equipment decommissioning plant made of:*

- roller bench for mechanically cutting condensers' heads and oil leak;
- tank for collecting PCB-containing oil, V = 1 m³;
- electric hoist for transferring condensers to the washing unit, S_{max}= 1000 kg;
- boiling perchloroethylene tank for washing condenser casings, V = 2.5 m³;
- solvent recovery distillation unit, V = 5 m³;
- distilled solvent tank, V= 3 m³;
- tank for PCB-oil collected from the solvent distillation tank, V = 3 m³;
- two pumps for perchloroethylene circulation (Q_{max} = 2 m³/h, P = 1 kW);
- electric air ventilator (Q = 100 Nm³/h, P = 0.5 kW);
- motor-driven electric hoist (P = 2 kW).

The washing and distillation units are heated with 10 kW and 25 kW resistors in ceramics sheath.

The total perchloroethylene volume in the plant circuits and storage tank is 2000 l.

The maximum plant capacity is 1000 kg/day for condensers or 5000 kg/day for transformers.

The plant for perchloroethylene recovery from waste through distillation has two 300-l hermetically sealed distillation tanks. The distillation capacity of the tanks is 60-80 l/charge, 140-160 l/charge respectively, depending on the nature of the recovered solvent. Each tank has two heating systems of the lower part (the distilling vessel); one is electric and the other uses diathermic oil from the flue gas cooling phase through the heat exchanger-recuperator of the incineration plant. Usually the distillation tanks use recirculated diathermic oil as heating agent with a flow of about 250 l/h and 350 l/h respectively.

- *Distillation plant for the recovery of liquid waste reusable components*

The recovery of liquid waste reusable components through distillation requires two thermal distillation systems supplied with boiler steam. The two systems have the following structure:

➤ System 1

- two 50-l stainless steel coated distilling vessels, with four connections on the lid;
- two 2-m stainless steel pipe sections without filling or trays, equivalent of 3 theoretical trays;
- two enamelled condensers of the bell-shaped heat exchanger type, with two 100-l heat transfer areas and a total heat transfer area of 2 x 2 m².

➤ System 2

- two enamelled steel distilling vessels, V = 30 l, V = 50 l, respectively;
- two 2-m stainless steel pipe sections without filling or trays, equivalent of 3 theoretical trays;



- two enamelled condensers of the bell-shaped heat exchanger type, with two 100-l heat transfer areas and a total heat transfer area of $2 \times 2 \text{ m}^2$.

The distillation plant capacities are C 40-50 l/h and 25-35 l/h, depending on the nature of the recovered solvent. The distillation plants use steam as heating agent. The steam pressure is between 2 and 12 bar. The steam volume is about 150 kg/h for the 30-l vessel and about 350 kg/h for the 50-l vessel.

- *Closed-in chamber of the fume cupboard type for decommissioning mercury-containing components:*

- gas exhaustion and activated carbon filtration system;
- sulphur tray for trapping and neutralizing potential mercury spills as sulphide.

- *Waste shredder, LINDE TG 14 type.* The designed capacity of the shredder is 2000kg/h. The shredder operates 4-5 hours daily.

- *Hydraulic press* 11 tf for compaction of metal packaging.

- *Waste water pre-treatment station:*

- mixing chamber, $V = 0.5 \text{ m}^3$;
- primary decanter, $V = 1.8 \text{ m}^3$;
- activated carbon filter (3 columns);
- biological treatment tank, $V = 10 \text{ m}^3$;
- 2 secondary decanters, $V = 0.92 \text{ m}^3$ each;
- sludge thickener, $V = 0.66 \text{ m}^3$;
- polyelectrolyte tank, $V = 220 \text{ l}$;
- sodium hypochlorite tank, $V = 220 \text{ l}$;
- hydraulic tank for gas evacuation, $V = 60 \text{ l}$.

- *Cold storage room* cu $V = 70 \text{ m}^3$

- *Laboratory equipment:*

- gas chromatograph;
- atomic absorption spectrometer;
- UV-VIS spectrometer;
- organic carbon analyzer;
- analytical balance;
- thermostatic oven;
- calcinations oven;
- thermostatic bath;
- thermostatic plate;
- distiller;
- 4 soil sieves;
- 2 magnetic stirrers;
- fume cupboard.

- *Weighing equipment:*

- weighbridge, 20-60000 kg;
- steelyard balance, 10-200 kg;



- steelyard balance, 50-1000 kg;
- electronic decimal balance, 4- 600 kg;
- portable electronic balance, 1-150 kg;
- table steelyard balance, 2-110 kg;
- pharmaceutical scales, 0,01-1 kg.

- *Tools:* pickhammer, peristaltic pump, gear pump, lobe pumps for dense fluids, centrifugal pumps, pressure washer, compressors, 7 kVA generator, angle grinder, hammers, manual digging tools (shovels, spades, pickaxes)

- *Means of transport:*

- forklift - maximum allowable load: 3000 kg; diesel fuel consumption per hour: 3.5 l;
- forklift - maximum allowable load: 4000 kg; diesel fuel consumption per hour: 5,0 l;
- manual pallet trucks – load capacity: 1 and 2 t

- *Means of road transport:*

- 3 utility vans;
- truck and trailer;
- 2 trucks;
- 5 automobiles.

The means of transport are fuel-supplied at filling stations outside the company premises.

2. Raw materials, auxiliary materials, fuels and used packaging – packaging and storage method, quantities:

Maximum material consumption for:

- 9800 kg/day incinerator:

- solid waste	5 t/day;
- pasty waste	3 t/day;
- liquid waste	1 t/day;
- gas waste	0.8 t/day
- methane gas for burners	5520 Nm ³ /day;
- 5% NaOH solution in the conditioning tower	30 kg/day;
- compressed air in the conditioning tower	2250 Nm ³ /day;
- limestone in the gas purification phase	150 kg/day;
- activated carbon in the gas purification phase	25 kg/day;
- technical oxygen	5000 Nm ³ /day;
- standard gas for emissions analyzer	3 l/day;
- forklift diesel fuel	20 l/day;
- de-icing fluid	0.2 m ³ /day.

Categories of waste admitted for incineration:

- wastes from agriculture, horticulture, aquaculture, silviculture, hunting and fishing, food preparation and processing – category code 02;
- wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard – category code 03;
- wastes from the leather, fur and textile industries – category code 04;
- wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal – category code 05;
- wastes from inorganic chemical processes – 06, only the following subcategories:



