



ENVIRONMENTAL STATEMENT

2022

LEOBENDORF PLANT

Kwizda

Agro

COMMITTED TO HEALTH, CONNECTED TO NATURE

People are increasingly becoming aware of the importance of ensuring an adequate supply of high-quality food from regional producers. Accordingly, they increasingly see agriculture as an industry that should be kept domestic. At the same time, the Green Deal means that farmers must meet requirements in the areas of climate protection and biodiversity, which many perceive as an area rife with tension.

In Kwizda Agro's view, however, economic goals can be pursued while still protecting the environment. In fact, it is impossible to achieve one without the other because a healthy environment is required to grow healthy plants.

Our New Technologies business unit collaborates with our partners to develop products exclusively based on microorganisms, natural extracts, and mineral elements that can be used in organic and conventional spray plans. Our role model and source of inspiration is nature, whose protective mechanisms, active ingredients, and defensive tactics can be utilized in crop protection. Our broad international network of partners provides the basis for our operations. After all, the current challenges require an intensive level of cooperation and mutual exchange of knowledge. However, we also rely on our know-how in the toll processing area, in which the proportion of organic products is constantly increasing, as well as in advising local farmers and hobby gardeners.

This allows us to provide environmentally friendly plant protection in agriculture as well as in-home and gardening contexts. This means:

- the highest possible proportion of organic solutions
- the optimal interaction of various plant protection measures
- constant optimization of the spraying schedules and applications to promote plant health and environmental protection.

This is how we promote the health of the plants, the soil, and the environment. And it also advances our vision for the modern, future-proof, and socially acceptable use of crop protection products.

Kwizda Agro also continuously invests in climate-friendly measures at its own production facilities. We aim to use as much energy as possible from renewable resources and to use environmentally friendly packaging solutions at our production facilities. To this end, we will take appropriate measures in the coming years.

This demonstrates that economic and environmental goals are not mutually exclusive. Rather, there are numerous ways and opportunities to overcome both challenges at the same time. As a result, it will be possible to jointly implement the vision of a sustainable and growing economy and agricultural sector that society accepts, as laid down in the Green Deal.

Assured growth.

ENVIRONMENTAL STATEMENT 2022

in accordance with Regulation (EC) No 2009/1221 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS III).

Kwizda Agro GmbH

Werk Leobendorf

Kwizda Allee/Laaer Straße 1 2100 Leobendorf

NACE Code: 20.20

Reporting period: 2021

Statement by Kwizda Agro GmbH on the entry of the Leobendorf plant into the EMAS Register in accordance with Article 15 of the Austrian Environmental Management Act (Umweltmanagementgesetz (UMG)):

The initial assessment of the environmental statement (2015) of the Leobendorf plant by the environmental assessment organisation ETA Umweltmanagement GmbH took place in April 2015. A declaration of validity was issued.

Kwizda Agro subsequently applied to the Environment Agency Austria for the Leobendorf site to be entered in the EMAS Register.

However, the plant could not be entered because the environmental proceedings against Kwizda Agro GmbH (see Chapter 1 - Pollution of the groundwater body "Korneuburger Buch" by the Leobendorf plant) have not yet been concluded and hence the formal prerequisites for registration in accordance with Article 15 of the Environmental Management Act are not currently met.

As it appears today, it is likely that the proceedings will be concluded once the remedial measures have been completed. The environmental statement was updated in March 2022 and reassessed and approved by the environmental assessment organisation ETA in May 2022.

In the interest of transparency, we believe it is important to publish the 2022 revised environmental statement of Kwizda Agro GmbH.

Executive Board of Kwizda Agro GmbH



WORDS OF THE MANAGEMENT

THINK HOLISTICALLY, ACT SUSTAINABLY, AND COMMUNICATE OPENLY.

As a family-owned business, we see it as our responsibility to do business in such a way that future generations will inherit not only a stable economic system that can provide the basis for their prosperity but also an intact environment that is worth living in. Therefore, we adopt measures in different areas to meet the challenge of the Green Deal:

1. At the Leobendorf factory, we rely on environmentally friendly and sustainable production processes, the responsible use of resources, and the use of the latest technology. This enables us to meet the highest standards in terms of sustainability, health and safety, and quality management.
2. Kwizda Agro wants to increase the proportion of green electricity to 100 per cent in five years, of which around 13 per cent will be generated from a photovoltaic system to be installed in 2023 on the grounds of our factory in Leobendorf. With the Kwigge project, we are establishing an energy monitoring solution in order to increase energy efficiency at the same time. We also want to make e-mobility more attractive for our employees by providing appropriate electric car charging infrastructure.
3. We have established a logistics system based on short distances, which we are constantly improving.
4. For our own products and in the biocides area, we continue to develop packaging systems and rely on innovative and recycled materials.
5. In the New Technologies business unit, we are developing organic solutions for crop protection. Kwizda Agro relies on international partners with whom it develops solutions to drive innovation and take advantage of mutual strengths. These products complement the company's existing product portfolio and allow for climate-friendly and future-proof agriculture and forestry.

