



**Republic of Serbia  
MINISTRY  
OF ENVIRONMENTAL PROTECTION**

Number: 002500932 2024

Date: 4 June 2025

Nemanjina 22-26,

Belgrade

Based on Article 2, point 2, indent 1, Articles 18, 24, 32 and 33 of the Law on Environmental Impact Assessment (*Official Gazette of the Republic of Serbia*, No. 135/2004, 36/2009), in connection with Article 59, paragraph 1 of the Law on Environmental Impact Assessment (*Official Gazette of the Republic of Serbia*, No. 94/2024), the Law on Ratification of the Convention on Environmental Impact Assessment in a Transboundary Context (*Official Gazette of the Republic of Serbia*, No. 102/2007), Article 136 of the Law on General Administrative Procedure (*Official Gazette of the Republic of Serbia*, No. 18/2016 and 95/2018 – authentic interpretation and No. 2/2023 – decision of the CC), Article 6, paragraph 1 and Article 39, paragraph 1, point 4) of the Law on Ministries (*Official Gazette of the Republic of Serbia*, No. 128/2020, 116/2022 and 92/2023 - other law), Article 23, paragraph 2 and Article 24, paragraph 3 of the Law on State Administration (*Official Gazette of the Republic of Serbia*, No. 79/2005, 101/2007, 95/2010, 99/2014, 47/2018 and 30/2018 - other law), acting upon the submitted request of the project developer ELIXIR CRAFT Ltd. Šabac for granting consent to the Environmental Impact Assessment Study of the project: Construction of the Waste-to-Energy Plant on cadastral parcel numbers: 1420/1, 1420/4, 1491/1, 1541/1, 1541/2, 5824/1, 6513/1, 6513/2 CM Prahovo, Negotin Municipality, and phased construction of the Non-Hazardous Waste Landfill within the industrial complex ELIXIR PRAHOVO on cadastral parcel numbers: 2300/1, 1491/1 and 1541/1 CM Prahovo, Negotin Municipality, Ministry of Environmental Protection, Mr. Aleksandar Dujanović, State Secretary, pursuant to the authorisation decision number: 002090484 2025 14850 009 005 020 092 dated 6 May 2025, issues:

**DECISION**

1. CONSENT SHALL BE GRANTED to the Environmental Impact Assessment Study of the project: Construction of the Waste-to-Energy Plant on cadastral parcel numbers: 1420/1, 1420/4, 1491/1, 1541/1, 1541/2, 5824/1, 6513/1, 6513/2 CM Prahovo, Negotin Municipality, and phased construction of the Non-Hazardous Waste Landfill within the industrial complex ELIXIR PRAHOVO on cadastral parcel numbers: 2300/1, 1491/1 and 1541/1 CM Prahovo, Negotin Municipality.
2. The project developer shall fully comply with the environmental and human health protection measures provided for in the Environmental Impact Assessment Study referred to in point 1 of this Decision (Chapter 8 of the Study).
3. The project developer shall fully comply with the measures of environmental and human health protection of the potentially affected parties in a transboundary context, i.e. Romania and the Republic of Bulgaria, during the construction and operation of the project, provided for in the Environmental Impact Assessment Study referred to in point 1 of this Decision (Chapter 8 of the Study).
4. During the construction and operation of the project, the project developer shall also fully comply with other conditions and consents of competent authorities and organisations in accordance with a special law.
5. The project developer shall carry out the environmental impact monitoring activities provided for in the Environmental Impact Assessment Study referred to in point 1 of this Decision (Chapter 9 of the Study).

6. The project developer shall carry out the monitoring activities of the environmental impact on the potentially affected parties in a transboundary context, i.e. Romania and the Republic of Bulgaria, during the construction and operation of the project, provided for in the Environmental Impact Assessment Study referred to in point 1 of this Decision (Chapter 9 of the Study).
7. The project developer shall start the project implementation within two years from the date of receipt of this Decision on granting consent to the Study. The Decision and the relevant Environmental Impact Assessment Study shall be an integral part of the technical documentation required for obtaining a building permit for the construction of the Waste-to-Energy Plant and the phased construction of the Non-Hazardous Waste Landfill.
8. Costs of the procedure will be decided in a separate decision.

### **Explanatory Statement**

The project developer ELIXIR CRAFT Ltd. Šabac submitted to this authority on 26 Aug. 2024 the request for consent to the Environmental Impact Assessment Study for the project of construction of the Waste-to-Energy Plant on cadastral parcel numbers: 1420/1, 1420/4, 1491/1, 1541/1, 1541/2, 5824/1, 6513/1, 6513/2 CM Prahovo, Negotin Municipality, and phased construction of the Non-Hazardous Waste Landfill within the industrial complex ELIXIR PRAHOVO on cadastral parcel numbers: 2300/1, 1491/1 and 1541/1 CM Prahovo, Negotin Municipality, in accordance with the location requirements for construction of the Waste-to-Energy Plant No. ROP-MSGI-32562-LOC-1/2023 file number 000262083 2023 1481 005 001 000 001 dated 22 Nov. 2023 and the Decision on correction of error No. ROP-MSGI-32562-TECCORO-3/2024 file number 000262083 2023 1481 005 001 000 001 dated 21 Jan. 2025 and the location requirements for the phased construction of the Non-Hazardous Waste Landfill within the industrial complex ELIXIR PRAHOVO No. ROP-MSGI-27919-LOCA-7/2023 file number 350-02-01642/2023-07 dated 18 August 2023, issued by the Ministry of Construction, Transport and Infrastructure.

The Study, prepared in full accordance with the Decision on determining the scope and content No. 000886163 2024 of 17 June 2024, is accompanied by the necessary documentation and requirements of other competent authorities and organisations obtained in accordance with special regulations, as well as updated reports on the monitoring of the main environmental factors.

With the request for consent to the Study submitted to this authority on 26 Aug. 2024, the following was submitted:

- Environmental Impact Assessment Study for the project of construction of the Waste-to-Energy Plant on cadastral parcel numbers: 1420/1, 1420/4, 1491/1, 1541/1, 1541/2, 5824/1, 6513/1, 6513/2 CM Prahovo, Negotin Municipality, and phased construction of the Non-Hazardous Waste Landfill within the industrial complex ELIXIR PRAHOVO on cadastral parcel numbers: 2300/1, 1491/1 and 1541/1 CM Prahovo, Negotin Municipality, with attachments in Serbian – in three printed copies and one copy in electronic form on an electronic information carrier – USB.
- Offprint – Non-technical brief presentation of the data provided in the Study in Serbian – in three printed copies and one copy on an electronic information carrier – USB.
- Environmental Impact Assessment Study for the project of construction of the Waste-to-Energy Plant on cadastral parcel numbers: 1420/1, 1420/4, 1491/1, 1541/1, 1541/2, 5824/1, 6513/1, 6513/2 CM Prahovo, Negotin Municipality, and phased construction of the Non-Hazardous Waste Landfill within the industrial complex ELIXIR PRAHOVO on cadastral parcel numbers: 2300/1, 1491/1 and 1541/1 CM Prahovo, Negotin Municipality, with attachments in English – in two printed copies and one copy in electronic form on an electronic information carrier – USB.
- Offprint – Non-technical brief presentation of the data provided in the Study in English – in two printed copies and one copy on an electronic information carrier – USB.



- Responses to the comments of the Ministry of Environmental and Water of the Republic of Bulgaria in English – one printed copy and one copy on an electronic information carrier – USB.
- Responses to the comments of the Ministry of Environment, Water and Forests of Romania in English – one printed copy and one copy on an electronic information carrier – USB.
- Authorisation authorising ELIXIR ENGINEERING Ltd. Šabac, Hajduk Veljkova 1, 15000 Šabac, registration number: 20222123, TIN 104713960, to act on behalf and for the account of the project developer ELIXIR CRAFT Ltd. Šabac, Hajduk Veljkova 1, 15000 Šabac, before the competent authorities and organisations.

The Study was developed by ELIXIR ENGINEERING Ltd. From Šabac.

The procedure provided for by the Law on Environmental Impact Assessment was implemented, ensuring the participation of the bodies/organisations concerned and the public concerned, through print media (advertisements in the daily newspaper "Danas" as of 12 Oct. 2024 and in the weekly "Timok" as of 18 Oct. 2024) and through the official website of the Ministry as of 14 Oct. 2024: <http://www.eko.mlinpolj.gov.rs/obavestjenja/procena-uticaja-na-zivotnu-sredinu/>.

Bearing in mind that the project is on the List of Activities of Appendix I to the Convention on Environmental Impact Assessment in a Transboundary Context, i.e. the ESPOO Convention (Law on the Ratification of the Convention on Environmental Impact Assessment in a Transboundary Context, *Official Gazette of the Republic of Serbia* 102/2007 and the Law on the Ratification of Amendments to the Convention on Environmental Impact Assessment in a Transboundary Context, *Official Gazette of the Republic of Serbia – International Treaties* No. 4/2016), under point 10 (a) Waste-disposal installations for the incineration, chemical treatment or landfill of toxic and dangerous wastes and 10. (b) Waste-disposal installations for the incineration or chemical treatment of non-hazardous waste with a capacity exceeding 100 metric tons per day, notification of potentially affected parties in a transboundary context, i.e. Romania and the Republic of Bulgaria, was carried out.

In accordance with the provisions of the ESPOO Convention, the Ministry submitted the Notification of the Planned Project translated into Romanian to the Ministry of Environment, Water and Forests of Romania on 6 March 2024 and the Notification of the Planned Project translated into Bulgarian to the Ministry of Environment and Water of the Republic of Bulgaria also on 6 March 2024.

The Ministry of Environment, Water and Forests of Romania, by letter No. DGEICPSC/10258/9 April 2024 as of 9 April 2024 declared that it had decided to participate in the environmental impact assessment procedure for the project and submitted its comments and requests.

Ministry of Environment and Water of the Republic of Bulgaria, by letter No. 04-00-949 as of 26 April 2024, declared that it had decided to participate in the environmental impact assessment procedure for the project and submitted its comments and requests.

In accordance with Article 2, point 2, indent 1, Article 14, Article 17, Article 32 and Article 33 of the Law on Environmental Impact Assessment (*Official Gazette of the Republic of Serbia*, No. 135/2004, 36/2009), Article 3 of the Law on the Ratification of the Convention on Environmental Impact Assessment in a Transboundary Context, (*Official Gazette of the Republic of Serbia* 102/2007), as well as the comments and requests contained in the submitted letters of the Ministry of Environment, Water and Forests of Romania dated 9 April 2024, and the Ministry of Environment and Water of the Republic of Bulgaria dated 26 April 2024, a decision was issued determining the scope and content of the Environmental Impact Assessment Study No. 000886163 2024 dated 17 June 2024, which defines the obligation of the project developer to take into account all comments, objections and requested clarifications submitted by the



parties potentially affected by this project, i.e. the Ministry of Environment and Water of the Republic of Bulgaria and the Ministry of Environment, Water and Forests of Romania, when preparing the Study.

The Study document with attachments, prepared in accordance with the Decision on determining the scope and content No. 000886163 2024 of 17 June 2024, was translated into English and forwarded to Romania on 9 Oct. 2024 and to the Republic of Bulgaria also on 9 Oct. 2024.

Based on Articles 22 and 23 of the Law on Environmental Impact Assessment (*Official Gazette of the Republic of Serbia*, No. 135/2004, 36/2009), Article 23, paragraph 2 and Article 24, paragraph 3 of the Law on State Administration (*Official Gazette of the Republic of Serbia*, No. 79/2005, 101/2007, 95/2010, 99/2014, 47/2018 and 30/2018 - other law) and Article 1, paragraph 2 of the Rules of Operation of the Technical Commission for Evaluation of the Environmental Impact Assessment Study (*Official Gazette of the Republic of Serbia*, No. 69/2005), the Technical Commission for Evaluation of the Environmental Impact Assessment Study of the Project was established by Decision number: 002500932 2024 14850 003 002 501 063 dated 31 Oct. 2024, issued by the Ministry of Environmental Protection of the Republic of Serbia.

In accordance with Article 20 of the Law on Environmental Impact Assessment, public inspection was provided, a presentation was organised and a public debate was conducted on the Study on 15 November 2024, in the premises of the Municipal Administration of Negotin Municipality. Representatives of citizens' associations from Negotin participated in the public debate: "Badem", "Negotinci u akciji", Mr. Sreten Djordjević, lawyer, representative of the association "Centre for Ecology and Sustainable Development" (CESD) from Subotica, representatives of the local community of Prahovo, representatives of the Negotin local self-government, local businessmen, citizens of Negotin, representatives of the project developer, processor of the Study, as well as members of the Technical Commission.

Comments and opinions were submitted in writing and within legal deadlines by:

- The association "Centre for Ecology and Sustainable Development" (CESD) from Subotica submitted comments signed by Prof. Dr. Filip Kokalj.

At the public debate held on 15 Nov. 2024 in the premises of Negotin Municipality, the public concerned asked questions and made comments related to the implementation of the project and its impact:

- Is the Law on Waste harmonised with EU laws? What measures will be implemented to reduce waste? Which materials for incineration contain a high percentage of mercury? Is the landfill in Halovo now a failed investment due to the construction of this power plant? Will bonuses be received for returning packaging in accordance with the regional waste management plan?
- Obligation of the project developer to pay particular attention to the following was pointed out: Fluidised technology has advantages and limitations, maximum temperature, therefore it will not be a good incineration. The company that designed the technology shall guarantee that the plant can incinerate all the waste in which the investor is interested. This type of statement and guarantee for each index number is missing. In this way, the investor is protected from real damage to the plant. Such plants are susceptible to corrosion and deterioration, and therefore guarantees from the technology supplier are needed. The supplier, TBU, says that the technology is theirs, but they have provided little information. The second point relates to the redefinition of views on decarbonisation. The team of experts believes that incinerating waste creates a certain amount of carbon dioxide. The third point is to pay attention to BATs. A detailed definition of the waste pre-acceptance and acceptance into the plant is extremely important. Waste with more than 1 percent of organic chlorine shall not be accepted into the plant. This must be clearly defined in the Study and all documentation, which is very important. Waste acceptance procedures must be defined and any doubt must be avoided that waste with more than 1 percent of organic chlorine will not enter. Water treatment has not been well resolved. The Study authors should improve the Study in that part and fully implement the water conditions. Among the



experts who worked on the Study, some are also on the list of potential members of the Technical Commission for the Study evaluation. Written statements from the technology supplier and index numbers should be requested explicitly. From the point of view of environmental protection and the project developer, this is important in order to get protected. The larger the amount of waste in the plant, the greater the risk of an accident.

- Questions were raised regarding the installation of measuring stations, as they were not noted in the presentation. The question of the possible use of the resulting ash was raised, whether ash mixed with cement has some other purpose, for example for filling roads?
- How will separation be carried out if waste is combined? How is the difference defined and how does treatment differ in the case of non-hazardous waste and hazardous waste? Does the combustion of non-hazardous waste produce non-hazardous compounds? Process control and which regulatory body monitors and performs external control of the plant? Which institutions are responsible for control and supervision, and how frequent are their controls? In the context of waste gas treatment, what are the filter capacities and duration? Checking the efficiency of the filters during operation? Have process simulations and dioxin concentrations been performed? What emissions are expected? Who is sampling, what parameters and how often in the air at the emitter itself and how will it be measured? How are the employment and training of the workforce planned? Exchange of information with Romania and the Republic of Bulgaria and explanations of cross-border cooperation procedures.
- The question of forming a civil control (composed of experts) in the work of the company ELIXIR CRAFT Ltd. was raised because it is the right of the local community and the obligation of the project developer.
- All questions and comments raised by the public concerned were responded and clarified by representatives of the project developer, the Study processor and the competent authority at a public debate held where minutes were drawn up on the public presentation of the Study and the public debate.

Comments and opinions on the Environmental Impact Assessment Study were submitted by the Citizens' Association CESD from Subotica through the attorney-at-law Mr. Sreten Djordjević from Valjevo and the expert engaged on their part, Prof. Dr. Filip Kokalj, and they were submitted in writing, within the legal deadline, relating to the following:

1. In Chapter 1.1. Information on the project developer, on page 26, paragraph 6 – the full name of the non-reactive waste that is disposed of in a landfill in accordance with the Regulation on Waste Landfilling (*Official Gazette of the Republic of Serbia*, No. 92/2010), Article 13, paragraph 3, point 3 “non-reactive hazardous waste”, as stated in other parts of the Study, is missing.

**Response:** *The comment has been accepted, a correction has been made in the supplemented Environmental Impact Assessment Study (Study) on page 26:*

*"In accordance with the Regulation on Waste Landfilling (Official Gazette of the Republic of Serbia, No. 92/2010), Article 13, paragraph 3, point 3, the following shall be disposed of at non-hazardous landfill:  
3) solid, non-reactive hazardous waste (solidified) whose leachate is equivalent to that of non-hazardous waste under point 2) of this paragraph and which meets the limit values of the parameters for disposal of hazardous waste at non-hazardous landfills."*

*The non-hazardous waste landfill does not provide for the disposal of biodegradable waste, nor are there any special cassettes for biodegradable waste.*

2. In Chapter 1.5 on page 59, incorrect information is provided, such as that waste incineration is decarbonisation, which is not entirely true because waste incineration generates CO<sub>2</sub>. It is also incorrect that the construction of the Waste Incineration Plant is being carried out for the purpose of decarbonisation by Elixir Group, because waste incineration nevertheless generates CO<sub>2</sub> and other GHG gases. The claims that appear in several places in the Study are not confirmed by the calculation, which results from the composition of the waste to be incinerated.



**Response:** The above calculations are not the subject of the Study and, due to their complexity, are not included in the documentation, because the above calculations require taking into account the entire life cycle of the materials used.

It is true that GHG gases are emitted at the emitter of the thermal waste treatment plant, but it is also true that the above scenario is more favourable than current practice, taking into account the entire life cycle of the materials. Namely, there are 3 scenarios with which the favourable impact of the above project can be proven:

1. Currently, hazardous waste generated in Serbia intended for thermal treatment is treated at plants in Austria, Switzerland, Germany or other plants in the EU. From the SCOPE 3 transportation emissions perspective, this is less favourable than local treatment which causes fewer transportation emissions.

2. Production process of Elixir Prahovo currently uses water vapour obtained from fossil fuels, which will be partially replaced by vapour obtained from energy generated by thermal treatment and energy utilisation of waste. This is a more favourable scenario, considering that part of the hazardous and/or non-hazardous waste may be of a non-fossil type (the share of bio-fraction in municipal waste or contaminated wood, etc.) and as such is considered a renewable energy source. Consequently, GHG emissions are reduced over the entire life cycle of the material. Calculation for the above scenario is given on page 426 (it is considered a Scope 1 emission of the Elixir business system).

3. When it comes to treated (non-recyclable) municipal waste that can potentially be thermally treated at the above-mentioned plant, the current regional alternative is unsanitary landfilling, which is considered the most unfavourable scenario according to the waste hierarchy due to emissions generated during the operation and handling of landfills, among other undesirable factors. Therefore, it is the policy of the EU, and also of the Republic of Serbia, to give priority to R1 operations over D operations when technically possible.

The Elixir Sustainability Team conducted an LCA (Life Cycle Assessment) analysis in accordance with ISO 14067, relying on data from internal operational systems, strategic plans, and publicly available sources such as the Regulation on Final to Primary Energy Conversion Factors and Carbon Dioxide Emission Factors (Official Gazette of the Republic of Serbia, No. 111/2021, 6/2023), the International Energy Agency (IEA), and the Guidelines for Calculating Greenhouse Gas (GHG) Emissions in Waste Management and Waste-to-Energy Projects.

3. In Chapter 1.5 Introductory considerations, page 60, paragraph 4 – in the list of documents, 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 Parliament and the Council for waste incineration (notified under document C(2019)7987) is missing.

**Response:** The comment has been accepted, correction has been made in the supplemented Study.

In chapter 1.5 Introductory considerations, page 60, paragraph 4 – in the list of documents, 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 Parliament and the Council for waste incineration (notified under document C(2019)7987) which relates to waste incineration and contains ELVs that are stricter than those in the IED Directive, has been added.

4. The subtitle of the Supporting Documents for Technical Documentation Development on page 74, among other things, lists the Strategic Environmental Impact Assessment Report – Amendment and Supplement to the General Regulation Plan for the Prahovo Settlement (Decision of the Municipal Administration of Negotin Municipality, Department of Urban Planning, Construction and Environmental Protection, No. 501-101/2020-IV/02 of 29 March 2021 received), but does not list the Strategic Environmental Impact Assessment Report for the "Second Amendment and Supplement to the Detailed Regulation Plan for the Chemical Industry Complex in Prahovo", adopted at the 9th session of the Municipal Assembly of Negotin on 17 June 2022, published in the *Official Gazette of Negotin Municipality* No. 17 as of 17 June 2022.

**Response:** ASDRP-1 – abbreviation for "Amendment and Supplement to the Detailed Regulation Plan for the Chemical Industry Complex in Prahovo" published in the *Official Gazette of Negotin Municipality* No. 7/21.



*ASDRP-2 – abbreviation for the “Second Amendment and Supplement to the Detailed Regulation Plan for the Chemical Industry Complex in Prahovo” published in the Official Gazette of Negotin Municipality No. 17/22.*

*The aim of the development of ASDRP-2 was the reorganisation of existing urban units and zones within the existing planning area, through corrections in the spatial disposition of the ecological and energy island zones, the wastewater treatment plant (WWTP) zone, as well as the abolition of public roads passing through the complex, in order to adapt to the changes that have occurred with respect to the long-term development of the complex in relation to ASDRP-1.*

*A strategic environmental impact assessment was not carried out for ASDRP-2, based on the Decision on non-proceeding to develop a Strategic Environmental Impact Assessment of the Second Amendment and Supplement to the Detailed Regulation Plan for the Chemical Industry Complex in Prahovo No. 501-11/2022-IV/02 of 1 March 2022.*

*“Decision on developing ASDRP-2 for the Chemical Industry Complex in Prahovo” No. 350-46/2022-I/07 of 11 March 2022 and “Decision on non-proceeding to develop a Strategic Environmental Impact Assessment of ASDRP-2 for the Chemical Industry Complex in Prahovo” No. 501-11/2022-IV/02 dated 1 March 2022, are an integral part of the ASDRP-2 documentation.*

*In addition to the conditions and rules defined in the ASDRP-2, the environmental protection measures defined in the Strategic Environmental Assessment Report for ASDRP-1, which was cited and used in the preparation of the Study, are also mandatory.*

*The revised Study is accompanied by the Decision on non-proceeding to develop the Strategic Environmental Impact Assessment of ASDRP-2 for the chemical industry complex in Prahovo” No. 501-11/2022-IV/02 dated 1 March 2022.*

5. In Chapter 2.8 Presentation of climatic characteristics with appropriate meteorological indicators, pages 111 and 115, Figures 2.14 and 2.20 – contain data on completely opposite wind roses and different data, without data on wind measurements at the Power Plant location, which is why the data entered for simulation purposes are arbitrary.

**Response:** *A clarification has been added in the supplemented Study, in Chapter 2.8 on page 116 and reads: “Note: Figure 2.14 shows the wind rose at the nearest local station, but which does not correspond to the wind rose at the chemical industry complex, as the project location. For the purposes of the calculations, a more precise base was used (Figure 2.20), which is the best available practice for the aforementioned calculations. Data on all details are given in the accompanying studies of the Faculty of Mechanical Engineering in Belgrade.*

*In this regard, on page 115 of the Study, the following is clearly stated: “In order to define the local prevailing meteorological parameters, WRF-MMIF hourly meteorological data for a specific location (Prahovo Chemical Complex) and for a time period of five consecutive calendar years (from 2017 to 2021) were acquired from Lakes Environmental Consultants from Canada. This dataset consists of information on the surface and upper layers of the atmosphere, which are necessary to run the dispersion model.”*

6. In Chapter 2.13.2 Infrastructure and superstructure facilities, page 128, paragraph 1, it is stated that a biodisk ES 20 (40 employees) will be installed for the treatment of faecal wastewater, with a hydraulic load of 3 m<sup>3</sup>/day, a biological load of BOD: 1.2 kg/day, intended for the biological treatment of sanitary wastewater. However, in paragraph 3 it is stated that 4 l/s of faecal wastewater will be pre-treated through the BP ES 20 biological treatment plant. The plant capacity of 3 m<sup>3</sup>/day is insufficient for an inflow of 4 l/s of faecal wastewater, which represents a total amount of 346 m<sup>3</sup>/day. The data provided in paragraph 3, on the quantities of 233 l/s of conditionally clean (from the roofs of buildings) and oily atmospheric water do not represent information on the quantities of faecal water, because such data (on conditionally clean atmospheric water and potentially oily atmospheric wastewater) belong to the stormwater sewer segment. The processor has not proven the source of the data on the quantity of 233 l/s of conditionally clean potentially oily water, which is why these quantities cannot be verified or examined.



In the same chapter, paragraph 2, page 130, subtitle "Technological sewage..." The processor did not provide the quantities of wastewater generated and treated for any line of technological wastewater.

**Response:** In accordance with the comment, the Study on pages 130-138 was revised and supplemented with the requested data and calculation. In accordance with the attached hydraulic calculation, the total quantities of purified water discharged from the Waste-to-Energy Plant complex into the Central Collector of the Prahovo Chemical Industry Complex are:

- The quantity of conditionally clean (from the roofs of buildings) and oily atmospheric water treated through two oil derivative separators is 233 l/s.
- The quantity of sanitary and faecal wastewater that is treated through the BP ES 20 biological treatment plant is a maximum of 4 l/s (only in the case of a consumption peak that can last only a few minutes, while in regular operation this quantity is significantly less, i.e. an average of 0.035 l/s).
- The quantity of treated technological water is a maximum of 4 l/s (discontinuous discharge).

To the existing Central Collector of the Prahovo Chemical Industry Complex DN800, through which water is drained to the final recipient, the Danube River, purified water is brought from the Waste-to-Energy Plant complex through the DN600 channel with a total length of 385 m with a drop of 0.2%, into which a maximum of  $(233 + 4 + 4 = 241)$  l/s of water) is discharged.

In accordance with the above calculation, and taking into account the maximum capacity of the existing Central Collector of the chemical industry complex Prahovo of 870 l/s, it can be concluded that the existing Central Collector DN800 has sufficient capacity to accept, in addition to the treated water of the Elixir Prahovo complex, all treated water discharged from the Waste-to-Energy Plant (WiE plants).

On page 226 of the revised Study, as well as in the attachment to the Study, a schematic presentation of the WWTP is provided.

A block diagram of technological wastewater is provided in the attachment to the Study.

7. In Chapter 2.13.2 Infrastructure and superstructure facilities, page 129 – The Study does not contain data on what kind of washing of residues from dry flue gas treatment will be carried out and why, as well as what is the quantity of wastewater per hour?

**Response:** The text of the Study has been adjusted to clearly state that washing is necessary to remove water-soluble salts from the residues from the dry flue gas treatment, as a key measure with a direct impact on preventing salt leaching after the solidification process of this material. The technological wastewater treatment plant from the boiler plant with a capacity of 10 m<sup>3</sup>/h is designed to receive all wastewater for treatment, including the specified stream of water from washing the residue from the dry flue gas treatment (as well as leachate coming from the non-hazardous waste landfill).

On page 138, the text has been added: "...which is necessary to remove water-soluble salts from the residues from the dry flue gas treatment, and thus directly affects the prevention of salt leaching after the solidification process of this material."

During wastewater treatment with TMT 15 (trimercapto-s-triazine), contaminants are converted into complex compounds, preventing their deposition and impact on the environment.

A schematic presentation with the material balance of wastewater treatment is provided as an attachment to the Study.

8. In Chapter 2.13.2 Infrastructure and Superstructure Facilities, page 130 – DEA power is not specified.

**Response:** The comment has been accepted, DEA power is specified in the supplemented Study in Chapter 2.13.2 on page 140 (1385 kVA).

9. In Chapter 2.13.2 Infrastructure and Superstructure Facilities, page 131 – The Study does not contain data on whether the natural gas reduction station and its parameters are compatible with the burner or burners on the incinerator.

**Response:** The comment has been accepted, in the supplemented Study in subchapter 2.13.2 Infrastructure and substructure facilities on pages 140-141, precise data on natural gas supply is provided.

10. In Chapter 3.0 Description of the Project, subtitle Introduction, page 134 – The Processor provides imprecise data on "proven references" for the company "TBU Stubenvoll" GMBH. On the official website of this company ([http://www.tbu.at/en\\_leistungen.htm](http://www.tbu.at/en_leistungen.htm)) the manufacturer declares that it has



designed the technology of the Stationary Fluidised Bed Combustion for the combustion of biomass, waste fuels with high calorific value and for the combined combustion of waste fuels and sewage sludge, which implies that the plant is not compatible for the thermal treatment of all other types of waste specified by the Investor in the Study and accompanying documentation. This has the consequence that the Study is not in compliance with the declared waste incineration technology.

**Response:** "TBU Stubenvoll" GMBH has references in the design of plants for the thermal treatment of hazardous and non-hazardous waste, which the comment itself states as expressed on the front page of the company's web presentation (waste fuel). In addition, we emphasize that one of the references of "TBU Stubenvoll" GMBH is the ABRG Arnoldstein plant in Austria, which treats hazardous and non-hazardous waste for energy purposes in a BFB boiler (incineration in fluidised bed) (ABRG – Abfall Behandlung & Recycling GmbH), which confirms the compliance of technological solutions with the EU standards set for the aforementioned plants and compliance with the regulations in the aforementioned area. The following is attached to the Study: Presentation TBU\_EN for TBF October 2018; ABRG\_Waste Quality Acceptance; Live data from the ABRG website about the emissions from 2 Fluidised Beds.

On page 144 of the revised Study, the text has been supplemented with all necessary references.

Expert confirmations from partners from Austria, "TBU Stubenvoll" GMBH and "AK2Energy" GMBH, are provided in the attachment to the Study: Confirmation on Technology Suitability for Treatment of EWC Codes in the Waste-To-Energy Plant in Prahovo – TBU Stubenvoll GmbH Austria and Confirmation on Technology Suitability for Treatment of EWC Codes in the Waste-To-Energy Plant in Prahovo – AK2 Energy GmbH Austria". Although expert confirmations of the list of index numbers initially given in the attachment to the Study were obtained from the Austrian partners, the project developer, taking into account the comments of the public concerned, revised the list of acceptable index numbers of waste for thermal treatment in the plant. In the attachment to the Study, we provide a consolidated list of index numbers with maximum capacities of P 1, P 12 and P 13 operations, as well as a list of index numbers with capacities for D operations.

11. In Chapter 3.0 Description of the Project, subtitle Introduction, page 135 – The Study does not contain data on the annual quantity of solidified waste disposal at the non-hazardous waste landfill (only volume data), which is why the entered data is incomplete.

**Response:** The comment has been accepted and the quantity of solidified waste for disposal is specified in the supplemented Study on page 148. The expected generation of solidified waste is expressed in the Study in Chapter 3.2.1.12 on page 237. For index numbers of all residues from thermal treatment, please refer to Appendix D of the operation\_Capacities by index numbers.

12. In Chapter 3.2 Description of the facility, planned production process or activity, their technological and other characteristics, page 139 – The Study contains data on the boiler capacity (30 MW) and water vapour production (35 t/h) which are not energy compliant, because with that capacity, higher vapour production of defined parameters is possible. However, on page 169 it is stated that the boiler capacity is 46.5 t/h, which is why the data is inconsistent and why the Study cannot be examined.

**Response:** The indicated capacities are the capacities of the case used for boiler design. In special modes, the boiler may have a higher thermal power and low-pressure vapour production which is stated in net quantities. The data on page 169 refers to the maximum operational capacity of the valve that must enable operation in special modes and control the direct gross vapour production of the boiler. Part of the water vapour is consumed for the boiler's own needs (overheating of primary combustion air, heating of boiler feed water, heating of bag filters and flue gas blowers). A clarification has been added to the text of the supplemented Study on page 191.

13. In Chapter 3.2 Description of the facility, planned production process or activity, their technological and other characteristics, page 145 – Data on a very large average range of disposal of solidified materials (from 8,964 m<sup>3</sup>/year to 25,564 m<sup>3</sup>/year) are not supported by evidence and reasons for such a high average range of disposal.

**Response:** A clarification has been added on pages 158 and 237 of the Study.

14. In Chapter 3.2 Description of the main characteristics of the production process of Waste-to-Energy Plant, page 146, paragraph 2 – The Study lacks data on the method of disposal of hazardous waste in



a special segment of the landfill that is separate from the cassettes intended for biodegradable waste, which makes it incomplete.

**Response:** We refer to response to the question number 1

The non-hazardous waste landfill does not provide for the disposal of biodegradable waste, nor are there any special cassettes for biodegradable waste. On page 158, the following has been added: "The selected incineration technology precisely defines the restrictions regarding the type of waste, hazardous characteristics of the waste and limit values regarding the physical and chemical composition of the waste fuel that will be simultaneously thermally treated in the Waste-to-Energy Plant. Based on this, all adopted technical solutions and capacities for the treatment of expected contaminations and waste streams have been designed and dimensioned, including stabilisation and solidification as the intended physical and chemical treatment of residues from thermal treatment. The control of leachate from the non-hazardous waste landfill and the proof of the inactivity of the solidified materials will be carried out by an accredited laboratory in accordance with the Regulation on Categories, Testing and Classification of Waste (Official Gazette of the Republic of Serbia, No. 56/2010, 93/2019, 39/2021 and 65/2024), according to the NEN standard 7345 or equivalent standard." The criteria for accepting or not accepting waste for landfill are given in chapters 3.2.2.4 and 3.2.2.5.

15. In Chapter 3.2.1.1 to 3.2.1.4 on pages 148 to 153 – The descriptions given are inconsistent with BATC, specifically BAT 9 and 11.