- wastes from the manufacture, formulation, supply and use MFSU of phosphorus chemicals and phosphorous chemical processes – 06 09;
- wastes from the MFSU of nitrogen chemicals, nitrogen chemical processes and fertiliser manufacture – 06 10;
- wastes from the MFSU of halogens and halogen chemical processes – 06 07;
- wastes from the MFSU of silicon and silicon derivatives – 06 08;
- wastes from the manufacture of inorganic pigments and opacifiers – 06 11;
- wastes from inorganic chemical processes not otherwise specified – 06 13;
- wastes from organic chemical processes – category code 07;
- wastes from the MFSU of coatings (paints, varnishes and vitreous enamels), sealants and printing inks – category code 08;
- wastes from photographic industry – category code 09;
- wastes from thermal processes – category code 10;
- wastes from chemical surface treatment and coating of metals and other materials (aqueous rinsing liquids, degreasing wastes, sludges, ion exchange resins, waste containing cyanide, solid wastes from gas treatment) – category code 11;
- wastes from shaping and physical and mechanical surface treatment of metals and plastics (mineral-based machining oils and synthetic machining oils, emulsions, waxes and fats, sludges, blasting material and grinding, honing and lapping sludge, wastes from degreasing processes) – category code 12;
- oil wastes and wastes of liquid fuels (except edible oils, and those in chapters 05, 12 and 19) – category code 13;
- waste organic solvents, refrigerants and foam/aerosol propellants (except 07 and 08) – category code 14;
- waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified – category code 15;
- wastes not otherwise specified – category code 16, only the following subcategories:
 - end-of-life vehicles and wastes from dismantling of end-of-life vehicles – 16 01, except end-of-life vehicles 16 01 04*; end-of-life vehicles containing neither liquids nor other hazardous components – 16 01 06; explosive components (for example air bags) – 16 01 10*;
 - wastes from electrical and electronic equipment – 16 02;
 - off-specification batches and unused products – 16 03;
 - gases in pressure containers and discarded chemicals – 16 05;
 - wastes from transport tank, storage tank and drum cleaning (except 05 and 13) – 16 07;
 - aqueous liquid wastes destined for off-site treatment – 16 10;
- wastes from construction and demolition (including excavated soil from contaminated sites) – category code 17;
- wastes from human or animal health care and/or related research – category code 18;
- wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use – category code 19; only the following subcategories:
 - wastes from incineration or pyrolysis of waste – 19 01 (solid and liquid wastes from gas treatment, spent activated carbon, pyrolysis wastes containing dangerous substances);
 - wastes from physico/chemical treatments of waste – 19 02;
 - stabilised/solidified wastes – 19 03;
 - wastes from aerobic treatment of solid wastes – 19 05;
 - wastes from waste water treatment plants not otherwise specified – 19 08;
 - wastes from the preparation of water intended for human consumption or water for industrial use – 19 09;
 - waste from oil regeneration – 19 11;
 - waste from the mechanical treatment of waste – 19 12;



- solid wastes from soil and groundwater remediation – 19 13;
- municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions – category code 20 01.

The maximum waste amounts shall not exceed the nominal burning capacity of maximum 9.8 t/day.

Category of waste for CFC injection (0.5 t/day):

- chlorofluorocarbons, HCFC, HFC – code 14 06 01*;
 - gases in pressure containers – code 16 05 04*.
- *decommissioning plant for condensers and transformers (code 16 02 09*)*
- condensers 1000 kg/day;
 - transformers 5000 kg/day;
 - perchloroethylene circuit completion 0.5 kg/day;
 - cooling water 2800 kg/day;
- *decommissioning plant for equipment containing hazardous substances (mercury)*
- equipment containing mercury (code 16 01 08* , 16 02 13* , 16 02 15* , 20 01 21*) 50 kg/day;
 - sulphur powder 3 kg/day;
 - activated carbon 10 kg/90 days;
- *distillation plant for the recovery of liquid waste reusable components (2000 l/day)*
- Categories of waste accepted for solvents recovery:
- organic halogenated solvents, washing liquids and other mother liquors – 07 01 03*
 - other organic solvents, washing liquids and other mother liquors – 07 01 04*
 - other organic solvents, washing liquids and other mother liquors – 07 02 04*
 - organic halogenated solvents, washing liquids and other mother liquors – 07 03 03*
 - other organic solvents, washing liquids and other mother liquors – 07 03 04*
 - organic halogenated solvents, washing liquids and other mother liquors – 07 04 03*
 - other organic solvents, washing liquids and other mother liquors – 07 04 04*
 - organic halogenated solvents, washing liquids and other mother liquors – 07 05 03*
 - other organic solvents, washing liquids and other mother liquors – 07 05 04*
 - organic halogenated solvents, washing liquids and other mother liquors – 07 06 03*
 - other organic solvents, washing liquids and other mother liquors – 07 06 04*
 - organic halogenated solvents, washing liquids and other mother liquors – 07 07 03*
 - other organic solvents, washing liquids and other mother liquors – 07 07 04*
 - other halogenated solvents and solvent mixtures – 14 06 02*
 - other solvents and solvent mixtures – 14 06 03*
 - spent liquids used as catalysts (solvent) – 16 08 06*
 - spent catalysts contaminated with dangerous substances (solvent sludge) -16 08 07*
 - solvents – 20 01 13*

- *CLAVE 1000 System for medical waste thermal treatment:*

- wastes from human or animal health care and/or related research:
- hazardous and non-hazardous waste (code 18 01 01, 18 01 03*, 18 01 04, 18 02 01, 18 02 02*, 18 02 03): 1440 kg/day;
- steam generator water: 5000 kg/day.



- *Wastes collected for temporary storage* (1000 t):
- waste resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals – 01
- wastes from agriculture, horticulture, aquaculture, silviculture, hunting and fishing, food preparation and processing – 02
- wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard – 03
- wastes from the leather, fur and textile industries – 04
- wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal – 05
- wastes from inorganic chemical processes – 06
- wastes from organic chemical processes – 07
- wastes from the MFSU of coatings (paints, varnishes and vitreous enamels), sealants and printing inks –code 08;
- wastes from photographic industry – code 09;
- wastes from thermal processes – code 10
- wastes from chemical surface treatment and coating of metals and other materials – 11
- wastes from shaping and physical and mechanical surface treatment of metals and plastics – 12
- oil wastes and wastes of liquid fuels (except edible oils, and those in chapters 05, 12 and 19) – 13
- organic solvents, refrigerants and foam/aerosol propellants (except 07 and 08) – 14
- waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified - 15
- wastes not otherwise specified – 16, except:
 - end-of-life vehicles 16 01 04* ,
 - discarded equipment containing chlorofluorocarbons, HCFC, HFC - 16 01 10*,
- construction and demolition wastes (including excavated soil from contaminated sites) - 17
- wastes from human or animal health care and/or related research - 18
- wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use - 19
- municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions – 20, except:
 - garden and park wastes (including cemetery waste) – 20 02
 - other municipal waste – 20 03.

- *Absorbents to be used on the company premises:*

- perlite 1 t/year;
- sawdust 10 t/year;
- sand 1 t/year;

- *Packaging for medical waste collection:* boxes (10 l, 20 l, 40 l), small bags, polyethylene recipients (2.3 l, 5 l, 12 l), sealed plastic buckets (30 l, 50 l), containers (240 l, 770 l);

- *Materials necessary for decontamination:*

- absorbing algae 0.7 t/year;
- perlite 1 t/year;
- detergents 1.2 t/year;
- chlorinated solvents (for restocking) 0.3 t/year.



Industrial and municipal wastes are packed according to their physical and chemical characteristics: 220-l metal drums and 220-l plastic drums, boxes, plastic recipients of various sizes, hermetically sealed glass or metal recipients, cylinders, containers of various sizes (20 m³, 0.8 m, 1 m³), bags, bales, 120-l and 770-l wheeled plastic containers, stretch-wrapped pallets.