With our factory's ISO 14001 and EMAS certifications, we also use proven management tools to evaluate and improve our environmental impact and performance. By publishing these figures in this environmental statement, we continue to pursue an open and transparent communication process with our residents, partners, and stakeholders. We stand for equal dialogue with our partners and customers. Because that, too, is the responsibility of a family company that acts sustainably.

Dipl.-Ing. Ronald HAMEDL
Managing Director

Dkfm. Dr. Johann F. KWIZDA
Managing Director

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CORPORATE POLICY

OF KWIZDA AGRO GMBH

The management of Kwizda Agro GmbH and the heads of the Tolling division manage the area of operations in accordance with the principles of an integrated management system.

The Leobendorf plant is certified in accordance with the following systems:

- § ISO 9001:2015 (Quality Management)
- § ISO 14001:2015 (Environmental management)
- § ISO 45001:2018 (Occupational Health & Safety)
- § EMAS (Sustainable Environmental Management)



THEREFORE WE SUBSCRIBE TO THE FOLLOWING PRINCIPLES FOR OUR CORPORATE POLICY:

Long-term, responsible corporate action represents a major part of our corporate philosophy, which is why we have set the following principles for our corporate policy:



We satisfy the needs of our customers
We produce high-quality products
We guarantee environmentally friendly production



We are in constant communication with our external stakeholders
We ensure we are compliant with legal requirements



We create long-term jobs
We offer opportunities for training and development and excellent conditions for our employees



We use our integrated management systems to continuously improve our performance in the areas of quality, environment, and safety



We protect the soil, air, and water through the careful handling of hazardous substances and our extensive technical efforts.



We strive for long-term partnerships and maintain a transparent approach
We act responsibly and see ourselves as a reliable partner

THE COMPANY

RELIABILITY,
VARIETY,
INNOVATION,
AND DECISION-MAKING POWER



THE COMPANY

SUSTAINABLE INNOVATION FOR THE ECONOMY AND THE ENVIRONMENT

Kwizda Agro is the professional partner for plant protection and plant nutrition in research, industry and agriculture, as well as the private sector. In order to enjoy successful growth, we rely on proximity to our customers, distribution know-how, and contract production arrangements. We also invest in the development of organic insecticides, fungicides, and repellents for agriculture, forestry, and consumers. As a family-owned business, we are focused on more than just the short-term. Rather, we are focused on creating corporate value through reliability, diversity, innovation, and improving decision-making power.

Kwizda Agro is part of the Kwizda Group, which, in addition to the Agro business area, is also active in the pharmaceutical, pharmaceutical trade, pharmaceutical distribution, pharmaceutical service, cosmetics, and sealing systems business areas. With more than 1,400 employees, the Kwizda Group is active in its home market of Austria, where it occupies leading market positions in the life sciences in industry and trade. In the 2021 financial year, the Group generated sales of over one billion euros.

After its founding in 1926 in Austria, Kwizda Agro has now extended its commercial activities across the globe. Our products and solutions are proven to be highly efficient and reliable. However, irrespective of conventional or biological plant protection, of biocides or production for specific customers, environmental considerations are our priority. We operate to the highest of standards taking the utmost care and are continuously expanding our core competencies

within formulation development, registration and sales. To complement all of this we operate one of the safest and most modern production plants in Central Europe, the Kwizda Agro plant in Leobendorf, Austria.

At Kwizda Agro we cooperate closely with international research institutes and with start-up companies to share innovative ideas and gain access to the latest active substances. By collaborating in this way our goal is to improve and further develop our products and solutions. All of our new product developments are based on biologically active substances or mechanisms making them suitable for application in both biological and conventional agriculture and forestry. But also, in the area of toll production, we are steadily increasing the proportion of organic solutions and products thanks to our know-how in formulations.

Our innovations include the Xilon®, which is based on microorganisms and which, in addition to protecting against soil-borne fungi, also increases plant and soil health. This makes it the first organic soil fungicide that is active across a broad spectrum and has multiple applications for field crops. In 2020, Xilon® was recognized as the best organic plant protection product of the year.

Xilon® represents just the initial product in a series of further organic in-house developments in which we take nature as a model in order to offer farmers and foresters efficient solutions. However, relying on the power of nature is not a new idea at Kwizda Agro. In developing Trico®, which has since also been approved for wildlife browsing in the USA, Kwizda Agro relied on natural active ingredients that are suitable for sustainable crop production.

Kwizda Agro does not see itself just as a partner of agriculture and forestry. We pride ourselves on the breadth of our portfolio, offering pest control experts and hobby gardeners an extensive and innovative range of products from our home and garden range.

In the future, trap products will also be made from environmentally friendly materials that have been developed in recent years. They are characterized by durability and long service life. We are also constantly looking for ways to optimize the packaging of our products. In the area of biocides, for example, we will increase the proportion of reused and recycled packaging and reduce the use of plastic and other materials.



