To: Ministry of Environment and Water of the Republic of Bulgaria

Sofia, 22 Mariya Luiza Blvd

Attn: Minister of Environment and Water of the Republic of Bulgaria

Subject: Environmental Impact Assessment (EIA) study prepared for the Project for the Construction of a Waste-to-Energy Plant on cadastral parcels 1420/1, 1420/4, 1491/1, 1541/1, 1541/2, 1552, 5824/1, 6513/1, 6513/2 on the cadastral map of the Prahovo settlement, municipality of Negotin, and phased construction of a Non-Hazardous Waste Landfill within the industrial chemical complex in Elixir Prahovo on cadastral parcels number 2300/1, 1491/1 and 1541/1 Prahovo, municipality of Negotin.

Your Reference: Letter Reg. No 04-00-949-49 dated on February 28th, 2025.

Date: March 20th, 2025.

Dear Minister Manol Genov,

Ladies and jentelman,

Hereby we would like to send cordial greetings of the Ministry of Environmental Protection of Republic of Serbia to the Ministry of Environment and Water of Republic of Bulgaria.

Within this letter we are submitting the answers related to Your respected letter Reg. No 04-00-949-49 dated on February 28th, 2025, with additional suplementary Environmental Impact Assessment documentation for the Subject Project:

- **Attachment 1**_Study of the impact of the Waste-to-Energy Plant on the concentration of selected heavy metals in the air of the broader location of the chemical industry complex in Prahovo, as additional supplementary study to the EIA study of the Subject Project
- **Attachment 2**_ New dedicated EIA chapter 6.4 - Assessment of the Potential Impact of the Waste-to-Energy Plant and Non-Hazardous Waste Landfill on public health in cross-border areas, as a new special chapter which will be implemented in the revised EIA study of the Subject Project
- **Attachment 3**_Updated EIA Chapter 8 - Description of the measures envisaged to prevent, reduce and where possible, eliminate any significant adverse impact on the environment, which will be implemented in the revised EIA study of the Subject Project.

Hopefully, you will find the level of provided details sufficient for full project impact comprehension and for issuing of a respective positive decision.

Please accept assurance of our highest consideration.

Yours sincerely,

Ministry of Environment of Republic of Serbia

The answers related to Letter of the Ministry of Environment and Water of the Republic of Bulgaria Reg. No 04-00-949-49 dated on February 28th, 2025

AMBIENT AIR COMPONENT

1. The supplemented documentation does not contain data on the results of the modelling of emissions of heavy metals - Cd+Tl and Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V Directive (EU) 2024/2881 of the European Parliament and of the Council of 23 October 2024 on ambient air quality and cleaner air for Europe (recast), (the Directive) was adopted in 2024. For the following heavy metals - arsenic, cadmium, nickel, lead - the Directive sets target values for the protection of human health to be achieved by 11 December 2026 and limit values to be achieved by 1 January 2030.

In view of this, the operator should carry out modelling of the expected impact on ambient air quality on the territory of the Republic of Bulgaria when operating the installation, showing that these air quality limit values the heavy metals will be met. These data need to be reflected in the revised EIA report.

Answer:

The comment is well noted. Additional dedicated air study has been executed by Faculty of Mechanical Engineering, University of Belgrade, with a purpose of modelling expected impact of heavy metal emissions on ambient air quality.

Please find enclosed as Attachment 1, the additional supplementary study entitled ***"Study of the impact of the waste-to-energy plant on the concentration of selected heavy metals in the air of the broader location of the chemical industry complex in Prahovo"*** (Mechanical Engineering, University of Belgrade, March 2025)" which covers a modelled zone of 50 km x 50 km, that is an area of 2500 km^2.

Waste-to-energy facility boiler stack is the dominant source of potential heavy metal emissions, regulated by the BAT conclusions (BATC 25 of BATC WI – Commission implementing decision EU 2019/2010 of 12 November 2019 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliaments and the Council for waste incineration, notified under documents C(2019) 7987), and as such modelling is intended to quantify the contribution of this emission source. The modeled zone spreads across Serbia, Romania and Bulgaria. The modeling approach was conservative, which means that the emissions were simulated at the maximum allowed values for the 2 groups of metals, according to the emission limit values from the corresponding BAT conclusions (BATC 25 of BATC WI – Commission implementing decision EU 2019/2010 of 12 November 2019 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliaments and the Council for waste incineration, notified under documents C(2019) 7987).

Two groups of metals were analyzed - the first, which includes cadmium and thallium, and the second, which includes arsenic, lead, nickel, chromium, cobalt, copper, manganese, nickel, and vanadium. Later the results for each group of metals are treated as the emitting value for each group component individually (e.g., a full emission limit for Cd + TI was attributed to Cd).