Medical waste is packed in special packages, in compliance with the specific legislation.

Liquid oxygen is stored in a 20000 Nm³ tank.

Limestone powder is stored in a-40 m³ bunker and 25-kg bags.

Analyzer standard gas and special gas is packed in under pressure vessels.

Activated carbon is packed in 10-kg bags.

Laboratory substances are packed in glass and plastic recipients stored in special facilities, depending on chemical and usage compatibility.

Diesel fuel is stored in cubitainers.

Sodium hydroxide (NaOH) is packed in 1-kg polyethylene bags and 60-l metal drums.

Decontamination materials are kept in their original packaging and stored in closed rooms.

3. Utilities – water, sewerage, energy (sources, amounts, volumes):

- water for sanitary and technological purposes is supplied from the city distribution network and a 160-m water well. The water consumption is 58.37 m³/day from the city network and 2.5 m³/day from the drill;

- domestic wastewater, $Q_{\text{day max}} = 1.2 \text{ m}^3/\text{day}$, is discharged in the municipal sewerage system;

- rainwater from the platform of the company is collected separately through a sewerage system and discharged in the municipal sewerage system, after passing through the 1x60 m³, 2x3 m³ decanters, the 6 m³ decanter- separator and the 4.5 m³ decanter;

- water used for washing the means of transport and the containers is collected in the 60 m³ container;

- if the water collected in the 60 m³ container requires treatment, it is pumped to the pre-treatment station and then discharged in the local sewerage system;

- the administrative wing is supplied with heat from the company's own thermal plant and energy recovery methods;

- the incineration plant has two methane gas injectors, as described below:

- the incineration chamber

- injector type RIELLO RS 70;
- maximum methane gas flow 80 Nm³/h;
- installed generating capacity 1,4 MW;
- two-step operation;

- the post-combustion chamber

- injector type RIELLO RS 130;
- maximum methane gas flow 150 Nm³/h;
- installed generating capacity 2,7 kW;
- two-step operation.

The injectors operate automatically, through the thermocouple systems mounted on the two chambers; a frequency modulation device turns the flame on and off and controls its intensity, driven in line by the thermocouple systems.

Flue gases are exhausted through a stack that is 18 m high and 600 mm in diameter.

In case of emergency, flue gases are exhausted through a stack that is 9 m high and 400 mm in diameter.



- the heat necessary for sand drying equipment is air heated at 300°C by the heat-exchanger-recuperator of the incinerator. The hot air volume required for daily production is 19000-22000 Nm³/h.

4. Description of the main stages of the technological process or other activities:

According to Annex II of Law no. 211/2011 on waste management, the disposal operation codes are the following:

- **D9** – Physico-chemical treatment not specified elsewhere in this Annex, which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12 (e.g. evaporation, drying, calcination, etc.);
- **D13** – Blending or mixing prior to submission to any of the operations numbered D 1 to D 12. If there is no other D code appropriate, this can include preliminary operations prior to disposal including pre-processing such as, inter alia, sorting, crushing, compacting, pelletising, drying, shredding, conditioning or separating prior to submission to any of the operations numbered D1 to D12;
- **D10** – incineration on land;
- **D15** – Storage pending any of the operations numbered D 1 to D 14, excluding temporary storage, pending collection, on the site where the waste is produced. Temporary storage means preliminary storage according to point 6 of Annex I of the Law.

According to Annex III of Law no. 211/2011 on waste management, the recovery operation codes are the following:

- **R1** – use principally as a fuel or other means to generate energy;
- **R2** – Solvent reclamation/regeneration;
- **R4** – Recycling/reclamation of metals and metal compounds;
- **R5** – Recycling/reclamation of other inorganic materials. This includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials.
- **R7** - Recovery of components used for pollution abatement;
- **R10** - Land treatment resulting in benefit to agriculture or ecological improvement;
- **R11** - Use of waste obtained from any of the operations numbered R 1 to R 10;
- **R12** - Exchange of waste for submission to any of the operations numbered R 1 to R 11;
- **R13** – Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage, pending collection, on the site where the waste is produced). Temporary storage means preliminary storage according to point 6 of Annex I to the Law.

- *collection and transport of hazardous and non-hazardous waste and goods* with the company's own means of transport licensed for transport of dangerous goods; the transport of hazardous non-hazardous and medical waste complies with GD no. 1061/2008 on the transport of hazardous and non-hazardous waste on Romania's territory;
- *waste reception* complies with GD no. 856/2002 and temporary storage on site (on the concrete platform or in closed facilities);
- *random sample collection for laboratory tests*;
- *waste shredding with the shredder, if applicable*;
- *waste pre-sorting and preparation* for obtaining a mixture based on the recipe of the waste management and disposal manager.

Besides pre-sorting in packages, various bulk wastes can be mixed in the multiple-compartment metal tank of the incineration line and then loaded with a grapple in the feeding compartment of the incineration chamber.

Liquid waste is incinerated directly either in the combustion chamber or in the post-combustion chamber, by injection.



- *the incineration process:*

In the incineration chamber, waste is managed sequentially and incinerated at 800–1100°C.

Waste is pushed through the incineration chamber by a sequential pushing system.

Air for combustion is brought by methane gas injectors through the hearth grate and the numerous holes in the lateral walls that are made of suitable refractory materials. In this way, air reaches the waste more easily and incinerates it completely.

The flue gas in the incineration chamber is absorbed in the post-combustion chamber where controlled total instantaneous combustion occurs at 1100-1300°C for minimum 3 seconds.

The air blast at the connection between the chambers occurs on an annulus, which allows oxygen enrichment of flue gas.

The gas in the post-combustion chamber is absorbed by the heat exchanger-recuperator. For better gas oxidation, oxygen is injected into the connecting throat progressively, starting with a minimum flow of 1 Nm³/h to a maximum of 40 Nm³/h.

CFC is injected directly in the post-combustion chamber. The liquid CFC mass flow rate that can be injected for incineration is 50 kg/h, corresponding to a gas CFC volumetric flow rate of 10 Nm³/h expressed as CF₂Cl₂.

Flue gas enthalpy is recovered through heat exchange with other agents in tube bundles:

- diathermic oil for a distillation plant;
- anti-freezers for the heating plant supplying the buildings.

Hot gases evacuated from the recuperator at a maximum temperature of 200°C is directed towards the conditioning and chemical cleaning system and then to the filtration system to be absorbed by the end exhauster.

The whole incineration line is controlled with an automated computerized system.

- *slag and bottom ash discharge;*

Slag and bottom ash are discharged with a chain and flight elevator located in the lower part of the incineration chamber. The residues are extracted after passing through a water tank. The fly ash beyond the post-combustion chamber is discharged at the bottom of the cyclones placed between the heat exchanger and the conditioning line and is collected in metal drums. Limestone and activated carbon of the gas treatment stage are discharged at the bottom of the filters of the metal vat located in a closed facility.

- *sterilization of waste produced in a medical institution, except anatomical and pathological waste, in the CLAVE 1000 system.* Categories of hazardous medical waste, in compliance with Order no. 219/2002 with subsequent completions and amendments, with the list of waste provided in GD no. 856/2002 on waste management and for approving the list of waste, including hazardous waste, that can be treated by thermal sterilization and Order of the Ministry of Health 1226/2012.