Harnessing the power of nature



DESCRIPTION OF THE LEOBENDORF SITE

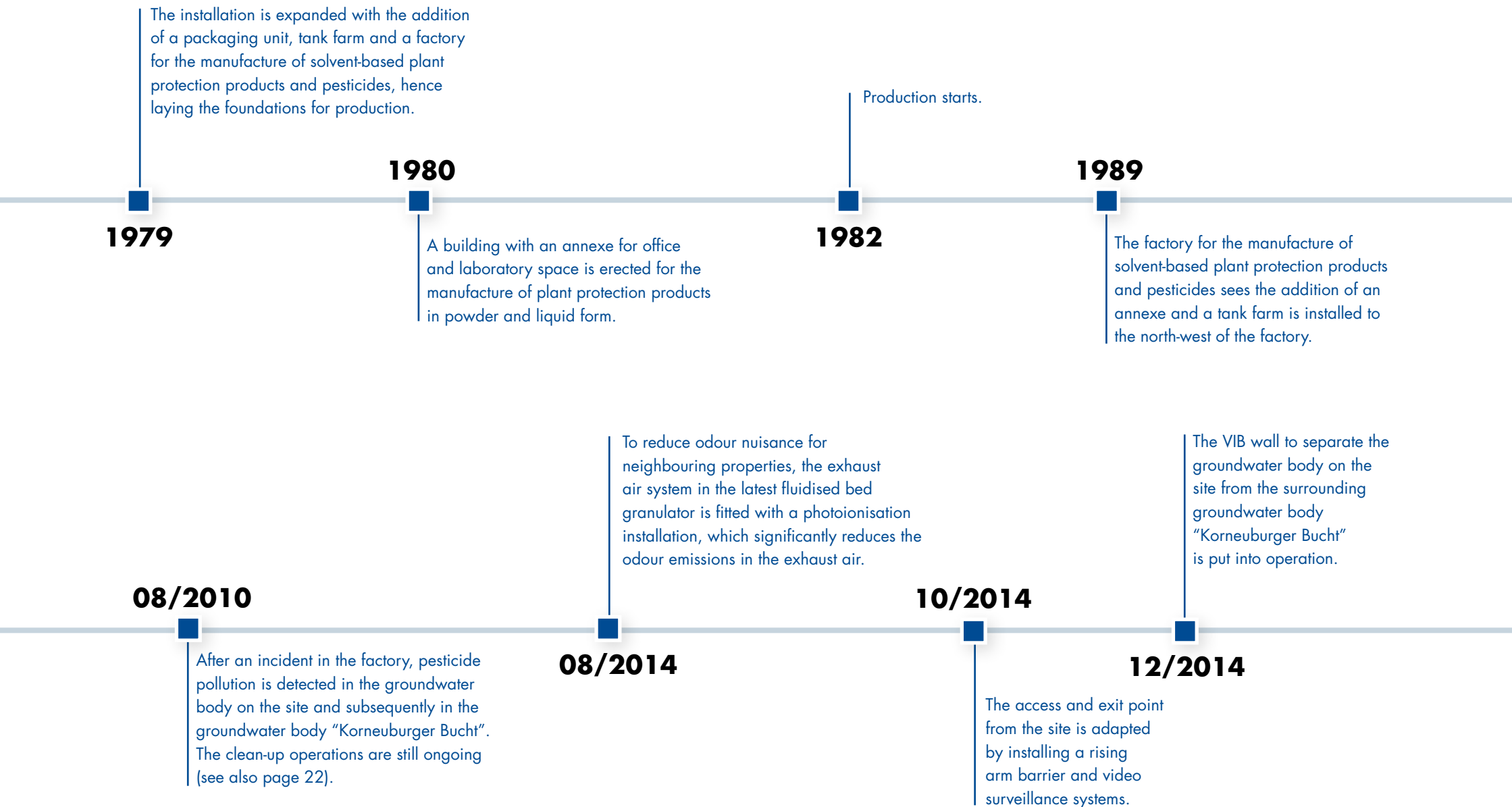
The environmental management system covers Kwizda Agro GmbH's Leobendorf plant and all its employees. Our 156 employees produced and supplied around 12.979 tonnes of plant protection products in our 2021 business year, representing a turnover of some 28 million euros.

