

REPUBLIC OF BULGARIA

MINISTRY OF ENVIRONMENT AND WATER

99-00-101 04-00-1311 05 September 2023, Sofia

Subject: project "Construction of hall building, drainable concrete pool, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, location of a wastewater pre-treatment station, location of medical waste incinerator with ancillary installations" with the contracting authority SC FRIENDLY WASTE ROMANIA SRL in Romania

Dear Minister FECHET,

I hereby acknowledge receipt of your letter Reg. No. DGEICPSC/108050/08.08.2023 (received by e-mail only), by which you submit to us a notification under Art. 3 of the Convention on Environmental Impact Assessment (Espoo Convention) for the project "Construction of hall building, drainable concrete pool, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, location of a wastewater pre-treatment station, location of medical waste incinerator with ancillary installations" on the territory of Romania.

We would like to express our gratitude for being notified again about the project by submitting the notification under Article 3 of the Espoo Convention and the updated documents, as well as the attached Memorandum of Presentation.

H.E. Mircea FECHET

Minister of Environment, Waters and Forests of Romania
12 Libertatii Blvd.,
Sector 5, Bucharest, Romania





The initiated proposal concerns the deployment of a rotary incinerator for the incineration of medical and animal waste, providing a technological unit consisting of:

- construction of a hall made of coated sheet metal placed on a metal structure;
- purchase and installation in the technological flow of a waste incinerator type 1E1000R-300;
 - installation of 2 refrigeration chambers with a volume of V=16 cubic meters each;
 - purchase and installation of a weighing platform;
 - mobile weighing scale;
 - purchase and installation of 4 propane-butane tanks of 5000l each;
 - construction of concrete platforms;
 - placement of a basin with a volume of $V=10 \text{ m}^3$;
 - construction of water supply and sewage networks;
 - connection to the district drinking water network;
 - connection to the district sewage network.

The production site is planned to be located within the regulatory boundaries of the municipality of Giurgiu, Sloboziei road, 4th km. lot 2, Giurgiu County. The selected site has an area of 3050 m² and is located in Platform 2, on the site of the former chemical plant in the town of Giurgiu. The annual maximum incineration capacity is estimated at 7,2 t/day (2304 t/year).

The implementation of the project will include the construction of a water and sewerage system, connection to the district drinking water network and connection to the district sewerage network.

According to the information provided, the investment proposal involves the construction of a hall on a metal structure and the purchase and installation of a rotary incinerator for the incineration of medical and animal waste. According to the updated General Urban Development Plan of the Municipality of Giurgiu, the site is located in a production storage area. The incinerator will consist of two chambers, a main chamber and a post-combustion chamber. The main rotary combustion chamber is equipped with a supplementary air injector to ensure complete and homogeneous combustion, and the second chamber is used for flue gas afterburning to remove harmful emissions. The facility is planned to be equipped with an automatic process control system that monitors the maintenance of temperatures in both chambers. In cases where non-hazardous waste is not incorporated directly into the

incineration stream, it will be temporarily stored on a concrete pad designed for this purpose, and animal waste in a refrigerated chamber. Storage of medical waste will also take place in a refrigerated chamber. In the process of incineration, waste 'ash' will be generated, representing 3-5 % of the original weight.

After careful consideration of the information provided and the consultations with the competent authorities in our country, it has been established that there is a potential transboundary impact in the common Bulgarian-Romanian section of the Danube River (the common transboundary water body of the Danube River with Romania), given the following:

- Construction of a rotary incinerator for the incineration of hazardous medical and non-hazardous animal waste on the territory of industrial
 platform No 2 of the former chemical plant in Giurgiu with a waste
 incineration capacity of 300 kg/h, respectively 7.2 t/day. Typical pollutants
 identified in the Report are: sulphur dioxide, carbon monoxide, nitrogen
 oxides, persistent organic pollutants, heavy metal compounds.
- As a result of the activity, production wastewater effluent will be generated from the site from vehicle and container washing, hall washing/sanitation and concrete platform. The wastewater effluent will be discharged to an existing industrial sewer in the area after treatment at a wastewater treatment plant. The proposed discharge of treated wastewater effluent will be permanent in nature.
- During the implementation of the investment proposal, it is expected that the sources of pollution in the atmosphere will be the result of waste incineration, fuel combustion (propane-butane) in the incinerator and from waste transport vehicles. A Gaussian mathematical model has been used to quantify the expected ground-level concentrations of pollutants from the site after implementation. The occurrence of the following pollutants was investigated for the operational phase: emissions of sulphur dioxide, carbon monoxide, nitrogen oxides, organic pollutants and heavy metal compounds from flue gases. It is noted in the information that, given that the incinerator is equipped with a secondary combustion chamber, a gas cleaning system, a bag filter system, the emissions to the atmosphere will be of very low/minor concentrations. Numerous sites subject to health protection are located near the IP and within the emission radius of the site. The nearest objects subject to health protection are residential buildings of the city of Giurgiu 535 m away from the site. The nearest distance to the territory of Republic Bulgaria is 3317m and to the nearest objects subject to health protection is over 3700 m.



The distance from the IP to the nearest residential area of the town of Giurgiu is 570 m.

- IP is a potential source of unpleasant odors.
- The activity will generate domestic and process wastewater, which after treatment will be discharged into the existing sewage network of the area, as well as combustion gases from the incinerator, which will be treated.
- Causes that could lead to potential contamination of surface water and groundwater are through infiltration of pollutants, during the implementation and operation of the project, and could be related to: accidents during operation of machinery used in the construction works; accidental failure of diesel tanks of vehicles servicing the activity; possible accidental loss of lubricants from machinery or vehicles.
- Diffuse water pollution due to spreading/dispersion and sedimentation, respectively emissions of pollutants and particulates into the atmosphere, which will be of a permanent nature.

The plant will be located at a distance of less than 4 km. from Ruse, which, given the prevailing wind direction - north/northeast, is a prerequisite for impact on the air quality in the territory of the country, including in the town of Ruse. Despite the fact that the operator has not modelled the worst-case scenario of the operation of the installation, the modelling results confirm that an impact on the territory of Ruse is expected.

The site will represent a long-term and intensive source of organised emissions of air pollutants, with the potential for hazardous substances to be released during incineration, especially during the incineration of medical waste, which has a high plastic content, as well as in the event of accidents and failures of the rotary combustor and gas filtration plant.

Based on the above, in accordance with Article 3 of the Espoo Convention, I would like to inform you that we wish the Republic of Bulgaria to take part in the EIA procedure in a transboundary context for the project "Construction of hall building, drainable concrete pool, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, location of a wastewater pre-treatment station, locationt of medical waste incinerator with ancillary installations".

After the Report was provided for public access, numerous opinions were expressed by the Bulgarian public (more than 400 against the implementation of the IP, accompanied by a petition from more than 2 000 citizens), which we attach to this letter. Some of the opinions also object against the short deadline for submitting opinions.



The comments received after public access can be summarised in the following main points:

- According to the opinions submitted by natural and legal persons, there is a lack of a detailed and realistic assessment of the impact of air pollution emissions in the transboundary territory of the city of Ruse and of an environmental impact assessment. In the report Bulgaria is mentioned for the first time on pages 104-105 in Section 6 "Description of the significant effects the project may have on the environment" with two tables and a few sentences: "The environmental factor air will be affected by the project within acceptable limits, without quantifiable effects; Settlements may be affected by air quality (concentrations of pollutants in emmissions) and noise"; In the same Section 6, on page 113, where Bulgaria is again mentioned only tables and formulas are given, and it is not clear from the entire presentation of this chapter of the report which locality (Giurgiu or Ruse) and which environment (Bulgarian or Romanian) the findings refer to and to what extent they indicate or exclude transboundary impacts.
 - There is a lack of specific, detailed and verbal analysis of the geographical, climatic, meteorological conditions of the transboundary impact on air pollution, taking into account the specific wind rose on the territory of the municipalities of Giurgiu and Ruse. The opinions also mention the lack of a specific, detailed and comprehensive analysis of the transboundary impact of pollution taking into account all pollutants in the area. It is noted that only enterprises operating in the territory of the municipality of Giurgiu are mentioned, that in this part of the analysis the polluters in the area of the city of Ruse (such as Linamar, TPP Ruse, etc.) are not taken into account, which makes it incomplete, inaccurate and not providing reliable data on the overall scale and coefficient of transboundary pollution. It is proposed that the impact assessment should take into account all air pollutants on both sides of the Danube in a comprehensive manner, taking into account the wind roses, the constant complaints of citizens about odours and the relevant reports of the Regional Inspectorate for Environmental Protection on exceedances of the limit values of all pollutants. In this respect, the public considers inadequate any judgement on the extent of air pollution that is derived by considering pollution coefficients from only one source or only from sources located on one side of the Danube, as in the published report. In the absence of an aggregate estimate of total pollution from all sources, air quality is neither established nor guaranteed in any way.
 - In their submissions, the public expressed concern about the lack of historical analysis of air pollution data from the previous source, the chemical plant in Giurgiu,