Modeling results show that regulatory limits expressed in Directive (EU) 2024/2881 of the European Parliament and of the Council of 23 October 2024 on ambient air quality and cleaner air for Europe (recast) for 2030 are not exceeded even in the immediate vicinity of the emission source, while concentrations in remote areas are many times lower.

In conclusion, the modeling results confirm that the emissions from the planned plant will not negatively affect the air quality in the analyzed area, including the potential cross-border impact on Romania and Bulgaria. Please be referred to the study provided as Attachment 1 to this letter.

The study findings will be accordingly implemented in the revised EIA study.

Monitoring of emissions of heavy metals needs no revision, as it is already implemented in the adopted monitoring plan envisioned in chapter 9 of the submitted EIA study, in accordance with BATC 4 (BATC WI – Commission implementing decision EU 2019/2010 of 12 November 2019 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliaments and the Council for waste incineration (notified under documents C(2019) 7987).

HUMAN HEALTH

2. The attached supplementary information addresses in detail the issues regarding the comments expressed in letter No. 04-00-949-36/15.11.2024 of the Ministry Environment and Water of the Republic of Bulgaria. With regard to the condition "A special section should be prepared in the report which, based on the other sections in the EIA Report, analyses the potential for transboundary impacts on human health, and measures to prevent and mitigate them", it is indicated that a special section will be prepared and applied in the EIA study as a summary of the analyzed potential transboundary impacts on human health and measures to prevent and mitigate them.

Answer:

The comment is well noted. Please find enclosed as Attachment 2 to this letter a new dedicated EIA chapter entitled as ***6.4 - Assessment of the potential impact of the Waste-to-Energy Plant and Non-Hazardous Waste Landfill on public health in cross-border areas*****,** as a summary of analyzed potential transboundary impacts on human health, which will be implemented in the revised EIA study of the Subject Project.

The assesment findings did not indicate hazardous substances which could be considered as a potential public health risk. Consequently, measures to be taken for the purpose of environment

and health risk prevention in transboundary context only supplement measures to be taken for overall project environmental impact mitigation and as such are a part of chapter 8 of the EIA study.

Please find enclosed as Attachment 3 to this letter ***Updated EIA Chapter 8 - Description of the measures envisaged to prevent, reduce and where possible, eliminate any significant adverse impact on the environment*****,** which will be implemented in the revised EIA study of the Subject Project.

To take additional precaution for protection of environment in transboundary context and consequently human health in neighboring Romania and Bulgaria, additional precaution measures have been taken and included in the updated chapter 8 provided as Attachment 3 to this letter. Additional measures could be separated in prevention and mitigation groups. These additional protection measures for the environment and moreover human health, included in updated chapter 8 of the EIA study, are as follows:

- To reduce the operating risk start-up/shut down operations will be carried out in such a way that first/last waste introduced to the boiler contains minimal amount of organic halogenates.
- In accordance with Article 41 of the Law on Waste Management ("Official Gazette of RS", no. 36/2009, 88/2010, 14/2016, 95/2018 – Other Laws and 35/2023) and Article 7 of the Regulation on technical and technological conditions for the design, construction, equipment and operation of waste thermal treatment plants, emission limit values and their monitoring ("Official Gazette RS", No. 103/2023), the project holder is obliged to obtain from the competent Ministry of Environmental Protection, Department for Waste Management, a permit for the thermal treatment of waste by incineration before obtaining the so-called IPPC permit, which in addition to the prescribed conditions for work, contains the following:
    1) types of waste that can be treated in accordance with the special regulation on categories, testing and classification of waste, if possible, with data on the amount of each type of waste;
    2) total capacity of the incineration or co-incineration plant;
    3) emission limit values;
    4) data on pH values, temperature and flow of wastewater discharge, flow and all other quality parameters of wastewater, required water conditions by competent authorities;
    5) the method of measurement and the sampling and measurement deadlines that should be followed in order to comply with the conditions for monitoring emission limit values;
    6) maximum allowed working time in periods of technical interruptions or breakdowns of devices for pollution control and monitoring, i.e. transition periods for the operation of the plant and its parts, as well as measures for interruption of work in accidental situations;
    7) data on the highest and lowest ignition points of the waste that will be thermally treated, the highest and lowest calorific values of the waste, the maximum content of polychlorinated biphenyls, chlorine, sulfur, heavy metals and other substances emitted by the plant;
    8) data on the method of measuring emissions into the air;
    9) average composition of mixed municipal waste intended for incineration