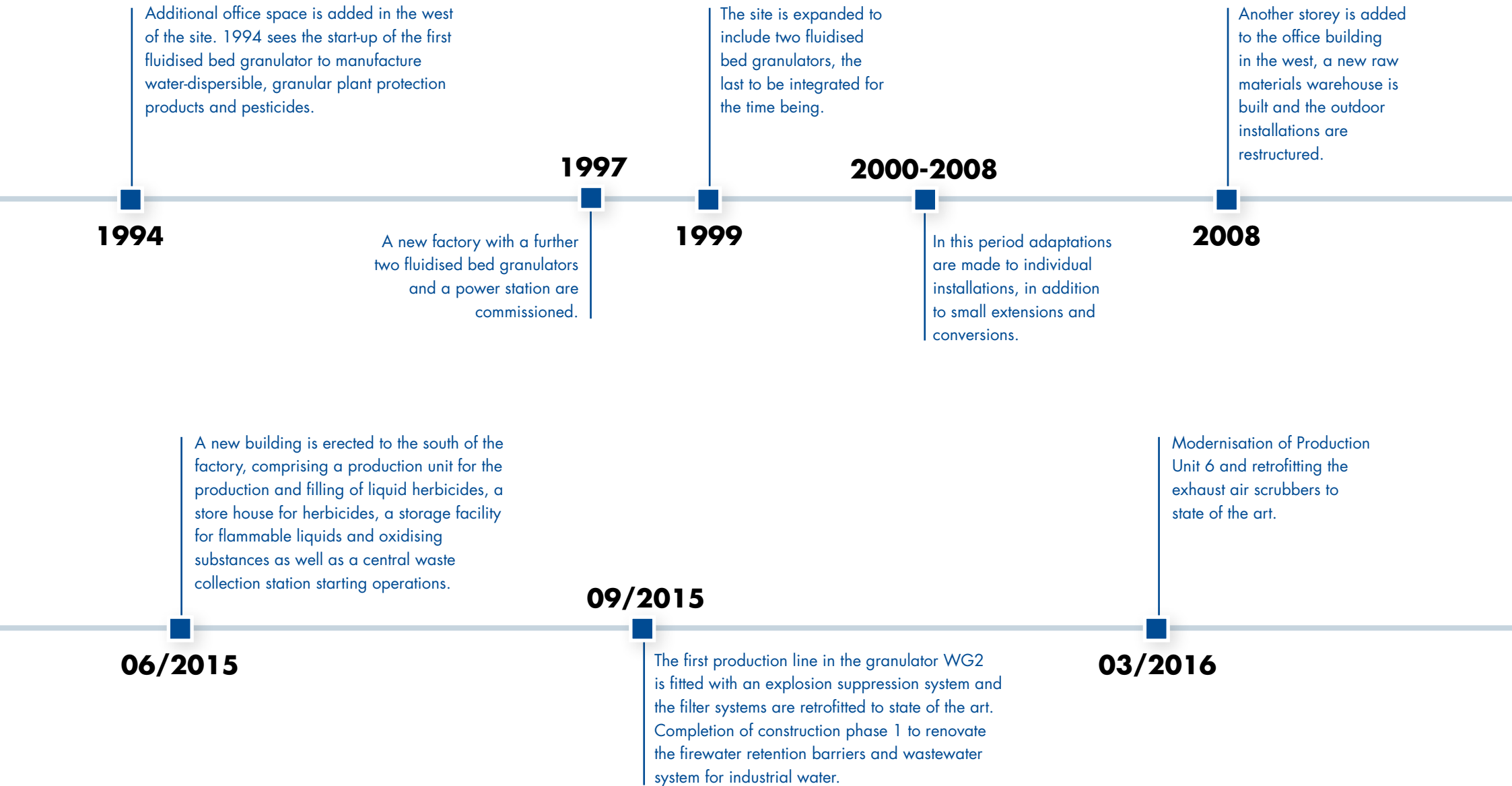
GEOGRAPHICAL LOCATION

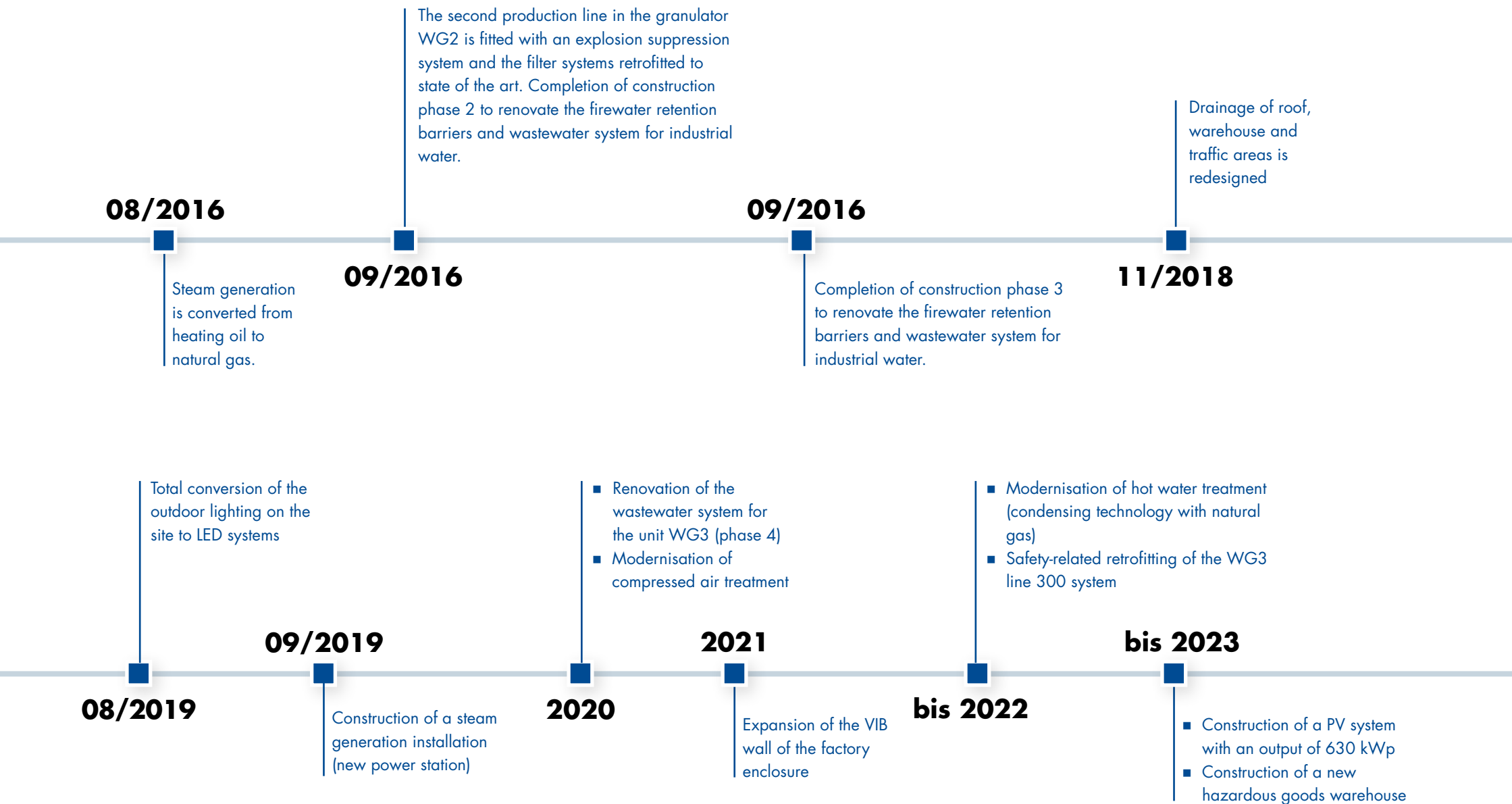
The operational facilities are on the industrial estate at Laaer Strasse/Kwizda Allee1 in Leobendorf, a market town to the north of Vienna. They can be reached from the west via the A22 motorway, exit Korneuburg West, and the S1 dual carriageway, exit Korneuburg Nord; from the south take the B6. Access is from the Kwizda Allee.