Contaminated waste loaded in the system is crushed in 2x2 cm pieces and the resulting mixture is steam-heated at 138°C and a pressure of 3.8 bar. The high temperature is maintained for 10 minutes. The complete sterilization cycle lasts 50 minutes.

After decontamination, condensed and cooling water are discharged in the purification station, the decontaminated waste are stored in containers and taken by authorised operators.

- *decommissioning and chemical cleaning of condensers and transformers:*

- the porcelain insulators are removed and the casing is opened mechanically;
- the condensers/transformers are emptied by letting the oil flow out freely;
- the casings and solid content are washed with perchloroethylene;
- the solid content is separated from the casing;
- the solvent is recovered through distillation;
- pressed casings are recovered as scrap iron;



- *distilled water production:*

- thermal demineralization of water until a specific conductivity value lower than 5 $\mu\text{S}/\text{cm}$ is reached.

- distillation plant for the recovery of liquid waste reusable components:

- halogenated solvents: chlorinated derivatives of methane, ethane and propane;
- ketones: acetone, methyl ethyl ketone, propanone;
- hexane, benzene, toluene, styrene;
- oil derivatives: white-spirit, petroleum benzine;
- other cleaning solvents;
- organic solvent-based thinning agents;
- solvents based on alcohol (C1- C5).

Solvents recovered through distillation are packed in metal or plastic recipients and marketed or returned to the company that produced them.

Distilling vessel waste resulted from the operation of the distillation plant for the recovery of liquid waste reusable components is incinerated with other wastes, through mixing, according to the daily incineration menu.

- *decommissioning of mercury-containing components* (recovery of mercury from measurement, control and automation equipment such as thermometers, tensiometers, manometers and contactors):

- mercury-containing devices are introduced in a closed-in chamber of the fume cupboard type and crushed;
- mercury is recovered and packed in hermetically sealed metal containers stored in secured cabinets until it is shipped to authorised specialised units;
- the crushed fragments are washed in sulphur powder and collected separately, while mercury sulphide is stored in metal drums until it is shipped to authorised specialised units;

- *wholesale of waste and scrap;*

- *field activities of decontamination and greening* comply with a working schedule approved by the competent environmental protection agency;

- decontamination of soil, plants (including tanks, decanters, evacuation pipes,)

- decontamination of soil, industrial plants (including tanks, decanters, exhaust lines, etc.) and sites, refuse heaps, hazardous and non-hazardous waste storage facilities, treatment/recovery/disposal of waste resulted from these activities;

- wastes are identified, sorted, packed, repacked, labelled, shipped, disposed of in the company's plant or temporarily stored on the site of SC PRO AIR CLEAN SA or the supplier, until delivered to other authorised specialised units;

- decontamination of soils and wastes from demolition works take place *in situ* where possible, with methods based on remediation or authorised physical and chemical procedures (e.g. washed in acid/basic medium for metal solubilization, metal precipitation under the form of hydroxides or insoluble salts etc.)

5. Obtained products and by-products – quantities, destination:

- distilled water 2000 l/day: marketed or for internal use;
- solvents recovered from waste: 2000 l/day, marketed or returned to the company that produced them;
- recovered energy: 88GJ/day, internal use – technological and administrative buildings heating;
- mercury: 50 kg/day.



6. Data about the company's own thermal plant: 3 forced draught thermal plants running on methane gas, power output 80 kW each. Maximum fuel consumption is 6.9 Nm³/h/boiler.

7. Other activity-specific data: Technical testing and analysis – NACE code 7120

8. Operating hours: 24 h/day, 7 days/week, 335 days/year.

II. Plants, measures and environmental protection conditions

1. *Stations and plants for retaining, discharging and dispersing of pollutants in the environment (by environmental factors):*

- *the flue gas cleaning plant* is a combined system for the separation of toxic substances and for de-dusting. The dust in the gas stream is filtered with 144 PTFE filter bags. Toxic substances are neutralized in prolonged contact with limestone and activated carbon in excess doses. The final flue gas exhaustion temperature is also adjusted in the gas cleaning plant. Slaked lime and activated carbon powder are used as absorbents. The frequency of shaking the retaining bags is adjusted automatically.

- *the wastewater treatment station*, with a nominal capacity of 2 m³/h, is made of:

- mixing chamber, V= 0.5 m³;
- primary decanter, V= 1.8 m³;
- activated carbon filter (3 columns);
- biological treatment tank, V= 10 m³;
- two secondary decanters, V= 0.92 m³ each;
- sludge thickener, V= 0.66 m³;

- for rainwater on the platform:

- oil products decanter-separator, V = 60 m³;
- two 3 m³ decanters;
- one 6 m³ decanter-separator;
- one 4.5 m³ decanter;

- for accidental leakage collection:

- two retention tanks (V = 1 m³)

- for air:

- flue gas stack H = 18 m and Ø 600 mm;
- emergency flue gas stack H = 9 m and Ø 400 mm;
- flue gas stack of the steam generator H = 11 m and Ø 200 mm.
- odour control hood (paper and activated carbon filter) at the medical waste low-temperature treatment plant.

2. *Other special facilities and measures for environmental protection:* concrete platform, closed areas, metal vats of 0.5 and 1.65 m³ retention volume, for the temporary storage of treated waste and equipment containing hazardous substances.

3. *Concentrations and mass flow rates of pollutants, noise and radiation level allowed at the release of pollutants in the environment, allowable exceedances and conditions of exceedance:*

1. Air emissions

1.1 Waste incineration plant

Incineration plants shall be designed, equipped, built and operated in such a way that flue gases do not exceed the emission limit values set in Law no 278/2013 and MAPM Order no. 756/2004 approving Technical Norms for the Incineration of Waste.



All emission limit values shall be calculated at a temperature of 273.15 K, a pressure of 101.3 kPa and after correcting for the water vapour content of the waste gases. Values are standardised at 11% oxygen in waste gas.

The emission limit values for the daily average values are the following:

Pollutant	Emission limit value mg/Nm³
Total dust	10
Gaseous and vaporous organic substances, expressed as total organic carbon	10
Hydrochloric acid (HCl)	10
Hydrofluoric acid (HF)	1
Sulphur dioxide (SO ₂)	50
Nitrogen monoxide (NO) and nitrogen dioxide (NO ₂), expressed as NO ₂	400

The air emission limit values shall be regarded as being complied with if none of the daily average values exceeds any of the emission limit values.

At the daily emission limit value level, the values of the 95% confidence intervals of a single measured result shall not exceed the following percentages of the emission limit values:

carbon monoxide:	10%
sulphur dioxide:	20%
nitrogen dioxide:	20%
total dust:	30%
total organic carbon:	30%
Hydrochloric acid:	40%
Hydrofluoric acid:	40%

Average emission limit values over 30 minutes:

Pollutant	Emission limit values	
	(100%)A	(97%)B
	mg/Nm ³	mg/Nm ³
Total dust	30	10
Gaseous and vaporous organic substances, expressed as total organic carbon	20	10
Hydrochloric acid (HCl)	60	10
Hydrofluoric acid (HF)	4	2
Sulphur dioxide (SO ₂)	200	50
Nitrogen monoxide (NO) and nitrogen dioxide (NO ₂), expressed as NO ₂	400	200



The air emission limit values shall be regarded as being complied with if both requirements are met. Example for total dust: all measurements (100%) are lower than 30 mg/m³ and 97% of measurements are lower than 10 mg/m³.