**Response:** The thermal treatment technology for hazardous and non-hazardous waste in the plant was designed fully in accordance with BATC WI 2019, which is stated and argued in the appendix to the study "Review of the project's compliance with the best available techniques", December 2023, Elixir Engineering. Compliance with BAT 9 and BAT 11 of the BATC WI document – 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 Parliament and the Council for waste incineration (notified under documents C(2019)7987. The appropriate characteristics of the waste, as well as the types of waste that can be treated, are listed in the appendices given in response to comment 10 (more precisely Appendix 4\_Confirmation on BFB Technology Suitability for Treatment of Hazardous and Non-Hazardous Waste in the Waste-To-Energy Plant in Prahovo – TBU Stubenvoll GmbH Austria, as contracted technology provider for the Waste-To-Energy Plant in Prahovo, Appendix 5\_Confirmation on Technology Suitability for Treatment of EWC Codes in the Waste-To-Energy Plant in Prahovo – AK2Energy GmbH Austria, as contracted consultant for expert revision of technical solutions adopted in the Waste-To-Energy Plant in Prahovo). The composition restrictions that must be met at the boiler are expressed in Chapter 3.3.1.5 Types and quantities of raw materials, as well as in Chapter 7.1.2.1 Characteristics of waste to be treated at the plant (clearly expressed on page 508). In accordance with BAT 9b, the Study in Chapter 3.2.1.1 describes the procedure for prior verification and acceptance of waste on page 162. If necessary, the waste will be sampled in accordance with SRPS CEN/TR 15310-(1-5):2009, ASTM D 6051:2015, SRPS EN ISO 21645:2021 and further tested to determine its adequacy for treatment at the plant (see Chapter 7.1.2.1). The revised Study specifies in Chapter 8.3.2.1 the method of measuring, accepting and unloading waste on pages 637-638. In Chapter 3.2.1.2 Acceptance control and testing, waste measurement and acceptance of non-hazardous and hazardous waste, it is clearly stated that each accepted waste will be accompanied by adequate legally prescribed documentation, and it is additionally stipulated that all additional tests performed in accordance with the acceptance and pre-acceptance procedures of waste will be added to the documentation of the accepted waste in the unified database of treated waste. This requirement foreseen in accordance with BAT 9d is precisely expressed in chapter 8.3.2.1 Measurement, acceptance and unloading of waste on page 639. Liquid waste is delivered to the plant in tank trucks as described in 3.2.1.6 Transfer and storage of liquid waste. Chapter 3.2.1.5 shows the method of unloading and temporary storage of sludge waste (municipal and industrial sludge). When mixing of waste cannot be avoided due to the necessity of preparation for thermal treatment, it is necessary to foresee operational procedures in accordance with BAT 9f, so in chapter 8.3.2.1 Measurement, acceptance and unloading of waste on page 639 the following is specified: "The operational instructions for the acceptance and preparation of waste for treatment prescribe the



verification of 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." Measures provided for in Chapter 8.3.2.1 Measurement, acceptance and unloading of waste, performing rapid analyses to check the compliance of the waste composition with the announced composition, longer laboratory verification of additional parameters, compatibility analysis, radioactivity measurement, mass measurement and visual inspection, etc. correspond to the recommendations of BAT 11 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 Parliament and the Council for waste incineration (notified under documents C(2019)7987. Implementation of the requirements under all points of BAT 9 and BAT 11 (BATC WI, 2019) is envisaged through the development of detailed operating procedures for the plant, which are the subject of documentation for issuing a permit for trial operation, i.e. Integrated pollution prevention and control (IPPC) permit for the plant, in accordance with the legal regulations of the Republic of Serbia.

16. In chapter 3.2.1.2 on page 150, paragraph 2 – The Study does not define prohibited substances, what is meant by that and why hazardous waste is categorised as such.

**Response:** On page 269 (Chapter 3.3.1.5) prohibited substances for thermal treatment in the plant are defined. Also, on page 508 (Chapter 7.1.2.1) and on page 636 (Chapter 8.3.2.1 Measurement, acceptance and unloading of waste with measures). Determining the compliance of waste for treatment is the subject of the procedure for waste pre-acceptance explained in more detail in the response to comment 15, while rapid analyses check the characteristics of the delivered waste and note any deviations from the facts established during the procedure for waste pre-acceptance (see response to comment 15). Consequently, the text on pages 165 and 638 has been revised.

17. In the subtitle 3.2.1.2 Waste acceptance control, on page 149, third paragraph, the following text is stated: "The project documentation defines that waste containing more than 1% of halogenated organic substances expressed as chlorine cannot be treated in the boiler." This statement is not contained in any part of the project documentation that passed the audit commission, so something like this cannot be stated in the Study either. If this is correct, then it must be implemented in the project documentation, in accordance with the provisions of the Regulation on technical and technological conditions for the design, construction, equipment and operation of facilities and types of waste for the thermal treatment of waste, emission limit values and their monitoring (*Official Gazette of the Republic of Serbia*, No. 103/2023), Article 8, paragraph 2. The equipment envisaged by the project documentation attached to the Study cannot achieve this condition, which is why the Study cannot be examined in this part.

After waste has been delivered to the Operator's location, before it is accepted, it must be confirmed by analysis whether the waste contains more than 1% of halogenated organic substances, which is not feasible in practice due to the impossibility of taking a representative sample, but instead one has to trust the analysis carried out by the previous owner of the waste and which is contained in the accompanying documentation on the movement of the waste. Something like this can cause great damage to the Project Developer, both through damage to the equipment and damage to the environment for which the Project Developer would again be sanctioned.

In the same subtitle, on page 150, first paragraph, point 2, the activity "taking representative samples" is mentioned, but nowhere is the method of taking representative samples described, that is, there is no data on the technical conditions for achieving representativeness of the sample, nor data on the equipment and operation of that equipment necessary for taking representative samples. This deficiency in the project is unacceptable, because it does not provide confidence that the plant will not incinerate prohibited types of waste listed in both the Study and the project documentation, namely: waste materials containing or contaminated with polychlorinated biphenyls (PCBs) and/or polybrominated terphenyls (PCTs) and/or polybrominated biphenyls (PBB), waste containing cyanides, isocyanates, thiocyanates, asbestos, peroxides, biocides, cytostatics, waste electronic equipment, waste from lists H1, H-3A, H-3B, H9, H12, waste materials that have additional



restrictions (waste materials in the form of aerosols, as well as organometallic compounds – spent metal-based catalysts, or organometallic wood preservatives) and aluminised paints. However, even in this part there is no clear evidence of how a representative sample can be taken from which it can be determined with certainty that the transported waste does not contain prohibited substances.

On the same page 150, in the second paragraph there is a "Note" which states that the rapid analyses will take about 1 hour and that during that time the vehicle that transported the waste will be parked. Rapid analyses are envisaged to analyse the following parameters: heavy metal content, determination of the calorific value of the waste, content of ash, moisture, and prohibited substances. The attention of the Study processor and the Project Developer shall be drawn to the fact that this is an arbitrary and imprecise assessment, i.e. it is incorrect. Waste analyses for the specified parameters cannot be performed in less than 24 hours. This also applies to all other types of waste that are specified in the Study to be treated in this plant (municipal and industrial sludge, liquid waste, etc.).

Accordingly, and in order to overcome this problem, it is necessary for the Processor in the Study to revise the waste list, that is, to remove from the list all types of waste that may contain halides and to amend the project and incinerate only non-hazardous waste at the planned plant.

**Response:** *Development of waste categorisation reports is carried out in accredited laboratories in accordance with the technical requirements set out in the Rulebook on Categories, Testing and Classification of Waste (Official Gazette of the Republic of Serbia, No. 56/2010, 93/2019, 39/2021 and 65/2024) and as such are the subject of waste movement documentation.*

*The Study has been supplemented on pages: 163, 165, 164.*

*Conceptual design (CD) of the plant was prepared in accordance with the aforementioned Regulation and all standards for the preparation of project documentation for the aforementioned area, and as such received a positive report from the State Audit Commission. In addition, the Study certainly represents an integral part of the project documentation of the plant, as well as a mandatory part of the unified procedure for obtaining a Building Permit, which is issued by the MCTI as the competent authority. All data in the project documentation that has been formed in the course of the unified procedure so far, as well as that which will be prepared in the further course of the unified procedure and on the basis of which the Building Permit for the plant will be issued, is understood to be and shall be fully consistent with each other in accordance with the relevant legal regulations of the Republic of Serbia for the aforementioned areas, including the final Study that shall receive the approval of the Ministry of Environmental Protection as the competent authority, in accordance with the Law on Environmental Impact Assessment (Official Gazette of the Republic of Serbia, No. 135/2004), as well as the DBP (design for building permit), in accordance with the Law on Planning and Construction (Official Gazette of the Republic of Serbia, No. 72/2009, 81/2009 – corr., 64/2010 – decision of CC, 24/2011, 121/2012, 42/2013 – decision of CC, 50/2013 – decision of CC, 98/2013 – decision of CC, 132/2014, 145/2014, 83/2018, 31/2019, 37/2019 – other law, 9/2020, 52/2021 and 62/2023), which together constitute the project documentation that is a condition for issuing a Building Permit in the ongoing unified procedure, in accordance with the legal regulations of the Republic of Serbia.*

18. In Chapter 3.2.1.5 Unloading and temporary storage of sludge waste (municipal and industrial sludge) on page 156, the waste that is prohibited is listed, and the Study did not define limit values for all substances that are prohibited (e.g. PCB, PCT...)

**Response:** *The comment has been accepted and the supplemented Study specifies that the limit values for the presence of PCB and PBT in input waste are defined in accordance with Article 4 and Annex I, Part A, of Regulation (EU) 2019/1021 of the European Parliament and of the Council of 20 June 2019 on POPs substances. That is, in the text on pages 175, 509 and 637 in Chapter 3.2.1.5 the Study was supplemented with the following text "no acceptance of substances exceeding the limit values for the quantity of POPs substances shall be permitted in accordance with Article 4 and Annex I, Part A, of Regulation (EU) 2019/1021 of the European Parliament and of the Council of 20 June 2019".*

19. Subtitle Line for pre-treatment of bulk solid hazardous and non-hazardous waste on page 163 – The Study does not contain technical solutions for transport from the fine shredder to different bunkers,



nor how is it ensured that after shredding hazardous waste, contamination of non-hazardous waste does not occur?

**Response:** The revised Study was supplemented on pages 172-173 for clarification. In order to reduce the emission of powdery substances in the plant, generated during the transfer of waste from one bunker to another for the purpose of mixing the waste, water mist spraying is planned during crane manipulation. The supplemented Study includes a tabular overview of all storage bunkers and their capacities.

20. In Chapter 3.2.1.8 Thermal treatment of waste and production of thermal energy in the form of water vapour on page 165 – solutions for flue gas recirculation for NO<sub>x</sub> reduction are not listed, which makes the Study incomplete.

**Response:** Gas circulation is presented in Chapter 3.2.1.8.2 (Combustion air and recirculation gas system). In addition to air recirculation, the main role in NO<sub>x</sub> reduction is played by the SCR unit on the flue gas outlet branch (pages 187- 188). A clarification has been added in the text of the supplemented Study, on page 189 where the sentence "Flue gas recirculation regulates the combustion temperature and consequently reduces NO<sub>x</sub> generation" will be added.

21. In Chapter 3.2.1.8.1 System for dosing prepared waste for thermal treatment, page 166, paragraph 4 – The Study does not contain basic data for developing software for recipes, namely: data on the types, composition, quantities and thermal power of waste delivered for incineration and used as fuel. These are parameters that must be obtained exactly, either from a pilot plant or from known incinerators that the technology owner has put into operation.

**Response:** Development of the software is intended for the organisation of logistics and management of mass balances. A clarification has been added to the text of the Study on page 188. The limit values regarding the physical and chemical composition of the waste mixture that can be thermally treated in the plant boiler at the same time and as such constitute a composition limitation when preparing mass and energy balances are listed in Chapter 3.2.1.8.3 Boiler on page 174, Table 3.10.

22. In Chapter 3.2.1.8.2 Combustion air and recirculation gas system on page 167 – The Study contains information that recirculation gas is taken from the channel between the bag filter and the scrubber. This returns halides and sulfur to the process, which is harmful to the environment and equipment, which is why redesign is necessary because the existing solutions are not justified.

**Response:** The adopted technical solution is part of the CD of the project that has passed the revision process of the State Audit Commission. A supplement has been made to the text of the Study within Chapter 3.2.1.8.2 on page 189.

23. In Figure 3.10 on page 170, the process in the boiler is shown from right to left, and in all other figures from left to right. This is confusing. Correct it.

**Response:** The comment has been accepted, correction has been made in the supplemented Study on page 192.

24. On page 173, subtitle Material and energy balance, Figure 3.11 shows a diagram of the boiler operating modes, but the source of data for this diagram is not specified. The drawing goes up to a dosage of 17 t/h, and otherwise the Study states that the maximum amount of waste dosage is 12.5 t/h. It is not clear why the Project Developer specifically opted for the operating mode point 2b, which it took for the boiler calculation, when it is known that sufficient quantities of waste with a lower calorific value of 16.5 MJ/kg cannot be found on the market (6,322 kg/h is required). Also in Table 3.10 on page 174 it is not clear why some parameters are given for waste with a lower calorific value of 7 MJ/kg, and for others of 16.5 MJ/kg. In the same table, the footnote lists the chlorine content originating from organic compounds (\*organic chlorine content <1%), which once again indicates that the planned rapid analyses of the transported waste cannot determine the total chlorine content and the organic chlorine content in 1 hour.

**Response:** The stated hourly thermal treatment capacity of 12.5 m<sup>3</sup>/h is a derivative of the maximum annual capacity of the plant of 100,000 t<sup>3</sup>/year on the planned equipment availability of 8,000 hours/year and is derived as the average hourly maximum of thermal treatment.



*The suggestion for harmonisation has been accepted, because the boiler in the designed operating modes, i.e. in the case of thermal treatment of waste with a lower thermal power of 7 MJ/kg, can have a higher hourly thermal treatment capacity, in which case the hourly maximum is 17 m<sup>3</sup>/h.*

*In the Study on page 197, a revised Table 3.10 is given.*

*The waste is rarely available on the non-hazardous waste market (e.g. Impregnated wooden waste railway sleepers). This was expected as a design scenario, and in the project and technical documentation all cases were done as rating cases, which is regular industrial practice.*

*The pre-acceptance and acceptance procedures of the plant are explained in the responses to questions 15, 17 and 18.*

25. On page 174, under the subtitle Material and Energy Balance, the table Material and Energy Balance by Flows is referenced, which is provided in the annex of the Study. Based on it, it can be concluded that the Power Plant will not operate in accordance with BATC WI, which is unacceptable.

**Response:** *The technology for the thermal treatment of hazardous and non-hazardous waste at the facility in question has been fully designed in compliance with BATC WI 2019, as stated and substantiated in the Study. The maximum ELVs are established according to the type of waste treated, as well as the applied technological solution if it is considered the best available technique, and in any case, the permitted emission range must be respected. In the supplemented Study, the table Material and Energy Balance by Flows has been further updated to show expected emission parameters within the emission limit value range defined by BATC WI 2019 – 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 Parliament and of the Council for waste incineration (notified under document C(2019)7987), which refers to waste incineration and contains ELVs that are stricter than those in the IED Directive. The updated table is provided in the annex to the Study. The updated Table 3.17 is shown on pages 209–210. The updated Table 3.18 is on page 219. The updated Table 3.19 is on pages 221–224. The updated Table 3.55 is on page 318.*

26. In Chapter 3.2.1.8.4 – Sand Storage and Dosing System, on page 174, the specification and the quantity of sand dosed into the fluidized bed are not provided, which renders the Study incomplete.

**Response:** *The quantity of sand dosed into the fluidized bed amounts to 20 kg/h. This information is provided on page 194, as well as in Chapter 3.3.1.6 – Use of Auxiliary Raw Materials, on page 277. Among the specifications, the granulometry of the sand is the most important parameter, and as such, it has been submitted in the annex of the Study.*

27. In Chapter 3.2.1.8.5 – Pilot and Auxiliary Fuel System, on page 175, neither the specification of natural gas nor the required quantity is provided, which renders the Study incomplete.

**Response:** *The characteristics of natural gas are provided in Chapter 7.1.2.2 – Characteristics of Natural Gas.*

*The burner capacity is 2 x 12 MW, and the consumption of natural gas is variable, depending on the operational conditions at the facility. Therefore, it is not possible to predict or state the required annual consumption in advance. Continuous availability of natural gas will be ensured through a contractual obligation of the affiliated company managing the Prahovo Chemical Park.*

*In the supplemented Study, the characteristics of natural gas are also provided in Chapter 3.2.1.8.5 – Pilot and Auxiliary Fuel System, on page 199. The following text will be added: "Natural gas will be used to operate the boiler burners as pilot and auxiliary fuel, with an auto-ignition temperature of 595°C and a minimum lower heating value of 34.4 kJ/m<sup>3</sup>."*

28. On page 177, under the subtitle Sampling System, Tables 3.11 and 3.12 include process parameters such as pressure, temperature, and flow rate, which are not relevant to the sampling system.

*The sampling system is intended to monitor the quality of water and steam in terms of chemical composition, in order to adjust the conditioning process, i.e., the dosing of chemicals to maintain oxygen content, pH value, conductivity, silica, and other parameters within the water-steam system. These parameters are missing from the Study, and physical quantities are not monitored in this context.*

**Response:** *We refer to Tables 3.14 and 3.15, which are provided in the Study on page 205. Sampling will ensure the required quality.*



29. In Chapter 3.2.1.9 – Flue Gas Cleaning Systems of the Boiler Plant, on page 180, it is stated in the first paragraph that these systems are designed based on the defined chemical composition of the mixture of various types of waste entering the incineration process. However, in previous sections of the Study and the project documentation, it is stated that formulations for waste-derived fuel will be developed specifically for this project, making it unclear how these systems could have been designed before such formulations were created. Therefore, this part of the Study cannot be evaluated.

**Response:** *The design of the thermal treatment technology, including the boiler plant and flue gas cleaning systems, was carried out based on a predefined chemical composition of the waste fuel, i.e., the waste mixture entering the combustion (thermal treatment) process simultaneously. This composition includes parameters such as calorific value, moisture content, ash content, chlorine, and other criteria that the waste fuel must meet to ensure proper operation of the boiler under defined working conditions.*

*These predefined limits in the chemical composition of the waste fuel form the basis for developing fuel formulations. These are constraints that must be observed during plant operation and must be applied when preparing the mixture of waste to be treated simultaneously. For any further optimization of plant operation, including the development of formulations and mass balances, the mentioned data are used as non-exceedable limits. The defined limitations for simultaneous thermal treatment are presented in Table 3.10. An explanation has been added to the supplemented Study text on page 197.*

30. In Chapter 3.2.1.9 Flue Gas Cleaning Systems of the Boiler Plant, on page 180, it is defined that a portion of the activated carbon mixture, containing adsorbed dioxins and heavy metals, along with ash, is sent to wet ash treatment, while another portion is returned to the reactor via recirculation conveyors. The Study does not provide information on how this distribution is determined or how much material is returned to the reactor, making it incomplete.

**Response:** *Additional clarification has been provided in the updated Study, within Chapter 3.2.1.9 Flue Gas Cleaning Systems of the Boiler Plant (see page 207).*

31. In Chapter 3.2.1.9 Flue Gas Cleaning Systems of the Boiler Plant, on page 182, the Study contains incorrect information stating that during gas passage through the filter bags, fly ash particles remain on the inner surface of the bags, forming a layer of deposited dust. This statement is incorrect because these particles actually remain on the outer surface of the bags.

**Response:** *The comment is accepted; the correction has been made in the updated Study on page 208.*

32. Under the subtitle Selective Catalytic Reduction (SCR System), on page 187, the catalyst placed in two layers in the reactor is mentioned several times. However, there is no information about the type of catalyst used, its function, or how it assists in the reaction of nitrogen oxides in the flue gas with a 25% ammonia water reagent solution. Additionally, the Study does not contain data on the catalyst's service life—whether it is regenerated or replaced. If replaced after the end of its service life, how is the spent catalyst handled, since it becomes a waste stream? In the same subtitle, Table 3.19 presents the projected Flue Gas Composition at the Chimney Outlet (after the SCR system) and states that the composition, i.e., limit values, complies with the Regulation on Technical and Technological Requirements for the Design, Construction, Equipment, and Operation of Waste Incineration Plants, Emission Limit Values, and Their Monitoring (Official Gazette of the Republic of Serbia, No. 103/2023), and with the limit values prescribed in the 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 Parliament and of the Council, for waste incineration (notified under document C(2019) 7987). Attention is drawn to the Study authors that the above regulations define emission limits as daily averages, half-hour averages, and averages over sampling periods of at least 30 minutes and no more than 8 hours, and at least 6 and no more than 8 hours. Contrary to the cited regulations, Table 3.19 does not provide emission data for the pollutants dioxins and furans. There is also no data on the emissions of the pollutant CO (carbon monoxide).

**Response:** *SCR catalysts are standardized in industrial applications by various catalyst suppliers. Catalysts can be based on different materials; consequently, some may be regenerated while others may not. There is a need for regeneration/disposal of the spent catalyst after its multi-year service life (mechanical cleaning is expected every 3 years). The comment is accepted—after its service life, the spent catalyst becomes a waste stream and this has been added to the Study (text updated on page 217).*



All pollutant emissions have been expressed and modeled, and monitoring is proposed in accordance with the contents of Chapters 6 and 9 of the Study (including dioxins, furans, and CO). In the updated Study on pages 221–224, Table 3.19 has been updated with stated emission values into the air, including emissions of dioxins, furans, and carbon monoxide. Chapters 6 and 9 specify that the emission limit values comply with the upper BATC WI 2019 limits, as well as with the RS regulations. In case of differences between RS regulations and BATC WI 2019, the stricter emission limit value is defined for the plant in question. During the trial operation period of the plant, as a stationary source of pollution, emission guarantee measurements will be conducted as part of the procedure for obtaining the Operational Permit. These measurements will be carried out in accordance with regulations under conditions of maximum load of the stationary pollution source.

33. On page 195, under the subtitle *Treatment of Wet Ash*, within the description of streams entering the ash suspension reactor, the process water stream originating from the Solid Waste Landfill is not mentioned. This stream is shown in Figure 3.16 – *Schematic Diagram of the Process Wastewater Treatment Plant of the Boiler Facility*.

**Response:** The primary method for treating leachate from the non-hazardous waste landfill is through the process wastewater treatment plant of the boiler facility (EnviroChemie), which has been referenced and described. The comment is accepted, and the text of the Study has been amended on page 228. Figure 3.16 – *Schematic Diagram of the Process Wastewater Treatment Plant of the Boiler Facility* has also been updated and is provided on page 226.

34. On page 199, the last paragraph, which continues onto page 200, reads as follows: "Considering the variety of waste that, in accordance with the selected technology, can be treated at the Waste-to-Energy Plant, and for the purpose of managing the operation of the facility in compliance with the limitations prescribed by the Regulation on Technical and Technological Requirements for the Design, Construction, Equipment, and Operation of Facilities and Types of Waste for Thermal Waste Treatment, Emission Limit Values, and Their Monitoring (*Official Gazette of the Republic of Serbia*, No. 103/2023), as well as for the purpose of managing the composition of residues from the boiler facility—and consequently the solidified material (solidificate) that must be disposed of at the designated non-hazardous waste landfill—the Project Developer has initiated the development of software for generating formulations of compatible waste types that can be thermally treated. A pilot project has also been launched for laboratory testing of expected formulations. The aim of this is to simulate and assess the most frequently expected types of waste to be received at the facility, to examine their physico-chemical properties and quantities, and to define formulations that will be used for thermal treatment at the Waste-to-Energy Plant, with minimal deviations and correlations needed during actual operation. Based on this, different formulations, material balances, and process control methods will be defined, which will largely ensure a consistent composition of residues for each anticipated formulation—and therefore a consistent composition of solidificate to be disposed of at the non-hazardous waste landfill." The Project Developer should have first carried out a pilot project involving laboratory testing of the expected waste mixtures as part of the preliminary works. The purpose of this is to simulate and assess the most commonly expected types of waste that will be received at the facility, and based on those findings, determine the appropriate type of waste incineration plant and the corresponding auxiliary facilities that are integrated with the selected furnace type. Therefore, the composition of combustion residues (slag and ash) could not be determined, which places significant uncertainty on the selected method of stabilization/solidification of solid residues from the boiler facility. This method is required to produce non-hazardous or non-reactive hazardous waste suitable for disposal at the designated non-hazardous waste landfill. Given this uncertainty, it is unclear on what grounds the Study preparer concludes: "These process settings are in accordance with the European Commission Directorate-General for Environment Guidance on the interpretation of key provisions of Directive 2008/98/EC on waste, 2012." Moreover, based on the waste list, which includes several hundred different types of waste, the properties of the residues will not be consistent even during the operation of the Waste-to-Energy Plant.

**Response:** The Project Developer should have first carried out a pilot project involving laboratory testing of the expected waste mixtures as part of the preliminary works. The purpose of this is to simulate and



assess the most commonly expected types of waste that will be received at the facility, and based on those findings, determine the appropriate type of waste incineration plant and the corresponding auxiliary facilities that are integrated with the selected furnace type. Therefore, the composition of combustion residues (slag and ash) could not be determined, which places significant uncertainty on the selected method of stabilization/solidification of solid residues from the boiler facility. This method is required to produce non-hazardous or non-reactive hazardous waste suitable for disposal at the designated non-hazardous waste landfill. Given this uncertainty, it is unclear on what grounds the Study Preparer concludes: "These process settings are in accordance with the European Commission Directorate-General Environment The Director-General Guidance on the interpretation of key provisions of Directive 2008/98/EC on waste, 2012."

Moreover, based on the waste list, which includes several hundred different types of waste, the properties of the residues will not be consistent even during the operation of the Waste-to-Energy Plant.

In accordance with the responses to comments/questions No. 29 and 21, it is emphasized that the equipment design and mass balances provided by the technology provider and the designer of the key equipment define the most unfavorable possible waste composition scenarios. These data are used as the maximum input constraints for all subsequent operational procedures and optimizations to which the cited chapter refers. Accordingly, the designer has taken into account all necessary limitations, and the stated experimental and modeling work serves the purpose of more efficient facility management. This clarification has been added to the revised Study text—specifically, the text has been added on page 235.

35. In Chapter 3.2.2.3 Technological Description, Method and Procedure of Operation of the Non-Hazardous Waste Landfill, on page 215 (last paragraph) and page 216 (first paragraph), the Study preparer describes the procedures for the reception and inspection of waste that, after stabilization/solidification, is to be disposed of as non-reactive hazardous waste at the non-hazardous waste landfill. This is done by once again referring to the expected formulations of incoming waste types intended for thermal treatment. Given that the Study states in multiple places that such formulations have not been developed, nor has a pilot project been carried out for laboratory testing of the expected waste mixtures to be thermally treated, it is unclear on what basis the Project Developer selected the given technology for the thermal treatment of non-hazardous waste and hazardous waste containing less than 1% organic halogen compounds. It is also unclear how the associated facilities for the treatment of eluates resulting from such a thermal treatment technology were dimensioned. For this reason, the Study cannot be properly assessed in this section.

**Response:** The explanation of the input restrictions for the purposes of operational procedures and optimization is provided in the responses to questions number 21, 29, and 34. The mentioned chapter technically brings the operational work closer, while the methods of monitoring and demonstrating compliance are given in chapter 9.2.2., in accordance with the Regulation on categories, testing, and classification of waste. (Official Gazette of the Republic of Serbia, Nos. 56/2010, 93/2019, 39/2021, and 65/2024)

36. Chapter 3.2.2.3 Technological description, method and procedure of operation of the Non-Hazardous Waste Landfill, page 215, paragraph 4, the following text is provided: "Upon receipt of each batch of waste, authorized persons of the accredited laboratory shall take a sample (the minimum amount of matter necessary for laboratory testing) of the solidified material, which shall be further analyzed in accordance with the Regulation on categories, testing and classification of waste (Official Gazette of the Republic of Serbia, No. 56/2010)". The Study does not explain what is meant by a batch of waste, where the minimum amount of waste necessary for laboratory testing is taken, from a truck or elsewhere, nor how it is proven that this minimum sample is a representative sample. This makes the Study absolutely incomplete in essential elements of the environmental impact assessment.

**Response:** The objection is accepted. In the revision of the Study, on page 254 Clarification added. The text also provides detailed mass balances for the production of solidified material for disposal at the Non-Hazardous Waste Landfill.

37. In Table 3.49 – Overview of the types and maximum concentrations of emitted pollutants at the boiler plant emitter (page 249), the limit values are not adequately presented in accordance with Serbian



regulations or BAT-AELs according to BATC WI. Additionally, incorrect emission data for NO<sub>x</sub> has been entered instead of emissions for NO and NO<sub>2</sub>.

**Response:** *The remark is accepted. The updated Table 3.49 – Overview of the types and maximum concentrations of emitted pollutants at the boiler plant emitter is provided in the revised Study on pages 291–294. Table 6.9 – Expected emission values from the boiler plant emitter (W-C14) is included in Chapter 6.2.1 of the Study on page 443.*

38. In Table 3.51 – Overview of the types and quantities of emitted pollutants in wastewater after treatment at the wastewater treatment plant of the boiler plant (page 253), the parameters and limit values defined in the Regulation on Technical and Technological Conditions for Design, Construction, Equipment, and Operation of Plants and Types of Waste for Thermal Waste Treatment, emission limit values, and their monitoring (*Official Gazette of the Republic of Serbia*, No. 103/2023), as well as the emission levels associated with BAT according to 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 Parliament and of the Council for waste incineration, are not adequately presented. In addition, the parameters for Total Organic Carbon (TOC) are missing, and discrepancies exist in limit values for mercury and other pollutants.

**Response:** *The remark is accepted. The updated Table 3.51 – Overview of the types and quantities of emitted pollutants in wastewater after treatment at the wastewater treatment plant of the boiler plant is provided in the revised Study on page 298. Table 6.14 – Overview of the types and quantities of emitted pollutants in wastewater after treatment at the wastewater treatment plant of the boiler plant is included in Chapter 6.2.1 of the Study on page 464.*

39. In Chapter 3.5.3 – Overview of waste treatment technology and prevention of air emissions from the boiler plant (page 272), the first paragraph once again states that the flue gas purification systems, resulting from waste combustion, were designed based on the defined chemical composition of various waste types entering the incineration process. This statement further confirms that the incineration technology and accompanying facilities were selected before the chemical composition of waste mixtures was determined and tested in a pilot plant, which is unacceptable. Below this paragraph, a general chemical composition of the waste mixture is provided without evidence of how this composition was determined, despite its critical role in pollutant formation. The specified composition shows a halogen content of 3.02% (chlorine and bromine), yet it does not specify the proportion of organic halogens. Since the Project Holder does not have the capability to take a representative sample and will not be able to determine the level of organic halogens through rapid analysis, which must be <1%, it is once again recommended that the Project Holder only thermally treats non-hazardous waste without chlorine presence at the planned facility.

**Response:** *As already explained in response to question 29, the predefined chemical composition of the waste mixture undergoing simultaneous thermal treatment in the facility was used for designing key equipment, including the boiler, and appropriately configuring the flue gas contamination purification system. The waste mixture directed to thermal treatment in the boiler plant must not contain characteristics outside the limits defined in Table 3.10. These characteristics serve as constraints when creating logistical plans and scheduling simultaneous waste treatment. Consequently, there is no possibility of variation beyond the defined limitations of waste composition permitted for simultaneous thermal treatment in the facility. Table 3.10 also clearly shows that the equipment is designed for a technical maximum total chlorine content of <3% in the incoming fuel, while the organic halogen content is limited to <1%, in accordance with the restrictions set forth in Article 8, Paragraph 2 of the Regulation on Technical and Technological Conditions for Design, Construction, Equipment, and Operation of Plants and Types of Waste for Thermal Waste Treatment, emission limit values, and their monitoring (*Official Gazette of the Republic of Serbia*, No. 103/2023). The suggestion for clarification has been accepted, and the revised study text incorporates the changes indicated in response to comment 34. Additionally, in line with the response to comment 29, supplementary text has been added to page 197 of the Study. The pre-acceptance and acceptance procedures for the plant are explained in responses to questions 17 and 18.*



40. In Chapter 3.5.3 (page 284), it is stated: "The plant's emissions comply with the highest EU standards, best available technologies, and BREF documents (a comparison of the facility's compliance with BATs is provided in the study annex)." However, based on a review of the comparisons in the annexes, it can be concluded that emissions do not comply with the highest standards.

**Response:** Please refer to the responses provided for questions 25 and 32.

41. In Chapter 3.5.5 – Overview of Wastewater Treatment Technology (page 295), under the subsection Wastewater Treatment Plant (WWTP), paragraph 4, it is noted: "In the case of organic water load due to oil spills, this method of purification via sand filters and activated carbon filters is certainly inadequate, as the oil would contaminate the sand layer before reaching the activated carbon. The study does not present an effective technological solution for this issue (e.g., directing water through an oil and grease separator before passing through the filters)."

**Response:** The project includes an upstream oil and grease separator with an integrated coalescer. The remark is accepted, and further clarification is provided in Chapter 3.5.5 of the revised Study under the subsection Wastewater Treatment Plant (WWTP) on page 341: "To remove the organic load from process wastewater, the project includes the installation of an upstream oil and grease separator with an integrated coalescer."

42. In Chapter 3.6 – Overview of Environmental Impact of the Selected and Other Considered Technological Solutions (page 301), it is stated: "The annex to the study provides a comprehensive REVIEW OF PROJECT COMPLIANCE WITH BEST AVAILABLE TECHNIQUES." However, this document only presents a review of compliance with BATC WI, BATC WT, and BREF Storage, while other aspects are missing. Additionally, it is evident that the project is not fully compliant with BATC. Furthermore, the text in the annex and the study itself are not aligned!

**Response:** The document provided in the annex of the Study offers insight into the compliance of the facility with relevant EU reference documents, transparently indicating adherence to Best Available Techniques (BATC WI, BATC WT, and BREF Storage). Please refer to the responses provided for questions 25, 32, 37, and 38. We appreciate the comment highlighting the differences in meaning between the BATC document (Commission Implementing Decision), which holds the status of an EU Regulation, and the BREF document for the same application area. The name of the document referenced in the study has been revised to: "Review of Compliance with the Conclusions of the Reference Document on Best Available Techniques." Additionally, alternative options considered in the project development process are covered in Chapter 4 of the Study.

43. In Chapter 4.1.1 – Selection of the project implementation site (page 303), the location choice was not analyzed in terms of collecting 100,000 tons of waste per year, as it is known that this quantity of waste cannot be gathered within the Negotin area and its surroundings. The total amount of municipal waste in the entire Zaječar district is approximately 35,000 tons per year, meaning that waste will need to be transported over long distances beyond the district. This transport will lead to air emissions and environmental noise from fossil-fuel-powered vehicles. Because of this, the selection of the site is questionable, and the total emissions have not been analyzed, which is unacceptable.

**Response:** The site selection is thoroughly examined in Chapter 4.1, with the key conclusions outlined in 4.1.8. The comment only considers the availability of municipal waste in the district, overlooking industrial hazardous and non-hazardous waste quantities. The statement that this site will cause higher emissions due to transport is not substantiated—refer to the response to question 2. The site was carefully selected as an existing industrial zone and aligned with the applicable Detailed Regulation Plan (DRP) for the chemical industry complex in Prahovo to ensure acceptable noise levels from transportation. A key advantage of the chosen site is that it has industrial consumers requiring continuous thermal energy, which will be produced through energy recovery from waste, replacing fossil fuels that are currently delivered via road transport due to the absence of a gas pipeline network. Conducting thermal waste treatment on-site, while using the recovered thermal energy locally, instead of fossil fuels that are currently used, will bring multiple environmental benefits. The argument presented in response to comment 2 has been included in the justification for site selection on page 349 of the Study.