- It will not be allowed to receive substances that exceed the limit values of the amount of POPs substances according to Article 4 and Annex I part A, Regulation (EU) 2019/1021 of the European Parliament and the Council of June 20, 2019.
- Acceptance of waste that can be reused, composted or recycled is prohibited.
- In order to check the compliance of the delivery with the accompanying documentation (waste characterization report, preliminary pre-acceptance test report (in accordance with BATC 9 of BATC WI – Commission implementing decision EU 2019/2010 of 12 November 2019 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliaments and the Council for waste incineration (notified under documents C(2019) 7987, etc.)), quick analyzes (about 60 min.) are planned (in accordance with BATC 9 and BATC 11 of BATC WI – Commission implementing decision EU 2019/2010 of 12 November 2019 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliaments and the Council for waste incineration (notified under documents C(2019) 7987), if necessary, before the actual reception at the site. To check the physical and chemical properties of the delivered waste, referral for treatment, representative samples will be taken, and the representative samples will be analyzed and tested as part of the internal central laboratory protocol. During quick analyses, test the following parameters: determination of sensual properties, determination of calorific value of waste, ash content, moisture content, concentration of total halides. Rapid analyzes will be performed in the internal laboratory at the very entrance to the complex. In the case of deviation of the parameters from the expected values determined in the pre-acceptance procedure, the truck will not be allowed to unload until a complete analysis and determination of all parameters that were the subject of the waste pre-acceptance procedure. If it is determined that the waste does not correspond to the contract through the analytical procedure, the acceptance will be refused. Additional waste tests may include ignition temperature, halogen content, sulfur (S) content, heavy metal content, viscosity, density, POPs content, etc. (in accordance with BATC 9 and BATC 11 of BATC WI – Commission implementing decision EU 2019/2010 of 12 November 2019 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliaments and the Council for waste incineration (notified under documents C(2019) 7987)).
- All documentation foreseen by the relevant law provisions, as well as documentation produced by the procedures of pre-acceptance and acceptance of waste at reception will be combined with the measured mass at reception and stored under a unique code in the database of accepted waste, uniquely generated. The documentation will be stored in the electronic database of accepted waste for treatment.
- The operational instruction for receiving and preparing waste for treatment prescribes checking the compatibility of hazardous waste characteristics in accordance with the compatibility matrices available in the European Commission, Integrated Pollution Prevention and Control Reference Document on Best Available Techniques on Emissions from Storage, July 2006. In the absence of available information, a laboratory mixing test is carried out in the plant's internal laboratory. In both cases, the decision on the mixing and the conditions under which it is done is made by an expert person with a high degree in chemical field.

On the other hand, additional measures considered as a part of the operating requirements and mitigation protocol are:

- The waste incineration plant operates in such a way as to achieve a combustion completion level that guarantees that the total level of organic carbon (TOC) in the slag and boiler (fireplace) ash will be less than 3% in accordance with Article 8 of the Regulation on technical and technological conditions for the design, construction, equipment and operation of plants and types of waste for thermal waste treatment, emission limit values and their monitoring ("Official Gazette of RS", number 103/2023), as a binding requirement for technological the solution.
- In accordance with BATC 20 WI (of BATC WI – Commission implementing decision EU 2019/2010 of 12 November 2019 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliaments and the Council for waste incineration (notified under documents C(2019) 7987), the minimum requirement for boiler efficiency when treating hazardous waste is 60-80%. and 60-70% for sludge from wastewater treatment. Since the mentioned installation has the possibility of using all mentioned types of waste, a minimum efficiency of 0.7 expressed in decimal notation was adopted. In operational work, a significantly higher energy utilization than the above is expected, expressed according to the methodology described in the Rulebook on categories, testing and classification of waste ("Official Gazette of RS", no. 56/2010, 93/2019, 39/2021 and 65/2024).
- Measurement points will be determined in accordance with the regulation governing the emission of pollutants into the air (Regulation on the measurement of emissions of pollutants into the air from stationary sources of pollution "Official Gazette of RS", no. 5/2016 and 10/2024)
- All emitters must have provided measuring points for measuring the emission of pollutants into the air in accordance with the standard SRPS ISO 9096: E. Determination of the location and equipment of representative measuring points for emission measurement is performed by an authorized legal entity in accordance with the requirements and recommendations of the SRPS EN 15259 standard. The measuring point is established so that it is large enough, easily accessible and equipped so that the measurement can be performed in the prescribed manner and without danger for the person performing the measurement, as well as that the measurements performed are representative of the emissions from the stationary source of pollution in question and in relation to the metrological conditions. In general, it is necessary to ensure that there are no disturbances on the emitter in front of and behind the measuring opening (curves, flaps, openings, etc.), in a length of 5 hydraulic diameters of the emitter in order to ensure the conditions for isokinetic sampling of powdery substances.
- The project holder is obliged to, in accordance with Article 15 and 16 of the Regulation on measurements of pollutant emissions into the air from stationary sources of pollution ("Official Gazette of RS", no. 5/16 and 10/24), prepare an emission measurement plan for all stationary emitters it owns. The emission measurement plan is drawn up in cooperation with the authorized legal entity for emission measurement. If, over time, there are changes