on whose site the hazardous waste incinerator is to be built. A comparison is made with the situation that existed during the operation of the Verahim chemical plant and a request is made for an analysis containing information on air pollution from the previous source due to the specific air currents, geographical and climatic conditions of the site.

As the attached opinions and petition from citizens contain personal data, such as personal identification numbers, signatures and telephone numbers, we draw attention to the fact that the provisions of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC should be complied with and deleted when submitted to third parties or public access.

With regard to the submitted Environmental Impact Assessment Report we express the following:

I. General comments:

- 1. The submitted EIA documentation provides a cursory description of the investment proposal, both in the stages of the production process and the technical infrastructure necessary for the implementation of the investment proposal to and on the production site, which causes uncertainty regarding the specifics of the production process and the technological units of the installation.
- 2. A comparative assessment of the proposed activities with the currently available BAT implementation documents has been carried out. The sponsor's proposal complies with the BAT criteria in terms of the types of pollutants, their emission limits and the treatment facilities necessary to comply with the BAT.
- 3. The EIA Report does not contain information and evaluation of the reagents for the treatment of the generated flue gases, H-warnings and P-recommendations, and an annual performance standard. There is no information on how the hazardous chemicals to be used as reagents and/or auxiliary materials will be stored.
 - 4. Insufficient data are provided on the method of waste sorting
- mechanized, manual or others. It is not clear whether waste from other countries will be accepted;
- There is no description of the separate and visualised storage areas for the different types of waste and the description of <u>....temporary storage on a concrete pad with a partially covered light shed</u> is insufficient, given the type of waste accepted, which is rapidly



decomposing and volatile, from Group 02, i.e. 'Waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing'. It is foreseen to accept waste - sludge, faeces, urine and animal manure, unusable food products, etc. in containers of 240-1 100 l. There is no clear information regarding the containers - corrosion resistance, environmental protection from harmful emissions and odours, mobile or stationary, allowing inspections and repairs under their bottom;

- It is not clear whether the incineration will be recovery for energy production R1, or surface incineration disposal D10.
- Options and measures for providing the site with collectors to capture leaked or spilled liquids or bulk waste are not spelled out;
- There is no information on the method of storage of the generated waste ash, storage period and subsequent treatment place of recovery or disposal. There is also no data on the movement of each waste to the last consignee.
- 5. The report does not address how and where compatible liquid and paste wastes are mixed when the need arises for more efficient and environmentally sound management in waste preparation.
- 6. The estimated quantities for the individual wastewater streams and pollutants during operation are reported. A quantitative and qualitative assessment is provided. With regard to the discharge of water after treatment by local wastewater treatment plants, there is no data on the effluent quality parameters for discharge into the river. Danube.
- The production is provided on the parameters of all organised emission sources at the production site. The modelling of the dispersion of the emissions from the sources on the site shows that in the area of the investment proposal and near the residential areas of the town of Bishkek, the emissions from the sources on the site are not significant concentrations of pollutants above the regulatory concentration limits will not be reached. The mathematical model used in the EIA for the assessment of the dispersion of emissions and their impact on the air quality in the territory of the town of Giurgiu is based on the following results. The model used for the assessment of the emission of air pollutants in the territory of the Republic of Bulgaria is not approved by the environmental legislation of the Republic of Bulgaria in the part "atmospheric air". The presented modelling results do not provide evidence for the assessment of the expected transboundary impact on ambient air quality in the territory of the Republic of Bulgaria. There is no cumulative impact assessment of all sources of harmful emissions in the area of the investment proposal initiated by the sponsor.