44. According to the analysis presented in Subchapter 4.2.1.2 – Alternatives Regarding Waste Combustion Technology (page 317), it is confirmed once again that an appropriate technology selection has not been made. The Project Holder does not have the capability to conduct representative sampling or perform adequate and quick analyses to determine organic halogens, meaning that hazardous waste streams cannot be thermally treated at the selected facility. Therefore, it is recommended that the Project Holder incinerates only municipal (non-hazardous) waste at the chosen facility.

**Response:** Table 4.6 clearly states that the selected fluidized-bed furnace technology has the capacity to treat a wide range of waste types, including industrial and municipal-based waste. This technology provides significant advantages in terms of combustion control, thermal efficiency, and requires more investment in waste preparation for treatment. A detailed control of waste composition for combustion is part of the pre-acceptance procedure, where accredited waste sampling and testing are conducted. Additionally, the acceptance procedure involves rapid analyses in the facility's internal laboratory, confirming that the waste aligns with pre-acceptance protocols and directly verifying the content of organic halogens (expressed as chlorine) in the waste. The organic halogen content, expressed as chlorine, is limited to, which undergoes thermal treatment at the facility, in line with combustion temperatures of 850–950°C. The pre-acceptance and acceptance procedures are explained in the responses to questions 17 and 18. The basis for comment 44 is unclear, but to eliminate any doubts, the reader is referred to response to comment 10 and its annexes.

45. In Chapter 4.2.1.3 – Alternatives for Transport and Storage of Hazardous Waste (pages 325–326), a reference for the table should be provided, indicating its source. Can waste oils and solvents be incinerated in these furnaces? In this regard, it is noted that the manufacturer has specified on its official website that the facility incinerates waste fuels, waste oils, and waste solvents, which are not mixed with non-hazardous waste and are fed directly into the combustion chamber.

**Response:** The data presented in this chapter can be found in: BMLFUW (2015): Neubacher, F. (UVP GmbH): Waste-to-Energy in Austria, Whitebook – Figures, Data, Facts. 3rd Edition 2015, published by the Austrian Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology. The reference has been added to Chapter 4.2.1.3 on page 371. The applied technical solution allows the thermal treatment of waste oils, provided their composition does not prohibit such activity according to the exclusion list given in section 7.1.2.1. The storage method for accepted waste is explained in Chapter 3.2.1.4–6. Further clarification has been included in the revised Study, Chapter 3.2.1.8.1 on page 187. The maximum capacity for individual waste types has been determined based on the designed capacities of all waste dosing lines into the boiler, where simultaneous thermal treatment and energy recovery of waste take place. This is detailed on page 188 of the Study.

46. In Chapter 4.2.1.4 – Alternatives for Waste Gas Treatment (page 326), it is stated: "These systems are designed based on the defined chemical composition of various types of waste entering the incineration process..." However, the Study does not contain chemical composition data for the waste that would match the manufacturer's declaration.

**Response:** As already explained in responses to questions 21, 29, 34, and 39, the predefined chemical composition of the waste mixture undergoing simultaneous thermal treatment in the facility was used to design key equipment, including the boiler, and to appropriately configure the flue gas purification system.

47. On page 335, in Chapter 4.5 – Type and Selection of Materials, it states: "The equipment was selected with consideration for using the latest generations available both locally and internationally. It has been certified accordingly and meets the requirements of recommended BAT techniques, which aim to reduce negative environmental impact." However, the equipment and the planned operation of the facility do not comply with BATC WI!

**Response:** Please refer to responses provided for questions 25, 32, 37, 38, and 39.

48. On page 376, third paragraph, it is stated: "In addition to the regular air quality monitoring in the designated area, to track the impact of air emissions, the operator Elixir Prahovo d.o.o. conducts biannual monitoring of pollutant emissions from all emitters. This is performed by an authorized accredited laboratory in accordance with the adopted Monitoring Plan." However, the Study does not address this monitoring, nor does it include reports on pollutant emission measurements for existing emitters at Elixir



Prahovo. Therefore, it is impossible to determine whether the measured values comply with legal regulations.

**Response:** *The clarification has been added to the revised Study on page 423: "The relevant data is available in the annex to the Study under the title: Environmental Factors Analysis (including annexes), 2023."*

49. On page 397 in Chapter 6.2.1.1.2 – Air Emissions from the Boiler Plant, it states: "Based on the provided data, it can be concluded that the operation of the boiler plant may result in the emission of pollutants into the air, including: particulate matter, heavy metals, HCl, HF, SO<sub>2</sub>, NO<sub>x</sub>, CO, NH<sub>3</sub>, TVOC, PCDD/F, CDD/F+ dioxins as PCBs, Hg. However, the expected emission values comply with Serbian regulations and the values prescribed by the Best Available Techniques (BATC) conclusions." These claims are inaccurate, as Table 6.11 does not substantiate them. Additionally, some reported values exceed those outlined in BATC!

**Response:** *The overview of the types and maximum concentrations of emitted pollutants from the boiler plant emitter, along with the prescribed emission limit values (ELVs) per BATC (Best Available Techniques for Waste Incineration: Commission Implementing Decision (EU) 2019/2010 of 12 November 2019 establishing the BAT Conclusions under Directive 2010/75/EU of the European Parliament and the Council for waste incineration), and as per the Regulation on Technical and Technological Conditions for Design, Construction, Equipment, and Operation of Facilities and Types of Waste for Thermal Waste Treatment, emission limit values, and their monitoring (Official Gazette of the Republic of Serbia, No. 103, 21 November 2023), clearly indicate that all expected emission values comply with BATC. The updated Table 3.49 – Overview of the types and maximum concentrations of emitted pollutants from the boiler plant emitter is presented in pages 219–294 of the revised Study. Table 6.9 – Expected emission values from the boiler plant emitter (W-C14) is also updated in Chapter 6.2.1 of the Study on page 443. Regulatory requirements related to Serbian regulations and BATC references can also be found in the updated Table 9.1 – Emission limit values for air pollutants from the boiler plant on pages 663–666. Table 9.2 – Emission limit values for air pollutants from the pre-treatment filter system, activated carbon filter, and the stabilization and solidification process filter system is also updated on page 670 of the revised Study. The proposed emission limit values are aligned with BATC as stricter than those prescribed by Serbian regulations. The ELVs are ultimately determined as part of the Integrated Pollution Prevention and Control (IPPC) permit issuance process, following the trial operation period, considering the BATC conclusions related to the demonstrated production process of the facility (after commissioning). Please refer to the responses provided for questions 25, 32, 37 and 38 for further clarification.*

50. Chapter 6.2.1.1.4 – Emissions from Transport Vehicles (pages 398–399), paragraph 2, states the following: "The project envisages unloading approximately 10 trucks per hour carrying solid and sludge waste materials. Regarding liquid waste, the project plans unloading approximately 10 trucks per day carrying waste materials delivered in IBC containers, barrels, jumbo bags, and 6 tanker trucks per day carrying liquid waste. The unloading process will be conducted across two daily shifts. This amounts to 170 trucks per day + 6 tanker trucks. The sampling and laboratory procedures cannot realistically keep up with the stated requirement of collecting a representative sample from each truck."

This procedure is outlined on page 148, stating that the acceptance control for hazardous waste includes procedures identical to those for non-hazardous waste, including:

- a) Verification of documentation
- b) Sampling of waste before unloading for quick analysis at the moment of waste acceptance, to verify compliance with the accompanying documentation and the Waste Testing Report, prepared according to Annex 9 of the Regulation on Waste Categories, Testing, and Classification (*Official Gazette of the Republic of Serbia*, Nos. 56/2010, 93/2019, 39/2021, and 65/2024)
- c) Measures enabling competent authorities to review and identify waste designated for thermal treatment

On page 214, a different statement is presented: "360 m<sup>3</sup>/day of solidified waste transported using tipper trucks, amounting to a maximum of 50 trucks per day, or 3 trucks per hour."



Although the data regarding the number of vehicles in the Study are inconsistent, in both cases, the prescribed acceptance control procedures are practically impossible to execute, considering the parameters that must be determined in waste according to Annex 9 of the Regulation on Waste Categories, Testing, and Classification (*Official Gazette of the Republic of Serbia*, Nos. 56/2010, 93/2019, 39/2021, and 65/2024) and the time required for these processes.

**Response:** Chapter 6.2.1.1.4 presents expected local emissions from transport operations. The projected vehicle flow was exaggerated to demonstrate negligible pollution load in the most unfavorable conditions, which are neither expected nor realistic in practice. At maximum operational capacity, the boiler can treat 17 m<sup>3</sup>/h of waste, making this the most relevant indicator of the maximum possible hourly load. Consequently, the maximum reception rate is 3 trucks per hour, under conditions of minimum bulk density and/or ADR restrictions on truck transport. The remark is accepted, and the text in Chapter 6.2.1.1.4 has been supplemented on page 445. The comment regarding the transport of solidified waste for disposal is also accepted, considering that this transport can be more efficiently conducted using larger-capacity vehicles. Since there are no technical limitations to increasing the transport capacity, the remark is accepted, and the text will be adjusted alongside operational planning to reduce emissions by using larger transport vehicles. As a result, no overload in administrative verification processes, documentation review, or laboratory waste control is expected. The explanation is provided in response to comment 36, and the revised Study clearly states on page 445: "111 m<sup>3</sup>/day of solidified waste transported using tipper trucks, amounting to a maximum of 8 trucks per day."

51. In Chapter 6.2.1.1.6 – Analysis of the Cumulative Impact of Emissions on Air Quality, under the subsection Description of the Applied Model (page 403), tables 6.14, 6.15, and 6.16 provide modeling data for the dispersion of PM<sub>10</sub> and PM<sub>2.5</sub>, specifying wind speeds. However, no wind speed data are provided for modeling the dispersion of other pollutants.

According to the wind rose and frequency diagram for the Prahovo area, the dominant average wind speed ranges from 2.1–3.6 m/s. If the same wind speeds listed in tables 6.14, 6.15, and 6.16 were used for modeling the dispersion of other pollutants, then the presented ground-level pollutant dispersion models lack significance. At higher wind speeds, pollutants disperse from elevated emitters, leading to dilution of their concentrations, reducing their impact on the ground-level atmosphere. Additionally, none of the referenced studies in the annexes (Study on the Impact of the Waste-to-Energy Plant and Non-Hazardous Waste Landfill on Air Quality and Study on the Impact of the Pre-Treatment Filter System and Activated Carbon Filter at the Waste-to-Energy Plant on Air Quality, prepared by the Faculty of Mechanical Engineering, University of Belgrade) contain clear wind speed data used for modeling pollutant dispersion from elevated emitters (SO<sub>2</sub>, NO<sub>2</sub>, CO, HF, HCl, NH<sub>3</sub>, Hg, PCDD/F).

**Response:** All modeling details and software integration are specified in the supporting studies by the Faculty of Mechanical Engineering, University of Belgrade. The modeling was conducted using state-of-the-art software packages specifically designed for this application, including AERMOD, a Gaussian-based dispersion model recommended by the U.S. Environmental Protection Agency (EPA).

Thus, the modeling covers the entire range of available wind speeds at the heights of elevated emitters throughout the specified time domain. Consequently, the modeling also included scenarios of poor atmospheric stability with low wind speeds, as referenced. More precisely, the maximum pollutant concentrations for hourly, 8-hour, daily, and annual averages provide the highest values obtained by the model across the full wind speed range, spanning a 5-year period. For point sources of air emissions, a critical wind speed threshold is not applied, as would be the case for surface emitters, where aeolian erosion dominates.

52. In Chapter 6.2.1.2.1 – Analysis of the Impact of Wastewater on the Water Quality of the Danube (page 420), Table 6.19 – Emission Limit Values for Pollutants in Process Wastewater After Water Treatment from the Boiler Plant Waste Gas Treatment System at the Waste-to-Energy Plant, is not aligned with BATC WI (Table 9).

**Response:** Table 6.19 adopts the highest potential allowable ELVs (Emission Limit Values) per BATC WI Table 5.9, to demonstrate a maximized negative case for modeling and assessing the worst-case scenario of pollutant emissions into the recipient water body. As a result, proving negligible impact on the Danube



under these conditions guarantees negligible impact when applying the stricter ELVs under BATC WI, as presented in Chapter 9 (Table 9.8 on page 686). To resolve uncertainties regarding pollutant ELVs, the revised Study (page 466) includes an updated version of Table 6.19, now numbered Table 6.16 – Emission Limit Values for Pollutants in Process Wastewater After Water Treatment from the Boiler Plant Waste Gas Treatment System.

53. In Chapter 6.2.2.2 – Impact of Air Emissions on Health (page 427, paragraph 4), the detailed composition of waste is not provided anywhere. Only general formulations are mentioned, but there is no breakdown of composition and quantity of specific waste fractions within the total annual incineration amount (100,000 t/year).

**Response:** Please refer to responses provided for comments 16, 17, 18, 24, 29, 35 and 44.

54. In Chapter 6.2.5.1 – Creation of New Jobs and Development of Small and Medium Enterprises – Waste Management Operators, it is stated that the Project Holder will directly employ 80–90 people. However, earlier in the Study (page 128, under the subsection "Sanitary Sewerage"), it is mentioned that the ACO-INTERPLAN BIOTIP biological wastewater treatment plant will be installed with a capacity of 20ES (40 employees). This raises the question: Which figure is correct? If 90 people will be employed, then a larger-capacity biological wastewater treatment plant should be installed.

**Response:** Both figures are correct. The wastewater treatment system is designed based on simultaneous capacity requirements, in accordance with the response provided for comment 6. Additionally, it should be noted that the facility is planned to operate in three shifts.

55. In Chapter 7.1.3.2 – Fire and Explosion (page 455, paragraph 1), the Study lacks data on PM particles, HF, dioxins, and furans.

**Response:** PM particles are covered under the terminology for "soot." The generation of HF, dioxins, and furans is theoretically possible, but in significantly lower quantities compared to dominantly recognized chemical compounds. The allowed fluorine content as a precursor for HF formation is substantially limited upon material intake. The maximum fluorine concentration in the waste formulation for thermal treatment must not exceed 200 ppm, as stated in the revised Table 3.10 on page 197 of the Study. Consequently, it is present at a maximum concentration dozens of times lower than chlorides. On the other hand, even under unfavorable combustion conditions with oxygen deficiency, dioxins and furans are generated at significantly lower concentrations than other hazardous substances mentioned in Chapter 7.1.3.2: (Engineering Analysis Report, National Dioxin Study Tier 4-Combustion Sources, US EPA, 1987).

56. In Chapter 7.2 – Analysis of Accident Consequences at the Waste-to-Energy Plant, under the subsection Scenario 1 – Accidents at the Liquid Waste Transfer Station, the second bullet point states: "A major accident: a tanker truck affected by fire for approximately 30 minutes (the worst chemical accident at the incineration site), leading to the occurrence of a BLEVE effect (Boiling Liquid Expanding Vapor Explosion)."

- Thermal impact from the fireball
- Destructive impact from the resulting blast wave
- Fragmentation impact from pieces created by the explosion of the tanker truck's reservoir

This statement is unclear and contradicts the previous data presented in the Study and project documentation, given that the BLEVE effect can only be triggered by materials with a low ignition temperature, sometimes even lower than their boiling point.

Since the Study and project documentation specifically state which materials are prohibited at the site—including those classified under hazard HP 3 (see Table 3.30, Chapter 7.1.2.1, and Chapter 8.3.2.1), which lists waste types that must not be accepted for thermal treatment, including materials that could potentially cause a BLEVE effect—this accident consequence analysis contradicts the data on prohibited materials, making this section of the Study inapplicable.

**Response:** The project provides for the acceptance, storage, and treatment of hazardous waste which, under the Law on Flammable and Combustible Liquids and Flammable Gases (Official Gazette of the Republic of Serbia, No. 54/2015) is classified as combustible liquids (a combustible liquid is defined as a liquid with a flash point above 60°C and below or equal to 100°C, which cannot be classified under



Category 3 flammable liquids). In line with this, the Ministry of Internal Affairs has issued Safety Conditions, which are an integral part of the location conditions and have been attached as an annex to the Study. The acceptance and storage of combustible liquids is clearly described in Chapter 3 of the Study. The modeled accident scenario at the liquid waste transfer station—specifically the BLEVE effect modeling—refers precisely to accident situations involving combustible materials, as outlined in Table 7.8 – Overview of the Characteristics of Potential Waste Found at the Waste-to-Energy Plant Site. It is also noted that given the expected effect of such an accident (BLEVE effect), the selection of hazardous material for simulating this effect was based on its flash point. Since one of the requirements for incoming liquid waste is that its flash point must not be lower than 60°C, the selected material for accident simulation was n-dodecane, with the following physical-chemical characteristics (R. Reid et al., *The Properties of Gases and Liquids*, McGraw-Hill, 1977):

- Molecular weight (MW): 170.34 g/mol
- Flash point (Fp): 71°C
- Critical temperature (Tc): 658.3 K
- Saturated vapor pressure at required temperatures ( $\Delta p^*$ ): calculated based on Antoine coefficients

The scenario was selected in line with all the above considerations, and according to the Safety Conditions, the designed storage and acceptance of combustible waste materials ensures a flash point higher than 60°C and lower or equal to 100°C, as per the updated Regulation on Waste Categories, Testing, and Classification (Official Gazette of the Republic of Serbia, No. 56/2010, 93/2019, 39/2021, and 65, dated August 2, 2024). Namely, it is important to note that the issued location conditions and Ministry of Internal Affairs requirements—including the Safety Conditions—were based on the old HP list from the previously valid Regulation on Waste Categories, Testing, and Classification (Official Gazette of the Republic of Serbia, No. 56/2010, 93/2019, 39/2021). During the Study preparation process, in accordance with the issued location conditions, a new edition of the Regulation on Waste Categories, Testing, and Classification (Official Gazette of the Republic of Serbia, No. 56/2010, 93/2019, 39/2021, and 65, dated August 2, 2024) was published, defining an entirely new HP list of hazardous waste characteristics. The data presented in the Study have been aligned with both the issued requirements and the new HP list.

57. In Chapter 7.2.1 Accident Modeling in Facilities for Storing Hazardous and Non-Hazardous Waste, the results of accident modeling with the material waste oil Transterm 2000 are presented, but the flash point of this material is not specified anywhere. If the flash point of this material is higher than 100°C, which it certainly is, then all these presented scenarios are irrelevant, since the simulated scenarios were based on hazards associated with flammable and combustible materials, into which this material cannot be classified.

**Response:** The comment is accepted that it is necessary to indicate the flash point of the waste in the accident model with the material waste oil Transterm 2000. The flash point of Transterm 2000 is approximately 240°C. The flash point of fuel oil is greater than 60°C but less than 100°C. Since the facility has acceptance conditions for waste with a flash point higher than 60°C (see the response to question 56), it is appropriate to model the scenario with fuel oil as the model component. Consequently, it is necessary to rename the scenario and the input waste for the simulation scenario from Transterm 2000 to waste fuel oil. The revised Study will incorporate this modification for the specified scenario on page 540. For the accident effect simulation, fuel oil (heavy fuel oil for heating) was selected, as stated in the Study. Heavy fuel oils are classified as Seveso substances under the Regulation on the List of Hazardous Substances and Their Quantities and the Criteria for Determining the Type of Documents to be Prepared by the Operator of a Seveso Facility or Complex, Table 1, List of Hazardous Substances and Their Threshold Quantities, and therefore, the given modeling is justified. Additionally, accident situations do not necessarily have to be related to Seveso facilities or material classifications, so further modeling to establish adequate corrective measures is justified to ensure an additional level of safety for future operational work.



58. On page 478, under the subtitle Scenario 2 – Accidents in the Waste Storage, i.e., in Receiving Bunkers or Bunkers for Mixing Solid Hazardous Waste, the subsection Input Data states in the second bullet point: "heterogeneous composition of solid waste, where the assumed proportion of the mixture of polyethylene (PE) and polyvinyl chloride (PVC)\* in the composition of the waste material is: 20%, m/m", which is followed by the footnote interpretation:

\*"For modeling, the assumption was made from the standpoint of obtaining various toxic products, even though the project documentation defines the maximum allowable proportion of chlorine-containing compounds that can be treated at the facility in question."

From this, it can be concluded that even the Study processor expresses doubts about the project and that it is possible that hazardous waste, which is formally prohibited through the Study and technical documentation, may actually be incinerated at the facility.

This is yet another piece of evidence that the proposed project documentation (Project) does not provide proof of technical reliability that prohibited waste will not be incinerated at the facility. Therefore, it is suggested to the Project Holder that the project documentation be modified, and the planned facility be used solely for the thermal treatment of non-hazardous waste, primarily municipal waste.

**Response:** *The stated scenario was analyzed in the Study from the standpoint of safety management to determine the potential impacts of worst-case accident scenarios at the project site. However, the scenario described is not feasible under real conditions due to the existence of pre-acceptance and acceptance procedures (refer to responses to questions 15, 17, 18 and 44). Consequently, the scenario has been modified, excluding waste PVC from the modeling.*

59. In the same subsection 8.1.1 on page 528, the obligations of the Project Holder under Article 29 of the Waste Management Act are listed, and item 3 states: "obtain a permit for waste treatment and perform waste treatment operations in accordance with that permit." In addition to this obligation, the obligation to obtain a permit for thermal waste treatment by incineration, as prescribed by Article 7 of the Regulation on Technical and Technological Requirements for the Design, Construction, Equipment, and Operation of Facilities and Waste Types for Thermal Waste Treatment, Emission Limit Values, and Their Monitoring (*Official Gazette of the Republic of Serbia*, No. 103/2023), should also be specified.

**Response:** *The remark is accepted, and the Study has been supplemented on page 595.*

60. Chapter 8.3.2.1. Measurement, reception, and unloading of waste on page 568 – A defined waste list is not sufficient to determine the properties of waste that can be treated in the facility in question. The limit values for certain properties are defined only for some parameters but not for all, so this should be clearly stated.

**Response:** *The waste characterization report is prepared in accredited laboratories in accordance with the technical requirements expressed in the Rulebook on Categories, Testing, and Classification of Waste (*Official Gazette of the Republic of Serbia*, No. 56/2010, 93/2019, 39/2021, and 65/2024) and as such, it is part of the waste movement documentation. The mentioned document contains all the necessary data to determine the possibility of thermal waste treatment. If the pre-reception and reception procedures (responses to questions 15, 17, 18, 29 and 39) prove that the waste planned for thermal treatment complies with the defined boiler design limitations, the requirements of the Regulation, the mentioned Rulebook, and the characterization report, no additional restrictions other than those stated are necessary.*

61. Chapter 8.3.2.2. Thermal waste treatment and production of thermal energy in the form of steam on page 572 – TOC values in slag and boiler ash are stated to be below 3%. In other parts of the same study, it is stated that it will be below 0.5% (e.g., page 339), which causes inconsistencies in the study.

**Response:** *A clarification has been added to chapter 8.3.2.2 on page 640. Additionally, the actual operational values for TOC in slag and boiler ash at the facility are expected to be much lower, i.e., below 0.5%, as stated on page 339.*

62. Chapter 8.3.2.2 Thermal treatment of waste and production of thermal energy in the form of steam on page 572 – The combustion temperatures in the study are not consistent – somewhere they are 850–950 °C, somewhere 850–930 °C (e.g. page 146), which makes the Study unclear.



**Response:** The remark refers to a technical writing error. As such, it is taken into account, the data will be harmonised in the Study so that the precise combustion temperature range of 850 - 950°C is presented throughout the document.

63. Chapter 8.3.2.2 Thermal treatment of waste and production of thermal energy in the form of water vapour on page 572 – Thermal efficiency must be determined based on the WFD Directive and BATC WI, which is not contained in the Study.

**Response:** The comment is accepted; a correction has been made in the amended Study on page 641.

64. Chapter 8.3.2.4 Air protection measures on page 574 – In this part of the Study, data on exceeding air emissions compared to those prescribed in BATC WI are included.

**Response:** We refer to the answers given to questions 25, 32, 37 and 38.

65. Chapter 8.3.3 Plans and technical solutions for environmental protection during regular operation of a non-hazardous waste landfill on page 581 – The Study contains completely inconsistent data on the NEN 7345 method – somewhere it is stated 16 days, somewhere 64 days (e.g. page 582).

**Response:** The given case is not about non-compliance, according to the stated standard, but according to the prescribed possibilities expressed in the Rulebook on Categories, Testing and Classification of Waste (The Official Gazette of the Republic of Serbia, Nos. 56/2010, 93/2019, 39/2021 and 65/2024), it is possible to measure the composition of the leachate according to the NEN 7345 standard after a 64-day test, but also after 16 days, with the concentration limit values being a quarter of the concentration values for individual parameters after 64 days. The amended Study has clarified this, and the stated text has been reformulated on page 650.

66. Chapter 9.2.1 Monitoring of the operation of Power Plant using waste on page 588 – Monitoring data in the Study are not in compliance with the IED Directive.

**Response:** We refer to the answers given to questions 25, 32, 37 and 38.

67. In Chapter 9.2.1.1.1 Monitoring of emissions of pollutants into the air from boiler plants on page 589, the legal regulation is not fully cited because it is not enough to refer only to the regulations, but it is necessary to indicate which annex, item, table of that regulation. It is also necessary to fully cite items 6 and 7 of Annex 1 of the Regulation on Technical and Technological Conditions for the Design, Construction, Equipment and Operation of Plants and Types of Waste for Thermal Treatment of Waste, Emission Limit Values and Their Monitoring (The Official Gazette of the Republic of Serbia, No. 103/2023).

**Response:** The comment is accepted and the annexes and tables from the Regulation are explicitly cited in the amended Study: On page 666, it is stated that: In order to determine the toxic equivalence (TE) of dioxins and furan, the mass concentrations of dioxins and furan are multiplied by the equivalent factors before addition given in Annex 1 of the Regulation on Technical and Technological Conditions for the Design, Construction, Equipment and Operation of Plants and Types of Waste for Thermal Treatment of Waste, Emission Limit Values and Their Monitoring (The Official Gazette of the Republic of Serbia, 103/2023). The Study revised Table 9.1 to provide an overview of all prescribed ELVs given in Annex 2. Regulation on Technical and Technological Conditions for the Design, Construction, Equipment and Operation of Plants and Types of Waste for Thermal Treatment of Waste, Emission Limit Values and Their Monitoring (The Official Gazette of the Republic of Serbia, 103/2023). Limit values for emission of pollutants.

68. In Chapter 9.2.1.1.1 Monitoring of emissions of pollutants into the air from the boiler plant on page 590 in table 9.1, there are no proposed ELVs for Power Plant, so it is not known what the investor proposes for Power Plant. Therefore, it is not possible to check whether the ELVs are in accordance with BATC WI, which is the investor's obligation.

**Response:** We refer to the responses given to questions 25, 32 and 37 as well as to the updated table 9.1 - Limit values for emissions of pollutants into the air from the boiler plant on page 663 and the updated table 9.2 - Limit values for emissions of pollutants into the air from the waste pretreatment filter system and activated carbon filters and the stabilisation and solidification process filter system on page 670.

69. In Chapter 9.2.1.1.2 Monitoring of emissions of pollutants into the air from the waste pretreatment filter system and activated carbon filters and the stabilisation and solidification process filter system



on page 594, there are no proposed ELVs for Power Plant in table 9.5, so it is not known what the investor is proposing for Power Plant. Therefore it is not possible to check whether the ELVs are in accordance with BATC WI, which is the investor's obligation.

**Response:** We refer to the answers given to questions 25, 32, 37, 38 and 68.

70. In Chapter 9.2.1.3.1 Monitoring of waste water from the boiler plant on page 600, in table 9.6, there are no proposed ELVs for Power Plant, so it is not known what the investor is proposing for Power Plant. Therefore it is not possible to check whether the ELVs are in accordance with BATC WI, which is the investor's obligation.

**Response:** The comment is accepted, Table 9.3 - Limit values for emissions of pollutants when discharging waste water from the waste gas purification system of thermal treatment plants has been updated on page 678

71. On page 595, only formal mention is made of guarantee measurements. It is necessary that the Study contains detailed defined guarantee measurements and limit values defined by the project documentation and legal regulations. Also, the guarantee measurements must include proof of energy efficiency according to the project documentation and according to 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 Parliament and of the Council, for waste incineration), BAT 20, table 2.

**Response:** The comment is accepted. The guarantee measurements and limit values defined by the project documentation and legal regulations are clearly specified in the Study in tabular format. (The guarantee measurements imply testing the same parameters during regular operation of the plant, which are given in the text of the Study. )

For questions related to energy efficiency, we refer to the answer to question number 63.

72. In Chapters 9.2.1.5.1 Monitoring of groundwater quality and 9.2.1.5.2 Monitoring of soil quality on pages 606 and 607, the limit values of pollutants tested in groundwater and soil are not listed.

**Response:** On page 688 it is clearly stated that: "Quality control and monitoring of groundwater regime in piezometres shall be carried out in accordance with the Regulation on Limit Values of Pollutants in Surface and Groundwater and Sediment and Deadlines for Their Achievement (The Official Gazette of the Republic of Serbia, No. 50/2012) - Annex 2 and the Regulation on Limit Values of Pollutants, Harmful and Hazardous Substances in Soil (The Official Gazette of the Republic of Serbia", Nos. 30/2018 and 64/2019) - Annex 2 - Remediation Values of Pollutants, Harmful and Hazardous Substances in the Aquifer.". On page 695 it is stated that: "Pursuant to the provisions of the Law on Soil Protection (The Official Gazette of the Republic of Serbia", No. 112/2015) and the Regulation on the List of Activities That May Cause Soil Pollution and Degradation, the Procedure, Data Content, Deadlines and Other Requirements for Soil Monitoring (The Official Gazette of the Republic of Serbia", No. 102/2020) and the Regulation on Limit Values of Pollutants, Harmful and Hazardous Substances in Soil (The Official Gazette of the Republic of Serbia", Nos. 30/2018, 64/2019), it shall be the obligation of the project developer to carry out the procurement procedure and select an authorised, accredited laboratory to perform soil monitoring at the subject location of the Waste-to-Energy Plant" which also defines the limit values of pollutants. Table 9.19 provides a list of all soil parameters that will be tested. The tables themselves will be added to Chapters 9.2.1.5.1 and 9.2.1.5.2. Updated Table 9.9 - List of parameters and testing methods for groundwater quality control in piezometres on page 689 of the Study. Updated Table 9.10 - List of parameters and testing methods for soil quality control on page 697 of the Study.

Updated Table 9.19 - Tabular overview of the environmental impact monitoring programme as part of Waste-to-Energy Power Plant on page 734 of the Study.

73. In Chapter 9.2.2 Monitoring of landfill operation and maintenance after closure on page 614, the legal regulations, parameters tested and limit values according to which the monitoring of the landfill operation and maintenance after closure is carried out (Surface water monitoring, leachate monitoring, gas emission monitoring and groundwater monitoring) are not listed.

**Response:** The comment is accepted. The legal provisions for groundwater, surface water, leachate and PM particle monitoring will be specified.



On page 712 it is stated that: "The content and method of monitoring the operation of the landfill, as well as subsequent maintenance after the closure of the landfill shall be defined by the Regulation on the Disposal of Waste in Landfills (The Official Gazette of the Republic of Serbia", No. 92/2010).

Therefore, in order for the given non-hazardous waste landfill to be put into functional and intended use, it is necessary to establish an effective system of monitoring and control of the operation in order to increase environmental safety and protect human health. Mandatory and continuous monitoring of the operation of the non-hazardous waste landfill will be carried out in accordance with the aforementioned Regulation. All data obtained from the monitoring will be submitted to the Environmental Protection Agency.

In addition to the abovementioned regular monitoring, daily visual inspection of the landfill operation will be carried out, maintenance of all facilities within the landfill complex, maintenance of mechanisation, as well as control of the efficiency of the truck wheel cleaning unit.

The CEKOR Association, comments on the Environmental Factors Analysis:

1. On page 37, a comparison was made of the measurement results at the emitter of the final tower - scrubber, of the "ELIXIR PRAHOVO DOO" artificial fertiliser production plant with the emission limit values defined in the Integrated Permit for the "Elixir Zorka-Mineralna Đubriva" d.o.o., Šabac plant, which cannot be linked to each other. The limit values at the emitters in Prahovo can be compared with the limit values defined in the Integrated Permit, but for the "ELIXIR PRAHOVO" location, and not for the location "Elixir Zorka-Mineralna Đubriva" d.o.o. plant in Šabac. Considering that the Study contains a comparison of data on measurement results that cannot be compared, it cannot be examined in this part.

**Response:** The listed ELVs at the emitter of the final tower - scrubber, the "Elixir Prahovo doo" mineral fertiliser production plant are taken from BREF LVIC 2007, the EU reference document for this type of plant, in relation to which the ELVs of the "Elixir Zorka-Mineralna Đubriva" d.o.o., Šabac plant are defined in the Integrated (IPPC) Permit and as such are listed in this document.

The measurement results at the emitter of the final tower - scrubber, of the "Elixir Prahovo doo" fertiliser production plant are compared against the limit values from BREF LVIC 2007 as a reference document for both of the abovementioned mineral fertiliser production plants.

The CEKOR Association, review of compliance with BAT:

1. In the part of the table under point 1.3 Overall environmental efficiency and combustion efficiency, BAT 9 Environmental performance, for sub-points "b" and "c" the conclusion that the procedures for pre-acceptance of waste and the procedure for receiving and accepting waste (acceptance) are defined is not correct, as well as the conclusion in sub-point "f" because the project does not provide reliable technical solutions for the possibility of taking a representative sample, as well as the possibility of determining the chemical composition in terms of the content of organic halides through rapid analyses. The same applies to the conclusion regarding BAT 11.

**Response:** The pre-acceptance and acceptance procedures referred to in the BAT 9 requirement are listed in the context of references to the documents by which the BAT 9 requirements will be defined and implemented in the operational operation of the plant. The specific operating procedures of the plant are not subject to the scope and content of the Study and will be subject to the procedure for issuing a permit for trial operation, i.e. the Integrated (IPPC) permit.

The pre-acceptance and acceptance procedures of the plant are explained in the responses to questions 15, 16, 17, 18 and 44. In order to make aspects of the future operational operation of the plant clearer, the details expressed in the responses to questions 15, 16, 17, 18 and 44 have been added to the text of the Study.

2. The conclusion in subparagraph "a" relating to BAT 13 regarding clinical waste is incorrect because the study does not mention the receipt of clinical waste anywhere.

**Response:** The list of waste with unacceptable characteristics is clearly stated and presented as part of the response to question 16. Clinical waste (group 18, Waste from human and animal healthcare and/or related research) that is not infectious or has been previously sterilised in another facility may be finally thermally treated at the subject facility. The existence of an independent storage location for waste with



hazardous characteristics and a line for the pre-treatment of hazardous waste (inert grinding) allows compliance with BAT 13a, as stated. Waste handling that includes operations defined in BAT 13b and 13c is not applicable.

Please refer to the response to question 17.

3. The conclusions regarding BAT 16 (restrictions on start-up and shut-down operations) are incorrect. The project developer has not yet developed the given procedures, and the technical solutions for taking representative samples and performing rapid analyses to determine the content of organic chlorides (must be <1%) are not reliable, nor can they ensure continuous operation of the thermal treatment plant.