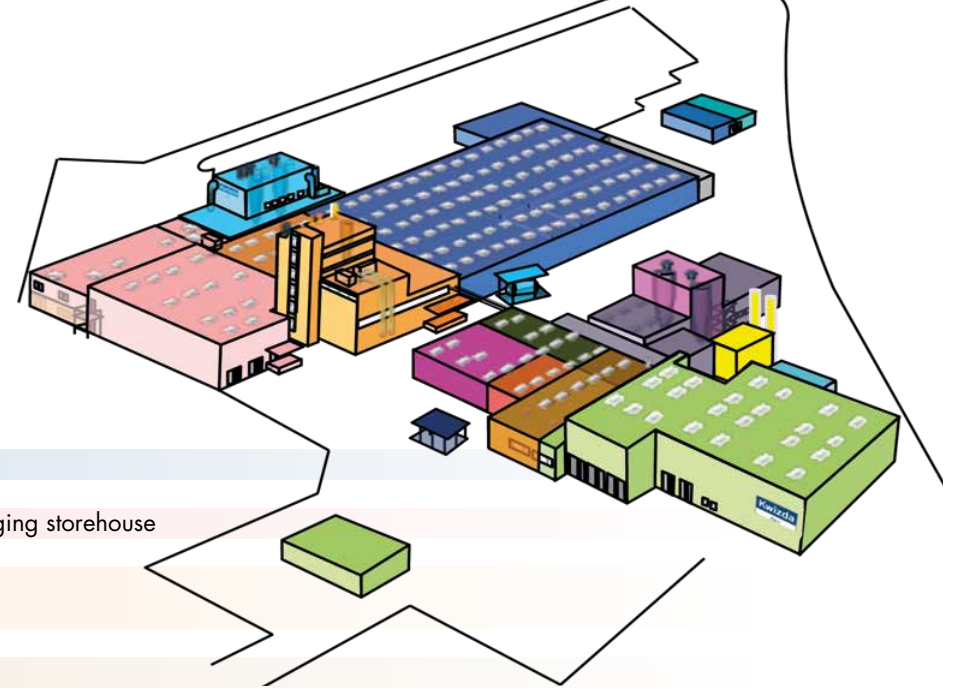
HISTORY OF THE LEOBENDORF SITE







CONSTRUCTION PHASES



1978 Phase 1	Finished goods warehouse (formerly "central warehouse"), East Offices
1979 Phase 2	Liquid herbicide factory (production, filling and packaging), tank farm and packaging storehouse
1980 Phase 3	"Production tower" factory building – liquid and powder insecticides, fungicides (production, filling and packaging); office and laboratory space
1989 Phase 4	Annexe to liquid herbicide factory (production, filling and packaging); tank farm
1992 Phase 5	Expansion of warehouse "E"
1994 Phase 6	Annexe to West Offices, adaptation of the production tower, installation of the first fluidised bed granulator (WG1 – insecticides/fungicides; production, filling and packaging)
1997 Phase 7	Factory insecticides/fungicides or (separate) herbicides with 2 fluidised bed granulators, one each for insecticides/fungicides or herbicides (WG2; production, filling and packaging – only herbicides); power house
1999 Phase 8	Annexe to factory insecticides/fungicides with 2 fluidised bed granulators (WG3; production, filling and packaging)
2008 Phase 9	Storey added to "West Office Building"; annexe added to raw materials warehouse
2012 Phase 10	Various modifications (construction of workshop in Unit 7, adaptation of the preparation unit for liquid herbicides and production of liquid herbicides)
2014 Phase 11	Factory enclosure – construction of thin diaphragm wall and water treatment installation
2015 Phase 12	Expansion of the herbicide installation with a factory for production/bottling of liquid herbicides; annexe to storehouse for herbicides, flammable liquids and oxidising substances; creation of the "waste island"
2015 Phase 13	Adaptation of wastewater disposal installations ("tank farm"), expansion of the firewater retention barriers and start of work to renovate wastewater pipes
2016-17 Phase 14	Modernisation of production unit 6, conversion of WG2
2019 Phase 15	Construction of a power station
2021 Phase 16	Expansion of the VIB wall of the factory enclosure

KEY DATA ON THE PLANT

AREAL DATA

Floor area
92.000 m²

13.425 m²	Gross floor area buildings	5.400 m²	Raw materials and finished goods warehouses
880 m²	Supply of utilities	350 m²	Laboratory, technical centre
6.165 m²	Production	1.600 m²	Office space

EMPLOYEES

Total
156

21	Sales and administration	9	Store
53	Production / Packaging	9	Maintenance, Engineering
21	Quality Assurance/Product Development	43	Leased employees (temporary)