The half-hourly average values and the 10-minute averages shall be determined within the effective operating time (excluding the start-up and shut-down periods if no waste is being incinerated) from the measured values after having subtracted the value of the confidence interval. The daily average values shall be determined from those validated average values.

To obtain a valid daily average value no more than five half-hourly average values in any day shall be discarded due to malfunction or maintenance of the continuous measurement system. No more than ten daily average values per year shall be discarded due to malfunction or maintenance of the continuous measurement system.

Average emission limit values for heavy metals and dioxins/furans

Average values are based on a sampling period of minimum 30 minutes and maximum 8 hours (heavy metals), and minimum 6 hours and maximum 8 hours (dioxins/furans):

Pollutant	Emission limit value
Cadmium and its compounds, expressed as cadmium (Cd)	total 0.05 mg/Nm ³
Thallium and its compounds, expressed as thallium (Tl)	
Mercury and its compounds, expressed as mercury (Hg)	0.05 mg/Nm ³
Antimony and its compounds, expressed as antimony (Sb) Arsenic and its compounds, expressed as arsenic (As) Lead and its compounds, expressed as lead (Pb) Chromium and its compounds, expressed as chromium (Cr) Cobalt and its compounds, expressed as cobalt (Co) Copper and its compounds, expressed as copper (Cu) Manganese and its compounds, expressed as manganese (Mn) Nickel and its compounds, expressed as nickel (Ni) Vanadium and its compounds, expressed as vanadium (V)	total 0.5 mg/Nm ³
Dioxins and furans, calculated with the toxic equivalency factor	0.1 ng/Nm ³

The emission limit value is valid for a total concentration of dioxins and furans calculated according to Law 278/2013 (equivalency factors for dibenzo-p-dioxins and dibenzofurans).

The emission limit values for heavy metals and dioxins shall be regarded as being complied with if none of the average values in the set sampling period exceeds any of the emission limit values.



Limit values for carbon monoxide in flue gases (except start-up and shut-down)

Averaging period	Emission limit value mg/Nm ³
Daily average	50
Half-hourly average values, taken in 24-h period, for all measurements or	100
10-minute averages, for minimum 95% of all measurements	150

For other types of air emissions, the emission limit values set in MAPPM (Ministry of Water, Forests and Environmental Protection) Order no. 462/1993 shall be complied with.

1.2. Activity of decommissioning mercury-containing components

Mass flow ≥ 1 g/h

Pollutant	Air emission limit values mg/m ³
Mercury and its compounds	0.2

The geometrical parameters of the emission source and the physical parameters of the effluent must be provided.

1.3. Waste shredding and mixing

If the shredder facility has a ventilation system.

Indicator	Air emission limit values mg/m ³
Dust	50

1.4. Emission limit values for the thermal plant

Indicator	Air emission limit values mg/Nm ³
Dust	50
Carbon monoxide	100
Sulphur oxides SO _x (expressed as SO ₂)	35
Nitrogen oxides NO _x (expressed as NO ₂)	350

The limit values are standardized at 3% oxygen in gas effluents.



2. Ambient air quality

The concentrations of air pollutants on site limits shall not exceed the limit values for human health protection provided for in Law no. 104/2011 and the maximum permissible values set in STAS 12574-87.

Pollutant	Averaging period	Limit value Law no. 104/2011 $\mu\text{g}/\text{m}^3$
Sulphur dioxide	One day	350
	24 hours	125
Nitrogen dioxide and nitrogen oxides	One day	200
	Calendar year	40
Carbon monoxide	Maximum daily 8 hour mean	10
Particulate matter PM ₁₀	One day	50
	Calendar year	40
Lead	Calendar year	0,5
Benzene	Calendar year	5

Pollutant	Target value Law no. 104/2011 ng/m^3
Arsenic	6
Cadmium	5
Nickel	20
Benzo(a)pyrene	1

Indicator	Averaging period	M.A.C. STAS 12574-87 mg/m^3
Hydrochloric acid	30 min.	0.3
	24 h	0.1
Fluorine – inorganic gaseous compounds and soluble aerosols	30 min.	0.015
	24 h	0.005
Chromium (CrO ₃)	24 h	0.0015
Manganese and its compounds	24 h	0.01

M.A.C. Maximum admissible concentration



3. Wastewater

The quality of the water discharged in the city sewerage (domestic and rain water) must comply with GD no. 188/2002 on approving norms on wastewater discharge in aquatic environment, amended and completed by GD no. 352/2005 and GD no. 210/2007 and the “NTPA-002 Normative concerning the conditions for waste water discharge into urban collecting systems and directly into waste water treatment plants”.

Quality indicator	U.M.	Maximum permissible values
Temperature	°C	40
pH	pH units	6,5-8,5
Particulate matter	mg/dm ³	350
Biochemical oxygen demand over 5 days	mg O ₂ /dm ³	300
Chemical oxygen demand – with potassium dichromate (CCO _{Cr}) ¹	mg O ₂ /dm ³	500
Ammonium (NH ₄ ⁺)	mg/dm ³	30
Total phosphorus (P)	mg/dm ³	5,0
Total cyanide (CN)	mg/dm ³	1,0
Sulphides and hydrogen sulphide (S ²⁻)	mg/dm ³	1,0
Sulphites (SO ₃ ²⁻)	mg/dm ³	2
Sulphates	mg/dm ³	600
Volatile phenols	mg/dm ³	30
Substances extractable with organic solvents	mg/dm ³	30
Biodegradable synthetic detergents	mg/dm ³	25
Lead (Pb ²⁺)	mg/dm ³	0,5
Cadmium (Cd ²⁺)	mg/dm ³	0,3
Total chromium (Cr ³⁺ +Cr ⁶⁺)	mg/dm ³	1,5
Hexavalent chromium	mg/dm ³	0,2
Copper (Cu ²⁺)	mg/dm ³	0,2
Nickel (Ni ²⁺)	mg/dm ³	1,0
Zinc (Zn ²⁺)	mg/dm ³	1,0
Total manganese (Mn)	mg/dm ³	2,0
Residual chlorine (Cl ₂)	mg/dm ³	0,5

¹⁾ The CCO(Cr) concentration value depends on CBO₅/CCO ratio ≥ 0.4.

4. Soil

The concentrations of activity-specific pollutants found in the soil within the company premises shall not exceed the limits set in MAPPM Order no. 756/1997 for the approval of the Regulatory Document on Environmental Pollution, according to Table no. 1 – Reference values for traces of chemical elements in soil for less sensitive use of soils:



Chemical element	Alert thresholds mg/kg S.U.	Action thresholds mg/kg S.U.
Antimony (Sb)	20	40
Silver	20	40
Arsenic	25	50
Barium	1000	2000
Beryllium	7,5	15
Soluble boron	5	10
Cadmium	5	10
Cobalt	100	250
Total chromium	300	600
Copper	250	500
Manganese	2000	4000
Mercury	4	10
Molybdenum	15	40
Nickel	200	500
Lead	250	1000
Selenium	10	20
Tin	100	300
Thallium	2	5
Vanadium	200	400
Zinc	700	1500
Cyanides (complex)	200	500
Sulphocyanates	20	40
Total petroleum hydrocarbon	1000	2000
Total polychlorinated biphenyls	1	5

5. Noise

The permissible limit of noise level at the limit of the operational area of industrial premises is $Leq = 65$ dBA, according to STAS 10009-88. If the limit of the operational area of industrial premises is adjacent to the limit of a residential area, the permissible limit value is 50 dBA.