- 8. The preparation of an Odour Management Plan is affected without such a plan being proposed.
- 9. No detailed assessment of the presence of fugitive emission sources at the site has been provided. The mathematical modelling of pollutant dispersion cannot be verified as to the correctness of the calculations.
- 10. The EIA Report does not adequately describe, analyze, and compare alternatives with respect to:
 - Location:
 - activities and technologies;
- size and scale relevant to the investment proposal and its specific characteristics with an indication and justification of the chosen option, taking into account the consequences of the environmental impacts of the investment proposal.
- 11. The climatic factors in the area of Giurgiu are described without considering the ambient air quality and the factors (favourable and unfavourable) to assess the climatic conditions as suitable/unsuitable for the implementation of the investment related to the incineration of medical and animal waste.
- 12. There is no assessment of the condition of water surface and groundwater, the area in which the property subject to the proposal falls, water quality of the river. Danube in the area under consideration, permitted discharges in the area under consideration, water sources for drinking and domestic purposes in the area, presence of sanitary protection zones (SPZ).
- 13. The EIA does not consider landscape types and their significance in the context of the area under consideration in terms of their importance in natural, social and cultural terms.
- 14. In relation to the analyses carried out in the EIA, there is a lack of aggregated data on specific impacts on environmental components and the population, which should be structured during the construction and operation phases, including in emergency situations. In this respect, there is also a lack of adequate data on the significance of the impacts of the IP, both during construction and operation.
- 15. No specific measures are proposed to avoid, prevent, reduce adverse impacts. There is also no plan for implementation of the measures in the phases of implementation of

the investment proposal. The EIA also does not present how the installation will be controlled in accordance with the applicable BAT.

16. The submitted documentation also does not provide evidence of the results of the consultations carried out at the various stages of the procedure to date with specialised agencies, the public and competent authorities.

II. Remarks on environmental components and factors:

Remarks on the "water" component:

1. The chemical substances identified as priority substances by Directive 2008/105/EC setting environmental quality standards in the field of water policy (Directive 2008/105/EC), as amended by Directive 2013/39/EU with regard to priority substances in the field of water policy (Directive 2013/39/EU), have not been analysed in the waste at the input of the incinerator site, with the exception of a partial analysis for dioxins and furans. These substances, entering the incinerator as municipal or hospital waste, will be deposited on the walls of the incinerator, will be released via the effluent when the facility is washed, will be released into the air, and will form a diffuse source of airborne contamination that will enter surface water via atmospheric processes.

It is necessary to analyse and foresee measures to prevent the impact of all substances defined by Directive 2008/105/EC and Directive 2013/39/EU as well as other possible pollutants that can be expected from the site on the one hand as a point pollutant, but also on the other hand as a diffuse pollutant of water and soil through airborne transport.

- 2. The assessment of the transboundary impact on water is based on the principle of dilution, which is unacceptable, as dilution is not an acceptable method of achieving the quality standards, especially as it could lead to contamination of the drinking water supplying some of the Bulgarian settlements along the river. Danube. It is also pointed out that the treatment plant has been upgraded in accordance with IP 188/2002, as supplemented and amended by IP 325/2005, which, in view of scientific progress, we consider to be outdated standards.
- 2.1. It is necessary to consider all pollutants, the concentrations of each and their cumulative effect when entering surface water.
- 2.2. Consideration should be given to the impact of substances and elements that will be deposited on the incinerator walls and subsequently enter the water when the facility is washed.



- 2.3. There is a need to ensure that priority and priority hazardous substances are not discharged into the Danube River.
- 3. The description of the location and the landscape does not take into account that the former chemical plant on the site of which the facility is to be built has had negative transboundary impacts for many years. In this respect, the document does not consider the region, but only locally the site on which it is to be built.
- 4. It is necessary to ensure a sufficiently large distance from the border with Bulgaria to limit the impact only to the territory of the Republic of Romania, given the possible transboundary impact of the international basin of the Danube River., soils and the health of Bulgarian citizens.
- 5. In the Environmental Impact Assessment Report, the impact of the diffuse atmospheric pressure resulting from the gases emitted by the combustion processes on the Danube should be considered and analysed in detail.