**Response:** The procedures referred to in the BAT 16 requirement are listed in the context of references to the documents by which the BAT 16 requirements will be defined and implemented in the operational operation of the plant. The specific operating procedures of the plant are not subject to the scope and content of the Study and will be subject to the procedure for issuing a permit for trial operation, i.e. the Integrated (IPPC) permit.

Policies, procedures and work instructions by which all BATs will be defined and implemented in the operational work of the plant (including BAT 16), in order to improve the environmental, energy and other performance of the plant, will be specifically developed and defined in accordance with the requirements of the relevant ISO standards.

The pre-acceptance and acceptance procedures of the plant are explained in the responses to questions 15, 16, 17, 18 and 44.

The CEKOR Association, comments on the Technology projects and the Environmental Impact Assessment Study:

Technology project - Reception, storage and pre-treatment of solid waste:

1. In Chapter 7.1.5.1 Introduction, Paragraph 5, the claims about decarbonisation are incorrect because waste incineration produces CO<sub>2</sub>, so this Project has no connection with decarbonisation. In Paragraph 6, according to the written text, it can be interpreted that only waste generated by Elixir Group will be incinerated in the plant, so it is not clear whether it is correct that Elixir Group can generate 100,000 t/y of waste.

**Response:** The contribution of the given Project to decarbonisation is explained in the response to question number 2.

Elixir Group does not generate the stated amount of waste. The objection is accepted, the text will be formulated more clearly in the project for obtaining the construction permit.

2. In chapter 7.1.5.2 Technical description, subtitle Acceptance control, testing and acceptance of non-hazardous and hazardous solid waste, it is not stated in Paragraph 2 that BAT 5 provides for a procedure that also ensures legal eligibility for acceptance of waste for incineration.

**Response:** The pre-acceptance and acceptance procedures of the plant are explained in the responses to questions 15, 16, 17, 18 and 44, which will also ensure legal eligibility for waste acceptance for incineration. Policies, procedures and work instructions by which all BATs will be defined and implemented in the operational work of the plant will be specifically developed and defined in accordance with the requirements of the relevant ISO standards. The provisions related to BAT 5 pertaining to PCDD/F emissions during start-up and shut-down operations without waste treatment will be included in the monitoring plan in Chapter 9.3 with the obligation to measure every 3 years in accordance with Article 48 of Directive (EU) 2024/1785 of the European Parliament and of the Council of 24 April 2024 amending Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions (integrated pollution prevention and control) and Council Directive 1999/31/EC on the landfill of waste Text with EEA relevance.

3. This Chapter does not provide information on whether the technology owner who delivers detailed engineering, *Ingenieurgesellschaft Innovative Umwelttechnik GmbH (IUT)*, has the obligation to monitor construction, deliver attestation and technical documentation, proof of the quality of the installed material, commissioning and proving capacity and quality, service life guarantees, etc.



**Response:** Warranties for the delivered equipment, delivery of attestation and technical documentation, proof of the quality of the installed material, commissioning and proving capacity and quality, service life guarantees are contractual obligations of each supplier and contractor of the subject facility. Ingenieurgesellschaft Innovative Umwelttechnik GmbH (IUT) is one of the project partners, providing detailed engineering for solid waste pretreatment, which was carried out in accordance with the TBU Stubenvol technology.

Please refer to the response to question 10.

4. In the Subchapter Unloading and temporary storage of sludge waste (municipal and industrial sludge), when listing the types of waste that can and cannot be incinerated at the subject facility, the index numbers given in the List attached to the Decision on Determining the Scope and Content of the Study No. 000886163 2024 from 17 June, 2024 are not (mandatorily and unambiguously) listed in brackets, all in order not to create confusion or leave room for misuse of the interpretation of the names of individual types of waste.

**Response:** The comment is accepted. See enclosures:

- P1 operation\_Capacities by index numbers
  - P12 operation\_Capacities by index numbers
  - P13 operation\_Capacities by index numbers
  - D operation\_Capacities by index numbers
  - List of excluded index numbers
5. It is necessary, both in this Chapter and in the entire project documentation and in the Study, to update the data from the Rulebook on Categories, Testing and Classification of Waste (*The Official Gazette of the Republic of Serbia*, Nos. 56/2010, 93/2019 and 39/2021), so that it also includes the changes made in No. 65/2024, since Annexes 1 and 5 and Form 1 have been amended, while Annex 7 has been deleted from the Rulebook.

**Response:** The comment is accepted, the mentioned reference will be harmonised with the changes in the revised Study and further in the project for obtaining a construction permit.

6. Given that the Project envisages thermal treatment of non-recyclable municipal, commercial and industrial waste, and it is known that in Serbia the procedure for sorting municipal waste is not regulated or has not taken root, and in most cases industrial hazardous waste is in a mixed liquid-solid state (such as waste oils and oil emulsions from metal surface treatment, mixed with rags, adsorbents, small packaging), it is not clear how the project developer will meet the condition of representativeness of waste samples before its receipt and mechanical pre-treatment due to the inhomogeneity of the delivered waste. This situation will most often occur in the case of municipal waste, which may contain waste in large pieces, such as PVC packaging, PVC joinery, etc. The main problem is how to ensure the representativeness of the sample in order to adequately determine the limit values of individual components in the waste listed in Annex 9 of the Rulebook on Categories, Testing and Classification of Waste (*The Official Gazette of the Republic of Serbia*, Nos. 56/2010, 93/2019, 39/2021 and 65/2024). It is also not clear how the average composition of mixed municipal waste intended for incineration will be determined, which is prescribed by the Thermal Treatment Permit that must be obtained by the project developer pursuant to Article 7, Item 9, of the Regulation on Technical and Technological Conditions for the Design, Construction, Equipment and Operation of Facilities and Types of Waste for the Thermal Treatment of Waste, Emission Limit Values and Their Monitoring (*The Official Gazette of the Republic of Serbia*, No. 103/2023).

**Response:** Regarding the remark that industrial hazardous waste is in most cases in a mixed liquid-solid state, we refer to the response given to question number 45, where waste dosing lines are listed, specifically the line for dosing pretreated packaged liquid, solid and sludge waste, which is preceded by pretreatment on a grinding line for the aforementioned heterogeneous industrial waste that is delivered packaged in IBC containers, barrels, etc. This is a line from the renowned manufacturer SID from Switzerland, on which pretreatment (inert grinding) of heterogeneous industrial waste is performed together with the packaging in which the subject waste is packaged. Pretreatment is performed in an inert atmosphere - under nitrogen.



The plant does not allow the reception and thermal treatment of untreated municipal waste pursuant to the Law on Waste Management. In the list of index numbers provided with the Study, no index numbers are provided that suggest untreated municipal waste or PVC materials. In addition, Table 3.10 of the Study clearly states that the equipment is designed for a technical maximum total chlorine content of <3% in the input fuel, and limits the share of organic halides to <1%.

For a comment related to representative sampling and identification of the composition of the waste, we refer to the responses given to questions 15, 17, 18, 44 and 45 - pre-acceptance and acceptance procedures, which are fully applicable as a response to this question. As already stated, representative sampling and physical-chemical testing of the composition of waste in the pre-acceptance procedure will be performed by an accredited laboratory using accredited methods, and in the acceptance procedure, data from the pre-acceptance protocol will be checked using rapid methods.

The preparation of the waste categorisation report is carried out in accredited laboratories in accordance with the technical requirements set out in the Rulebook on Categories, Testing and Classification of Waste (The Official Gazette of the Republic of Serbia, Nos. 56/2010, 93/2019, 39/2021 and 65/2024) and is part of the waste movement documentation. The aforementioned document, as well as additional verification that the investor, as the future operator of the given facility will carry out as part of the pre-acceptance and acceptance procedure, will determine in detail the chemical composition of the waste, based on which an assessment will be given and a decision made on the acceptability or inadmissibility of the waste for thermal treatment in the subject facility.

The CEKOR Association, comments on 7.3 Technology Project - Boiler Plant:

1. In Chapter 7.3.5.4 Boiler, subtitle Combustion chamber, it is stated that the combustion temperature is 850 to 930 °C, while in the design requirements this temperature is 850 to 950 °C. Therefore, the design requirement was not met with respect to these parameters. Furthermore, in the subtitle Upper zone of the boiler on page 37, the text states that the flue gases have a temperature between 850 and 950 °C.

**Response:** The remark refers to a technical writing error. As such, it is taken into account, the data will be harmonised in the Study so that the precise combustion temperature range of 850 - 950°C is presented throughout the document.

In the subtitle Cyclone Ash, in Figure 22 The schematic overview of the ash separation system from the bottom of the bag filters is not consistent with the text description above the image. According to the legend shown in the image, recirculation ash enters the reactor, while the description states that flue gas enters the reactor.

**Response:** The remark refers to a technical writing error. The stated discrepancies will be corrected in the project for obtaining a construction permit (PDG).

2. In Chapter 7.3.5.6 Environmental Protection, subtitle Emissions to Air, in Table 15: ELVs according to BAT and the RS regulations for the emission of pollutants into the air, indicative emission values associated with BAT for mercury are not shown:
  - < 15–40 µg/Nm<sup>3</sup> for existing combustion chambers;
  - < 15–35 µg/Nm<sup>3</sup> for new combustion chambers.

**Response:** The remark is relevant, the author of the Study had it in mind, and therefore the stated values were introduced in the Study, and will additionally be stated in the project documentation (PGD).

The CEKOR Association, comments on the Location Conditions and conditions of other competent authorities:

1. In the Location Conditions No. ROP-MSGI-32562-LOC-1/2023, registry number: 000262083 2023 1481 005 001 000 001, issued on 22 November, 2023 by the Ministry of Construction, Transport and Infrastructure in point VI Special conditions, subtitle "Water conditions", it is stated: "When designing and carrying out works, it is mandatory to adhere to the conditions developed by the Ministry of Agriculture, Forestry and Water Management, Water Directorate of the Republic of Serbia, Belgrade, number in the system ROP-MSGI-32562-LOC-1-HPAP-11/2023 from 9 November, 2023". In the same document in point VII Conditions obtained for the purposes of



developing Location Conditions, the aforementioned water conditions are not listed at all, which makes the documentation incomplete and deficient.

The attachments to the Study include Location Conditions No. ROP-MSGI-32562-LOC-1/2023, file number: 000262083 2023 1481 005 001 000 001, issued on 22 November, 2023 but Water Conditions No. ROP-MSGI-32562-LOC-1-HPAP-11/2023 from 9 November, 2023 which are mentioned in the Location Conditions in point VI, but Attachment 4a. Water Conditions No. 325-05-1/210/2022-07 from 14 November, 2022 issued by the same authority and Attachment 4b. Notification No. 285878 2023 14843 000 000 000 001 from 7 November, 2023 also issued by the Ministry of Agriculture, Forestry and Water Management, Water Directorate of the Republic of Serbia, which are not mentioned at all in the Location Conditions.

Furthermore, the aforementioned Notification No. 285878 2023 14843 000 000 000 001 from 7 November, 2023 issued by the Ministry of Agriculture, Forestry and Water Management, Water Directorate of the Republic of Serbia, Paragraph 3 contains the following text: "The Water Directorate of the Republic of Serbia has adopted Water Conditions No. 325-05-1/210/2022-07 from 14 November 2022 and No. 325-05-13/73/2023-07 from 5 May, 2023 for the construction of a plant for energy utilisation (incineration) of non-recyclable waste in Prahovo on the land plot all in the Cadastral Municipality of Prahovo, Municipality of Negotin". These other Water Conditions No. 325-05-13/73/2023-07 from 5 May, 2023 are not enclosed with the Study. Also, this Notification No. 285878 2023 14843 000 000 000 001 from 7 November, 2023 issued by the Ministry of Agriculture, Forestry and Water Management, Water Directorate of the Republic of Serbia, Paragraph 4 states the reasons why the competent authority, the Ministry of Construction, Transport and Infrastructure, requests new water conditions from the Water Directorate of the Republic of Serbia according to the request No. 262083 2023 1481 005 001 000 001 from 9 October, 2023. This explanation clearly shows which changes have occurred (shown in the amended Conceptual Design) and that these changes may have an impact on surface and groundwater, so it is not clear on what grounds the Water Directorate of the Republic of Serbia draws the conclusion shown in Paragraph 5 of the Notification, stating that the already issued Water Conditions No. 325-05-1/210/2022-07 from 14 November 2022 are necessary and sufficient for the preparation of technical documentation and for the construction of the Non-Recyclable Waste Incineration Plant in Prahovo.

From all the abovementioned, it can be concluded that the issued Location Conditions are invalid, because they refer to the Water Conditions under a reference number that does not exist in the Study or in any other part of the technical documentation. It is necessary to proceed with the amendment or acquisition of new Location Conditions, which must contain new Water Conditions, issued due to changes that occurred during the implementation of the Project, all in accordance with the request of the Ministry of Construction, Transport and Infrastructure No. 262083 2023 1481 005 001 000 001 from 9 October, 2023 and the new Conceptual Solution describing all changes that occurred after the issuance of the Water Conditions 325-05-1/210/2022-07 from 14 November, 2022.

**Response:**

*The statements are correct that the attachments to the Study include:*

- Location conditions ROP-MSGI-32562-LOC-1/2023, file number: 000262083 2023 1481 005 001 000 001 from 22 November, 2023, issued by the Ministry of Construction, Infrastructure and Transport (abbreviated: MCIT), as the competent authority for issuing location conditions.
- Water Conditions No. 325-05-1/210/2022-07 from 14 November 2022 as well as
- Notification No. 285878 2023 14843 000 000 000 001 from 7 November, 2023, issued by the Ministry of Agriculture, Forestry and Water Management (abbreviated MAFWM), Water Directorate of the Republic of Serbia, as the holder of public authority competent for issuing water conditions for the preparation of project technical documentation.

*Regarding the comment that in the Location Conditions ROP-MSGI-32562-LOC-1/2023, file number: 000262083 2023 1481 005 001 000 001 from 22 November, 2023, issued by MCIT as the competent authority, Water Conditions No. ROP-MSGI-2562-LOC-1-HPAP-11/2023 from 9*



November, 2023 mentioned in the Location Conditions in point VI were not enclosed, we draw your attention and point out the following:

The aforementioned document of the MAFWM, Water Directorate of the Republic of Serbia with the internal number of this authority: 285878 2023 14843 000 000 000 001 from 7 November, 2023 (as the date of issuance of the document) corresponds to the CEOP number of the same document: ROP-MSGI-32562-LOC-1-HPAP-11/2023 from 9 November, 2023 (as the date of entry of the document into the CEOP).

The following can be undoubtedly concluded:

- The text of the Location Conditions ROP-MSGI-32562-LOC-1/2023, file number: 000262083 2023 1481 005 001 000 001 from 22 November, 2023, issued by MCIT as the competent authority, states the sub-process number from the unified procedure under which the Notification issued by the MAFWM, the Water Directorate of the Republic of Serbia, as the holder of public authority has been registered, i.e. the CEOP number of that document: ROP-MSGI-32562-LOC-1-HPAP-11/2023 from 9 November, 2023 (the date when the document of this authority was entered into the CEOP), while the document itself - Notification of the MAFWM, Water Directorate of the Republic of Serbia bears the internal number of this authority: 285878 2023 14843 000 000 000 001 from 7 November, 2023 (as the date of issuance of the document).

- The document issued by the MAFWM, Water Directorate of the Republic of Serbia, as the holder of public authority, bears the internal number of this authority: 285878 2023 14843 000 000 000 001 - which corresponds to the CEOP number ROP-MSGI-32562-LOC-1-HPAP-11/2023 (the number assigned by the MCIT in the unified procedure), in connection with which 7 November, 2023 represents the date of issuance of the document by the MAFWM, Water Directorate of the Republic of Serbia (registered under the internal number of this authority: 285878 2023 14843 000 000 000 001), and 9 November, 2023 is the date when the aforementioned document of the MAFWM, Water Directorate of the Republic of Serbia was entered into the CEOP (registered under CEOP number: ROP-MSGI-32562-LOC-1-HPAP-11/2023).

- From the abovementioned, it is clear that the document specified in the Location Conditions ROP-MSGI-32562-LOC-1-HPAP-11/2023 from 9 November, 2023 (CEOP number with the date of entry of the document into the CEOP), is precisely the subject document of the MAFWM, Water Directorate of the Republic of Serbia with the internal file number of this authority: 285878 2023 14843 000 000 000 001 from 7 November, 2023 (as the date of issuance of the document).

The Notification of the MAFWM, Water Directorate of the Republic of Serbia, with the internal number of the document: 285878 2023 14843 000 000 000 001 from 7 November, 2023 (corresponding to the CEOP number ROP-MSGI-32562-LOC-1-HPAP-11/2023), the holder of public authority states the following:

- "The Water Directorate of the Republic of Serbia adopted Water Conditions No. 325-05-1/210/2022-07 from 14 November, 2022 and No. 325-05-13/73/2023-07 from 5 May, 2023 for the construction of a plant for energy utilisation (incineration) of non-recyclable waste in Prahovo"- with the numbers of the land plot all in the Cadastral Municipality of Prahovo, Municipality of Negotin.

- Then, Paragraph 4 of the subject Notification states the reasons (due to the changes presented in the conceptual design) why MCIT, as the competent authority for issuing location conditions, requests new water conditions from the Water Directorate of the Republic of Serbia, as the holder of public authority, all in accordance with MCIT Request No. 262083 2023 1481 005 001 000 001 from 9 October, 2023 and the new Conceptual Solution describing all changes that occurred after the issuance of the Water Conditions 325-05-1/210/2022-07 from 14 November, 2022.

- Taking into account all of the abovementioned, in Paragraph 5 of the subject Notification, the Water Directorate of the Republic of Serbia, as the holder of public authority, draws a conclusion stating that the already issued Water Conditions No. 325-05-1/210/2022-07 from 14 November, 2022 are necessary and sufficient for the preparation of technical documentation and the construction of the Non-Recyclable Waste Incineration Plant in Prahovo, which as such were applied for the



preparation of the design and technical documentation for the construction of the subject plant and enclosed with the Study.

From all the abovementioned, it can be concluded that the issued Location Conditions are valid and that they refer to the Water Conditions under the reference number specified in the Study and which as such were used in the preparation of the project and technical documentation of the given investor's facility, including the Study.

Anyway, the project documentation of the Non-Recyclable Waste Incineration Plant in Prahovo was prepared in accordance with the requirements of both of the mentioned documents: Water Conditions No. 325-05-1/210/2022-07 from 14 November, 2022, which are an integral part of the Location Conditions ROP-MSGI-32562-LOC-1/2023, file number: 000262083 2023 1481 005 001 000 001 from 22 November, 2023 as well as Water Conditions No. 325-05-13/73/2023-07 from 5 May, 2023, given that the content of both of the abovementioned documents issued by the Water Directorate of the Republic of Serbia, as the holder of public authority, is identical in terms of water conditions for the preparation of the design and technical documentation of the subject Project. The facts stated in this Paragraph will be entered as in the PGD project documentation.

We also emphasise that the Law on Water stipulates the following:

Types of water documents

Article 113

"In order to ensure a unified water regime and implement water management, in accordance with the Strategy, water management plan and appropriate technical documentation, water documents shall be issued.

Water documents shall comprise the following:

- 1) water conditions;
- 2) water consent;
- 3) water permit".

The water documents referred to in Paragraph 2, Items 2) and 3) of this Article shall be administrative documents, which are adopted in accordance with the regulation governing the general administrative procedure."

The abovementioned means that water conditions do not have the character of an administrative document in the sense of the law, by which a state body and an enterprise or other organisation in the exercise of public powers decides on a certain right or obligation of a natural or legal entity or other party in an administrative matter and therefore do not have to have the form and content of an administrative document, nor are they adopted in the procedure prescribed by the Law on General Administrative Procedure, but rather they only define the conditions, i.e. technical and other requirements in the procedure for preparing technical documentation and as such represent only a prerequisite for obtaining a water management consent as an independent administrative document. Bearing this in mind, there are no grounds for challenging the actions of the Water Directorate of the Republic of Serbia in issuing the abovementioned Notification, by which it referred to the previously issued water conditions as necessary and sufficient for the preparation of the technical documentation of the subject facility, having previously explained and taken into account all the changes in the conceptual design, instead of issuing new water conditions, for which there was obviously no need in the essential sense because they would be identical to those indicated in the Notification as necessary and sufficient, and this was precisely by the competent authority, i.e. the holder of public authority for issuing water conditions. In this sense, there is no room for challenging the issued location conditions regarding the alleged non-existence of water conditions or omissions regarding their issuance.

2. The Public Utility Company "Badnjevo" Negotin has issued the Conditions and Data for the Construction of the Waste-to-Energy Utilisation Plant in Prahovo, No. 2962-06/2023-1 from 20 October, 2023 and in the subtitle Water and Sewerage Network, line 6, it is stated that the Public Utility Company "Badnjevo" Negotin does not have data on the faecal or atmospheric sewage network at the subject location, so it is not clear what conditions this company can issue. It is



necessary to provide all data to the competent authorities in the Detailed Study for Issuing Water Conditions in order to obtain real and relevant conditions.

**Response:** *Regarding this comment, we emphasise that the MCIT, as the competent authority in the procedure for issuing location conditions, is obliged to address all holders of public authority in the local self-government unit in whose territory the project is planned, who are registered as holders of public authority in the Business Registers Agency (BRA) and listed in the CEOP, and who it considers may have conditions of importance for the design. For this reason, the MCIT also contacted the PUC "Badnjevo" Negotin, and taking into account the fact that the website of this institution lists the activities that the PUC is engaged in, namely: water supply and sewage, heating, maintenance, landscaping and cleanliness, landfill and cemetery and services. In this regard, the MCIT, as the competent authority for issuing location conditions, acted in accordance with its powers contained in the Law on Planning and Construction, as well as by-laws adopted based on the Law. In compliance with Annex 2 and the response to comment number 6, it was explained in detail that the discharge of treated waste faecal, atmospheric and technological water from the location of the Waste-to Energy Power Plant complex is planned by connecting to the existing Elixir Prahovo Central Collector.*

At the meeting held on 27 January, 2024, the Technical Commission considered and analysed in detail all the objections and comments of the interested public expressed at the public hearing held on 15 November, 2024 in the premises of the Municipality of Negotin, as well as the objections of the interested public of the CEKOR Association from Subotica sent by mail and received within the legal deadline.

The requests, comments and proposals on the content of the Study of the subject project were considered and analysed in detail, which were submitted to the Ministry of Environmental Protection of the Republic of Serbia by official letter No. DGEICPSC/37558/12.11.2024. from 12 November, 2024 by the competent Ministry of Environment, Water and Forests of Romania, after the completion of consultations with the interested public and official competent authorities and experts of Romania.

The official letter of the Ministry of Environment, Water and Forests of Romania No. DGEICPSC/37558/12.11.2024. from 12 November, 2024 referred to the following:

In order to comply with the provisions of Article 3(8) of the ESPOO Convention, the Ministry of Environment, Water and Forests published the report on its official website. The public consultation ended on 31 October 2024. The Ministry did not receive any comments, opinions, suggestions or objections from the public within the period set for public consultations.

The report was submitted to the competent authorities and experts for assessment. The Environmental Impact Assessment Study includes a Study on the dispersion of pollutants emitted by the operation of the thermal waste treatment plant with a solidification landfill and the expansion of the phosphogypsum deposit on air quality in Serbia and Romania.

Within the chemical industrial complex in Prahovo, there are emitters of two companies – Elixir Prahovo and Phosphae – and within the Dispersion Study, all point and surface emitters of both companies were developed. Other sources, which do not belong to this industrial complex, have not been included in the analysis, as well as background pollution. The modelling in the Study covers an impact zone of 50 km x 50 km, or an area of 2,500 km<sup>2</sup>.

The assessment of the impact of the plant on air quality was carried out by comparing the results obtained using mathematical modelling with the prescribed values from European legislation (Directive 2008/50/EC for pollutants: sulphur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), PM<sub>10</sub>, PM<sub>2.5</sub>), as well as according to Serbian legislation.

The results presented in the Dispersion Study were obtained using a model that includes particulate emissions (PM<sub>10</sub> and PM<sub>2.5</sub>) SO<sub>2</sub>, NO<sub>2</sub>, CO, HF, HCl, NH<sub>3</sub>, Hg, PCDD/F. These substances, depending on the scenario, are emitted from various point and surface sources, from both companies operating in the industrial complex in Prahovo, i.e. Elixir Prahovo and Phosphae Danube DOO, both in the current state and in the future, after the construction of the plant. The emitters of the solidification system, the waste water filtration system, the thermal waste treatment plant and the activated carbon filters were taken into account.



The conclusions of the analysis regarding the future state show the following:

- SO<sub>2</sub> concentration values: the values for the future state, i.e. the operation of the waste-to-energy plant on average per hour, are almost identical to the current ones, which indicates that the existing emitters have a dominant influence;
- NO<sub>2</sub> concentration values: same as for SO<sub>2</sub> - the existing emitters have a dominant influence;
- PM<sub>10</sub> concentration values: the first maximum for the average period of one day in the current situation is higher than the first maximum for the future state with a landfill for non-hazardous (solidified non-reactive) waste and three other dust emission points;

**Response:** *Indeed, the modelled phenomenon is specific in nature, therefore it is treated in detail in the completed studies. In particular, an explanation is given on page 53 of the Study 'Waste Energy Utilisation Plant and the Impact of a Non-Hazardous Waste Landfill on the Air Quality of the Wider Site of the Chemical Industrial Complex in Prahovo', which was provided as a supplement to the Study issued in April 2024 by the Faculty of Mechanical Engineering, University of Belgrade.*

*The authors would like to further clarify that the supplementary study including the modelling of the impact of air emissions was carried out comprehensively, including not only the existing emitters on the site and new emitters associated with the subject Project, but also the potential impact of the future phosphogypsum storage expansion project foreseen in the long-term plans of the Prahovo industrial complex. The modelling was performed in this manner to comprehensively consider all potential cumulative impacts and to provide adequate inputs for relevant future projects planned by Elixir Group member companies at the site. Please note that the future expansion of the phosphogypsum storage facility is included in the scope of the modelling based on the spatial planning documents and the preliminary conceptual design for the expansion of the phosphogypsum storage facility, not yet based on the completed project design and documentation. Therefore, the future expansion of the phosphogypsum storage facility will be the subject of a separate future project and accordingly a separate future transboundary consultation process in the coming years. Elixir Prahovo, as the operator of the existing storage facility and the investor of its future expansion, will pay particular attention to the development of dust emission mitigation measures within the framework of the basic engineering and the completion of the Environmental Impact Assessment Study (the Study) taking into account the inputs received from the relevant comprehensive study as well as your valuable contribution received during this consultation process.*

- HCl concentration values: will be emitted from the existing emitter – final scrubber as well as from the boiler room (future plant);
- HF concentration values: may exceed daily values under extremely adverse weather conditions;
- NH<sub>3</sub> concentration values: ammonia will be emitted from the existing final scrubber as well as from the boiler room;
- Hg concentration values: currently not emitted, but after construction of the plant will potentially be emitted only from the boiler room;
- PCDD/F and dioxin as PCB values: currently not emitted, but after construction of the plant will potentially be emitted only from the boiler room.

In conclusion:

- in the case of components currently emitted (CO, SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, HF, HCl, NH<sub>3</sub>) and which will also be emitted from future emitters of the thermal waste treatment plant with a solidification landfill, the dominant influence is from the existing emitters;
- in the case of some components (SO<sub>2</sub>, PM<sub>10</sub> and HF) there is a possibility of episodic high concentrations in the event of extremely unfavourable meteorological conditions, from the aspect of dispersion;
- for the current situation and the future state, the cause of these potentially high concentrations are the existing emitters of SO<sub>2</sub> and HF, i.e. phosphogypsum storage pits;
- for components that are not currently emitted and that will be emitted only from future emitters of thermal waste treatment plants (Hg and PCDD/F) in the future, the obtained modelling results indicate that the expected concentrations are below the prescribed limit values.



In order to reduce the losses of pollutants into water bodies, it is necessary to monitor discharges into surface water and waste water in order to observe compliance with quality standards.

**Response:** The authors agree that in the Subchapter of the Study 9.2.1.3 Monitoring of waste water quality, the required monitoring plan is presented in full compliance with the applicable laws and regulations of the Republic of Serbia, as well as with Commission Implementing Decision (EU) 2019/2010 from 12 November, 2019 establishing conclusions on the best available techniques (BAT), pursuant to Directive 2010/75/EU of the European Parliament and of the Council, for the incineration of waste (notified under document C(2019) 7987). On page 603 it is specifically emphasised that "In accordance with the characteristics of the waste water generated and discharged to the recipient, the project developer shall be obliged to regularly monitor the quality of waste water: after treatment in the boiler waste water treatment plant: total suspended solids (TSS), total organic carbon (TOC), metals and metalloids (As, Cd, Cr, Cu, Hg, Ni, Pb, Sb, Ti, Zn, Mo), ammonium nitrogen (NH<sub>4</sub>-N), sulphates (SO<sub>4</sub><sup>2-</sup>) and PCDD/F, chlorides; before and after treatment in the grease and oil separator: temperature, pH value, biochemical oxygen demand (BOD<sub>5</sub>), chemical oxygen demand (COD), hydrocarbon index." In Subsection 9.2.1.3.1 Monitoring of waste water from boiler plants it is stated that for the potentially most polluted waste water stream, technology-specific waste water generated by the boiler, the operating procedure shall be as stated on page 603. The Subchapter also states: The Rulebook on Technical and Technological Conditions for the Design, Construction, Equipment and Operation of Plants and Types of Waste for Thermal Treatment of Waste, Emission Limit Values and Their Monitoring

("The Official Gazette of the Republic of Serbia, No. 103/2023), prescribed measurements shall be carried out at the point of waste water discharge. See Table 9.6 given in the Study. Similarly, all requirements with appropriate measurement frequencies are stated for atmospheric waste water and waste water after biological treatment in Subchapters 9.2.1.3.2 and 9.2.1.3.3, in the order listed. The quality of the receiving body is regularly monitored as expressed in Subsection 9.2.1.4 Monitoring of surface water quality, taking into account that the Danube is an international river, on 29 June, 1994, the Agreement on Cooperation for the Protection and Sustainable Use of the Danube River was signed in Sofia (Bulgaria), which entered into force in October 1998 when it was ratified by the ninth signatory. Serbia became a contracting party by adopting the Law on Ratification of the Agreement on Cooperation for the Protection and Sustainable Use of the Danube River (The Official Gazette of the FRY - International Treaties, No. 2/2003). Direct quote from the Subsection is given on page 610. Testing of waste water from the ELIXIR PRAHOVO complex and surface water of the Danube River is carried out quarterly on an annual basis, by sampling and physical and chemical testing of water quality by the Institute for Prevention, Occupational Safety, Fire Protection and Development DOO Novi Sad, "27. Januar" Niš Branch Office at four measuring points as shown in Table 9.10. The results of testing of waste water after the treatment plant from the Elixir Prahovo complex show that the concentrations of the tested parameters meet the emission limit values prescribed by the Rulebook on Limit Values for Emissions of Pollutants into Water and Deadlines for Their Achievement (The Official Gazette of the Republic of Serbia, Nos. 67/2011, 48/2012 and 1/2016, Annex 2, Other waste water, 4 Limit values for emissions of waste water containing mineral oils) and with the emission limit values prescribed by Commission Implementing Decision EU 2019/2010 from 12 November, 2019 establishing conclusions on best available techniques (BAT), pursuant to Directive 2010/75/EU of the European Parliament and of the Council for the incineration of waste (notified under document C(2019)7987, tables 5.9 and 5.10).

Later in the text on page 611 it is stated that: "Bearing in mind that all waste water, which meets the prescribed emission limit values (ELV), from the aforementioned Waste-to-Energy Plant will be collectively discharged into the existing Central Clean Water Collector of the Elixir Prahovo Industrial Complex, which is discharged into the natural recipient - the Danube River, the obligation of the project developer shall be to regularly carry out quarterly monitoring of the quality of surface water of the Danube River upstream and downstream of the inflow of waste water from the Central Clean Water Collector of the Elixir Prahovo Industrial Complex after the implementation of the aforementioned Project."

After commissioning, in order to identify priority substances/priority hazardous substances, the project developer must carry out qualitative screening during the first discharge of treated water into the recipient.



For those substances identified in quantified concentrations, further monitoring is required, both for the discharged waste water and in the receiving water body.

**Response:** *The authors of the Study and the designers fully agree with the statement. The information is provided in the responses given above. As described, zero measurements have already been carried out, in addition, it is envisaged that the quality of waste water will be constantly checked, while additional quarterly measurements of surface water quality will be carried out (read the Danube River).*

Depending on the type of waste deposited on the platform, it is necessary to repeat the qualitative screening for priority substances/priority hazardous substances in order to expand the spectrum of substances/groups of substances to be analysed.

**Response:** *Due to the selected combustion technology in the incinerator, i.e. the maximum combustion temperature, the investor has set strict restrictions on the composition of the waste intended for treatment. Subsection 4.10 Pollution Control states that "During operation, strict attention must be paid to the waste received at the facility in accordance with a clearly defined list of wastes that can/cannot be accepted and treated at the subject facility. The project documentation provides all restrictions and prohibitions related to certain characteristics of waste that must not be treated. It is strictly forbidden to accept waste that is explosive, flammable, infectious, radioactive, waste materials containing or contaminated with polychlorinated biphenyls (PCB) and/or polybrominated triphenyls (PCT) and/or polybrominated biphenyls (PBB), waste containing cyanides, isocyanates, thiocyanates, asbestos, peroxides, biocides, cytostatics, electronic waste. Additional restrictions on acceptance at the subject facility are waste substances in the form of aerosols, as well as organometallic compounds (spent metal catalysts or organometallic wood preservatives) and aluminised paints. The subject Project does not envisage the thermal treatment of waste containing POP substances. The final list of waste that can be treated in the complex of the Waste-to-Energy Plant is given in the appendix to this Study. In addition, Subsection 7.1.2.1 states that: "The project documentation defines that waste containing more than 1% halogenated organic substances expressed as chlorine cannot be treated in the boiler." These restrictions will be strictly enforced by carrying out pre-acceptance and acceptance procedures in accordance with BAT<sub>9</sub> & BAT<sub>11</sub> of Commission Implementing Decision (EU) 2019/2010 from 12 November, 2019 establishing best available techniques (BAT) conclusions, pursuant to Directive 2010/75/EU of the European Parliament and of the Council, for the incineration of waste (notified under document C(2019) 7987). Avoiding the treatment of POP substances ensures that site contamination caused by waste is avoided, making site screening for such substances redundant. On the other hand, prevention of treatment for waste types containing POPs and/or halogenated compounds in high concentrations prevents the possibility of the formation of compounds categorised as POPs. For more information, please refer to the responses given to the comments listed on page 4 paragraph 5 (comment 11) and page 4 paragraph 6 (comment 12).*

Since the site covered by the EIA report is affected by historical pollution (as shown in the document), it is necessary to carry out ecotoxicological studies both before the start of the activity and during the implementation of the Project.