to the stationary source (reconstruction, change of fuel, raw materials, etc.) or a change in regulations, it is necessary to amend the existing measurement plan. The content of the emission measurement plan is given in Section A of Annex 4 - Emission measurement plan and report on the measurement of pollutant emissions into the air, of the Regulation.

- The project holder is obliged to perform a guaranteed emission measurement during the trial run of the stationary source of pollution in the process of obtaining a use permit in accordance with the regulations governing planning and construction. The warranty measurement is carried out for the purpose of comparing the measured values of emissions of polluting substances with the limit values of emissions. Warranty measurement is performed under operating conditions at the highest load of the stationary source of pollution.

- In case of non-compliance with the with non-hazardous leaching criteria set for non-reactive waste class according to national (Regulation on disposal of waste on landfills ("Official Gazette of the RS",No.92/2010) and EU regulation (Landfill Directive 1999/31/EC, Council Decision 2003/33/EC for disposal to Non-hazardous waste landfill), the reactive hazardous waste will be removed from the landfill and directed to another authorized operator or recipient, transported using trucks according to hazardous waste transport regulations. The recipient will be an authorized operator of the hazardous waste landfill and/or underground mine operator permitted for acceptance and disposal of such waste streams.
- Considering that the leachate is treated as part of the wastewater treatment plant at the waste-to-energy plant, any change in the quality of groundwater determined after the analysis of samples taken from the piezometers in Zone A, B or C, will be considered as an incident scenario requiring corrective action including:
    - Physical introduction of a hydraulic barrier that changes the elevation of the groundwater, changing the flow with the aim of preventing the flow towards the Danube River as close as possible to the landfill site.
    - Weekly verification of groundwater quality downstream during the period of existence of the hydraulic barrier.
    - Extraction of contaminated groundwater and directing it to the wastewater treatment plant of the complex during the period of active hydraulic barrier measures.
    - Conducting an analysis of the causes of underground water with the aim of determining the nature of the phenomenon, i.e. continued observation or notification of a one-time event and/or determination of the type of contamination with the appropriate mechanism of contaminant migration.
    - Implementation of an expert program of mitigation measures after the analysis of the cause of groundwater (physical, mechanical or construction problem requires maintenance work, induction of an inert layer at certain locations of the landfill, introduction of layers of material with metal sorption characteristics, etc.).
    - Re-establishing the groundwater connection with the Danube River or inducing a permanent mechanical barrier for water flow in accordance with the expert mitigation plan.

- If there is a leak of fuel or polluting substances and soil pollution at the location in question, and if the concentrations of polluting, dangerous and harmful substances in the soil exceed the prescribed remediation values, it is the responsibility of the Project Owner to:
    - Notify the competent Ministry of Environmental Protection as soon as possible.
    - Carry out soil testing and create a land remediation and recultivation project and obtain the consent of the competent authority.
    - Carry out land remediation and recultivation by engaging specialized companies/operators (using, for example, physical remediation methods, chemical remediation methods, biological remediation, phytoremediation, etc.).
    - Submit to the competent ministry for environmental protection the Report on the performed remediation and land recultivation no later than within 30 days from the date of completion of the project. The report contains in particular:
      1) data on the condition of the soil before remediation or recultivation.
      2) list of methods and standards that were used during the implementation of remediation or recultivation.
      3) list of materials that were used in order to achieve remediation or recultivation.
      4) data on the condition of the soil after remediation or recultivation.
      5) assessment of the success of the measures taken.
      6) proposal of measures to maintain the achieved soil condition.
      7) data on the registration and competence of the rehabilitation and remediation contractor and the author of the report.

Additionally taken measures, outlined in this letter, are only a supplement to already established measures required by regulation, norms and standards, measures to be taken in the event of an accident (prevention, preparedness, response), measures incorporating plans and adopted technical solutions and other established measures recognized as state-of-art in the field. Thereby, we would like to address your attention to Attachment 3 to this letter for the full list of measures envisioned by the Subject Project.