Remarks on the "air" component:

The documents indicate emission limit values set according to Directive 2010/75/EU on industrial emissions, emission levels according to Commission Implementing Decision (EU) 2019/2010 of 12 November 2019 establishing the conclusions on the best available techniques (BAT) for waste incineration, as well as maximum values of expected emissions from the incinerator (the values from the technical book of the incinerator and from specialised literature are used), without and with additional air supply. It is not clear which emission limit values will be complied with by the operator when operating the plant. Also, in order to account for the installation's permissible most significant contribution to ambient air quality, mathematical modelling must be carried out using a mass flow calculated on the basis of the emission limit values for the installation and the maximum permitted flow. This will ensure that, at these and lower emission levels, emissions will not result in exceedances of the set standards for the protection of human health.

In this case, estimated concentrations of pollutants emitted into the atmosphere during the operation of an installation were used, which is a prerequisite for possible underestimation of the impact on air quality of the installation in cases where it operates with higher, but compliant with the regulatory emission levels.

On page 205 of the report it states that "the provisions of the best available techniques (BAT) will apply in the authorisation and operation phase of the installation", by which we can

assume that the operator will comply with all the requirements set out in Commission Implementing Decision (EU) 2019/2010 of 12 November 2019 establishing BAT conclusions for waste incineration, as well as those set out in Directive 2010/75/EU. In this regard, we draw attention to the need to set conditions in the forthcoming EIA decision for the operation of the plant to ensure that the emission limit values and emission monitoring requirements are complied with, in full compliance with European legislation for waste incineration plants - Directive 2010/75/EU on industrial emissions, Section IV.

In relation to the location where the incinerator is proposed to be built, we draw serious attention to the following issue: it is necessary to prevent/reduce fugitive emissions resulting from the operation of the installation and its associated activities, in order to prevent emissions of harmful substances from reaching the city of Ruse, given the prevailing wind direction, namely north/northeast (23.4% of the year) and the distance to the city of Ruse (less than 4 km). In the event of any shortcomings in the permitting, construction and operation of the installation, problems would be difficult to resolve given that it is an installation in a neighbouring country. This applies also, and not least, to emissions of intensely odorous substances from the storage processes of non-hazardous, medical (non-hazardous and hazardous) and animal waste. All possible BAT should be applied and specific requirements should be set out in the future EIA decision to prevent the off-site release of odour-intensive substances, such as:

- storage of animal by-products as well as other perishable wastes that could be a source of odorous substances in cold rooms for no more than 24 hours;
- the preparation of an Odour Management Plan that includes the components described as BAT on page 249 of the report.

Remarks on the "waste" factor:

In the "Environmental Impact Statement, Overview 1", point 2 .4.6, "Table 13 - Waste generated during operation" and in "Appropriate Assessment Study, Rev. 1", item 2.6.2. - Waste Generated by the Project, Table 26, does not describe by code and quantity the waste that will be generated from spent filters (filter bags as labeled in the "Exhaust Gas Purification/Washing System, Dry Type," from the Report on page 29) and entrained/flying ash (dust from the filtration system), and where and to whom it will be delivered.

The presented modelling of emissions to ambient air does not take into account the fact that the IP will operate with a variety of origin and composition of the incinerated waste, which is able to significantly affect the qualitative composition of emissions. The diversity of waste to be incinerated is not made clear until pages 37-39 of the EIA Report. It is obvious that the

incinerator will not only accept hospital waste, as the current IP designation is erroneously worded. In this regard, it is not clear in the Report for the incineration of what type of waste the mathematical emission modelling has been prepared for.

III. Regarding the impact of the IP on humans and the possible health risk of the implementation of the investment proposal:

The submitted IP is potentially adverse in a transboundary context and does not represent an investment that would minimize the negative impacts on human health given the fact that the town of Ruse has been a hotspot for decades in terms of poor air quality and the health and demographic indicators in Ruse are less favourable than the national average, including mortality from respiratory and cardiovascular diseases and malignant neoplasms. According to the information presented, it can be concluded that there is a potential for the incinerator's activities to directly or indirectly affect public health.