OUTPUT

Output
2021

4.730 t/a	Granulates	2.675 t/a	Suspensions, suspension granulates
2.876 t/a	Emulsions, emulsion concentrates	1.201 t/a	Other formulations

ANNEXES

ANNEXES
2021

5 Fluidised bed granulators

60 Stirrer and disperser as well as filling and storage containers

10 Ball mills

11 Bottling and filling installations (for powders, granulates and liquids)

2 Dry product blenders

4 Micro capsule machines

19 Dry filter installations to clean exhaust air of volatile organic components and dust particles

2 Boiler to generate saturated steam (total output 6,400 kg saturated steam/hour), fired by natural gas

2 Hot water boilers (output 620 kW each), fired by light heating oil

3 Water quenches to generate process cooling

4 Compressors to supply compressed air

1 Water treatment plant for treating process water

3 Transformer substations

6 Heat chambers for melting active ingredients

POLLUTION OF THE GROUNDWATER BODY "KORNEUBURGER BUCHT" BY THE LEOBENDORF PLANT AND REMEDIAL MEASURES TAKEN

After an incident concerning a wastewater collection pit in August 2010, pollution (traces of Thiamethoxam) of the groundwater body on the factory site was found. As an emergency measure the wastewater collection system and the wastewater collection pits were taken out of operation and subsequently thoroughly cleaned.

A series of remediation wells with activated carbon filters were installed on the site and in the downstream region of the site to prevent further spreading of the pollution or to eliminate pollutants. With these 14 wells, part of the polluted groundwater was removed from the groundwater body, cleaned using activated carbon and allowed to drain away in the downstream area of the installations or channelled into the Danube via an outfall ditch ("Donaugraben"). In the course of 2011 additional pollution caused by decomposition products (metabolites) from Thiamethoxam was detected in the groundwater of the residential area of Korneuburg in addition to the previously identified insecticide Thiamethoxam.

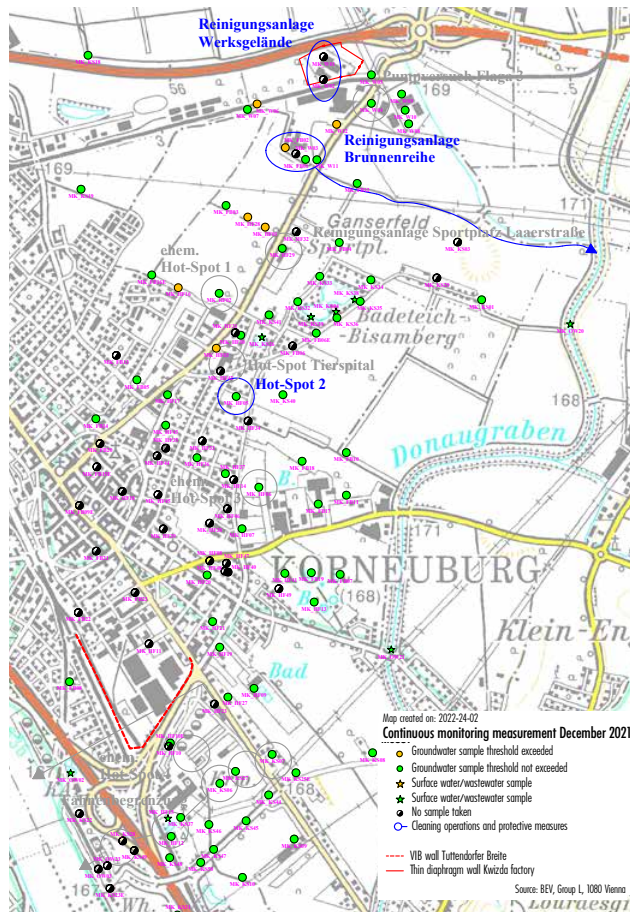
Consequently, in spring 2012, in addition to the two rows of remediation wells – at selected points in the contamination plume – several purification installations were erected (so-called hotspots) and brought into operation. The polluted groundwater around these hotspots was cleaned to drinking water quality using activated carbon and allowed to drain away in the downstream area of the installations.