6. Slag

The waste incineration plant shall be operated in such a way as to achieve a level of incineration such that the total organic carbon content (TOC) of slag and bottom ashes is less than 3% or their loss on ignition is less than 5% of the dry weight of the material.



Indicator	Limit values according to Law 278/2013
- Total Organic Carbon (TOC) or - Loss on ignition of the dry weight	< 3% of the dry weight < 5% of their weight
Metal content:	Alert threshold (ppm) Less sensitive soils according to Order 756/1997
- Copper	250
- Cadmium	5
- Nickel	200
- Lead	250
- Zinc	700
- Total chromium	300
- Cobalt	100
- Arsenic	25

III. Environmental monitoring

1. Physical, chemical, bacteriological and biological indicators, pollutant imissions, frequency, exploitation of results:

1.1 Waste incineration plant

Indicators	Frequency	Method of analysis
Total dust	continuously	SR EN 13284-2
Gaseous or vaporous organic substances, expressed as total organic carbon	continuously	SR EN 12619
Hydrochloric acid (HCl)	continuously	SR, ISO or CEN methods
Hydrofluoric acid (HF)	quarterly	SR, ISO or CEN methods
Sulphur dioxide (SO ₂)	continuously	SR ISO 7935 SR ISO 11632
Nitrogen monoxide (NO) and nitrogen dioxide (NO ₂), expressed as NO ₂	continuously	SR ISO 10849
Carbon monoxide(CO), except the start-up and shut-down stages	continuously	SR, ISO or CEN methods
Cadmium and its compounds, expressed as Cadmium (Cd) Thallium and its compounds, expressed as Thallium (Tl)	quarterly	SR EN 14385
Mercury and its compounds, expressed as mercury (Hg)	quarterly	SR EN 13211/AC
Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V and their compounds	quarterly	SR EN 14385
Dioxins and furans, calculated with the toxic equivalency factor	quarterly	SR EN 1948-1 SR EN 1948-2 SR EN 1948-3 SR EN 1948-4



Heavy metals shall be determined over a period of 8 hours, the sampling period being 30 minutes, and they shall be related to the incineration stage. Dioxins and furans shall be determined over at least 6 hours and maximum 8 hours. The values for dioxins and furans shall be calculated according to Law no. 278/2013.

The following process parameters shall be measured continuously: temperature near the inner wall or at another representative point of the combustion chamber and or post-combustion, oxygen concentration, pressure, temperature and water vapour content of the flue gases. The residence time as well as the minimum temperature and the oxygen content of the flue gases shall be subject to appropriate verification, at least once and under the most unfavourable operating conditions anticipated.

In the case of a breakdown, operation shall be stopped as soon as possible, until normal operation can be resumed. If the emission limit values are exceeded, the incineration plant shall under no circumstances continue to incinerate waste for a period of more than 4 hours uninterruptedly. The cumulative duration of operation under such conditions over one year shall be less than 60 hours.

2. Ambient Air

Indicators	Frequency	Method of analysis
Sulphur dioxide	Half-yearly	SR ISO 6767 SR ISO 4221 SE EN 14212
Nitrogen dioxide and Nitrogen oxides	Half-yearly	SR EN 14211 SR EN 14212 STAS 10329
Carbon monoxide	Half-yearly	SR ISO 8186 SR EN 14626
Particulate matter PM ₁₀	Half-yearly	SR EN 12341
Hydrochloric acid	Half-yearly	STAS 10943
Fluorine – inorganic gaseous compounds and soluble aerosols	Half-yearly	SR, ISO or CEN
Arsenic	Half-yearly	SR EN 14902 STAS 10931
Cadmium	Half-yearly	SR EN 14902
Nickel		SR EN 14902
Chromium (CrO ₃)	Half-yearly	STAS 11103
Manganese and its compounds	Half-yearly	STAS 10815
Lead	Half-yearly	SR ISO 9855 EN 14902
Benzene	Half-yearly	SREN 14662-1 SREN 14662-2 SREN 14662-3 SREN 14662-4 SREN 14662-5



3. Waste water

Quality indicator	Frequency	Method of analysis
Temperature	daily	-
pH	daily	SR ISO 10523
Particulate matter	daily	STAS 6953
Biochemical oxygen demand over 5 days	quarterly	SR EN 1899-2
Chemical oxygen demand – with potassium dichromate (CCO _{Cr})	quarterly	SR ISO 6060
Ammonium (NH ₄ ⁺)	quarterly	SR ISO 7150-1
Total phosphorus (P)	quarterly	SR EN ISO 6878
Total cyanide (CN)	quarterly	SR ISO 6703
Sulphides and hydrogen sulphide (S ²⁻)	quarterly	SR ISO 10530 SR 7510
Sulphites (SO ₃ ²⁻)	quarterly	STAS 7661
Sulphates	quarterly	STAS 8601
Volatile phenols	quarterly	SR ISO 6439 SR ISO 8165/1
Compounds extractable with organic solvents	quarterly	SR 7587
Biodegradable synthetic detergents	quarterly	SR ISO 7875 SR EN 903
Lead (Pb ²⁺)	quarterly	SR ISO 8288
Cadmium (Cd ²⁺)	quarterly	SR EN ISO 5961 SR ISO 8288
Total chromium (Cr ³⁺ +Cr ⁶⁺)	quarterly	SR EN 1233
Hexavalent chromium	quarterly	SR EN 1233 SR ISO 11083
Copper (Cu ²⁺)	quarterly	SR ISO 8288
Nickel (Ni ²⁺)	quarterly	SR ISO 8288
Zinc (Zn ²⁺)	quarterly	SR ISO 8288
Total manganese (Mn)	quarterly	SR ISO 6333 SR 8662/1 SR 8662/2
Residual chlorine (Cl ₂)	quarterly	SR EN ISO 7393-1 SR EN ISO 7393-2 SR EN ISO 7393-3

The analysing methods corresponding to the standard given in the above table are only for guidance; other alternative methods can be used if they are proved to be as reliable and have the same detection limit.