**Response:** *Indeed, the historical environmental pollution of the site is addressed in detail in the accompanying Environmental Factor Analysis Report, March 2023. On the other hand, the ecotoxicological deterioration of the potentially affected area has been determined in other relevant works. Based on the latest international Danube survey (Liška et al., 2021), but also on previous studies (László, 2015; Liška, 2015; Slobodnik and von der Ohe, 2015; Sommerwerk et al., 2009), the targeted Section (referring to the sector below the Đerdap II dam to the Timok mouth) is not among the places along the Danube (the aforementioned studies cover more than 2,500 kilometres of the Danube, from Kelheim in Germany to the Danube Delta – Romania/Ukraine) that are most critical in terms of the presence of toxic and genotoxic agents. This has also been confirmed by genotoxic studies (Deutschmann et al., 2016; Marić et al., 2023, 2021). The approach mentioned in the comment is not directly relevant to the impact assessment of a potential project, but could be considered as backup information to support further monitoring of the impact of the operational phase on the aquatic environment. Previous genotoxicity studies provide reliable information for further monitoring of substances with known genotoxic potential, and this*



*will be taken into account in the subsequent phases of project development as useful information for the investor.*

Groundwater monitoring is carried out according to the presentation given in the material, through a small number of boreholes. We believe that, in order to obtain an overview of groundwater pollution (data necessary for assessing the level of diffuse pollution) and to assess the impact of the quality of groundwater bodies on the quality of surface water in the Danube zone, it is necessary to extend the monitoring to at least 3 boreholes (2 on the banks of the Danube and one downstream of the investment).

*Response: In accordance with the strategy presented in the Study report. The authors point out that the number of piezometres (the terminology used is considered equivalent to boreholes) at the location of the chemical complex is significant. The locations of the existing piezometres are given in Figure 5.7 on page 369 and Figure 5.8 on page 370. X5 (Coordinates N 44°17'3.68", E 22°38'8.2") and X3 (Coordinates N 44°17'11.68", E 22°38'50.0") are specifically designed to monitor potential groundwater pollution in terms of possible pollution of the Danube River, both downstream of the investment. X2 (Coordinates N 44°17'1.97", E 22°37'13.05") will, on the other hand, be used as a direct control at the project site. Furthermore, the authors point out that additional piezometres are planned to be installed for special purposes. Please refer to Subsection 9.2.2.5 of the Study report and in particular to page number 622, where a proposal for additional soil and groundwater monitoring in the area of the Eco Energy complex has been published. The concept was later adopted in 9.3. as a measurement requirement. On this occasion, the authors believe that the issue addressed is fully in line with the correctly identified need expressed by the Romanian authorities.*

The report briefly presents the impact of the activities carried out within this Project on the aquatic biodiversity of the Danube River, not taking into account all biological quality elements necessary to determine the status/ecological potential of the surface water body (only general data regarding macroinvertebrates and fish are provided).

*Response: During the preparation of the accompanying study (Biodiversity Study of the Industrial Complex Elixir Prahovo, 2024, "Siniša Stanković" Institute for Biological Research) and related field activities, the most important components of biological diversity were addressed, starting with aquatic (algae, vascular aquatic plants, macroinvertebrates and fish fauna), terrestrial and semi-aquatic insects, amphibians, reptiles, and finally birds and mammals. Vascular aquatic and terrestrial plants are covered in the same Subchapter – Floristic characteristics of the subject area.*

*With regard to aquatic ecosystems, the final report does not include a review of the results on zooplankton for two reasons:*

- 1. This biological quality element is not mandatory for the assessment of ecological status under the EU Water Framework Directive (Directive 2000/60/EC) and as such is not part of the assessment system, neither in Serbia nor in Romania. Therefore, data are only available from research activities, the quantity of data does not support systematic monitoring of changes over time and may provide misleading interpretation.*

- 2. Based on data from the international Joint Danube Exploration Expeditions 1-4 carried out in 2001, 2007, 2013 and 2019 (Liška et al., 2021, 2008; Literáthy et al., 2002), as well as a review of zooplankton characteristics along the Iron Gate Section of the Danube (Simonović, P. et al., 2010), protected and rare taxonomies are not relevant for this group of taxa.*

*The approach of the study was to present reliable data relevant to the Project. Accordingly, this approach allows easier interpretation of the study in terms of the area of interest. The study is focused on aquatic habitats and the coastal land zone of the area of interest that will be directly affected by the construction works and the operational phase of the facility. Therefore, data on the abovementioned biotic components for this zone are presented and discussed in detail.*

Information on surface water should also include aspects related to the status of the water body/potential and possible impacts.

*Response: The status of the water body including potential impacts has been assessed in several aspects. On the one hand, the quality of surface water is presented in the baseline analysis as part of Subsection 5 of the Study report. More precisely, it is stated on page 371. In 2024, in order to determine the baseline status of*



waste water and surface water quality of the Danube River for the construction of the Eco Energy complex, the Institute for Prevention, Occupational Safety, Fire Protection and Development DOO Novi Sad, '27. Januar' Niš Branch Office, carried out sampling and physical and chemical testing of waste water and surface water quality at four measuring points, as shown in Table 5.7 and Figure 5.9 (Physical/chemical analysis report is provided in the Annex to the Study). In addition, the status verification was provided as an annex to the Study report; this information was later used to model the impact of waste water discharges with a potential impact on the quality of the Danube. In Subsection 6.1.1.2 of the Study, the impact on water quality during the construction phase was assessed as being of no concern. In a similar manner, Subsection 6.2.1.2.1 models the effects on the quality of the Danube as the final recipient of the Project's treated waste water. The quality of a water body with corresponding pollution by hazardous substances can be directly monitored through official documents, ICPDR reports (Accidental Pollution Hazards in the Danube River Basin, 2023 and Guide for the Management of Pollution by Hazardous Substances in the Danube River Basin, 2024). Moreover, the basic classification can also be found in the "Sinteza Calitatii Apelor Din Romania" for 2023 where three water bodies were identified on the Danube main stream as having good ecological potential and good chemical quality. More importantly, closer to the project of interest, two reservoir positions were categorised as having good ecological potential and good chemical quality. The findings of the literature review are addressed in the Study report in paragraph 2.6.2 under the Section entitled Hydrological Characteristics (pages 95 - 99).

Information on the complete leachate cycle from the non-hazardous waste landfill (collection, storage, treatment, etc.) that could potentially impact groundwater is presented separately. A schematic representation of the entire flow should be included for easier analysis and monitoring of pollutant flows.

**Response:** A schematic overview will be provided in the amended Study report within Subsection 3.5.5 on page 336. The leachate is collected by a system of drainage pipes above an impermeable HDPE sheet, before being directed to the waste water treatment plant as one of the water streams for treatment. This has been explained in Section 8.3.3 of the Study.

If, after the implementation of the Project and the application of water protection measures (described in Chapter 8.3.2.5 Water and solution protection measures), it is established through monitoring that the chemical status/ecological potential of the Danube and the chemical status of groundwater is poor and/or its deterioration is observed, it is necessary to plan additional measures to reduce the emission of chemical substances into the water resource and adjust the environmental impact monitoring programme. In this context, reference should be made to the Environmental Impact Assessment Study (i.e. in Chapter 8.4 Other measures that may affect the prevention or reduction of adverse environmental impacts).

**Response:** The authors refer the reader to the responses given to the comment made in the letter on page 3, paragraph 7 (comment 2) and page 3, paragraph 11 (comment 6). Namely, each waste water discharge stream is directly measured with the possibility of directly determining the stream quality. Furthermore, specially positioned piezometres for the detection of groundwater pollution are planned for the site and downstream towards the connection with the Danube. The published strategy allows for direct monitoring of the potential impact of the Project on the quality of the Danube. Any deterioration of the quality of the Danube resulting from the operation of the facility would imply a poor management of the early detection systems for pollution. Consequently, potential pollution of the Danube is considered an accident scenario with the measures to be taken in such a scenario described in 8.2.2. The authors would like to add regarding the correctly posed question that additional measures will be envisaged in Chapter 8.4 (Other measures that may contribute to the prevention or reduction of adverse effects on the environment), further elaborating on the system of early detection boreholes explained regarding the comment made in the letter on page 3, paragraph 11 (comment 6). Therefore, a new paragraph has been added in the Study, on pages 654-655. In the unlikely event (the handling surfaces are on an impermeable concrete layer) that topsoil spills occur on site, an additional measure is introduced in Chapter 8.4 (Other measures that may affect the prevention or reduction of adverse effects on the environment), in a new paragraph that will be added to the Study, on page 655. The authors emphasise that all modern measures have been taken to prevent the Danube River contamination scenario. Namely, the stable characteristics of the waste leaching are such that the risks are minimal, based both on the leaching behaviour of the material and its filterability. Furthermore, HDPE film



has a high elongation before failure. Obviously, all layers are used to protect the HDPE film from direct incrimination and potential failure situations. Finally, the soil at the site also shows low filterability behavior (see landfill accident scenario modelling) which further exacerbates the need for an additional established and described monitoring plan with the response measures recommended above.

We consider that more rigorous monitoring of emissions, especially persistent organic pollutants (POPs), is necessary, which is included in the Environmental Impact Assessment Report, taking into account the amendments to the Industrial Emissions Directive (IED) from 2023, if it is transposed into national legislation. Long-awaited revamp of Industrial Emissions Directive improves dioxin monitoring in incinerators - Zero Waste Europe

**Response:** The author emphasises the fact that the topic of banning and/or mitigating POP emissions is addressed in the Project at several levels. 1. First, it must be noted that "waste containing more than 1% halogenated organic substances expressed as chlorine cannot be treated in the boiler. It is strictly forbidden to accept waste that is explosive, flammable, infectious, radioactive, waste materials containing or contaminated with polychlorinated biphenyls (PCB) and/or polybrominated triphenyls (PCT) and/or polybrominated biphenyls (PBB), waste containing cyanides, isocyanates, thiocyanates, asbestos, peroxides, biocides, cytostatics, electronic waste. Additional restrictions on acceptance at the subject facility are waste substances in the form of aerosols, as well as organometallic compounds (spent metal catalysts, or organometallic wood preservatives) and aluminised paints." as expressed on page 152 of the Study report. Treatment of waste containing POPs is not planned on site. Furthermore, limiting the content of halogenated organic substances to less than 1% significantly minimises the release of PCDD/F and PCBs targeted as pollutants in the reference documents. 2. Secondly, the incinerator is designed, built and operated according to the best available techniques (BAT), as described in the EU BAT reference document on waste incineration (BREF WI). Several measures described in the BREF WI aim to reduce POP emissions, such as rapid cooling of the flue gases after the boiler which helps to reduce the residence time of the flue gases within the critical temperature window of 200 to 450 °C (i.e. where de novo dioxin synthesis occurs) to a minimum. 3. Third, the flue gas system included in the project proposal has additional measures that allow the control of pollutants that will be emitted via the boiler stack. Also, flue gas cleaning includes activated carbon adsorption, wet scrubbing and selective catalytic reduction of NO<sub>x</sub> (SCR). As is generally known, the SCR process not only mitigates nitrogen oxides but also chemically destroys organic compounds including PCDD/F and other POPs (cf. <https://www.umweltbundesamt.at/fueleadmun/sute/publukatuonen/m116.pdf>, strana 43; [https://pureadmuntest.unuleoben.ac.at/ws/portalfiles/portal/2386734/AC03473496\\_2001.pdf](https://pureadmuntest.unuleoben.ac.at/ws/portalfiles/portal/2386734/AC03473496_2001.pdf), Subchapter 4.2.5.1.).

All the mentioned technical solutions are also active in the field of PCDD/F and PCB reduction, resulting in very low expected emission levels from the plant (as shown in Table 3.49). Consequently, the state-of-the-art diffusion model did not indicate any expectation of violation of the prescribed daily average limit, with the highest values of the emission rate being far below the limit (see Figure 6.11 on page 416). The figure indicates that the diffusion effect of PCDD/F and PCBs in the territory of Romania is non-existent.

The authors point out that incinerators are finally recognised by industry and government bodies of the EU Member States as dioxin and furan destruction plants, since they destroy more dioxins and furans than they produce, as shown in the following linked documents:

- [https://www.bmk.gv.at/dam/jcr:40b93468-8ffc-4581-a7f3-a0dedec04350/Whitebook\\_Waste\\_to\\_Energy.pdf](https://www.bmk.gv.at/dam/jcr:40b93468-8ffc-4581-a7f3-a0dedec04350/Whitebook_Waste_to_Energy.pdf) (see page 52 or reference)
- [www.abfallratgeber.bayern.de/publukatuonen/abfallbehandlung/doc/muellverb.pdf](http://www.abfallratgeber.bayern.de/publukatuonen/abfallbehandlung/doc/muellverb.pdf) (see Rule 20 of the reference)
- <https://epub.sub.unu-hamburg.de/epub/volltexte/2009/2846/pdf/duoxunbulanz.pdf> (see Table 25 of the reference)

These studies conclusively demonstrate that such plants destroy the pollutants listed and as such contribute to the general conditions of the environment, in other words, this is a direct contribution to



human health. The EIR demonstrates in Table 9.1 the emission limits and standards that will be applied for emissions of PCDD/F and PCDD/F + dioxin-like PCBs, with an explanation on page 596 "Table 9.4 shows the average emission values for dioxins and furans over a sampling period of at least 6 hours and at most 8 hours. The emission limits apply to the total concentrations of dioxins and furans, calculated based on the equivalent toxicity factor.

Table 9.4 Average emission values for dioxins and furans over a sampling period of at least 6 hours and at most 8 hours. The emission limits apply to the total concentrations of dioxins and furans, calculated based on the equivalent toxicity factor referred to in Annex 1 of the Rulebook on Technical and Technological Conditions for the Design, Construction, Equipment and Operation of Plants and Types of Waste for Thermal Treatment of Waste, Emission Limit Values and Their Monitoring ("The Official Gazette of the Republic of Serbia, No. 103/2023). Section 9.3 on page 632 states that individual measurements of dioxin and furan concentrations should be determined at least twice a year, with these measurements being carried out at least four times a year with an interval of three months in the first year of operation. The project developer is committed to the Emission Limit Values (ELV) prescribed in the BAT conclusions and the 2019 BREF WI documents. (Commission Decision (EU) 2019/2010 from 12 November, 2019 establishing Best Available Techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the incineration of waste) which are stricter than the national emission limit values of Serbia. The 2023 amendments to the IED Directive have not been transposed into the national legislation of most EU countries due to the recent nature of the amendments; similarly, this legislation has not been transposed into Serbian legislation. The project developer is willing to commit to measuring emissions of PCDD/F and PCDD/F + dioxin-like PCBs during start-up/shutdown in a monitoring programme every three years, as required by the final text of the amended Directive (see Directive (EU) 2024/1785 of the European Parliament and of the Council from 24 April, 2024 amending Directive 2010/75/EU of the European Parliament and of the Council concerning industrial emissions (integrated pollution prevention and control) and Council Directive 1999/31/EC on the landfill of waste), with a reporting obligation for the first year of operation. Therefore, the following text has been added to page 662 in Section 9.2. On pages 663-666, an updated table 9.1 Limit values for emissions of pollutants into the air from thermal waste treatment plants is presented, on page 670, an updated table 9.2 Limit values for emissions of pollutants into the air. In addition, the project developer will introduce a specific operational measure (to be introduced in Section 8.1.1) to reduce the operational risk.. On page 595 the following text was added: "Start-up/shutdown operations should be carried out in such a way that the first/last waste introduced into the boiler contains a minimum amount of organic halogenates." The authors refer the reader to the accompanying study Analysis of Environmental Factors, 2023, where the following is published on page 36: "Report on the measurement of mass concentrations of dioxins and furans (PVDDS/PCDFS) in ambient air near the 'Elixir Prahovo' production plant in Prahovo, 'Aerolab' doo, Belgrade, 21-24 June, 2021. The project developer has established baseline measurements for the subject pollutants, and would undertake to monitor measurements at the site every 3 years with a reporting obligation. Contamination levels can only be linked to emissions into the air; therefore clear monitoring of baseline values provides an adequate level of precaution. The obligation has been added in Section 9.3 on page 733 in table 9.19 under the title Tabular overview of the environmental impact monitoring programme within the Waste-to-Energy Plant under the row Ambient air quality testing as a new column: "mass concentrations of dioxins and furans" with a measurement frequency of "once every 3 years".

The document "Report on early consultations carried out with the local community regarding the implementation of the waste-to-energy plant project in Prahovo" only presents the benefits of the investment, namely: alternative to waste storage, job creation and its importance in the circular economy. The European Union's concerns regarding biomonitoring of emissions of persistent organic pollutants (dioxin, furan) detected near the facilities in Slovakia and the Kingdom of the Netherlands were not presented. New ZWE biomonitoring report alerts of a high level of dioxins around 3 European incinerators - Zero Waste Europe Response: The reader is referred to the response given to the comment made in the letter on page 4, paragraph 5 (comment 11) which covers the topic of POP emissions and monitoring. The author of the Study report would point out that the press release report only covers the monitoring aspects with limited exposure



to considerations related to the nature of the treated waste and, more importantly, the technological solutions used to achieve the targeted emission levels.

The project considered in this Study report is a state-of-the-art plant (see response to comment 11) planned for an industrial zone which is completely different compared to the mentioned plants. The combination of factors, technical solutions and industrial environment reduces the relevance of the mentioned findings. In addition, we draw your attention to the detailed research work carried out by the German Federal Institute for the Environment in the reference document: <https://www.umweltbundesamt.de/en/press/pressinformation/dioxin-in-animal-feed-source-of-contamination-not> Various food sources contaminated with PCDD/F were analysed based on their congener profile and led to the following conclusion (cf. para. 1+2): "The UBA analysis was, however, able to exclude some sources such as the metal and cement industries, and no other industrial sources could be linked to the current contaminations. The congener profile of fatty acids in milk fat in the contaminated food shows no similarities to existing environmental samples. Data on dioxin emissions from other industries also do not reveal any obvious matches that would indicate an industrial source. In comparison, external tests on waste and transformer oils were also tested, the results of which show similarities to the congener profile of fatty acids in milk fat. The database is, however, too limited to draw valid conclusions. The latest research conducted by the Chemisches und Veterinäruntersuchungsamt Münster-Emscher-Lippe, published today, supports the hypothesis that the contamination originates from industrial fats that should not have been used for the production of animal feed and other food products." For comprehensive study reports on PCDD/F + dioxin-like PCB emissions, please refer to the document provided in response to the comment made in the letter on page 4, paragraph 5 (comment 11).

The Environmental Impact Assessment Study contains in Chapter 6, Subsection 6.2.2, a summary of the study on the health effects of the Serbian population in Negotin. In this summary, we did not find data on the impact that the proposed Project will have on the health of the population in areas close to the border, with particular reference to the population of Romania, which is located in the Project's impact zone.

**Response:** Indeed, the health impact is predominantly based on the population of the Negotin Municipality, primarily due to the potentially most affected community of Prahovo belonging to the Municipality. However, all conclusions regarding the transboundary impact of the Project, including the potential impact on human health, are provided throughout the document. For example, the impact of the waste water discharge into the Danube River in both the accident and potential impact scenarios was shown to be negligible. Therefore, the impact on the health of the Romanian population is negligible. The same conclusion was reached by modelling the diffusion of emissions into the air, where it was conclusively shown that the impact was negligible and in line with the limit values for the required air quality (see Section 6.2.1).

On the other hand, the most important accident events are accidents classified as level II and level III. There are no accident scenarios classified as level IV or V, with full respect for the distance from the cross-border municipalities of Bulgaria and Romania. The accident classified as level III, with the largest range exceeding the boundaries of the subject project complex, is associated with accidents involving aqueous ammonia solution, since the furthest range for toxic concentrations is 680 m. The effects of afterburning remain within 11 m of the spill site, within the boundaries of the subject project complex. From the perspective of additional precaution in the modelling step, a special Scenario (accidents at the Waste-to-Energy Plant) was set up to assess the impact of a potential accident on the Danube River, with the following conclusion (page 516): "Applying the abovementioned equation to the input parameters, it is concluded that the calculated pollutant levels (PM and recalculated values of NH<sub>3</sub>, HCl, HF, SO<sub>2</sub> and NO<sub>x</sub>) are far below the previously stated values, which means that accidents at the Waste-to-Energy Plant do not lead to pollution of the Danube River by pollutants released into the air." All measures deemed necessary in view of the impact assessment of the subject Project, the regulations and the technology required are presented in Chapter 8 of the Study, which includes measures that must be taken to protect all environmental and human health factors (plans and technical solutions for environmental protection), related to the construction, regular operation, cessation of use or removal of the subject Project, as well as



measures to prevent accidents during construction and operation, measures to respond to accidents and eliminate the consequences of a potential accident.

Finally, the authors agree with the comment that structuring the document in a way that would specifically address the potential impact of the Project on public health in Romania would bring clarity. Therefore, the authors are committed to providing this change to the document in a revised version within the new Subsection 6.4 on page 487, entitled "Assessment of the potential impact of waste-to-energy plants and non-hazardous waste landfills on public health in cross-border areas".

Considering that, due to the location of the proposed Project within the industrial complex in Prahovo, a potential transboundary pollution effect cannot be excluded, we request the submission of the human health impact study that served as the basis for the environmental impact assessment report, which highlights data on the potential risk to which the Romanian population is exposed.

**Response:** We note that the human health impact study, pursuant to the Law on Environmental Impact Assessment of the Republic of Serbia, is part of the Study report in accordance with the establishment of the scope and content of the Study project issued by the Ministry of Environmental Protection of the Republic of Serbia on 17 June, 2024. All comments and suggestions submitted in the official letter file No. DGEICPSC/10258/6.04.2024. From 6 April, 2024, are respectfully incorporated into the abovementioned document issued by the Ministry of Environmental Protection of the Republic of Serbia. Human health has already been addressed in detail in the Study report, please refer to the response given to the comment made in the letter on page 4, paragraph 7 (comment 13) regarding the practical conclusions of the Study report with the proposed amendments.

Due to the mandatory requirement imposed by the Romanian Ministry of Environment, Forests and Water, deviating from the Serbian national procedure, the project developer is ready to comply with your request and provide a Human Health Impact Study as an additional supplement to the subject study Study. Please find enclosed the Human Health Impact Study as Annex 3 to this letter.

In addition to the population of the villages of Izvoarele and Gruja, it is necessary to take into account other settlements located on the banks of the Danube that are supplied with drinking water from the Danube River (Calafat, Maglavit, Cetate). Given that the Danube River is located approximately 500 m north of the proposed facility location, it is estimated that, after the construction/commissioning of the Project, there may be a potential health risk for the population of the coastal areas downstream of the facility and supplied with drinking water from the Danube.

**Response:** The authors point out that a cumulative approach has been adopted with regard to air and water pollution (read the Danube). Namely, in Subsection 6.2.1.1.6 of the Study (and the air quality assessment studies provided as an annexed), a cumulative emission study has been carried out taking into account the current emissions from the existing Elixir Prahovo facilities. Similarly, in the modelling approach described in Subsection 6.2.1.2.1 of the Study, the effects on the water quality of the Danube were estimated cumulatively taking into account the quality of treated waste water from existing plants within the industrial complex in Prahovo. On the other hand, among the parameters not regulated by the Rulebook, the highest relative burden (in terms of the limit value) has Tl, which is 1,667 times lower than the concentration prescribed by the BAT conclusions and the 2019 BREF WI documents (Commission Decision (EU) 2019/2010 from 12 November, 2019 establishing Best Available Techniques (BATC) conclusions, pursuant to Directive 2010/75/EU of the European Parliament and of the Council, for the incineration of waste (notified under document C(2019) 7987)). Furthermore, modelling of the effects of air emissions from the given Project, even under the most adverse weather conditions, and in the event of an accident with the most harmful air emissions scenarios, did not indicate any impact on the water quality of the Danube. To underline this conclusion, it will be introduced in the revised Study report with the aim of clarifying the conclusions potentially affecting the population in Romania, as suggested in the response to the comment made in the letter on page 4, paragraph 7 (comment 13). Please refer to the Human Health Impact Study, enclosed as Annex 3 to this letter, for conclusions on the potential impact of the Project on the general population. See Subsection 6.4 on page 487 of the revised study entitled "Assessment of the Potential Impact of the Waste-to-Energy FPlant and the Non-Hazardous Waste Landfill on Public Health in Transboundary Areas".



Taking into account the fact that the industrial platform "ELIXIR PRAHOVO" by its existence and operation may cause air pollution in the surrounding area, the construction and operation of the proposed facility will have a synergistic effect of increasing air pollution in the area, with a potential risk to the health of the surrounding population. Considering the existence of the phosphogypsum landfill of the company Fosfea Dunav d.o.o., which belongs to the "ELIXIR PRAHOVO" complex and is located 900 m west of the border of the plot of the future Waste-to-Energy Plant and the non-hazardous waste landfill (solidification), there may be a synergistic effect of emission of substances and odours into the air in the surrounding area

**Response:** As stated in the response to comment number 15 (regarding the comment to the letter on page 4, paragraph 9), in Subsection 6.2.1.1.6 of the Study (and the air quality modelling studies attached as an annex) a cumulative emissions study was performed considering current emissions from the existing Elixir Prahovo facilities. In practical terms, both the phosphogypsum landfill and the stabilised solid waste destined for landfill are included in the modelling efforts as surface sources of PM emissions in a cumulative manner for the future state. Please refer to Figures 6.4, 6.5 and 6.12 in the Study report for the results of the diffusion modelling of PM emissions (and the air quality modelling studies attached as an annex to the Study report). The report states the following on page 419: "Analysing the obtained results, it can be concluded that when it comes to the components currently emitted (CO, SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, HF, HCl, NH<sub>3</sub>) and which will also be emitted from the emitters of the future plant, including the Non-Hazardous Waste Landfill, it was concluded that the dominant influence is exerted by the existing emitters (within the Elixir Prahovo and Phosphea complexes) or, in the case of particles, by surface sources for the current and future state (phosphogypsum storage), while the influence of the future Waste-to-Energy Plant and the Non-Hazardous Waste Landfill (solidified materials) is practically negligible." **Also, on the same page it is stated: "Also, potential zones with exceedances of the limit values of these components are located in uninhabited areas in the immediate vicinity of the property boundary of the chemical industrial complex in Prahovo."**

**The studies conducted conclude that for both operational scenarios, TVOC emissions at their maximum near the plant are significantly lower compared to the indicatively mentioned limit value. Apparently, the modelling results show that no potential impact and odour are expected in neighbouring Romania and Bulgaria.**

In the received documentation, we did not find data on the impact determined by ionising radiation emitted by dust generated by the phosphogypsum composition (taking into account that the industrial unit for the production of phosphogypsum is already operating on the industrial platform of the Elixir complex), which in certain climatic conditions can generate polluting emissions, nor data on the impact from the perspective of the operation of the proposed facility within the Elixir energy complex.

**Response:** The authors would like to draw the reader's attention to the fact that activities related to phosphogypsum are in no way part of the subject Project. For the purpose of modelling, the current and predicted conditions within the chemical park were assessed as a zero-state point of interest for specific emissions related to the scope of the Project.

However, the project developer is ready to provide additional necessary information from the Elixir Prahovo Company, which is the operator of the phosphogypsum warehouse. Given that phosphate minerals and phosphate rocks may contain traces of natural radioactive elements, which are naturally present in geological formations, pursuant to the Law on Protection against Ionising Radiation and Nuclear Safety (The Official Gazette of the Republic of Serbia, Nos. 95/2018 and 10/2019), the soil and stored phosphogypsum were tested.

On page 471 of the revised Study, an explanation is provided. According to the Rulebook on the Limits of Radioactive Contamination of Persons, Working and Living Environments and the Method of Conducting Decontamination (The Official Gazette, No. 38/2011), the soil was also tested by sampling at five locations. The results of radionuclide activity in all five samples confirm that neither natural nor artificial radionuclides were detected in concentrations above the maximum permitted values. "The measured values are available upon request in the following reports:

- Report on measuring the concentration of radon (<sup>222</sup>Rn) in the air directly above and in the matrix of phosphogypsum material and the ambient dose rate equivalent to ionising radiation in the phosphogypsum



*Elixir Prahovo warehouse - Phase I and 0 gamma spectrometric analysis of phosphogypsum samples for the assessment of exposure to ionising radiation, Faculty of Sciences in Novi Sad, 5 June, 2020.*

- *Radioactivity Report No. 5404262201-5, Institute for Prevention, Niš, 22 May, 2024.*

The requests, comments and recommendations on the content of the Study of the subject Project were considered and analysed in detail, which were submitted to the Ministry of Environmental Protection of the Republic of Serbia by official letter No. 04-00-949-36 from 15 November, 2024 and official letter No. 04-00-949-49 from 28 February, 2025 by the competent Ministry of Environmental Protection and Water of the Republic of Bulgaria, after the completion of consultations with the interested public and the official competent authorities of the Republic of Bulgaria.

The official letter of the Ministry of Environmental Protection and Water of the Republic of Bulgaria No. 04-00-949-36 from 15 November, 2024 referred to the following:

**Regarding the "waste" factor**

The following information is missing from the "Notification to the affected party of the proposed activity pursuant to Article 3 of the Convention":

- type of waste by code and quantity, on an annual basis, that will be generated during construction, that will be treated in the incineration plant and that will be generated after incineration;

**Response:** *The comment is well noted. The necessary data are already listed in separate sections of the submitted Study report (6.1 Overview of possible changes in the environment during the implementation of the Project & 3.4.1 Overview of the type and quantity of gases, water and other liquid and gaseous waste materials that will be discharged during the construction of the subject facilities).*

**a) Waste type by code and quantity to be generated during construction**

*The estimated total mass/volume of waste to be generated on site during construction is listed in the submitted Study, Table 3.46 on page 286 and Table 3.47. on page 287.*

**b) Waste type by code and quantity to be treated in the incineration plant:**

*The maximum annual thermal waste treatment capacity in the subject Waste-to-Energy Plant is limited to a total of 100,000 tonnes per year, cumulatively for all listed EWC codes that are envisaged as acceptable in accordance with the designed incineration technology, while observing relevant EU and national regulations.*

- *A list of acceptable EWC codes, together with the maximum annual capacity for thermal waste treatment (R1 operation) for all listed EWC codes, is provided as an annex to the Study.*

**On pages 146-147** of the Study, the following text was added: *"The data on the maximum annual thermal treatment capacities determined for individual waste types (EWC codes) were calculated in accordance with:*

- *the intended aggregate phase and/or physical composition of the waste, and*
- *the maximum annual capacity of each waste dosing line/system designed for different aggregate phases and/or physical compositions of the waste (i.e. liquid, sludge, solid and heterogeneous multi-phase composition)*

*In order to improve the overall environmental performance of the incineration plant, in accordance with the requirements of BAT 9 and BAT 11 of the BATC WI 2019, detailed control of the physicochemical parameters of the delivered waste intended for thermal treatment will be subject to pre-acceptance and acceptance procedures, in accordance with relevant EU and national regulations.*

**Prohibited waste categories:** *We emphasise that the following categories of waste are strictly prohibited from being treated within the plant in question under any circumstances, as stated on page 164 of the Study:* • *Waste classified as explosive, flammable, infectious or radioactive.* • *Waste containing or contaminated with polychlorinated biphenyls (PCBs), polybrominated triphenyls (PBTs) or polybrominated biphenyls (PBBs).* • *Waste containing cyanides, isocyanates, thiocyanates, asbestos, peroxides, biocides, cytostatics or electronic waste.* • *Waste substances in aerosol form, organometallic compounds and aluminium paints.* • *Waste containing persistent organic pollutants (POPs).*



Thermal treatment in the boiler of the Prahovo waste-to-energy plant is strictly regulated by technical design specifications, ensuring constant compliance with the following defined limits for the chemical composition of the simultaneously treated waste mixture: Sulphur (S): max 2%, Chlorine (Cl): max 3% Halogenated organic substances (as chlorine): max 1% Fluorine (F): max 0.02%, Mercury (Hg): max 10 mg/kg, moisture (H<sub>2</sub>O): max 50%, Ash: max 40%. On page 197 of the Study, the text has been supplemented. The stated limits for simultaneous thermal treatment are expressed in Table 3.10.

**c) Waste types by code and quantity that will be generated after incineration and disposed of at the non-hazardous waste landfill:**

The expected amount of solidified waste is expressed in the Study in Subchapter 3.2.1.12. The mass balance was submitted as an appendix to the Study, where the amount of solid residues intended for solidification is shown in rows 51, 52 and 53 of Table 15. The maximum amount of waste generated at one time is specified in the Study in Subchapter 3.2.1.12.

A non-hazardous waste landfill is an installation designed exclusively for the disposal of stabilised and solidified waste residues from the waste-to-energy plant in question. Acceptance of solidified waste for landfilling is conditional on demonstrating compliance with the leaching criteria for non-hazardous non-reactive waste, in accordance with national and EU regulations. The landfill operation will be conducted in accordance with the Rulebook on Waste Landfilling ("Official Gazette of the RS", No. 92/2010). EWC codes of solid waste intended for production and disposal at the non-hazardous waste landfill: 19 03 06\* - waste marked as hazardous, solidified, 19 03 07 - solidified waste not covered by 19 03 06. The maximum annual production of solidified waste is 25,564 m<sup>3</sup>/year, which multiplied by its intended maximum density of 1.5 t/m<sup>3</sup> gives a maximum annual amount of 38,346 t/year of solidified waste for disposal (as non-reactive/inert hazardous or non-hazardous waste). The Study has been supplemented on pages 237-238

- What amount of waste will be stored on site, on a daily basis;

**Response:** The Study has been supplemented on pp. 145-146. The data provided pertain to the maximum capacity of thermal waste treatment in the waste-to-energy plant (R1 operation), the maximum capacity of waste pretreatment (R12 operation) and the maximum capacity of waste storage (R13 operation) for all listed waste types / EWC codes, per day.

A table with data related to the R waste management operations in the Eco Energy complex (WtE + DNO) is presented. It is important to take into account that the calorific value of different types of waste varies depending on their moisture and/or ash content. Therefore, the maximum capacity of the incinerator is not defined and limited by the waste throughput in tonnes per hour, but rather by the energy input in MJ per hour that the waste provides to the combustion chamber (furnace).

The maximum capacity of the thermal treatment of waste is calculated based on a maximum capacity of 17 t/h of waste with a calorific value of 7 MJ. Multiplied by 24 hours, it gives a maximum capacity of the thermal treatment of waste of 408 t/day.

The maximum storage capacity of all types of waste is envisaged at 620 t/day. This represents the theoretical maximum in terms of simultaneous logistical operational load, aligned with the capacities of the waste-to-energy plant (i.e. storage, preliminary treatment, quality control, pre-acceptance and acceptance protocol).

The total maximum annual thermal waste treatment capacity of the plant is 100,000 tonnes per year.

- Origin of the waste: Will there be any waste resulting from transboundary transport and, if so, from which countries?