The information on the health risk of the population in Ruse has not been described and substantiated. It is concluded that the possible release of pollutants into the atmosphere will not have a direct impact at a distance of 3 317 m to the nearest boundary point.

In order to be able to express an opinion on the level of significance of the impact and the risk to human health, it is necessary that the information contains sufficient facts, data and studies and that the analyses, conclusions and inferences drawn on the basis of them on the presence and level of health risk for the population of the town of Ruse are substantiated. Ruse in case of the implementation of the investment proposal, namely:

- To indicate the distances to the residential area of the town. Ruse, adjacent to the Danube.
- Assess and predict the expected impact of the emitted pollutants on the health of the population of the town of Ruse. Ruse.
- Indicate the expected concentrations of the pollutants emitted by flue gases into the ambient air at the boundary of the residential area of Ruse. Ruse, as well as their compliance with the permissible limits for concentrations of harmful substances in the ambient air of the settlements.
- To indicate the estimated area of spread of flue gases from the exhaust device at the most unfavourable wind rose location.
- From the cumulative effect analysis carried out, to estimate the spread of pollutants at the most unfavourable location of the wind rose for the town of Ruse.

- The information submitted in the EIA Report for the IP does not demonstrate that the site will have the necessary facilities for the treatment of waste gases in the event of their organised release into the atmosphere, in accordance with BAT requirements.
 - The developer envisages the use of a bag filter only, which, given the type of waste incinerated with high plastic content and the potential for release of dioxins and furans, is an insufficiently effective technique from a health perspective.
- The report presents that "The exhaust system consists of a centrifugal and a cooling fan [...]. The advantage of this FGD solution is the pollutant removal efficiency of about 98%". This technique, as well as the envisaged bag filter, are not effective for the capture of hydrogen chloride, hydrogen fluoride, dioxins, nitrogen oxides and sulphur oxides, as they are gases and not solid particles.
- Considering that the main problem of the submitted IP is the absence of treatment facilities required under BAT for incineration of waste with risk of release of organic pollutants, incl. Dioxins and furans (medical waste is incinerated together with its plastic packaging and the waste itself has a high plastic content), we consider it necessary to provide for effective treatment of the outgoing emission stream with the BAT equipment under point 30(i) of EC Decision 2019/2010, namely by using a wet scrubber with carbon sorbent.
- The findings on page 91 of the Report are incomplete for the pollutants emitted: PM, SO2, CO2, NOx, POPS, Cd. It is necessary to add under the scope of Directive 2010/75/EU total organic carbon, hydrogen chloride, hydrogen fluoride, polychlorinated dibenzodioxins and furans, benzpyrene.
- The project is being built in an industrial area and will certainly have a cumulative emission effect with other surrounding businesses in the industrial area of the city of Giurgiu and the industrial area of Ruse, i.e. atmospheric mixing of different pollutants will be possible. This, together with the high humidity in the area, creates a risk of secondary formation of new chemical pollutants. The risk of such a cumulative effect, as well as an analysis of the current emission contribution of the enterprises from the industrial zones in the cities of Giurgiu and Ruse is not addressed in the EIA report.
- It is not clear whether the IP will further increase the spatial concentration of sametype emission sources, thereby creating a risk of increased emission exposure for the population and degraded quality of the living environment in adjacent sites subject to health protection.



• The meteorological and landscape characteristics of the IP area, as well as the high humidity of the ambient air in the area of Danube River are unfavourable in terms of dispersion of air pollutants and contribute to their retention in the ground atmospheric layer, respectively the risk of exposure of the population to the emitted pollutants is high. In this regard, the report should assess the dispersion of pollutants at the most unfavourable wind rose location for the city of Ruse.

On the basis of all the above, we inform you that the information in the EIA Report should be revised and supplemented according to the comments described and resubmitted to the competent authorities and the interested public. Also, given the sensitivity of the investment proposal, I suggest that after the removal of the comments on the report, a public consultation on the investment proposal should be organised also in the territory of the Republic of Bulgaria.

Please accept, Honourable Minister, the assurance of my highest consideration and readiness for successful future cooperation.

Sincerely,

Julian Popov
Minister of Environment and Water