In autumn 2012 further pesticides (Clopyralid, Florasulam and Flumetsulam) were detected in the groundwater of the Korneuburg residential area; the regional administrative authority of Korneuburg then ordered a comprehensive remedial design by external experts. The remedial measure proposed by the experts to prevent further spreading of pollution (limitation of the plume) was to erect an additional row of remediation wells, to feed the groundwater into the Danube and, as long-term protection for groundwater use by removing the contaminated groundwater, to adapt the existing activated carbon filter installations.

The proposals of the team of experts were implemented in the first half of 2013 with great success: By December 2020 clean-up operations on around 12,2 million m³ groundwater removed 66.8 kg active ingredients in pesticides (almost 100% of the total pollutant load) from the groundwater (see diagram on page 24).

In criminal proceedings heard before the regional criminal court in Korneuburg in November 2014 Kwizda Agro accepted responsibility for polluting the groundwater. The proceedings ended with diversion ordered for all the accused. Employees of the company were fined between 3,000 and 38,000 euros. Kwizda Agro GmbH itself had to pay a fine of 250,000 euros and in addition to continue cleaning up the groundwater.

Between December 2015 and January 2017 the Agency for Health and Food Safety (Agentur für Gesundheit und Ernährungssicherheit – AGES) undertook irrigation water tests on tomato, lettuce, carrot and bush bean crops using contaminated groundwater (concentration 0.5 and 1 µg/l) taken from the groundwater body "Korneuburger Bucht". The results of the tests proved that no residues of the active ingredients in pesticides (Clopyralid, Thiamethoxam, their metabolites CGA 355190 and CGA 353968 as well as Florasulam and Flumetsulam) could be detected in the produce harvested from the above crops – with the exception of the tomatoes – irrigated with a pesticide load of up to 0.5 µg/l. The residues detected in the tomatoes of 0.014 mg/kg were significantly below the legally prescribed maximum level of 0.5 mg/kg active ingredient/kg of produce harvested.



CONTAMINATION OF THE GROUNDWATER BODY "KORNEUBURGER BUCHT"

There is no risk with regard to the ecotoxicological effects on pollinating insects, and any risk to arthropods, vertebrates, aquatic organisms and soil organisms is very unlikely. Correspondingly it is assumed that the irrigation water with a pesticide load of up to 0.5 µg/l can be used without reservations for market gardening, according to the current state of knowledge.

Due to the advanced level of treatment, adjustments have been made in recent years to the testing intervals, the number of groundwater treatment systems, and pumping capacity.

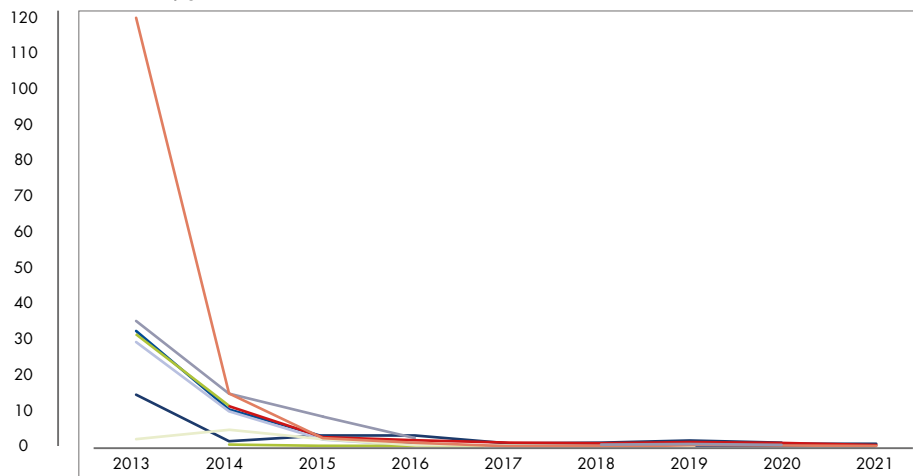
Both installation monitoring and (large) areal monitoring remained unchanged.

From today's perspective we can assume that purification of the groundwater must be continued until the threshold for drinking water (0.1 µg/l) is reached. The proceedings against Kwizda Agro GmbH will continue until further notice.