**Response:** The waste originates from Serbia. According to the Law on Waste Management of the Republic of Serbia, the import of waste for disposal and for energy recovery purposes is prohibited. Operation R1, which involves the use of waste primarily as a fuel or other means to generate energy, falls under this category. Accordingly, the import of waste for R1 operations is not permitted in Serbia. Considering that the construction of a non-hazardous waste landfill is planned as part of the plant, it is necessary to specify where and how hazardous waste generated by the incineration process, which is not suitable for disposal at a non-hazardous waste landfill, will be managed.



**Response:** The General Environmental Protection Plan for regular operations, outlined in Section 8.3.3 of the Study, specifies how waste testing, monitoring, and mapping will be conducted, in order to implement corrective measures if necessary. The non-hazardous waste landfill is designed and will be permitted exclusively for the disposal of waste that meets leaching criteria for non-reactive/inert non-hazardous waste, in accordance with national regulations (Rulebook on Waste Landfilling, "Official Gazette of the RS", No. 92/2010) and EU regulations (Landfill Directive 1999/31/EC and Council Decision 2003/33/EC). Waste compliance will be tested according to the legally prescribed NEN 7345 standard or its equivalent. In the event that the waste does not meet the criteria for disposal at a non-hazardous waste landfill, reactive hazardous waste will be redirected to another recipient and transported by truck, in accordance with regulations on the transport of hazardous waste. The recipient will be an authorised hazardous waste landfill operator and/or an underground mine operator licensed to accept and dispose of such waste.

On page 258, a notification has been provided in the form of the following text: "Waste solidified material that, based on the test report, has been determined not to meet the criteria for acceptance at the landfill will, based on the landfill site plan with precisely designated micro-locations of the cells (cassettes) where it has been deposited, be excavated and removed from the disposal site and, within the prescribed period, handed over for disposal to the landfill and/or hazardous waste storage operator or to an operator holding an export permit if there is no operator in the Republic of Serbia capable of managing that type of hazardous waste. The abovementioned procedure is in line with the European Landfill Directive (EU 1999/31/EC and 2008/98/EC)."

The description of the selected technology for thermal waste treatment, does not specify how the requirements of Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) – the Directive, and particularly Article 50(3), stipulating that each combustion chamber in a waste incineration plant must be equipped with at least one auxiliary burner, will be fulfilled.

**Response:** The requirements of Article 50(3) of Directive 2010/75/EU have been fully met in the design of the plant in question. In the Study, in Section 3.2.1.8.5. Ignition and auxiliary fuel system, it is stated: "Two natural gas burners with a nominal power of 2x12 MW are provided for boiler start-up and operation with low-calorific fuel. The burners are used only for boiler start-up and shutdown, as well as in the event that the temperature in the combustion chamber drops below 850 °C, while in regular operation the burners are used exclusively for the introduction of secondary combustion air."

In Subsection 8.3.2.2 Thermal Waste Treatment and Thermal Energy Production in the Form of Steam, it is additionally stated: "The waste incineration plant shall be equipped with at least one auxiliary burner that must be automatically activated when the process gas temperature drops below 850°C. The burner must be automatically activated when the process gas temperature drops below 850°C." The proposed solution includes two burners that provide 100% redundancy.

Furthermore, according to Article 50(4)(c) of the Directive, waste incineration plants and waste co-incineration plants must use an automatic system that prevents waste input whenever continuous measurements indicate that any emission limit values are exceeded due to a malfunction or failure of the waste gas treatment system.

**Response:** The requirements of Article 50(4)(c) of Directive 2010/75/EU have been fully met in the design of the plant in question. In the Study, Subsection 8.3.2.2 Thermal Waste Treatment and Thermal Energy Production in the Form of Steam, it is stated: "The incineration plant has and uses an automatic system to prevent waste input: 1. during the plant start-up, until the temperature reaches a level of 850 °C; 2. when the temperature is not maintained at 850 °C; 3. when continuous measurements, carried out in accordance with the regulations, determine that the emission limit values are exceeded due to a malfunction or shutdown of the fuel gas treatment plant." These requirements will be hardcoded in the DCS system of the waste-to-energy plant.



### **Regarding the “water” component**

According to the information provided in the Environmental Impact Assessment Study, sampling of discharged wastewater from the plant into the Danube is planned at the following sampling points:

- **SP1:** on the Danube, 150 m upstream from the wastewater collector inlet, with GPS coordinates: N 44°17'27.50", E 22°36'58.08".
- **SP2:** on the Danube, 100 m downstream from the wastewater collector inlet, with GPS coordinates: N 44°17'21.08", E 22°37'25.39".

Measurements at these locations will be conducted four times per year.

The Environmental Impact Assessment Study for the project examines the potential impacts on water during the implementation and operation phases. I support the measures proposed in the Study aimed at preventing, mitigating and compensating for, to the greatest possible extent, negative effects on water and express a positive opinion as regards the report concerning the water component, as well as a wish to request the submission of the results of surface water quality monitoring to the Ministry of Environment and Water of the Republic of Bulgaria.

**Response:** *The request for access to water quality monitoring data has been received and will be implemented in the corresponding chapter of the Study and in the Monitoring Plan. The investor points out the availability of current water quality measurement results, submitted as an appendix to the Study. According to the information provided in the Study report, the following wastewater sampling points discharged into the Danube from the site are planned:*

- *SP1: on the Danube, 150 m upstream from the wastewater collector inlet, with GPS coordinates: N 44°17'27.50", E 22°36'58.08".*
- *SP2: on the Danube, 100 m downstream from the wastewater collector inlet, with GPS coordinates: N 44°17'21.08", E 22°37'25.39".*

*Measurements at these locations will be conducted four times per year. On page 685 of the Study, the following text was added: "At the request of the Ministry of Environment and Water of the Republic of Bulgaria and the Ministry of Environment, Water and Forests of Romania, access to surface water quality monitoring data will be provided."*

### **Regarding the “ambient air” component:**

The Environmental Impact Assessment Study (doc. ENG - EIA5 FINAL eng.pdf) on page 401 shows the boiler parameters that were used as input data for modelling. In Table 6.10 “Boiler and emitter characteristics (W-C14)”, a typographical error was made — a value of 70 Nm<sup>3</sup>/h was given for the gas flow in the blue flame, while it should be 70,000 Nm<sup>3</sup>/h.

**Response:** *Indeed, this is true. The error occurred during the translation process. It will be corrected during the revision of the Study.*

In Table 3.49 “Overview of the types and maximum concentrations of emitted pollutants in the boiler exhaust gas”, on page 251 of the Study, it is necessary to revise the mass flow rates for: Cd+Tl, Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V.

Our calculations indicate that the mass flow rates for these pollutants listed in the table are approximately one order of magnitude higher than the actual maximum emissions.

**Response:** *Indeed, this is true. The mass flow values for Cd+Tl and Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V will be corrected to: 0.0007 kg/h and 0.007 kg/h, respectively. The modelling results (concentrations of regulated pollutants in the ground-level air) show that these parameters will not lead to the exceeding of the human health protection standards prescribed by European and national legislation. The updated table 3.49 is presented in the revised Study on pages 291-294.*



The results of the modelling of the concentrations of regulated pollutants in the ground -level air, indicate that there will be no exceedance of human health protection standards, neither by European nor by national legislation.

It is also noted that there is no modelling of emissions of heavy metals: Cd+Tl, Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V.

**Response:** *The revised Study has been supplemented with the following annex: Study of the Impact of a Waste-To-Energy Plant on the Concentrations of Selected Heavy Metals in the Air in the Wider Location of the Chemical Industry Complex in Prahovo, University of Belgrade, Faculty of Mechanical Engineering, March 2025.*

**Regarding human health:**

The Environmental Impact Assessment Study does not contain a dedicated chapter that analyses potential transboundary impacts on human health, including accidents with hazardous substances, health-related aspects and measures for their prevention and mitigation.

The Study does not sufficiently address the following issues that have the potential for adverse effects in a transboundary context, and therefore the sections listed need to be supplemented:

**Response:** *The comment has been accepted. The necessary analyses of potential impacts on human health have already been carried out as part of additional studies accompanying the EIA report, and their conclusions are addressed in the relevant sections of the EIA report. However, in a transboundary context, it will be more precisely stated as follows:*

- An estimated assessment of the potential for transboundary odour emissions during the proposed investment activity;

**Response:** *A special air quality study conducted by the Faculty of Mechanical Engineering, University of Belgrade (Study of the Impact of the Flue Gas Purification and Activated Carbon Filter System in the Waste-to-Energy Plant on the Air Quality in the Wider Location of the Chemical Industry Complex in Prahovo) included modelling of the diffusion of TVOC (total volatile organic compounds) as a model substance for odour emissions.*

*The modelling results clearly show that TVOC concentrations (as an indicator of odour emissions) are, even under the most unfavourable conditions, approximately 200 times lower than the extremely strict indicative limit level of 400 µg/m<sup>3</sup> for indoor air quality. Therefore, emissions and potential unpleasant odours are considered negligible in the the industrial complex area.*

*Furthermore, the study provides the following conclusion:*

*“Considering that the Chemical Industry Complex (Industrial Chemical Park) in Prahovo is located in a zone with potential transboundary pollution effects, and taking into account the trend of decreasing concentrations of pollutants in the ground-level air for all average periods, where concentrations become extremely low already after a few hundred metres from the boundaries of the complex, it can be concluded that the potential transboundary effect is practically negligible.”*

- Identification of new risk factors and harmful substances due to the cumulative impact of air pollutants following the implementation of the investment project;

**Response:** *The Environmental Impact Assessment Study has unequivocally shown that air quality will not be impaired by the implementation of this project, even at the production site itself, in accordance with the regulations of the European Union and the Republic of Serbia. Naturally, as the distance from the emission source increases, the level of exposure of the population to potentially harmful substances decreases. This conclusion was confirmed through dispersion modelling using state-of-the-art methods across a network of receptor points covering an area of 50 x 50 km.*

*Most of the pollutants that will be emitted by the plant are already present in the emissions of the existing industrial infrastructure in the area. The exceptions are potential emissions of PCDD/F, CDD/F+ dioxins as well as PCBs and Hg (mercury), which are typical for this industry and may have an impact on health, as stated in the EIA report, Section 6.2.2.2. The waste-to-energy plant in question fully complies with the requirements regarding operating conditions laid down in Article 50 of Directive 2010/75/EU, including Article 50(2), which reads as follows: “Waste incineration plants shall be designed, equipped, built and operated in such a way that the gas resulting from the incineration of waste is raised, after the last injection*



of combustion air, even under the most unfavourable conditions, to a temperature of at least 850 °C for at least two seconds.”

Further clarification is provided in Section 3.3.1.5 of the Study. A detailed description of the composition of the waste that may be subjected to thermal treatment, as well as the combustion and waste gas treatment conditions, is provided in Chapter 3 of the Study. The submitted Study also states that, in accordance with the requirements of BAT 9 (as well as BAT 11) of the BREF WI 2019 reference document, detailed control of all relevant parameters of waste intended for thermal treatment will be subject to pre-acceptance and acceptance procedures, in accordance with relevant EU and national regulations.

The authors point out that incineration plants are unequivocally recognised by industry and government bodies of EU Member States as plants for the destruction of dioxins and furans, since they destroy more dioxins and furans than they produce, as presented in the following documents:

• [https://www.bmk.gv.at/dam/jcr:40b93468-8ffc-4581-a7f3-a0dedec04350/Whitebook\\_Waste\\_to\\_Energy.pdf](https://www.bmk.gv.at/dam/jcr:40b93468-8ffc-4581-a7f3-a0dedec04350/Whitebook_Waste_to_Energy.pdf) (see page 52)

• [www.abfallratgeber.bayern.de/publikationen/abfallbehandlung/doc/muellverb.pdf](http://www.abfallratgeber.bayern.de/publikationen/abfallbehandlung/doc/muellverb.pdf) (see Section 20)

• <https://epub.sub.unu-hamburg.de/epub/volltexte/2009/2846/pdf/duoxunbulanz.pdf> (see Table 25)

A similar conclusion can be found regarding heavy metals and mercury, where official findings by the German government show a positive effect of waste incineration, as presented in the following document: ([https://www.utad.de/wissen/studuen/2005\\_abschued\\_von\\_der\\_duoxunschleuder.pdf](https://www.utad.de/wissen/studuen/2005_abschued_von_der_duoxunschleuder.pdf))

The cumulative impact of emissions on air quality in the Study was modelled using significantly exaggerated parameters, considering that the modelling assumptions took into account all emissions would occur simultaneously from every emission source at their maximum limit values and under the most unfavourable meteorological conditions. Nevertheless, according to the modelling results, the conducted air emission study comprehensively concludes that the impact of the plant of the project in question would be marginal, with limited synergistic effects. The potential impact on air quality in the wider area is marginal, meaning there is no potential impact on the neighbouring area of Bulgaria. In reality, Elixir intends to decarbonise its energy sources and use the waste-to-energy plant as a replacement for fossil fuels. Therefore, it should be emphasised that the use of the waste-to-energy plant instead of a coal-fired boiler will generally improve the emissions situation compared to current practices. Specifically, when comparing PM emissions from the existing source E3 (see the additional study issued by the Faculty of Mechanical Engineering, University of Belgrade) and the potential new sources E18, E19 and E20, it can be concluded that a net reduction of PM emissions of 0.276 kg/h (23%) can be expected. Performing the same analysis for SO<sub>x</sub> and CO, it can also be expected to have net emission reductions of 42.72 kg/h (95%) and 0.839 kg/h (19%), respectively. Finally, the authors draw attention to the positive environmental and health aspects of the waste-to-energy plant compared to the current waste management practice in Serbia, which relies on landfilling, posing a high risk of fires and consequent pollution, as stated in:

• <https://www.aktivutvut4sustanabuluty.org/wp-content/uploads/2024/08/WHITE-BOOK-ON-WASTE-TO-ENERGY-IN-SERBIA.pdf>

• <https://www.aktivutvut4sustanabuluty.org/wp-content/uploads/2024/03/Supplementary-resources-FINAL.pdf>

- Assessment of combined, complex, cumulative and remote impact of risk factors in emergency situations and incidents; assessment of risks to human health and proposed health protection and risk management measures;

**Response:** In Chapter 7 of the Study, the risks of accidents related to the waste-to-energy plant and the non-hazardous waste landfill are modelled in detail, with corresponding protective requirements outlined. These requirements are expressed in Chapter 8 of the Study, Section 8.2, after the vulnerability analysis conducted in Section 7 of the Study. Theoretically unlikely, but the most harmful scenarios are modelled and presented in Section 7 of the Study (Table 7.18 and Table 7.15). A total of 12 accident scenarios were analysed as potential accidents in the waste-to-energy plant, classified according to the level of potential consequences. The most important events are accidents classified as level II and level III. There are no accident scenarios classified as level IV or level V, fully respecting the distances of the cross-border municipalities of Bulgaria and Romania. As an additional precaution in the modelling phase, a special scenario number 12 (accidents



in the waste-to-energy plant) was set up to assess the impact of a potential accident on the Danube River, with the following conclusion (page 516), which reads as follows: "The application of the abovementioned equation to the input parameters shows that the calculated pollutant levels (PM and recalculated values of NH<sub>3</sub>, HCl, HF, SO<sub>2</sub> and NO<sub>x</sub>) are significantly below the previously stated thresholds, indicating that the accidental situations at the waste-to-energy plant do not lead to pollution of the Danube River by airborne pollutants." All measures assessed as necessary in relation to the impact assessment of the project in question, regulations and required technology are presented in Chapter 8 of the Study. These include measures that must be implemented to protect all environmental factors and human health (plans and technical solutions for environmental protection), applicable to the construction, regular operation, decommissioning or dismantling of the project in question, as well as accident prevention measures during construction and operation, emergency response actions and measures for remediation of potential accident consequences.

- Considering the planned discharges of wastewater into the Danube, it is necessary to assess the future impact of the implementation of the investment project on surface and groundwater, as well as soil within the territory of the Republic of Bulgaria, and thus on all water sources used for drinking and water supply needs in the affected Bulgarian settlements, whether located inside or outside the designated sanitary protection zone and which could be impacted as a result of the operation of the plant.

**Response:** The authors emphasise that a cumulative approach has been adopted regarding air and water pollution (specifically, the Danube River). Namely, in Subsection 6.2.1.1.6 of the Study (as well as in the air quality modelling studies provided as annexes), a cumulative emissions study has been conducted, taking into account current emissions from the existing Elixir Prahovo plants. Similarly, in the modelling approach described in Subsection 6.2.1.2.1 of the Study, the effects on the Danube water quality have been assessed cumulatively, considering the quality of treated wastewater from existing plants in the industrial complex in Prahovo. By comparing the modelling results of the Danube River pollution due to discharges of collective wastewater from the existing Elixir Prahovo complex and the addition of the future complex under the current project, it can be observed that none of the tested parameters exceed the limit concentration values. Moreover, it should be noted that based on the results of the "baseline state" of the Danube water quality, it can be concluded that, in its current condition, there is either no pollution or only a negligible load of pollutants characteristic of the anticipated wastewater discharges from the future complex planned under the project in question.

Taking the abovementioned into account, along with the fact that all pollutants in the wastewater from the plant under the current project will be below the emission limit values (ELVs) prescribed by the conclusions on the best available techniques (BAT) and the 2019 BREF WI documents (Commission Implementing Decision (EU) 2019/2010 of 12 November 2019 establishing BAT conclusions, under the Directive 2010/75/EU of the European Parliament and of the Council, for waste incineration), it can be concluded that after the commissioning of the project in question, there will be no cumulatively higher concentrations of pollutants in the collective wastewater discharged into the Danube River. Flow modelling further shows that pollutant concentrations are already negligible 100 metres downstream from the wastewater discharge point. At 100 metres downstream from the wastewater discharge point, the relatively highest load (in relation to the limit value) is recorded for chemical oxygen demand (COD), which is 22 times lower than the value defined by the Rulebook on Limit Values of Pollutants in Surface and Groundwater and Sediments, and Deadlines for Their Achievement (Official Gazette of the RS, No. 50/2012). On the other hand, among the parameters not regulated by the Rulebook, the highest relative load (in relation to the limit value) is for thallium (Tl), which is 1,667 times lower than the concentration prescribed by BAT conclusions and the BREF WI documents from 2019 (Commission Implementing Decision (EU) 2019/2010 of 12 November 2019 establishing BAT conclusions under the Directive 2010/75/EU of the European Parliament and of the Council for waste incineration), notified under document C(2019) 7987). Additionally, modelling of effects of pollutant emissions into the air from the project in question, even under the most unfavourable weather



conditions and in the event of accidents involving the worst-case pollutant release scenarios, did not indicate any impact on the Danube water quality. The determined concentrations at 100 m and 200 m downstream from the treated wastewater discharge point are negligible and largely difficult or impossible to detect. The results of the Study have unequivocally shown that there will be no violation of the emission limit values prescribed for such installations and, more importantly, that there will be no deterioration in the water quality of the Danube River, as a consequence of the implementation of the project in question. After presenting all of the abovementioned facts, it was concluded that there can be no harmful impact on the Danube River that could in any way affect the health of the population of either the Municipality of Negotin or the neighbouring cross-border municipalities. Considering the conclusions that the quality of the Danube will not deteriorate as a result of the implementation of the project in question, it can be concluded that there is no possibility for any downstream-connected river system and/or associated groundwater source to be affected, nor can any related impact on human health be expected. All modelling approaches have demonstrated that the effect on air and water quality in Bulgaria resulting from the implementation of the project in question would be negligible. Therefore, this conclusion applies to any cross-border location in Bulgaria as well.

A dedicated chapter, based on other parts of the Study, should be prepared to analyse the potential transboundary impacts on human health and the corresponding measures for their prevention and mitigation.

**Response:** The comment has been duly noted. A dedicated Section 6.4 has been incorporated into the Study as a summary of the analysed potential transboundary impacts on human health, along with measures for their prevention and mitigation, on pages 487–504.

The letter from the Ministry of Environment and Water of the Republic of Bulgaria, no. 04-00-949-49 dated 28 February 2025, refers to the following:

**Regarding the "waste" factor:**

The supplementary documentation contains the information requested by the letter no. 04-00-949-36/15.11.2024 from the Ministry of Environment and Water of the Republic of Bulgaria. Attached is a table listing the types of waste by codes and annual amounts expected to be generated during construction, as well as data on the amounts of waste to be treated at the incineration plant and those generated after the incineration process.

On pages 7 and 8 of the letter from the Ministry of Environmental Protection of the Republic of Serbia, responses were provided regarding the implementation of Articles 50(3) and (4) of Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control).

Based on the aforementioned, we have no objections concerning the waste factor.

**Regarding the "water" component:**

The supplementary information provided show that the request for access to surface water quality monitoring has been considered and will be implemented in accordance with the proposed monitoring plan within the Study. As an annex to the submitted Study, recent water quality measurements have also been provided. Modelling results indicate that pollutant levels are below the permitted limits, which means that even in the worst-case emergency scenarios at the waste treatment plant, no pollution of the Danube River will occur.

**Regarding the "ambient air" component:**

The supplementary documentation does not contain data on the results of modelling 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 directive, hereinafter: the Directive) was adopted in 2024. For the following heavy metals – arsenic, cadmium, nickel, and lead – the Directive sets target values for the protection of human health to be achieved by 11 December 2026 and limit values by 1 January 2030. In this regard, the operator should immediately begin modelling the expected impact on ambient air quality



within the territory of the Republic of Bulgaria during the operation of the plant, demonstrating that these limit values for air quality concerning heavy metals will be met. This data should be included in the revised Study.

**Response:** *An additional special air quality study has been prepared by the Faculty of Mechanical Engineering, University of Belgrade, aiming to model the expected impact of heavy metal emissions on ambient air quality.*

*Please find attached as Annex 1 the supplementary accompanying study titled "Study of the Impact of the Waste-to-Energy Plant on the Concentration of Selected Heavy Metals in the Air in the Wider Location of the Chemical Industry Complex in Prahovo" (Faculty of Mechanical Engineering, University of Belgrade, March 2025), which covers a modelled area of 50 km x 50 km, i.e., an area of 2,500 km<sup>2</sup>.*

*The findings of the study will accordingly be incorporated into the revised Environmental Impact Assessment (EIA) Study.*

*Monitoring of heavy metal emissions does not need to be revised, as it is already covered by the approved monitoring plan provided 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 adopting BAT conclusions under the Directive 2010/75/EU of the European Parliament and of the Council for waste incineration (notified under document C(2019) 7987)).*

#### **Regarding human health:**

The attached supplementary information address in detail the issues raised in the comments from letter no. 04-00-949-36/15.11.2024 of the Ministry of Environment and Water of the Republic of Bulgaria. Concerning the requirement, "A dedicated chapter should be prepared in the report that, based on the other chapters of the Study, analyses the potential transboundary impacts on human health, as well as measures for their prevention and mitigation," it is stated that such a dedicated chapter will be prepared and included in the Study as a summary of the analysed potential transboundary impacts on human health and the corresponding prevention and mitigation measures.

**Response:** *Attached as Annex 2 to this letter is a new dedicated chapter of the Environmental Impact Assessment Study (EIA Study), titled 6.4 – Assessment of the Potential Impact of the Waste-to-Energy Plant and Non-Hazardous Waste Landfill on Public Health in Transboundary Areas, which serves as a summary of the analysed potential transboundary impacts on human health and will be incorporated into the revised version of the EIA Study for the project in question.*

*The assessment results did not indicate the presence of hazardous substances that could pose a risk to public health. Accordingly, the measures to be taken for the prevention of environmental and health risks in the transboundary context only complement the measures already envisaged to mitigate the overall environmental impact of the project and, as such, are part of Chapter 8 of the EIA Study.*

*Annex 3 to this letter contains the updated Chapter 8 of the EIA Study — Description of measures planned for the prevention, reduction, and, where possible, elimination of any significant adverse environmental impacts, which will be incorporated into the revised version of the EIA Study for the project in question.*

*In order to exercise additional caution for environmental protection in the transboundary context, and consequently for the health of people in the neighbouring countries of Romania and Bulgaria, additional precautionary measures have been taken and included in the updated Chapter 8, provided as Annex 3 to this letter.*

*These additional measures can be divided into prevention and mitigation groups. These supplementary environmental protection measures, particularly concerning human health, are included in the updated Chapter 8 of the EIA Study. The measures listed represent a complement to the already established requirements mandated by regulations, norms, and standards — measures for accident cases (prevention, preparedness, response), which include plans and adopted technical solutions, as well as other established measures recognised as best available practices in the field.*



*Therefore, we would like to draw your attention to Annex 3 of this letter, which contains the full list of measures foreseen by the project in question.*

All observations from the members of the Technical Commission, which conducted the evaluation of the Environmental Impact Assessment Study (EIA Study) for the project in question and submitted them to the competent authority, have been thoroughly reviewed and analysed.

Taking into account all observations and comments, the contractor was instructed to amend and supplement the EIA Study for the project in question in all chapters. Accordingly, the competent authority issued letter no. 002500932 2024 dated 28 January 2025 to the project developer with a request for amendments and supplements to the Study, which included the following requirement:

1. In the Decision on the establishment of the multidisciplinary team for the preparation of the Study, it is necessary to specify the collaborators from the Institute for Biological Research "Siniša Stanković" who participated in the preparation of the Study in question, or alternatively, remove the name of this institution from the said Decision.

**Response:** *In accordance with the comment on pages 39-40, collaborators from the Institute for Biological Research have been added.*

2. The buried biological treatment plant of the type ACO-INTERPLAN BIOTIP cap 20 PE with continuous activated sludge recirculation technology, with a capacity of 20 PE (40 employees), is envisaged for construction at the project site in question, as stated multiple times in the Study. On the other hand, in two places in the Study (pages 133 and 432), it is mentioned that the implementation of the project in question is expected to require employing 80–90 workers. These two pieces of information seem to be in conflict and need clarification in the Study.

**Response:** *Both data points are correct. The treatment of wastewater is defined according to simultaneous capacity needs. On the other hand, it should be noted that the plant is planned to operate in 3 shifts.*

3. On page 135, the Study authors refer to the "Complete list of waste types and maximum planned amounts," which is provided in the Annex. Upon reviewing the list, it is noticeable that the maximum treatment capacity for each waste type is identical, so this needs to be explained.

**Response:** *Although expert confirmations of waste index number list, initially provided in the Study annex, were obtained from Austrian partners, the investor, taking into account the observations of the interested public, has revised the list of acceptable waste index numbers for thermal treatment at the plant.*

*An updated (consolidated) list of index numbers with maximum capacities for R1, R12, and R13 operations, as well as a list of index numbers with capacities for D5, D9, D13, and D15 operations, has been provided in the Annex to the Study.*

*Additionally, the investor has included in the Study an annexed list of excluded index numbers—i.e., waste index numbers that will not be treated at the plant, although treatment was initially planned for them.*

4. The waste list includes materials from group 10 (wastes from thermal processes), which covers ash, slag, boiler dust, etc.; then wastes from group 17 (construction and demolition waste, including excavated soil from contaminated sites), which includes concrete, bricks, tiles, ceramics, soil, stones, etc.; and soil and stones from group 20 02 (wastes from gardens and parks, including cemetery waste). What is the calorific value of these materials, how do they contribute to and participate in combustion in the boiler, and what is the purpose of their use in the incineration process?

**Response:** *The revised Study annex includes the List of Excluded Waste Index Numbers, as well as the revised List of Waste Index Numbers that may be treated at the plant.*

*Listed waste from group 17 is not envisaged for treatment at the plant (see the List of Excluded Index Numbers). On the other hand, a significant number of wastes from group 10 are not intended for R1 operations, but remained on the list due to a clerical oversight.*

*Wastes that may belong to these groups and are eligible for treatment are characterised by a high ash content. The thermal treatment boiler is capable of treating a pre-prepared waste mixture with a*



maximum ash content of 40%. This capability allows for the treatment of such waste in order to reduce its volume and eliminate certain hazardous properties. Biodegradable waste from group 20 02 can be thermally treated, although the calorific value of these materials may vary significantly depending on their moisture content. The thermal treatment boiler is capable of processing a pre-prepared waste mixture with a maximum moisture content of 50%, thereby enabling the treatment of this type of waste.

5. Energy generation through waste incineration is at the bottom of the waste management hierarchy, with only landfilling ranked lower. What measures will be taken to ensure that waste which can be reused, composted, or recycled is not used as fuel in the Waste-to-Energy Plant? These measures should be added to Chapter 8.

**Response:** Additional clarification has been provided in the revised Study on the following pages: 162–163, 637 (Subchapter 8.3.2.1), 637, 637–638.

6. The waste list includes various types of packaging waste with index numbers from 15 01 01 to 15 01 09, waste from mechanical treatment (group 19 12), plastics under index number 17 02 03 — all of which are recyclable — as well as wood from construction waste (index no. 17 02 01), and waste bark and cork (index no. 03 01 01), which are not subject to the provisions of the Regulation on Technical and Technological Requirements for the Design, Construction, Equipment and Operation of Facilities and Waste Types for Thermal Waste Treatment, Emission Limit Values and Their Monitoring (“Official Gazette of the RS,” No. 103/23), etc.  
These wastes must be removed from the list of waste intended for incineration at the plant in question.

**Response:** Metal and glass waste is not intended for thermal treatment, not even in cases where it is non-recyclable. Consequently, the removal of index numbers 15 01 04 (metal packaging) and 15 01 07 (glass packaging) from the list of waste intended for thermal treatment is accepted. Recyclable waste has significantly higher market value compared to non-recyclable waste; therefore, it is not expected that any recyclable waste will be treated at the said plant.

To ensure compliance with the waste management hierarchy and to guarantee that recyclable waste will not be thermally treated, the following statement has been added to Chapter 8.3.2.1, page 637:

“The acceptance of waste that can be reused or recycled is prohibited.” Since it is not possible to determine whether waste is recyclable based solely on its assigned index number, it is necessary to assess the physical and chemical characteristics of the waste, in order to determine the appropriate method of treatment. This characteristic is most easily illustrated using the example of plastic waste, where combinations such as polyethylene with polyamide are very common and non-recyclable.

The same argument applies to plastic with index number 17 02 03 — construction plastics may contain elastomers, be impregnated with special compounds to enhance heat resistance (such as flame retardants), or be made of thermoset plastic. All of these types are non-recyclable. Wastes not subject to the provisions of the Regulation on Technical and Technological Requirements for the Design, Construction, Equipment and Operation of Facilities and Waste Types for Thermal Waste Treatment, Emission Limit Values and Their Monitoring (“Official Gazette of the RS”, No. 103/2023) are exempt from additional requirements because their use for energy recovery is simplified, commonly applied, and, most importantly, environmentally safe without the need for additional requirements applicable to waste with different characteristics. Consequently, the request to exclude the abovementioned index numbers from the list of waste for thermal treatment at the plant is not justified.

7. In Chapter 3.2, in the first paragraph on page 145, it is stated that the average production of solidified waste to be landfilled is 8,964 m<sup>3</sup>/year, while the maximum is 25,564 m<sup>3</sup>/year. It is necessary to explain such a large difference between the average and maximum quantities of waste to be landfilled. Also, the quantities should be expressed in tonnes, while the landfill capacities should be given on a daily and annual basis.

**Response:** Additional clarification has been provided in the revised Study on pages 158 and 237.



8. In Chapter 3.2.1.2, a quality control laboratory is described where rapid analyses of waste delivered to the plant will be conducted. How reliable are these analyses, especially concerning hazardous waste, and can they reliably determine whether the content of halogenated organic substances is less than 1%?

**Response:** We refer to the answer given to question number 5. Additionally, on page 165, the Study has been supplemented with a table of accredited methods. Also, on page 165 of the revised Study, the following text has been added:

*"If the acceptance control report finds that the waste does not correspond to the pre-acceptance control report and as such is not eligible for reception and thermal treatment at the plant, the Waste Movement Document (WMD) initiated by the generator shall not be finalised, and the waste shall be returned to the generator on the same day with notification of the reasons for non-compliance."*

9. In multiple places in the Study, the abbreviation PCTs has been used for polybrominated triphenyls. Does this refer to polychlorinated terphenyls, or is this abbreviation incorrect?

**Response:** The abbreviation PCTs should be replaced with PBTs. The typographical error has been corrected in the revised Study.

10. At the end of the second sentence of the first paragraph in Chapter 3.2.1.3 *Waste Reception (waste weighing and wheel washing)*, in the part *Waste Weighing*, the following text should be added: "i.e. the Rulebook on the Form of the Hazardous Waste Movement Document, the Form of Advance Notification, the Manner of its Delivery and Filling in Instructions ("Official Gazette of the RS", No. 17/17)", given that the previous part of the sentence refers to both non-hazardous and hazardous waste.

**Response:** On page 167, the Study has been supplemented with the text as specified in the comment.

11. In Table 3.7 on page 157, it is stated that the maximum filling volume is 100 m<sup>3</sup>, while later in the text it is stated that the capacity of the reception bunker is 65 m<sup>3</sup>. These figures need to be clarified.

**Response:** Corrections pertaining to the storage bunkers were made on pages 169–177. A tabular overview of all storage bunkers and their capacities is provided in the Annex to the revised Study.

12. The title of Chapter 3.2.1.7 is "Physical–mechanical pretreatment of **solid** waste (hazardous and non-hazardous)", yet the Chapter refers to a pretreatment line for hazardous waste delivered in IBC containers, drums, etc. The text later states that the waste in IBC containers, drums and jumbo bags may be in either liquid or solid form, which is inconsistent with the Chapter title.

**Response:** Corrected in accordance with the comment. The title on page 182 has been aligned with the text and now reads as follows: "3.2.1.7 Physical–mechanical pretreatment of hazardous and non-hazardous waste."

13. On page 169, it is stated that in the combustion chamber, within the fluidized bed, the combustion products (i.e., flue gases) reach a temperature in the range of 850 to 930°C. On page 171, it is noted that the amount of oxygen in the bed is the most important parameter influencing heat release and must be maintained in the range of 650 to 800°C. On page 271, it is stated that the lower part of the combustion chamber is filled with sand that is heated to temperatures of 650 to 800°C, while in the upper part of the chamber, the temperature of the gases rises to 850 to 930°C. These statements need to be clarified.

**Response:** The observation refers to a technical type of clerical oversight. The combustion temperature range has been corrected to 850–950°C.

*In the Study Subchapter 3.2.1.8.3 – Boiler, the change in temperature has already been explained. Namely, the lower part of the boiler is filled with a fluidized bed (sand), which is heated to a temperature of 650–800°C. In the upper part of the boiler, the flue gases rising from the lower zone, mix with the upper secondary air. The nozzles are arranged to create a swirling motion of the gas. The flue gases enter this zone in a sub-stoichiometric state and react with the secondary air in the turbulence zone. At the end of this reaction, the flue gases have an excess of oxygen and reach a temperature between 850 and 950°C.*

14. The Study should specify the chemical composition of the chemicals BT-21 and BT-26.



**Response:** The MSDS (Material Safety Data Sheets) for the products Nalco BT-21 and Nalco BT-26 have been provided in the Annex to the Study.