4. Soil quality

The indicators listed in the table below shall be analysed annually, in 2 soil samples collected from 2 different depths (5 cm and 30 cm from soil surface), from the following places:

- Treatment station area – green area
- Waste storage area – green area

Chemical element	Frequency	Reference method
Antimony (Sb)	annual	SR, ISO or CEN
Silver	annual	SR, ISO or CEN
Arsenic	annual	SR, ISO or CEN
Barium	annual	SR, ISO or CEN
Beryllium	annual	SR, ISO or CEN
Soluble boron	annual	SR, ISO or CEN
Cadmium	annual	SR ISO 11047
Cobalt	annual	SR ISO 11047
Total chromium	annual	SR ISO 11047
Copper	annual	SR ISO 11047
Manganese	annual	SR ISO 11047
Mercury	annual	SR, ISO or CEN
Molybdenum	annual	SR, ISO or CEN
Nickel	annual	SR ISO 11047
Lead	annual	SR ISO 11047
Selenium	annual	SR, ISO or CEN
Tin	annual	SR, ISO or CEN
Thallium	annual	SR, ISO or CEN
Vanadium	annual	SR, ISO or CEN
Zinc	annual	SR ISO 11047
Cyanides (complex)	annual	SR, ISO or CEN
Sulphocyanates	annual	SR, ISO or CEN
Total petroleum hydrocarbon	annual	SR, ISO or CEN
Total polychlorinated biphenyls	annual	SR, ISO or CEN

5. Noise level

As the company operates permanently (24h/day, 7 days/week), the level noise shall be measured and evaluated outside the buildings during the night (from 10 pm to 6 am, measurements over 30 consecutively), according to STAS 6161-3/82.

For determinations at the limit of the operational area of industrial premises, the measuring points shall be set in the corners of the enclosure, so that the distance between two successive points is smaller or equal to 100 m.

The measurement results are registered in a noise analysis report. According to STAS 6161/3-82, the report must include at least the following data: date, time and duration of measurements, site plan, the points where the measurement was taken, the Leq equivalent noise level in those points for the day and night interval.



6. Slag and ashes

Indicators	Frequency	Method of analysis
Total organic carbon (TOC)	quarterly	SR ISO 10694

2. Data to be submitted to the environmental protection territorial authority and submission frequency:

- test reports of the indicators specified at point 1 – **to be submitted to APM Timis and the National Office of Environmental Police - Timis County Commissioner's Office (GNM - CJ);**
- **APM Timis shall be notified in case the indicators imposed during monitoring are exceeded and solution will be provided so that the quality indicators remain within the limits established in the legislation in force;**
- in compliance with GEO 68/2007 on environmental responsibility related to the prevention and repairing of environmental damage, approved by Law 19/2008 and amended by GEO no. 15/2009, in case of an imminent threat against the environment, the operator shall take the necessary preventive measures and inform APM Timis and GNM CJ within 2 hours after becoming aware of the threat;
- the data on waste management records shall be submitted annually, in compliance with Law 211/2011 on waste management and GD no. 856/2002 on waste management and for approving the list of waste, including hazardous waste;
- monthly report of data on the amount of collected/recovered waste, in accordance with GD no. 856/2002 on waste management and for approving the list of waste, including hazardous waste;
- annual report of data on collected/recovered waste electrical and electronic equipment, by April 30th, in compliance with Order no. 1223/2005 regarding the procedure of produce recording and reporting procedure of data regarding EEE and WEEE;
- annual report by February 25, of amounts of packaging waste received and managed according to Order no. 794/2012 on the procedure for reporting of data on packaging and packaging waste;
- the records of fresh/waste oils amount shall be reported biannually, according to Order no. 235/2007 on used oils management;
- annual report, by March 25, in compliance with MMP Order no. 3299/2012 on the approval of the methodology for the development and reporting of the air pollutant inventories
- other data requested by APM Timis.

IV. Waste and packaging management

1. Produced waste:

- domestic waste (code 20 03 01) 30 kg/day
- bottom ash (code 19 01 12) 1100 kg/day
- dust and ashes from flue gas treatment – including limestone and charcoal (code 19 04 02*) 400 kg/day
- glass waste (code 20 01 02) 350 kg/day
- metal and non-metal waste (code 19 01 02, 19 10 02, 19 12 03) 600 kg/day
- plastics (code 19.12.04) 200 kg/day
- wooden materials (code 20 01 38) 20 kg/day
- filtering bags (code 19 01 07*) 144 pieces/5 years
- insulation materials (code 17 06 04) 5 kg/day
- still bottoms from solvent recovery (code 07 02 07*, 07 02 08*) 200 kg/day
- still bottoms from distilled water production (code 06 06 99) 6 kg/day
- oils containing PCB or PCT (code 13 03 01*) 200 kg/day



- foil A1/paper or PE fillings (code 13 08 99*) 120 kg/day
- crushed porcelain insulators (code 13 08 99*) 50 kg/day
- hazardous components removed from mercury-containing equipment (code 16 02 15*) 5 kg/day
- mercury sulphide (code 16 03 04) 0.15 kg/day
- paper and cardboard (code 20 01 01) 30 kg/day
- pressure gas cylinders (including halons) containing dangerous substances (code 16 05 04*) 150 kg/day
- electric and electronic equipment waste (code 16 02 15*, 16 02 16) 50 kg/day
- waste from environmental remediation of contaminated areas (according to GD 856/2002)

2. Collected waste:

- wastes listed in Annex II of GD 856/2002 on waste management and for approving the list of waste, including hazardous waste, collected for incineration (code 02 ÷ 20);
 - waste collected for incineration: 3000 t/year;
 - waste collected for temporary storage: 7000 t/year.
- waste temporarily stored on site at a certain time: maximum 1000 t:
 - wastes resulting from mining, quarrying and physical and mineral treatment of minerals – 01
 - wastes from agriculture, horticulture, aquaculture, silviculture, hunting and fishing, food preparation and processing – 02
 - wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard - 03
 - wastes from the leather, fur and textile industries - 04
 - wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal - 05
 - wastes from inorganic chemical processes - 06
 - wastes from organic chemical processes - 07
 - wastes from the MFSU of coatings (paints, varnishes and vitreous enamels), sealants and printing inks - 08
 - wastes from photographic industry - 09
 - wastes from thermal processes – 10
 - wastes from chemical surface treatment and coating of metals and other materials – 11;
 - wastes from shaping and physical and mechanical surface treatment of metals and plastics - 12
 - oil wastes and wastes of liquid fuels (except edible oils, and those in chapters 05, 12 and 19) - 13
 - waste organic solvents, refrigerants and foam/aerosol propellants (with 07 and 08) - 14
 - waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified – 15
 - wastes not otherwise specified – 16 except:
- discarded vehicles 16 01 04*,
- discarded equipment containing HCFC, HFC - 16 01 10*,
 - wastes from construction and demolition (including excavated soil from contaminated sites) – 17
 - wastes from human or animal health care and/or related research - 18
 - wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use - 19
 - municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions – 20 except:



- garden and park wastes (including cemetery waste) – 20 02
- other municipal waste – 20 03.