15. On page 180, it is stated that the activated carbon with adsorbed dioxins and heavy metals is mixed with powdered materials on screw conveyors, and that part of this mixture is sent for wet ash treatment, while another part is returned to the reactor via the recirculation conveyor. The question is how it is determined which portion is sent for wet ash treatment and which is returned to the reactor, and what happens to the activated carbon afterwards?

**Response:** Additional clarification has been provided in the revised Study, in Chapter 3.2.1.9 – Flue Gas Cleaning Systems of the Boiler Plant, on page 207.

16. On page 209, the authors of the Study refer to Figure 9 instead of 3.19, which should be corrected.

**Response:** The correction has been made on page 248, in accordance with the comment.

17. The following is stated in the Study in question:

“Upon receipt of each batch of waste, authorised personnel from an accredited laboratory shall take a sample (the minimum quantity of material required for laboratory testing) of the solidified material (solidificate), which will then be analysed in accordance with the Rulebook on Categories, Testing and Classification of Waste (‘Official Gazette of the RS’, Nos. 56/2010, 93/2019, 39/2021 and 65/2024): Disposal of non-reactive hazardous waste at non-hazardous waste landfills.”. Does an external authorised laboratory conduct the analyses of solidified material samples? How frequently are these analyses performed? What is considered a batch, and how long does it take to obtain the analysis results?

Further in the text, it is stated: “For the purpose of obtaining preliminary rapid analyses, testing of collected waste samples will also be carried out within the internal laboratory, which is designed as part of the Waste-to-Energy Plant.”

After establishing a consistent operating regime and standardised formulations of input waste types designated for thermal treatment within the Waste-to-Energy Plant, in accordance with the Regulation on Waste Landfilling (“Official Gazette of the RS”, No. 92/2010), for waste that is regularly produced through the same process and at the same plant, if measurement results show only minor deviations from the limit values for landfill disposal parameters, testing will be conducted upon the first delivery, followed by periodic compliance checks.

The compliance check is a periodic assessment of the waste that is regularly delivered for disposal, to determine whether the parameters of the waste match those obtained during initial landfill waste testing and whether they meet the limit values for parameters for disposal of waste at a non-hazardous landfill. The compliance check will be performed only for those parameters previously identified as critical during the landfill waste testing.

The same testing methods used during the initial landfill waste assessment will be applied in the compliance checks.

The compliance check will be carried out at least once a year, and the landfill operator will ensure that it is conducted in accordance with the scope and frequency defined by the Regulation on Waste Landfilling (“Official Gazette of the RS”, No. 92/2010).

Based on all of the abovementioned, it is necessary to clarify and specify when and how the waste analysis is carried out.

**Response:** Additional clarification has been provided on pages 254–255 of the revised Study. Sampling of the input material (residues from thermal treatment) and physico-chemical testing will be carried out on a daily basis, for the purpose of monitoring the chemical characteristics of combustion residues in the plant's internal laboratory, tracking the stabilisation process and developing formulations for the solidification procedure. The solidification process is preceded by the consolidation of the produced combustion residues, followed by a stabilisation procedure. The curing process lasts a maximum of 14 days. A sample of the material intended for solidification treatment is taken before the solidification process from the storage area, after the completion of homogenisation process using a crane. The sample is analysed by an accredited laboratory, in accordance with the requirements of the Rulebook on Categories, Testing and



*Classification of Waste ("Official Gazette of the RS", Nos. 56/2010, 93/2019, 39/2021, and 65/2024), for the purpose of determining the physico-chemical treatment. Representative sampling of the output material from the solidification process (produced solidified material) from trucks will be conducted using accredited methods. Physico-chemical testing of a composite sample of one batch of 111 tonnes of produced and disposed solidified material will be conducted by an accredited laboratory, in accordance with the requirements of the Rulebook on Categories, Testing and Classification of Waste ("Official Gazette of the RS", Nos. 56/2010, 93/2019, 39/2021, and 65/2024). Detailed mass balances of the solidified material production for disposal at the non-hazardous waste landfill are indicated in the text of the Study.*

18. On page 218, it is stated that in the event of waste being rejected for acceptance, its temporary storage may be allowed in a designated area of the landfill for a period not exceeding four months (to be followed by the addition: "pursuant to Article 22 of the Regulation on Waste Landfilling ('Official Gazette of RS', No. 92/10)"). It is necessary to indicate the area within the landfill where such waste will be temporarily stored.

**Response:** *On page 258 of the revised Study, an amendment has been made in accordance with the comment. Additionally, on the same page in the following paragraph, a section is already included which outlines the management of solidified material that does not meet the acceptance criteria for the landfill.*

19. Are special cells planned at the landfill for non-reactive hazardous waste, or will it be disposed of together with non-hazardous waste without any restrictions?

**Response:** *A clarification has been added on page 26 of the revised Study. Only solidified material is landfilled; therefore, separation by waste types at the landfill is not planned. The aforementioned solidified material may be classified as either non-reactive hazardous or non-hazardous based on its characteristics, in accordance with the Rulebook on Categories, Testing and Classification of Waste ("Official Gazette of RS", Nos. 56/2010, 93/2019, 39/2021, and 65/2024). However, the leachate from the material will correspond to the leachate parameters for non-hazardous waste, as per the same Rulebook. Consequently, separating materials of the same nature is not justified, as it could potentially compromise the stability of the landfill.*

20. In Chapter 3.3.2.2 *Water Use at the Landfill*, on page 242, it is stated that the required amount of water per sprinkler is approximately 6 l/s and that water for landfill spraying, aimed at reducing air pollution, will be provided from the stormwater catch basin. In case of insufficient amount of collected stormwater, is there an alternative solution for spraying the landfill?

**Response:** *On page 284 and in Subchapter 8.3.3 on page 651 of the revised Study, the following text has been added: "In the event of insufficient amount of stormwater for landfill spraying, a water tanker will be provided."*

21. On page 243 of the Study in question, it is stated that a Construction and Demolition Waste Management Plan has been prepared. This Plan should be submitted within the Annex to the Study, along with the approval decision from the Ministry of Environmental Protection, if it has been obtained.

**Response:** *The approval decision for the Construction and Demolition Waste Management Plan for the construction of the waste-to-energy plant and the Construction and Demolition Waste Management Plan for the phased construction of the non-hazardous waste landfill has been obtained. The said plans, together with the approval decisions, have been provided in the Annex of the revised Study.*

22. In Table 3.47 on page 245, it is stated that during the construction of the non-hazardous waste landfill, generation of 1,000 kg of plastic waste with the index number 17 02 03 is expected. What is the origin of this plastic at the location and why is it expected that 10 times more of this waste will be generated at the non-hazardous waste landfill construction site than at the waste-to-energy plant construction site?

**Response:** *1,000 kg of plastic waste is expected for the construction of the entire landfill. Since phased construction of the landfill is envisaged, this value has been adjusted and given for Phase I as 300 kg. The generation of this waste is expected as a scrap from the installation of the waterproofing and protective membranes. Tables 3.46 and 3.47 on pages 286–287 have been corrected in accordance with the amendments to the Construction and Demolition Waste Management Plan.*



23. The comment below Table 3.48 on page 247 reads as follows: “\* BAT- AEL applies only when the organic compounds in question have been identified as relevant in the waste gas stream, based on the inventory referred to in BAT 3 of the BREF document *Commission Implementing Decision (EU) 2018/1147 of 10 August 2018 establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council (notified under document C(2018) 5070)*.” It is necessary to provide the full BAT 3 text following this, to make completely clear what it refers to and under which conditions TVOC emissions will not be monitored after the filter bag and activated carbon filter bag (filter system W-C09), which will be installed for the treatment of the waste gas stream from the pretreatment and waste storage facility.

**Response:** On page 289, the full BAT 3 text from the *Commission Implementing Decision (EU) 2018/1147 of 10 August 2018 establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council (notified under document C(2018) 5070)*, has been provided in accordance with the comment.

24. It is necessary to review BAT 8 of the BREF document *Commission Implementing Decision (EU) 2018/1147 of 10 August 2018 establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council (notified under document C(2018) 5070)*, and, if necessary, to add pollutants that need to be monitored during air emissions to Table 3.48, or provide justification as to why they will not be monitored.

**Response:** Table 3.48, shown on page 289, is already aligned with BAT 8 of the document *Commission Implementing Decision (EU) 2018/1147 of 10 August 2018 establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council (notified under document C (2018) 5070)*.

The treatments listed in BAT 8 that relate to the pretreatment of bulk solid hazardous and non-hazardous waste include: mechanical treatment of waste and mechanical treatment of waste with calorific value. Consequently, for the mechanical treatment of bulk solid hazardous and non-hazardous waste, it is justified to monitor only particulate matter and TVOC, in accordance with the planned waste to be treated on the specified line, and following the recommendation of BAT 3 of the same *Commission Implementing Decision (EU) 2018/1147 of 10 August 2018 establishing best available techniques (BAT) conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council (notified under document C (2018) 5070)*.

25. From the note at the end of the section describing emissions from the pretreatment and waste storage facilities, on page 248, one may conclude that the waste gas treatment system for the pretreatment and waste storage facilities will be used only when the boiler plant is not operational, and that in all other cases, the waste gas stream will be directed to the boiler for combustion. This should be clarified and described in more detail at the beginning of the description of emissions treatment for the pretreatment and waste storage facilities.

**Response:** The filter bag and activated carbon filter bag system (W-C09) purifies air from the pretreatment facility (annex of the W-C08 facility), as well as from the waste storage facility, in cases when the boiler plant is not operational due to maintenance, shutdowns, or other reasons. When the boiler is operational, air from the waste storage facility is used in the combustion process.

The note refers to the waste storage facility. Air from the pretreatment facility is not directed to the boiler but to the W-C09 filter system emitter. On pages 289–290, the facilities are highlighted in bold for easier reference, and the text has been supplemented.

26. In Table 3.50 on page 252, it is stated that according to the Regulation on Limit Values of Air Pollutant Emissions from Stationary Sources of Pollution, Except from Combustion Installations ("Official Gazette of RS", Nos. 111/15 and 83/21), the emission limit value for particulate matter from the emitter of the stabilisation and solidification process is 10 mg/Nm<sup>3</sup>. It is necessary to cite the Annex of the Regulation, the relevant Annex section and the table number from which this value was taken.



**Response:** The supplement has been made on page 295 in accordance with the comment. The following text was added: "Part VII, Table 74."

27. At the end of page 251, the following sentence is repeated: "An adequate number of inspection manholes is planned on the network to ensure proper maintenance." One of the sentences should be deleted.

**Response:** The correction has been made on page 296 in accordance with the comment.

28. On page 259, it is stated that mixed municipal waste will be treated in the boiler plant in question, but this type of waste is not listed in the list of waste types to be treated in the said plant, which is attached to the Study.

**Response:** In accordance with the comment, the text on page 301 in Subchapter 3.4.2.1.3 Waste Generation has been revised to read as follows: "All municipal waste will be separately collected and handed over to an authorised operator for further management."

29. On page 261, in Chapter 3.4.2.1.5, it is stated, among other things, that during the implementation of the project and operation of the equipment, no heat will be emitted, as the technology to be used does not contain a source of heat. This statement should be clarified.

**Response:** The observation has been accepted. The text of the Study has been corrected on page 306.

30. Chapter 3.4.2.2.3 Waste Generation should not include data on waste disposal, but only on waste that will be generated at the Landfill (commercial and municipal waste). Everything that was not previously stated in Chapter 3.2.2 should be moved there, while the rest should be removed from Chapter 3.4.2.2.3, including Table 3.54, which is identical to Table 3.20.

**Response:** Corrections have been made in accordance with the comment. Subchapter 3.2.2.1 on page 307 and Subchapter 3.4.2.2.3 on pages 309–310 have been amended.

31. The labels in the text on page 287 (LPK1,2,3, CV, etc.) should be aligned with the labels on the diagram in Figure 3.30 on page 286.

**Response:** The correction has been made on page 332 in accordance with the comment.

32. The second paragraph of Chapter 3.5.7 on page 299 should be harmonised with the current Law on Waste Management ("Official Gazette of the RS", Nos. 36/09, 88/10, 14/16, 95/18 – as amended, and 35/23).

**Response:** Corrections have been made on pages 345 and 382 in accordance with the comment.

33. On page 304, it is stated that along the boundary of the chemical industry complex expansion in Prahovo, there is a small cluster of residential buildings belonging to the workers' settlement. How many people live there and what is the age structure?

**Response:** In accordance with the comment, the revised Study has been supplemented on page 350.

34. On page 309, it is not stated which year the data in Table 4.4 refer to.

**Response:** In accordance with the comment, the revised Study has been supplemented on page 355.

35. Comment (no response required): The project implementation timeline presented in Chapter 4.6 appears overly ambitious. Even if the construction is completed within the planned period, it is unlikely that all required permits will be obtained in 2025 and in particular it is not realistic to expect that an integrated IPPC permit can be obtained within that period.

**Response:** Corrections have been made on pages 383–384 of the revised Study.

36. The timelines stated in Chapters 4.6 and 4.8 should be aligned, as Chapter 4.6 states that the use permit will be obtained in October 2025, while Chapter 4.8 indicates that construction completion is planned for November–December 2025.

**Response:** A correction has been made on pages 383–384 in accordance with the comment. Please refer to the response given under comment No.35.

37. In Chapter 4.17, it should be noted that the Project Developer, as the operator of an IPPC installation, is obliged to prepare an Environmental Protection Plan for Post-Closure and Decommissioning of the installation.

**Response:** In accordance with the comment, the Study has been supplemented on page 395.

38. Chapter 5.2 mentions national parks and Ramsar sites in Romania and Bulgaria, while Đerdap National Park is minimally addressed. Considering the importance of Đerdap National Park, which is also a



Ramsar site, it should be covered in more detail in Chapter 5 and the potential impact of the project in question on this area should be assessed (in Chapter 6).

**Response:** Completed according to the comment. On pages 116–118 and on page 434 of the revised Study in Subchapter 6.1.4, as well as on page 478 in Subchapter 6.2.4, the Study text has been supplemented.

39. On page 359, it is stated that in one soil sample near the phosphogypsum storage area, concentrations of arsenic (As) and copper (Cu) were found to exceed remediation values. What actions will be taken regarding this soil?

**Response:** The authors wish to draw the reader's attention to the fact that activities related to phosphogypsum are in no way part of the project in question. For the purpose of modelling current and projected conditions within the chemical park, this location was assessed as a baseline point of interest for specific emissions related to the project scope. The operator of the phosphogypsum storage is the company Elixir Prahovo. The elevated concentrations of As and Cu most likely resulted from historical deposition of pyrite cinder and represent legacy pollution. Prior to the removal of the soil layer for the expansion of the phosphogypsum storage, additional investigations will be carried out by Elixir Prahovo.

40. The “Leopold Matrix” presented in Table 6.7 is not very clear. The question is how no environmental protection measures will be undertaken, despite the fact that the project's impact on soil quality, noise levels and public health will be negative? It should be noted that taking soil protection measures also includes proper waste management, noise protection through the selection of less noisy equipment, placing potentially noisy equipment inside enclosed structures, etc.; protection of public health is ensured by treating waste gas streams, wastewater treatment, etc. It is also unclear how the negative impacts will be short-term, given that the expected operational lifetime of the plant is 50 or more years?

**Response:** The comment is accepted and the correction of the “Leopold Matrix” presented in Table 6.7 has been made accordingly (see page 440). All protection measures are listed in Chapter 8.

41. In Chapter 6.2.1, there is a completely unnecessary repetition of information already presented in several other sections, related to the treatment of waste gas streams prior to their release into the atmosphere. This Chapter should focus on the potential impacts on air quality, not on the treatment of pollutants and their air emission limit values. Therefore, subchapters 6.2.1.1.1 to 6.2.1.1.5 are repetitive and not needed in this part of the Study. Also, in Chapter 6.2.1.2.1, Tables 6.17 to 6.19 and the accompanying text, which are repeated throughout the Study, should be removed.

**Response:** The Study has been revised, the text has been shortened, and the tables have been adjusted to present the qualitative and quantitative impact of the respective plant on air quality and the quality of surface waters (Danube River).

42. In Chapter 7, it should be presented on what basis the complex in question is classified as an “upper-tier” Seveso establishment.

**Response:** This Study has identified and selected the most critical points of potential accidents within the Eco Energy complex and presented the possible impacts such events could have on the environment and human health. A complete and detailed analysis of all potential accident scenarios that may occur within the Eco Energy complex, along with a detailed assessment of consequences and risks, the definition of the safety system and measures for prevention and response in case of accidents, will be carried out through the development of documentation required for Seveso establishment operators in accordance with the provisions of the Law on Environmental Protection (“Official Gazette of the RS”, Nos. 135/2004, 36/09 and 36/2009 – as amended, 72/2009 – as amended, and 43/2011 – Constitutional Court decision, 14/2016, 95/2018, and 94/2024 – as amended), Articles 38, 58, 60, and 60a, and in line with the relevant provisions of the following rulebooks: the Rulebook on the List of Hazardous Substances and Their Amounts and the Criteria for Determining the Type of Documents Prepared by the Operator of a Seveso Establishment or Complex (“Official Gazette of the RS”, Nos. 41/2010, 51/2015, and 50/2018), the Rulebook on the Content of the Notification for a New Seveso Establishment or Complex, an Existing Seveso Establishment or Complex, and the Permanent Closure of a Seveso Establishment or Complex (“Official Gazette of the RS”, No. 41/2010), and the Rulebook on the Content of the Accident Prevention Policy and the Content and



*Methodology for Developing the Safety Report and the Accident Protection Plan ("Official Gazette of the RS", No. 41/2010).*

*Additionally, the recently adopted Law on the Control of Major Accident Hazards Involving Hazardous Substances ("Official Gazette of the RS", No. 94/2024) stipulates, among other things, that it also applies to sites involving thermal waste treatment processes and storage related to such processes that involve hazardous substances (Article 3). In accordance with Article 56, the Law shall enter into force on the eighth day following its publication in the "Official Gazette of the Republic of Serbia" and shall apply one year after its entry into force, except for the provisions of this Law related to the obligations of the Republic of Serbia toward the European Union, which shall apply from the day of Serbia's accession to the European Union (Article 56). It is the obligation of the Project Developer to align the documentation and begin applying the provisions of the said law within the prescribed timeframe.*

*Based on all of the abovementioned and the provisions of the Seveso III Directive (2012/18/EU) on the control of major accident hazards involving dangerous substances, i.e., Article 58 of the Law on Environmental Protection and the Rulebook on the List of Hazardous Substances and Their Amounts and the Criteria for Determining the Type of Documents Prepared by the Operator of a Seveso Establishment or Complex, and taking into account the maximum possible quantities of hazardous substances that may be present at any given time within the Eco Energy complex—as listed in Table 1 (List of hazardous substances and their threshold quantities; items 11, 33, 34, 40, and 45), as well as in Table 2 (List of categories of hazardous substances and their threshold quantities, under Section "H" – HEALTH HAZARDS, Section "P" – PHYSICAL HAZARDS, Sections "E1" and "E2" – ENVIRONMENTAL HAZARDS TO AQUATIC SYSTEMS)—the status of the complex has been determined (see the analysis of the respective plant in terms of regulations on chemical accident protection, so-called Seveso establishment, provided in the Annex to the Study). It has been concluded that the complex in question qualifies as a Seveso "upper-tier" establishment, and therefore, the Project Developer is obliged, in accordance with risk management responsibilities, to prepare a Safety Report and an Accident Protection Plan, and to obtain approval for both from the competent authority. Given that these documents, along with the project documentation, will prescribe all necessary measures aimed at preventing accidents and minimizing their consequences, it is considered that any potentially significant environmental impacts (i.e., accident scenarios) resulting from the operation of the complex will be appropriately mitigated through these documents.*

*In the annex of the revised Study, an "Analysis of the Plant in Question from the Perspective of Regulations on Chemical Accident Protection, so-called Seveso Establishments" has been provided.*

43. In Chapter 8, it is necessary to obligate the Project Developer, in accordance with Article 7 of the Regulation on Technical and Technological Requirements for the Design, Construction, Equipment and Operation of Facilities and on Waste Types for Thermal Waste Treatment, Emission Limit Values and Their Monitoring ("Official Gazette of the RS", No. 103/23), to obtain a permit for thermal waste treatment by incineration.

**Response:** *Completed according to the comment. The Study has been supplemented on pages 595-596.*

44. In Chapter 8, it should be added that all emitters must have secured measurement points for monitoring emissions of pollutants into the air, fully in accordance with the SRPS ISO 9096:E standard. The determination of the location and equipment of representative measurement points for emission measurement shall be carried out by an authorised legal entity in accordance with the requirements and recommendations of the SRPS EN 15259 standard. The measurement point shall be established so that it is sufficiently large, easily accessible, and equipped to allow measurements to be performed in the prescribed manner and without danger to the personnel conducting the measurement, also ensuring that the measurements are representative of emissions from the given stationary pollution source and relative to meteorological conditions. In general, it is necessary to ensure that there are no disturbances (such as bends, dampers, openings, etc.) in front of or behind the measurement opening of the emitter over a length of 5 hydraulic diameters of the emitter, to provide conditions for isokinetic sampling of particulate matter. Attention must be paid to this during the design of emitters and sampling openings.

**Response:** *In accordance with the comment, a measure was added in Subchapter 8.3.2.4 "Air Protection Measures" on page 644.*



45. In the corresponding chapter within Chapter 8, the following text should be added: "The Project Developer is, in accordance with Article 16 of the Regulation on Measurement of Air Pollutant Emissions from Stationary Pollution Sources ('Official Gazette of the RS', Nos. 5/16 and 10/24), obligated to prepare an Emission Measurement Plan for all stationary emitters they possess. The Emission Measurement Plan is prepared in cooperation with an authorised legal entity for emission measurement. If changes occur over time at the stationary source (reconstruction, fuel or raw material change, etc.) or if regulations change, 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 Air Pollutant Emissions, of the aforementioned Regulation."

**Response:** *In accordance with the comment, a measure was added in Subchapter 8.3.2.4 "Air Protection Measures" on page 644.*

46. Although stated in Chapter 9, the following text should also be included in the relevant part of Chapter 8: "During the trial operation of a stationary pollution source as part of obtaining the use permit, it is necessary to perform a warranty emission measurement. The warranty measurement shall be carried out under operating conditions at the highest load of the stationary pollution source."

**Response:** *In accordance with the comment, a measure was added in Subchapter 8.3.2.4 "Air Protection Measures" on page 644.*

47. On page 587, in Chapter 9.0, the Law on Environmental Protection is mentioned three times; however, in the third mention, not all *Official Gazettes* in which the amendments to this Law have been published are listed. There is no need to mention *Official Gazettes* every time, but if they are mentioned, all *Official Gazettes* should be correctly listed.

**Response:** *Corrected according to the comment on page 657.*

48. In Chapter 9.1, briefly present the results of analyses of environmental parameters in the vicinity of the relevant location that are significant for the project, regardless of the fact that more detailed analyses are presented in Chapter 5.

**Response:** *Implemented as per comment. The Study has been supplemented on pages 658-660.*

49. Due to an error in several subchapters of Chapter 9.2 *Parameters based on which harmful impacts on the environment can be determined*, it states "Monitoring," and this should be corrected.

**Response:** *Done in accordance with the comment.*

50. The note on page 590, which states that continuous monitoring of mercury can be replaced by long-term sampling, is not valid since low and stable levels of mercury have not been proven. For this reason, mercury should be monitored continuously, and when measurements prove low and stable levels of mercury, then it can switch to long-term sampling. Continuous monitoring of mercury should also be included in Table 9.19.

**Response:** *Done in accordance with the comment.*

51. Pollutants that will be monitored periodically in air emissions should include N<sub>2</sub>O, which should be monitored once a year, regardless of the fact that emission limit values for these pollutants have not been defined.

**Response:** *Done in accordance with the comment.*

52. In Table 9.1 (as well as in the other tables in this chapter that present ELVs), there is no need to include ELVs according to national legislation, as the relevant values will be prescribed by the appropriate BREF document or it should be clearly (bolded) emphasized in this part that for monitoring emissions of pollutants into the air, the relevant values will be those from the BREF document.

**Response:** *Done in accordance with the comment.*

53. There are many typographical errors in the Study that need to be corrected, which can be done with the help of appropriate software.

**Response:** *Corrected in accordance with the comment. Spell check used.*

54. On page 10 of the Tables, the name PCB instead of "**monomethyl-tetrachlorodiphenylmethans**" needs to be corrected to "**monomethyl-tetrachlorodiphenylmethane**".

**Response:** *The comment refers to a typographical error. Correction made on page 10.*



55. On page 79, information regarding devastated agricultural land. It is necessary to provide data on how the land was devastated. Who and how did it get devastated?

**Response:** *The text on page 79 has been supplemented according to the given comment.*

56. On page 90, the third dash, the term **Residula** needs to be corrected and written as **Residue**.

**Response:** *On page 90, corrected in accordance with the comment.*

57. On page 141, line under 7. Table. Mentioning the Filtration System for Pre-treatment and an activated carbon filter. It is necessary to emphasize what form of activated carbon it is? (whether it is block, granulate, or powder) although there is a table with this data in the further text.

**Response:** *In accordance with the comment on pages 83 and 155, the text "powdered" has been added.*

58. On page 149, in the description of waste control and acceptance procedures, there is no information on whether the radioactivity of the waste is checked. There is a statement that this waste is not incinerated. Furthermore, there is no description of how and where the waste that did not meet the control conditions at the reception after internal laboratory analysis is returned; How long does it wait at reception and whether it waits in the vehicle or is temporarily disposed of until the operator makes a decision for incineration?

**Response:** *The subchapter 3.2.1.2 of the Study: Waste acceptance control and waste testing, measuring and acceptance of non-hazardous and hazardous waste already explains the control of radioactivity. Text "quarantine zone" on page 164 has been added so that the text in the revised Study will read as follows: "As part of the acceptance control, testing of the radioactivity of the delivered waste shall be conducted. If the meter detects increased radioactivity, the relevant Republic inspection and Ministry shall be notified immediately, and the driver shall be instructed to park the vehicle in the designated truck parking area (quarantine zone) until the inspector arrives."*

59. On page 156, the incineration of flammable materials is not planned, and in section 3.2.1.5 discusses materials generated in grease and oil separators. Are these products flammable?

**Response:** *Sludge from the grease and oil separators shall undergo the same waste pre-reception and reception as other waste. If it does not meet reception conditions, it will be rejected. Chapter 3.2.1.2 Waste acceptance control and waste testing, measuring and acceptance of non-hazardous and hazardous waste clearly states that all accepted waste will be accompanied by appropriate legally prescribed documentation. It will also be stipulated that any additional testing conducted in accordance with the waste acceptance and pre-acceptance procedures will be added to the documentation of accepted waste in the consolidated database of treated waste. The implementation of requirements under all points BAT 9 and BAT 11 (WI BATC, 2019) is planned through the development of detailed operating procedures for the facility, which are part of the documentation for issuing a permit for trial operation, i.e., the Integrated (IPPC) facility permit, in accordance with the legal regulations of the Republic of Serbia. On page 639 in Chapter 8.3.2.1: Measuring, receiving, and unloading of waste, the following text has been added: 'all legally required documentation, as well as documentation produced by waste pretesting and testing procedures upon receipt shall be combined with the measured weight upon receipt 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.'*

60. On page 174, Table 3.10. Calculated characteristics of fuel – prepared waste material: chlorine content (total) 3.02%, and the share of organic chlorine is less than 1%. How is this interpreted?

**Response:** *The design of thermal treatment technology, the design of the boiler plant and the flue gas purification system have been planned in accordance with the predefined chemical composition of the waste fuel, i.e., the mixture of waste that simultaneously enters the combustion process (thermal treatment), in terms of calorific value, moisture content, ash, chlorine, and other conditions that the waste fuel must meet for the boiler to operate under defined working conditions. The predefined limitations in the chemical composition of the waste fuel serve as the basis for developing recipes, i.e., the limitations that must be met during the operational work of the plant and that must be applied for the preparation of the waste mixture that is simultaneously thermally treated. For any further optimization of the plant's operating regime, which includes the development of recipes and mass balances, the mentioned data is taken as limitations that must not be exceeded. The stated limitations of simultaneous thermal treatment are expressed in Table 3.10.*



*The Study is supplemented on page 197.*

61. On page 176, substances BT-21 and BT-26 are added to the water supply system. It is necessary to provide information on what the chemicals are (regardless of the fact that there is data in tables on page 236).

**Response:** The MSDS product lists Nalco BT-21 and Nalco BT-26 are provided in the annex of the Study.

62. On page 180 - Dry flue gas cleaning. When it comes to gas adsorption, it is unclear what mechanism occurs that heavy metals are adsorbed in the pores of activated carbon? Regarding activated carbon, there is no data on when the filling of activated carbon is changed, how and what is done with saturated carbon.

**Response:** On page 207, the revised Study has been supplemented with an explanation of the dry flue gas cleaning using activated carbon. The added text reads as follows: "In the reactor, there is a contact between flue gases and activated carbon and a mass transfer occurs. Dioxins and heavy metals present in the flue gas are adsorbed on the surface of the activated carbon, i.e., there is a removal of heavy metals and dioxins and furans from the flue gas stream. The extracted solid non-combustible particles and activated carbon particles are collected from the bottom of the reactor with a screw conveyor and sent to a collection screw conveyor. The ash from the bag filter consists of solid non-combustible particles that were generated in the combustion process and carried by the flue gas stream to the bag filter system and particles of activated carbon mixed with non-combustible particles. The solid particles carried by the flue gas collide with the fabric bags that make up the bag filter system and accumulate on their surface. After a sequence of pneumatic cleaning of the bags, the collected solid particles fall into the hopper of the bag filters and are further carried by the screw conveyors under the bag filters to the boiler ash conveyors. The ash is separated onto two screw conveyors. Both conveyors serve three bag filters in a single row. The flows from these two conveyors are collected onto two collecting screw conveyors, from where, along with the separated solid non-combustible particles and activated carbon particles collected at the bottom of the reactor on the conveyor, they are constantly sent to two recirculation conveyors that send the ash and activated carbon to the entrance of the bag filter reactor. The excess ash that cannot be returned to recycling is sent to the system of boiler ash conveyors and directed to the Wet treatment of ash.

In order to successfully carry out the dry purification of flue gases, it is necessary for the gases to have a certain concentration of activated carbon. The role of returning the mixture of activated carbon and ash to the reactor is to increase efficiency and reduce the consumption of activated carbon. After entering the reactor, activated carbon, along with other ashes, settles on the bags of the filter. After shaking the bags, most of the activated carbon is not saturated, so it is returned back to the purification process. The recirculated ash is returned using a frequency-controlled screw conveyor. The amount depends on the process parameters and the mass balance of combustion. The expected consumption of activated carbon during the treatment of the calculated composition of waste is expressed in the attached material balance, at 8 kg/h.

63. On page 187, in second paragraph, the deposition of heavy metals is explained. In previous descriptions, it was stated that heavy metals are adsorbed. This confirms that the previous assertion about the adsorption of heavy metals is not correct.

**Response:** Both statements are correct. The adsorption of heavy metals is carried out using activated carbon in the treatment of flue gases, while lime milk is used in wastewater treatment plants for precipitating heavy metals. The mentioned purification methods function synergistically to reduce unwanted emissions to a technically achievable minimum.

64. On page 202, Capacity of the non-hazardous waste storage - solidified: If the annual production is a maximum of 25,564 m<sup>3</sup>, how many years can it be stored in the intended landfill until full capacity?

**Response:** In the Study, the capacity of the landfill is already shown by phases (see Table 3.20), indicating the minimum lifespan of the landfill for maximum waste production, which is 44.6 years.

65. On page 204, item 3.2.1.13. Auxiliary systems necessary for the operation of the Waste-to-Energy Plant. It is necessary to provide quantities of fluids and matter per year.

**Response:** The comment is accepted. In Chapter 3.2.1.13., the required quantities of fluids and matter are given on an annual basis on page 243.



66. On page 222, item 3.2.2.9. It is necessary to provide information about the anticipated exploitation period of the landfill.

**Response:** *In accordance with the comment on page 263, the following text was added: (the minimum lifespan of the landfill for maximum waste production of 3.08 m<sup>3</sup>/h and an annual working time of 8300 h/year is 44.6 years.)*

67. On page 228, Table 3.30. Dangerous waste characteristics, the acceptance of which is strictly prohibited. If referring to a waste document, the characteristics of which are documented and classified before the waste arrives, it is clear that it will be returned to the waste owner according to the papers.

If it refers to how the operator plans to sample and test in the laboratory, then it is not clear how the laboratory will determine that the waste is explosive, toxic, infectious, etc.? It is defined:

*"In the event that it is determined that the waste does not meet the requirements or the needs of the operator, it shall be immediately returned to the supplier, using the same means of transport that the waste was delivered with."*

It is fine if this is based on documentation, but how long does it take to laboratory test this if it is done in the operator's laboratory? Also, is it even possible to verify it in this laboratory?

**Response:** *That's right. The verification of waste samples begins with an insight into the existing waste documentation, specifically the waste categorization report, while detailed verification will be carried out as part of the pre-acceptance and acceptance procedures, in accordance with the Rulebook on the waste categories, examination and classification (Official Gazette of the Republic of Serbia, Nos. 56/2010, 93/2019, 39/2021, and 65/2024) and the Regulation on technical and technological requirements for the design, construction, equipping, and operation of facilities and types of waste for waste thermal treatment, emission limit values, and their monitoring (Official Gazette of the Republic of Serbia, No. 103/2023).*

*We refer to the response given to question number 5.*

68. On page 229, Table 3.31. List of waste planned for thermal treatment in the Waste-to Energy according to waste groups. A significant number of waste groups listed in the table are not intended for treatment in the Waste-to-Energy Plant due to their hazardous properties or potential hazardous properties, as well as waste groups that are not planned for incineration such as the waste listed under numbers: 02, 05, 06, 07, 08, 14, 17, 18, and possibly some others.

**Response:** *The revised Study includes a List of Excluded Index Numbers, as well as a revised List of Waste Index Numbers that can be treated at the facility. It is not possible to determine whether the waste is suitable for thermal treatment solely based on the assigned index number; it is necessary to consider the physicochemical characteristics of the waste and the technical characteristics of the process in order to determine the adequacy of the treatment method. The annex to the Study provides a consolidated List of index numbers along with the maximum capacities for operations R 1, R 12, and R 13. A specific number of index numbers intended for treatment belong to waste groups 02, 05, 06, 07, 08, 14, 17, 18 in accordance with the recommendations of the technology solution provider (attached Confirmation on Technology Suitability for Treatment of EWC Codes in the Waste-to-Energy Plant in Prahovo – TBU Stubenvoll GmbH Austria and Confirmation on Technology Suitability for Treatment of EWC Codes in the Waste-to-Energy Plant in Prahovo – AK2 Energy GmbH Austria). Treatment is possible only if the waste does not exhibit characteristics for which there is a clearly expressed impossibility of treatment (e.g., radioactive, infectious, flammable, etc.) and if the mixture intended for simultaneous treatment does not exceed the composition limits for which the facility was designed (see Responses to questions 60 and 80).*

69. On page 236, Table 3.37. Concentration of lime in solution (lime milk). It is necessary to write: concentration of calcium hydroxide in aqueous suspension or aqueous suspension of lime. Calcium hydroxide dissolves in water at about 0.2% as stated in the lower part of the table, the rest of the lime is not dissolved but suspended in water.