3. Waste stored temporarily

- wastes listed in Annex II of GD 856/2002 on waste management and for approving the list of waste, including hazardous waste, collected for incineration (code 02 ÷ 20);
 - waste collected for incineration: 3000 t/year;
 - waste collected for temporary storage: 7000 t/year;
- waste resulting from the company's activity:
 - domestic (code 20 03 01) 30 kg/day, in containers, taken over by SC ASA SERVICII ECOLOGICE SRL Arad or other authorised specialised units;
 - bottom ash (code 19 01 12) 1100 kg/day, in containers, taken over by authorised specialised units;
 - dust and ashes from flue gas treatment – including limestone and charcoal (code 19 04 02*) 400 kg/day, in containers, taken over by authorised specialised units;
 - glass waste (code 20 01 02) 350 kg/day, in containers, taken over by authorised specialised units;
 - metal and non-metal waste (code 19 01 02, 19 10 02, 19 12 03) 600 kg/day in containers, taken over by authorised specialised units;
 - plastics (code 19 12 04) 200 kg/day, in containers, taken over by authorised specialised units;
 - wooden materials (code 20 01 38) 20 kg/day, in containers, taken over by authorised specialised units;
 - filtering bags (code 19 01 99) 144 pieces/5 years, in PE bags, incinerated in the company's own plant;
 - insulation materials (code 17 06 04) 5 kg/day, in containers, taken over by authorised specialised units;
 - still bottoms from solvent recovery (code 07 02 07*, 07 02 08*) 200 kg/day, in sealed recipients, incinerated in the company's own plant;
 - still bottoms from distilled water production (code 06 06 99) 6 kg/day, in sealed recipients, incinerated in the company's own plant;
 - oils containing PCB or PCT (code 13 03 01*) 1200 kg/day, in sealed recipients, incinerated in the company's own plant;
 - A1/paper or PE foil fillings (code 13 08 99*) 120 kg/day, in dense bags, incinerated in the company's own plant;
 - crushed porcelain insulators (code 13 08 99*) 50 kg/day, in containers, taken over by authorised specialised units;
 - hazardous components removed from mercury-containing equipment (code 16 02 15*) 5 kg/day, in sealed recipients, taken over by authorised specialised units;
 - mercury sulphide (code 16 03 04) 0,15 kg/day, in containers, taken over by authorised specialised units;
 - paper and cardboard waste (code 20 01 01) 30 kg/day, on pallets, in closed areas;
 - pressure gas cylinders (including halons) containing dangerous substances (code 16 05 04*) 150 kg/day taken over by authorised specialised units;
 - electric and electronic equipment waste (code 16 02 15*, 16 02 16) 50 kg/day in containers, taken over by authorised specialised units;
 - waste from environmental remediation of contaminated areas (according to GD 856/2002) in containers or sealed recipients, incinerated or taken over by other authorised specialised units.



4. Capitalized waste:

- glass (code 20 01 02) 350 kg/day,
- metal and non-metal (code 19 01 02, 19 10 02, 19 12 03) 600 kg/day,
- plastics (code 19 12 04) 200 kg/day,
- wood (code 20 01 38) 20 kg/day,
- paper and cardboard (code 20 01 01) 30 kg/day,
- electric and electronic equipment waste (code 16 02 15*, 16 02 16) 50 kg/day
- wastes listed in Annex II of GD 856/2002 on waste management and for approving the list of waste, including hazardous waste, collected for incineration (code 02 ÷ 20) - waste collected for temporary storage 7000 t/year. Wastes are recovered through authorised specialised units.

5. Waste transport and environmental protection measures:

- with means of transport approved by the Romanian Automobile Register, in compliance with Law no. 122/2002 on dangerous goods transport and GD 1326/2009 on dangerous goods road transport in Romania.

6. Waste disposal (permanent storage, incineration):

- domestic waste – incinerated or delivered to an authorised sanitation operator for permanent storage;
- waste that is both produced and managed through the company's activities is recovered/disposed of by authorised specialised units.

7. Waste management monitoring:

- the amounts of collected/recovered/disposed waste shall be reported to APM Timis monthly;
- the data on waste management records shall be submitted annually, in compliance with Law 211/2011 on waste management and GD no. 856/2002 on waste management and for approving the list of waste, including hazardous waste;
- monthly report of data on the amount of collected/recovered waste, in accordance with GD no. 856/2002 on waste management and for approving the list of waste, including hazardous waste
- annual report of data on collected/recovered waste electrical and electronic equipment, by April 30th, in compliance with Order no. 1223/2005 regarding the procedure of produce recording and reporting procedure of data regarding EEE and WEEE;
- annual report by February 25th, of amounts of packaging waste received and managed according to Order no. 794/2012 on the procedure for reporting of data on packaging and packaging waste;
- records of fresh/waste oils amount shall be reported biannually, according to Order no. 235/2007 on used oils management;
- other data requested by APM Timis.

8. Used and resulted packaging – types and quantities:

Used packaging:

- 20-m³ metal containers;
 - 220-l metal drums;
 - 220-l plastic drums;
 - 1000-l cubitainers;
 - 800-l metal containers;
 - 1000-l metal containers;



- 770-l wheeled plastic containers;
- 120-l wheeled plastic containers;
- 25-l polyethylene coated paper bags;
- 900-l cylinders for Freon transport;
- packaging used for medical waste collection: boxes (10 l, 20 l, 40 l, small bags, large bags, polyethylene recipients (2,3 l, 5 l, 12 l), sealed plastic buckets (30 l, 50 l), 240-l and 770-l containers.

Resulted packaging waste:

- plastic packaging (code 15 01 02) 10 kg/day;
- metal packaging (code 15 01 04) 50 kg/day;
- wooden packaging (code 15 01 03) 10 kg/day;
- paper and cardboard (code 15 01 01) 5 kg/day.

9. Management of (recovered) packaging:

- re-used as secondary packaging and incinerated at the end of their life cycle.

V. Hazardous substances and preparations management

1. Hazardous substances and preparations produced or used or marketed/transported:

- technical oxygen 5000 Nm³/day;
- standard gas for emission analyzer 3 l/day;
- forklift diesel fuel 20 l/day;
- perchloroethylene in circuit 2000 kg;
- perchloroethylene for circuit completion 0,5 kg/day;
- 5% NaOH solution 30 kg/day;
- solvents (600 kg/day) of the following categories:
 - halogenated solvents: chlorinated derivatives of methane, ethane and propane;
 - ketones: acetone, methyl ethyl ketone, propanone;
 - hexane, benzene;
 - oil derivatives: white-spirit, petroleum benzine;
- hazardous waste included in Annex II of GD 856/2002, on waste management and for approving the list of waste, including hazardous waste.

2. Management

- packaging: various original labelled plastic, metal and/or cardboard packaging;
- transport: with means of transport approved by the Romanian Automobile Register, in compliance with Law no. 122/2002 on dangerous goods transport and GD 1326/2009 on dangerous goods road transport in Romania with subsequent amendments and completions;
- storage: on the concrete platform in delimited areas, metal tanks, metal cabinet, closed and covered storage facilities;
- use/marketing: incinerated or delivered to other authorised specialised operators.

3. Management of used packaging or packaging resulted from hazardous substances and preparations: incineration in the company's own plant.

4. Plants, facilities, equipment and measures for environmental protection and intervention in case of accidents: specific facilities and measures in case of accidents with chemical and flammable substances.

5. Hazardous substances and preparations management monitoring: daily records, according to the current legislation.



This environmental permit has 38 (thirty-eight) pages. It has been issued in 4 original copies, of which 2 (two) for APM Timis, 1 (one) for GNM CJ Timis and 1 (one) for the owner of the environmental permit.

EXECUTIVE MANAGER

Mihai Danut CEPEHA

**HEAD OF APPROVALS,
AUTHORISATIONS AND PERMIT DEPARTMENT**
Lucia SCRIUBA

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