**Response:** *Corrected according to the comment. On page 278, the text reads: 'Concentration of calcium hydroxide in aqueous suspension.'*

70. On page 238, "Trimercapto-S-triazine," the data on the toxic properties of this compound is missing.

**Response:** *Attached to the revised Study is the MSDS for trimercapto-S-triazine as well as for other auxiliary chemicals.*



71. On page 274 - System of reactors with activated carbon. Data on the replacement time of carbon and annual consumption of activated carbon is missing.

**Response:** We refer to the Response provided for question 62.

72. On page 281, item 3.5.3.3. Selective catalytic filter. Second paragraph of the text: instead of **nitrogen dicoside** it should be **nitrogen dioxide**. (The Study contains several textual errors that have not been corrected, and some, such as the names of chemicals, must be corrected).

**Response:** Corrected according to the comment. Spell check used.

73. On page 323, Table 4.7. Some of the waste not intended for use in this installation have been analysed: whole waste tyres, waste wood, paint and lacquer residue...

**Response:** The annex of the revised Study provides a List of Excluded Index Numbers, as well as a revised List of Index Numbers of waste that can be treated at the facility. Table 4.7 presents treatment options for different types of waste through various thermal treatment processes and represents one of the reasons for selecting the respective technological solution.

74. On page 347, Chapter: Emergency plans, with a statement that the facility belongs to the Upper tier Seveso installation. After the listed hazardous materials, the quantities and types of materials based on which this conclusion was reached should be stated.

**Response:** We refer to the Response provided for question 42.

75. On page 354 - Women Protection Service: It is stated that: "the second group of diseases by frequency includes: Pregnancy, childbirth and the puerperium". - Are the mentioned conditions considered diseases or something else?

**Response:** Yes, they are considered a group of diseases according to the International Classification of Diseases (ICD) and fall under group XV Pregnancy, childbirth and the puerperium.

76. On pages 353 to 355 - Analysis of diseases and morbidity, but there is no information on the cause of illness and the relation to previous industrial activities. Is there such data in any Study?

**Response:** According to our knowledge, there is no available data.

77. On page 381 in Chapter 6.0 Description of possible significant impacts of the Project on the environment This chapter is detailed and professionally addressed. All forms of the Project's impact on the environment have been defined: An overview of possible changes in the environment during the project implementation, project operation, and termination of the project. The possible impacts on air, water, soil, the ecosystem, and public health have been analysed and assessed. An analysis of the cumulative impact on air quality has been carried out. Positions of the impact were modelled at distances of 3 km, 5 km, 10 km, and 25 km from the emitters.

The analysis of the obtained results concerning the components currently emitted (CO, SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, HF, HCl, NH<sub>3</sub>CO) and those that will be emitted from the future facility, including the landfill for non-hazardous waste, concluded that the dominant influence comes from existing emitters (within the Elixir Prahovo and Phosphea complex), or in the case of particulate matter, from surface sources for both the current and future state (phosphogypsum storage), while the impact of the future Waste-to-Energy Plant on waste and non-hazardous waste landfills (solidified) is practically negligible. It has been determined that for some components (SO<sub>2</sub>, PM<sub>10</sub>, and HF), there is a possibility of episodic high concentrations in the case of extremely unfavourable meteorological conditions from the perspective of dispersion, but that the number of hours/days with those concentrations is extremely small, meaning there is a low probability that this will occur at all.

- It has been determined that the cause of these potential episodic increased concentrations are the existing emitters of CO<sub>2</sub> and HF within the operations of Elixir Prahovo, specifically the disposal site for phosphogypsum in the case of PM<sub>10</sub>, both in the current and future state. Thus, the mentioned episodic emissions are not a potential consequence of the operation of the future Waste-to-Energy Plant and the landfill for non-hazardous waste.

- Furthermore, potential zones with exceedances of the limit values of the specified components occur on uninhabited areas in close proximity to the boundary of the chemical industry complex in Prahovo.



- When it comes to components that are currently not being emitted and that will only be emitted in the future from the waste incineration plant's emitters (Hg and PCDD/F), modelling results indicate that the concentrations of these pollutants will be far below the prescribed limit values.

- Analysing the obtained results, it can be concluded that the impact of the waste pre-treatment filter system and the activated carbon filter within the waste-to-energy facility on the air quality of the broader area of the chemical industry complex in Prahovo is practically negligible in terms of PM10 and TVOC.

- Furthermore, it is evident from the presented results that within the specified facility, the dominant influence on air quality in both cases, when the boiler plant is in operation and when it is not, comes from the emitters of auxiliary systems (waste preparation and solidification).

- It should also be noted that there is no prescribed maximum allowed concentration for TVOC in ambient air, and the aforementioned Study presents only an indicative value for indoor air quality.

Regarding the potential transboundary impact of the subject facilities on air quality in neighbouring Romania and Bulgaria, the following conclusion has been reached:

- Considering that due to the location of the chemical industry complex in Prahovo there is a potential transboundary impact on air quality, it should be mentioned that the modelling results indicate that both for the current and future conditions, this impact is generally negligible.

78. On page 456 in Chapter 8. Environmental Impact Assessment in case of an accident. Table 7.4. List of facilities and regulations based on which the requirements related to fire protection are defined: Pre-treatment waste filter system and activated carbon filter – There are no requirements from the aspect of fire protection. This is a sensitive point regarding fire safety, and a member of the Technical Commission believes that there must be requirements concerning fire protection.

On page 358 - For the activated carbon dosing system, it states that it is in the Fire Hazard Zone, and an EH protection execution is planned.

**Response:** *In accordance with Article 30 of the Law on Fire Protection, when designing and constructing facilities that are built in accordance with the law governing the field of planning and building, basic fire protection requirements must be ensured so that in the event of a fire they:*

1. *preserve the load-bearing capacity of the structure for a certain period of time;*
2. *prevent the spread of fire and smoke within the building;*
3. *prevent the spread of fire to adjacent buildings;*
4. *enable safe and secure evacuation of people, i.e., their rescue;*

*Considering that the facility W-C09 Pre-treatment Waste Filter System and activated carbon filter represents an engineering facility<sup>1</sup> for which structural resistance, evacuation of people, and fire spread cannot be considered, and that there are no special measures and fire protection systems prescribed by regulations in the field of fire protection for the respective, the given conclusion is presented in the Study. On the other hand, for areas where there is an explosion hazard, the Rulebook on equipment and protective systems intended for use in potentially explosive atmospheres (Official Gazette of the Republic of Serbia, Nos. 10/17 and 21/2020), and the Regulation on preventive measures for safe and healthy work due to the risk of explosive atmospheres (Official Gazette of the Republic of Serbia, Nos. 101/12 and 12/13) shall apply, according to which the employer is obliged, for the purpose of prevention and protection against explosions, to ensure the implementation of technical and/or organizational measures for safe and healthy work in accordance with the nature of the work being performed, based on priorities, starting from the following principles:*

1. *prevention of the occurrence of explosive atmospheres unless the nature of the work being performed does not allow it;*
2. *avoidance of ignition of explosive atmospheres;*

<sup>1</sup> PLANNING AND BUILDING ACT (Official Gazette of the Republic of Serbia, Nos. 72/2009, 81/2009 - correction 64/2010 – decision of the CC, 24/2011, 121/2012, 42/2013 – decision of the CC, 50/2013 – decision of the CC, 98/2013 – decision of the CC, 132/2014, 145/2014, 83/2018, 31/2019, 37/2019 – other act, 9/2020, 52/2021 and 62/2023): Article 2 item (30) "Engineering facilities" are all other facilities other than buildings: railways, roads, bridges, airport runways, pipelines, communication and electric power lines, etc



### 3. mitigation.

*In accordance with the above, a Hazard Zone Study has been prepared, defining the hazard zones in the respective system in accordance with applicable regulations and standards in this area.*

79. The analysis of all the scenarios of accidents created and their modelling shows no observations, as they have been elaborated in detail and presented at a very professional level.

- A member of the Technical Commission asks the authors of the Study: Why were all probable accidents analysed during the preparation of the Environmental Impact Assessment Study?

In the opinion of the member of the Technical Commission, it would have been sufficient to evaluate the worst possible accident (possibly also some other characteristic case for this type of facility), while all others could be addressed during the preparation of the Safety Report, where a comprehensive risk assessment of a chemical accident is conducted, as the Environmental Impact Assessment Study is already quite acceptable.

**Response:** *Considering the complexity of the project itself as well as its location, given that the project in question is to be realized in an area near the Romanian and Bulgarian borders, in addition to the worst possible accidents, other relevant accident scenarios have been presented as well.*

80. On page 526 - Measures provided within the Waste-to-Energy Plant, "The Waste-to-Energy Plant is designed based on the Austrian company TBU STUBENVOLL GMBH, which has proven references with similar type installations across Europe. What does similar type mean? In searching for data for the mentioned company, a member of the Technical Commission did not find the indicated projects of 'similar type'.

**Response:** *TBU Stubenvoll GMBH has references in the design of plants for the thermal treatment of hazardous and non-hazardous waste, as indicated on the front page of the company's web presentation. Furthermore, we highlight that one of the references for TBU Stubenvoll GMBH is the ABRG Arnoldstein plant in Austria, which treats hazardous and non-hazardous waste in a BFB boiler (incineration in a fluidized bed) for energy recovery (ABRG – Abfall Behandlung & Recycling GmbH), which confirms the compliance of technological solutions with EU standards set for these plants and adherence to regulations in this field.*

*This explanation has been added to page 144 of the revised Study.*

81. The opinion on the Study submitted by the Association: Centre for Ecology and Sustainable Development (CESD), Subotica, signed by Professor Dr. Filip Kokalj, is professional, detailed, and extensive (80 items on 42 pages). In most cases, it is well-formulated. Considering the significant number of comments, questions, and proposals provided, the member of the Technical Commission decided not to provide their opinion on it until a Response is received from the group of authors of the Study. After that, the member of the Technical Commission would give their opinion.

**Response:** *Responses to the questions formulated in the letter from the Association CESD were provided as a separate letter. Additionally, all accepted suggestions are an integral part of the text of the revised Study.*

82. Chapter: Waste management area:

The waste list contains types of waste that cannot be treated in an incinerator (waste vehicles that do not contain either liquids or other hazardous components, metal packaging, metals, fluorescent tubes, cameras, toners, soil and stone, concrete, bricks – waste from group 17, cork, .....).

The review of the extract from the Conceptual design found that the waste intended for incineration is only presented through waste groups, and index numbers according to the Waste Catalogue have not been defined; Additionally, it is only stated in the description of the technological process that the facility is designed to perform thermal treatment of various non-recyclable types of waste: solid non-hazardous and hazardous waste, sludges, and liquid non-hazardous and hazardous waste/industrial, commercial, and municipal waste. The question arises as to who is responsible for all types of waste listed and which document proves and confirms which types of waste can be incinerated at this facility? Waste from subgroup 20 03 (other municipal waste) is also not listed by index number, and it should be noted that the provisions of the Law on Waste Management do not apply to certain types of waste



from this subgroup (e.g., sludge from sewage systems and contents of septic tanks); the same applies to wastewater (leachate from sanitary landfills).

The Law on Waste Management prohibits the incineration of waste that meets the standards for reuse or recovery.

**Response:** The attachment to the revised Study provides a consolidated list of index numbers with maximum capacities for operations R 1, R 12, and R 13, as well as a list of index numbers with capacities for D operations. The authors refer to Responses to questions 3, 4, 5, 60, 68, and 80. Special attention is drawn to the Response given to question 80 and the documented attachments of the revised Study:

- Confirmation on Technology Suitability for Treatment of EWC Codes in the Waste-To-Energy Plant in Prahovo – TBU Stubenvoll GmbH Austria.
- Confirmation on Technology Suitability for Treatment of EWC Codes in the Waste-To-Energy Plant in Prahovo – AK2 Energy GmbH Austria.

83. Chapter: Landfill for non-hazardous waste:

The Study developer needs to provide a clearer representation of the landfill capacity (e.g., in a tabular format), i.e., the amount of waste disposed of on a daily and annual basis, in tons (capacities are given in cubic meters in the Study).

As stated in the Study: "In accordance with the projected capacity of the stabilization and solidification facility, it is planned that a maximum of 360 m<sup>3</sup> per day of solidified material will be transported from the Waste-to-Energy Plant location to the non-hazardous waste landfill..." Is that amount of waste being transported to the landfill also the maximum daily amount of waste that will be disposed of?

**Response:** In the attachment to the revised Study, there is a list of index numbers with capacities for D operations, within which operation D5 (disposal of solid waste in the landfill) is presented with expressed daily and annual capacity. The capacity is presented in tabular form.

84. Chapter: Storage of non-hazardous and hazardous waste:

The Study states that waste will be sorted and stored based on its physical-chemical characteristics, before the formation of a mixture for thermal treatment. According to the presented layout of the storage, it is not evident that separate storage of different categories of waste is being conducted (considering the large number of waste types). A more detailed presentation of the organization of non-hazardous and hazardous waste storage is needed.

**Response:** The comment is accepted. In accordance with BAT 9b in Chapter 3.2.1.1 Previous check and acceptance of waste on page 162, the text of the Study has been supplemented. In Chapter 3.2.1.2 Waste acceptance control and waste testing, measuring and acceptance of non-hazardous and hazardous waste, it is clearly stated that every accepted waste shall be accompanied by adequate legally prescribed documentation. Additionally, it will be stipulated that all further testing carried out according to the waste acceptance and pre-acceptance procedure will be added to the documentation of accepted waste in the consolidated database of treated waste. This requirement foreseen in accordance with BAT 9d will be specifically expressed on page 639 in Chapter 8.3.2.1 Measurement, acceptance, and unloading of waste. Liquid waste is delivered to the relevant facility in truck tanks as described in 3.2.1.6 Transfer and storage of liquid waste. When waste mixing cannot be avoided due to the necessity of preparations for thermal treatment needs, it is necessary to foresee operational procedures in accordance with BAT 9f, found on page 639 in Chapter 8.3.2.1 Measurement, acceptance and unloading of waste, where an explanation will be provided. The measures provided in Chapter 8.3.2.1 Measurement, acceptance and unloading of waste include conducting quick analyses to verify the compliance of waste composition with the announced composition, longer laboratory checks of additional parameters, compatibility analysis, measurement of radioactivity, measurement of mass, and visual inspection, etc., which correspond to the recommendations of BAT 11 (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 Parliament and the Council for waste incineration (notified under documents C(2019)7987). The implementation of requirements in all points of BAT 9 and BAT 11 (BATC WI, 2019) is planned through the development of detailed operational procedures for the plant, which are part of the documentation for



issuing a trial operation permit, i.e. the Integrated (IPPC) permit of the plant, in accordance with the legal regulations of the Republic of Serbia.

The method of storing received, accepted waste is explained in Chapter 3.2.1.4-6.

Attached to the revised Study, please find a tabular overview of all storage bunkers and their capacities. We are providing with the revised Study the capacities of waste storage intended for thermal treatment (R 13 operation).

85. The Study does not specify whether a designated space for the temporary storage of waste that is not accepted in the incinerator is provided and defined at the location.

**Response:** On page 164 of the Study, it is stated: "As part of the acceptance control, testing of the radioactivity of the delivered waste shall be conducted. If the meter detects increased radioactivity, the relevant Republic inspection and Ministry shall be notified immediately, and the driver shall be instructed to park the vehicle in the designated truck parking area (quarantine zone) until the inspector arrives."

Subchapter 3.2.1.6 Transfer and storage of liquid waste has been supplemented on page 182 according to the given comment.

The following graphic attachments are provided in the Study:

P&ID: 23-WTE-PGD-0702-NN-3009-R00

P&ID: 23-WTE-PGD-0702-NN-3013-R00

In the event that, after additional analysis of the received waste in IBC containers/barrels, it is determined that the waste does not meet the conditions from the requirements or the needs of the operator of the waste container, it will be moved to a designated quarantine zone within the Warehouse for packaged heterogeneous (liquid and sludgy) waste (regional warehouse for IBC containers, barrels, etc.).

86. The question arises (page 248) about the capacity (m<sup>3</sup>/h) of the flue gas purification system resulting from waste combustion (dry purification, wet purification, selective catalytic filter)? Although data exist in several places in the Study, in descriptions and tables, it is recommended to have a single tabular summary of all industrial ventilation, filtration, and dedusting systems, with the simplest system name, location, and its capacity (m<sup>3</sup>/h).

**Response:** In accordance with the comment attached, the revision of the Study includes a Summary of industrial ventilation, filtration, and dedusting.

87. The question arises (from pages 267-268) where the described activated carbon filter is located within W-C09 in Figure 3.26?

**Response:** In Figure 3.26, the activated carbon filter is located and marked with 01EBM 90 AT 002.

88. On page 267, it is necessary to clarify the use of alternative ventilation from the pre-treatment and from the boiler bunker. It is likely that LKP1-4 is used, not the fan(s). The explanation in two paragraphs beginning with 'Also...' and 'Namely...' is not very clear. If the boiler plant is in operation, then it will not be able to operate the intake (with the same air extraction of 24,000 m<sup>3</sup>/h). See Figure 3.26.

**Response:** In accordance with the comment in the attachment, the revision of the Study has provided a Summary. **Response:** It should be noted that in the facility called W-C08 Waste pre-treatment and storage, are separate areas of storage and pre-treatment, with two pre-treatment lines existing. The line for the pre-treatment of bulk solid hazardous and non-hazardous waste is located in the area marked 0.4 (00 EBC 00 EBC 001) and the line for the pre-treatment of hazardous waste (delivered in IBC containers, barrels, jumbo bags, etc.) is in the area marked 0.8 (00 EBC 02 EBC 001) (see Figure 3.3).

The air extraction of 24,000 m<sup>3</sup>/h is from the Line for the pretreatment of bulk solid hazardous and non-hazardous waste (0.4 (00 EBC 00 EB 001)), and that air goes for purification through the Pretreatment filter system and an activated carbon filter (figure 3.26). It does not go to the boiler.

The air from the waste storage facility, when the boiler is operating, is used for waste combustion. The amount of air extracted from the storage facility and sent to the boiler is conditioned by the required amount of air for combustion, which ranges from 23-47,000 Nm<sup>3</sup>/h depending on the current capacity of the boiler plant and the characteristics of the waste. Otherwise, when the boiler is not operating, the air from the storage facility is sent for purification through the Pre-treatment filter system and the activated carbon filter.

The combustion air in the boiler is taken from the fresh air outside the storage facility.



89. On page 267 in the last paragraph it says: 'The pipeline of the dedusting system is sized to always provide the necessary minimum speed for particle transport... to prevent its sedimentation.' What is the value (m/s)? This is very important for preventing accidents and harmful impacts on the environment.

**Response:** The comment is accepted. An appendix to the revised Study contains the calculations and sizing of the aspiration of the waste pre-treatment filter and activated carbon filter systems and the stabilization and solidification of the filter system, along with the overview of gas flow speeds in the pipeline.

90. On page 271 it states: "Ventilation of the space where the pretreatment of hazardous waste will take place ... of an axial wall fan with a capacity of 3500 m<sup>3</sup>/h." What kind of filtration is planned before discharge into the environment? If not, explain why. Compare with the following paragraph ... "ventilation from the digester with filtration."

**Response:** For physical-mechanical pretreatment of hazardous and non-hazardous waste, two lines for physical-mechanical waste pretreatment are planned (see subchapter 3.2.1.7) as follows:

- Line for pre-treatment of bulk solid non-hazardous and hazardous waste (waste railway sleepers, etc.) and
- Line for pre-treatment of hazardous waste (imported in IBC containers, barrels, etc.). The line for pre-treatment of bulk solid hazardous and non-hazardous waste includes a dedusting and ventilation system consisting of extraction hoods, pipelines, a filter unit with accompanying equipment, activated carbon filters, fans with a capacity of 24,000 m<sup>3</sup>/h, and an emitter (chimney) through which purified air is released into the atmosphere. The project specifies that the extraction hoods will be placed at connection points on the equipment itself (primary shredder, belt conveyors, metal separator, secondary shredder). On the collection pipeline of these extraction points, there is also an intended connection to a pipeline planned for ventilating the hall, i.e. the pre-treatment facility. The line for pre-treatment of bulk solid hazardous and non-hazardous waste (Figure 3.5 in the Study) is specified in the annex of the W-C08 facility in the area marked 0.4 (00 EBS 00 EB 001).

For the Line for the pretreatment of hazardous waste (delivered in IBC containers, barrels, jumbo bags, etc.), ventilation is provided in the area where the chamber for the pretreatment of hazardous waste is located, through an axial wall fan with a floating louver with a capacity of 3,500 m<sup>3</sup>/h. The air compensation supply is from the facade of the facility. The line for the pretreatment of hazardous waste (delivered in IBC containers, barrels, jumbo bags, etc.) is intended in a separate room in building W-C08 Pretreatment of Hazardous Waste.

Therefore, it is about the space where the chamber for the pretreatment of hazardous waste is located. This means that the waste treatment is of a closed type. The ventilation of the space around the chamber is done through an axial wall fan with a floating louver with a capacity of 3,500 m<sup>3</sup>/h and filtration is not provided.

To clarify, the text on page 315 has been supplemented and reformulated. The digesters are batch units and are located within the central laboratory in facility W-C01 Reception desk and administrative building, while the pretreatment lines are located in facility W-C08 Pretreatment of hazardous waste.

91. It is recommended that on one page of the Study, a so-called "Emitter Cadastre" is created in the form of a summary with clearly defined emitters from the facility into the surrounding air, so that effective measurements can be carried out later.

**Response:** In accordance with the comment, please find the Emitter Cadastre in the attachment of the revised Study.

92. It is necessary to submit clear (but not extensive) technical evidence that the planned air emissions into the environment, after filtration, will be less than ELVs.

**Response:** The project of mechanical installations has performed the calculation of pressure drop, sizing and selection of the bag filter, calculation of the fan as well as height of the emitter, based on the requirement that ELVs at the emitter must not exceed the prescribed values of emission according to the Conclusions on Best Available Techniques for waste incineration: 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 Parliament and of the Council, for waste incineration and Conclusions on Best Available Techniques for waste treatment: Commission Implementing Decision (EU) 2018/1147 of 10



*August 2018 establishing Best Available Techniques (BAT) Conclusions for waste treatment, under Directive 2010/75/EU of the European Parliament and of the Council.*

*Bag filters are equipped with a device for measuring the pressure drop of air through the filter, and thus, due to the increase in pressure drop, the bag shaking systems are activated or the bag filters are replaced as necessary. The characteristics of the filters obtained from calculations are presented in Chapter 3 of the Study.*

*It is the obligation of the Project Developer to require the supplier to provide guarantees when selecting and purchasing equipment, guaranteeing that the selected equipment will ensure the designed efficiency of the filter system, and thus guarantee the emission output values at the emitter that must be within the prescribed ELVs.*

*After the launch of production, i.e. when conducting trial operation of the facility, it is necessary to first carry out guarantee measurements, in order to compare the measured values of emissions of pollutants with the emission limit values defined in Tables 9.1 and 9.2.*

*In accordance with the aforementioned as well as in accordance with the response to question 46, it is additionally stipulated on page 644 within Chapter 8.3.2.4: Air protection measures.*

93. It is necessary to take into account the comments of the public concerned of the Association: Centre for Ecology and Sustainable Development (CESD) Subotica, signed by Professor Dr. Filip Kokalj, as well as the comments of the public concerned from Bulgaria and Romania.

**Response:** *The comment has been acted upon.*

94. All comments should be answered in a taxative manner with mandatory reference (to pages, tables, figures, etc.) in the Study where corrections have been made.

The amended and supplemented version of the Study with attachments, aligned with all the stated comments, requirements, and suggestions, was submitted to the Ministry on 1 April 2025.

The following documents were prepared and submitted as attachments to the Study document:

- Analysis of the state of environmental factors, Autorski biro Belgrade, which established the zero state of environmental factors through monitoring air quality, testing of surface and groundwater, analysing soil samples, measuring air pollution, and examining noise levels in the complex and in the nearest settlements
- Biodiversity Study of the impact zone of the Chemical Industry Complex ELIXIR PRAHOVO – Industrija hemijskih proizvoda d.o.o. Prahovo, Institute for Biological Research “Siniša Stanković”
- Study on the impact of the waste-to-energy plant and non-hazardous waste landfill on air quality in the wider location of the Chemical Industry Complex in Prahovo, Faculty of Mechanical Engineering, University of Belgrade
- Study of the impact of the pre-treatment waste filter system and activated carbon filter within the waste-to-energy plant on the air quality in the wider location of the Chemical Industry Complex in Prahovo, Faculty of Mechanical Engineering, University of Belgrade
- Study of the impact of the waste-to-energy plant on the concentrations of selected heavy metals in the air in the wider location of the Chemical Industry Complex in Prahovo, Faculty of Mechanical Engineering, University of Belgrade
- Review of the project compliance with the Conclusions on the Best Available Techniques (EU BAT Conclusions), Elixir Engineering.

With the amended and supplemented version of the Study along with the attachments, the revised documentation and Responses to the comments submitted by the Ministry of Environmental Protection of



the Republic of Serbia in letter no. 002500932 2024 dated 28 January 2025, were provided, clearly indicating the places in the Study where changes and supplements were made:

- Amended and supplemented Environmental Impact Assessment Study for the project of constructing a waste-to-energy plant on cadastral parcel numbers: 1420/1, 1420/4, 1491/1, 1541/1, 1541/2, 5824/1, 6513/1, 6513/2 in the Cadastral Municipality of Prahovo, Negotin Municipality, and the phased construction of a non-hazardous waste landfill within the Chemical Industry Complex ELIXIR PRAHOVO on cadastral parcel numbers: 2300/1, 1491/1, and 1541/1 in the Cadastral Municipality of Prahovo, Negotin Municipality, with amended attachments in Serbian – a printed copy in Serbian language and six copies in electronic form on USB.
- Amended and supplemented Offprint – Non-technical brief overview of the data mentioned in the Study in Serbian language – printed copy in Serbian and six copies in electronic form on USB.
- Responses to the comments submitted by the Ministry of Environmental Protection of the Republic of Serbia by letter No. 002500932 2024 dated 28 January 2025 – printed copy in Serbian language and six copies in electronic form on USB, namely:
  - Responses to the comments of the Technical Commission for the assessment of the Environmental Impact Assessment Study
  - Responses to the comments of the Association: Centre for Ecology and Sustainable Development" (CESD) from Subotica, signed by Prof. Dr. Filip Kokalj
  - Responses to the comments of the Ministry of Environment, Water and Forests of Romania
  - Responses to the comments of the Ministry of Environment and Water of the Republic of Bulgaria

The Ministry of Environment and Water of the Republic of Bulgaria, by letter no. 04-00-949 dated 21 May 2025, provided its final opinion in which it stated that, in order to minimize the likelihood of transboundary health risks, measures for the protection of human health, namely measures to prevent and mitigate the impact on human health in a transboundary context, which are provided in the documentation of the Environmental Impact Assessment Study, both during the construction of the project and during its operation, should be included in the decision approving the implementation of the project as mandatory measures to be implemented, while there are no other proposals and/or requests.

The amended and supplemented version of the Study with attachments and additional submitted documentation has been forwarded to all members of the Technical Commission.

After reviewing and analysing the amended and supplemented Study with attachments and additional submitted documentation, at the meeting held on 28 May 2025, the Technical Commission established that the document of the amended and supplemented Study with attachments has been corrected and aligned with all requirements, comments, and suggestions, and that it may be accepted.

After the implementation of the procedures defined by national legislation and transboundary notifications and consultations with potentially affected parties, namely Romania and the Republic of Bulgaria, arising from the Espoo Convention (Law on the Ratification of the Convention on Environmental Impact Assessment in a Transboundary Context, *Official Gazette of the Republic of Serbia*, No. 102/2007), by reviewing the submitted document of the Study with attachments, modified and supplemented chapters, it was concluded that the Developer has taken into account and observed all requests, comments, and suggestions and accordingly made amendments and supplements to the Study.



Based on all of the above, the adoption of this Decision was preceded by the implementation of the following legal procedures:

- Legally prescribed procedure, ensuring the participation of the interested public, authorities, and organizations through advertisements in printed media and via the Ministry's website, was carried out.
- Procedure that arises from the Law on the Ratification of the Convention on the Environmental Impact Assessment in a Transboundary Context (*Official Gazette of the Republic of Serbia*, No. 102/2007), which included informing and transboundary consultations with potentially affected parties, namely Romania and the Republic of Bulgaria, was carried out.
- A public presentation and public discussion were held in the premises of the Negotin Municipality.
- The interested public, authorities, and organizations have been given the opportunity to submit observations, opinions, and comments.
- At the meetings of the Technical Commission, all observations and comments were discussed, and the Project Developer was asked to provide argued responses to them and to amend and supplement the Study document accordingly.
- The proposed technical solutions have been aligned with relevant BREF documents and EU BAT Conclusions, as well as with prescribed ELVs that apply to new constructions.
- Dispersion modelling of pollutants has been conducted, showing that under the most unfavourable meteorological conditions and full load, maximum pollutant levels will remain below the permissible concentrations defined for ambient air.
- Construction of a facility for the treatment of all types of wastewater to the quality prescribed for discharge into the recipient – the Danube River, is planned.

The Ministry of Environment, Water and Forests of Romania, in a subsequent letter No. DGEICPSC/5673/02.06.2025 dated 2 June 2025 stated that the entire procedure was carried out in a satisfactory manner, and, in order to limit the impact on the environment and minimize the likelihood of transboundary health risks, particularly related to chemical contamination and deterioration of water quality in the Danube River, as well as air pollution, especially in the event of an emergency and possible exposure to harmful chemicals, it requests that the following conditions be included as mandatory in the upcoming administrative act that will be issued by the competent authority of the Republic of Serbia for the project:

1. In the case of an imminent threat to the environment, damage, or in the case of environmental damage caused in the territory of Romania by the activities of the project, the competent authority of the Republic of Serbia will provide the Minister of Environment, Water, and Forests of Romania with information related to the imminent threat of environmental damage or to the environmental damage caused (location, territorial scope, and type of caused or imminently threatening environmental damage, causes of the imminent threat or environmental damage, presumed consequences of environmental damage, recommendations for preventive or corrective measures, preventive or corrective measures taken so far, other circumstances and facts related to the caused environmental damage or measures taken to prevent the occurrence of environmental damage), as well as information on relevant national procedures of the Republic of Serbia.
2. Before the implementation of the investment project, the Republic of Romania will receive emergency situation and disaster plans. The plans will contain a detailed description of specific measures and preventive actions in emergencies and disasters, as well as the distribution of duties, determining responsible authorities and legal entities for the implementation of the foreseen security measures;
3. With the aim of monitoring the potential impact of the project's implementation on the state of the Danube River:



- establishing a procedure whereby the Republic of Romania will regularly receive from the official Serbian authorities the results of the planned periodic monitoring of wastewater quality and the quality of the Danube River;

- the Romanian party will be informed in a timely manner of any accidents or incident/contamination during the construction and operation of the project that may contaminate the water of the Danube River;

4. With the aim of monitoring the potential impact of the project's implementation on air quality:

- ensuring a procedure by which the Republic of Romania will regularly receive from the official Serbian authorities the results of planned periodic monitoring of dioxin and furan emissions from waste thermal treatment installations;

- the Romanian party will be informed in a timely manner of any accidents or incident/contamination during the construction and operation of the project that has the potential to cause transboundary air pollution.

In addition to the above, there are no other proposals and/or requests.

All measures for environmental protection and protection of human health, as well as activities for monitoring environmental impact, as stated in the letters from the Ministry of Environment and Water of the Republic of Bulgaria No. 04-00-949 dated 21 May, and the Ministry of Environment, Water and Forests of Romania No. DGEICPSC/5673/02.06.2025, dated 2 June 2025, are an integral part of the Environmental Impact Assessment Study of the project, in Chapters 8 and 9, which the Project Developer must implement and comply with during the construction and operation of the project in question, including most certainly the transboundary context, as stated in items 3 and 6 of the enacting terms of this Decision, thereby fulfilling the requirement that these measures and activities be an integral part of the decision on granting consent to the respective Study.

The competent authorities of the potentially affected parties by this project, namely Romania and the Republic of Bulgaria, will be granted access to the data and reports available in accordance with the implemented activities of monitoring the environmental impact of the project as specified in the Environmental Impact Assessment Study under item 1 of this Decision (Chapter 9 of the respective Study) by the competent authorities of the Republic of Serbia.

Approval may be granted for the Environmental Impact Assessment Study of the project for the construction of a waste-to-energy facility and the phased construction of a non-hazardous waste landfill, as it provides sufficient data for assessing the adequacy of the foreseen measures for preventing, reducing, and eliminating possible harmful impacts of the project on the state of the environment at the site and its vicinity, during project execution, operation of the facility, in case of accidents, and after the facility ceases operation.

Based on the conducted procedure and the recommendations of the Technical Commission, it has been decided as stated in the enacting terms of this Decision.

The Project Developer is obliged, in accordance with Article 28 paragraph 1 of the Law on Environmental Impact Assessment (*Official Gazette of the Republic of Serbia*, Nos. 135/2004 and 36/2009), to commence the implementation of the project referred to in item 1 of this Decision within two years from the date of receiving this Decision.

The Decision on granting consent and the relevant Environmental Impact Assessment Study are integral parts of the documentation required to obtain a permit or approval to start the implementation of the project, in accordance with Article 18 of the Law on Environmental Impact Assessment (*Official Gazette of the Republic of Serbia*, Nos. 135/2004 and 36/2009).


Pursuant to Article 33 of the Law on Environmental Impact Assessment (*Official Gazette of the Republic of Serbia*, Nos. 135/2004 and 36/2009) and Article 139 paragraph 2 of the Law on General Administrative Procedure (*Official Gazette of the Republic of Serbia*, Nos. 18/2016 and 95/2018-authentic interpretation



and 2/2023 - decision of the Constitutional Court), a separate decision on the costs of the procedure will be issued.

**Instruction of legal remedy:** This Decision is final in the administrative procedure. No appeal is allowed against it. The Project Developer and the public concerned may initiate an administrative dispute by filing a lawsuit to the Administrative Court in Belgrade, Nemanjina 9, within 30 days from the date of receipt of this decision, or from the date of its publication in the media. The court fee for the lawsuit is RSD 390.00.

Processed by:	Zoran Veljković
Reviewed by:	Jelica Vojnović
Approved by:	Aleksandra Imširagić Djurić, Assistant Minister

STATE SECRETARY  
  
Aleksandar Dujanović

**Deliver to:**

- Project Developer
- Sector for Supervision and Preventive Action in the Environment
- Archives