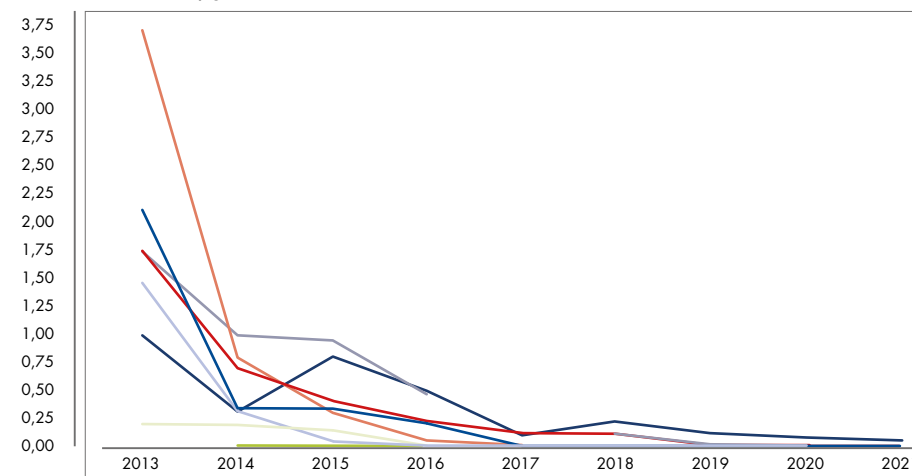
CONTAMINATION OF THE GROUNDWATER BODY "KORNEUBURGER BUCHT"

Due to groundwater remediation, the concentrations of clopyralid and thiamethoxam fell sharply during the 2013–2021 measurement period. At many measuring points, the values are already below the detection limit of 0.025 µg/L. In the case of thiamethoxam, all values obtained from the measuring points are already below the limit value of 0.1 µg/L specified under the drinking water ordinance. Clopyralid values are slowly approaching this value. Samples were not taken from the GW12 measuring point in 2017 and 2021, and no samples were taken from the GW25 measuring point in 2018, so there are no measured values from these sites. Samples only started to be taken from the GW26 measuring point in 2014.

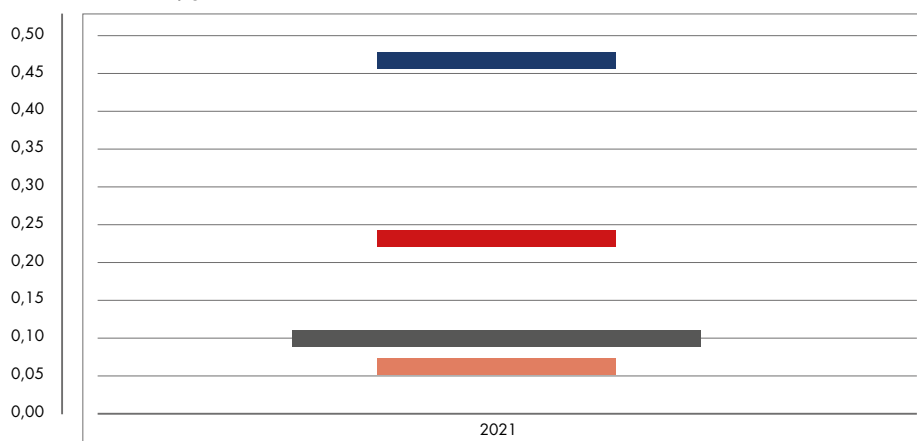
CLOPYRALID [µg/l]



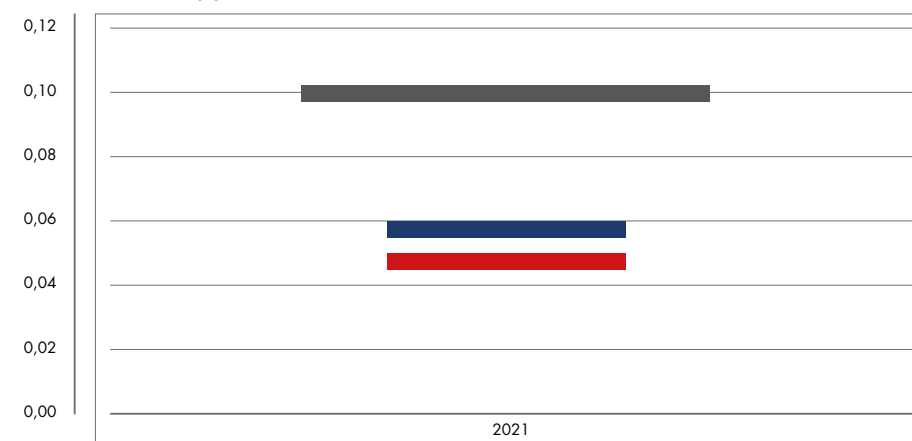
THIAMETHOXAM [µg/l]



CLOPYRALID [µg/l]



THIAMETHOXAM [µg/l]



ADDITIONAL PROTECTION OF THE GROUNDWATER BODY "KORNEUBURGER BUCHT" BY ENCLOSING THE FACTORY SITE WITH A VIB-WALL



Between June and December 2014 the factory was enclosed with a VIB-wall approximately 815m long as a measure to ensure the long-term protection of the groundwater body "Korneuburger Bucht".

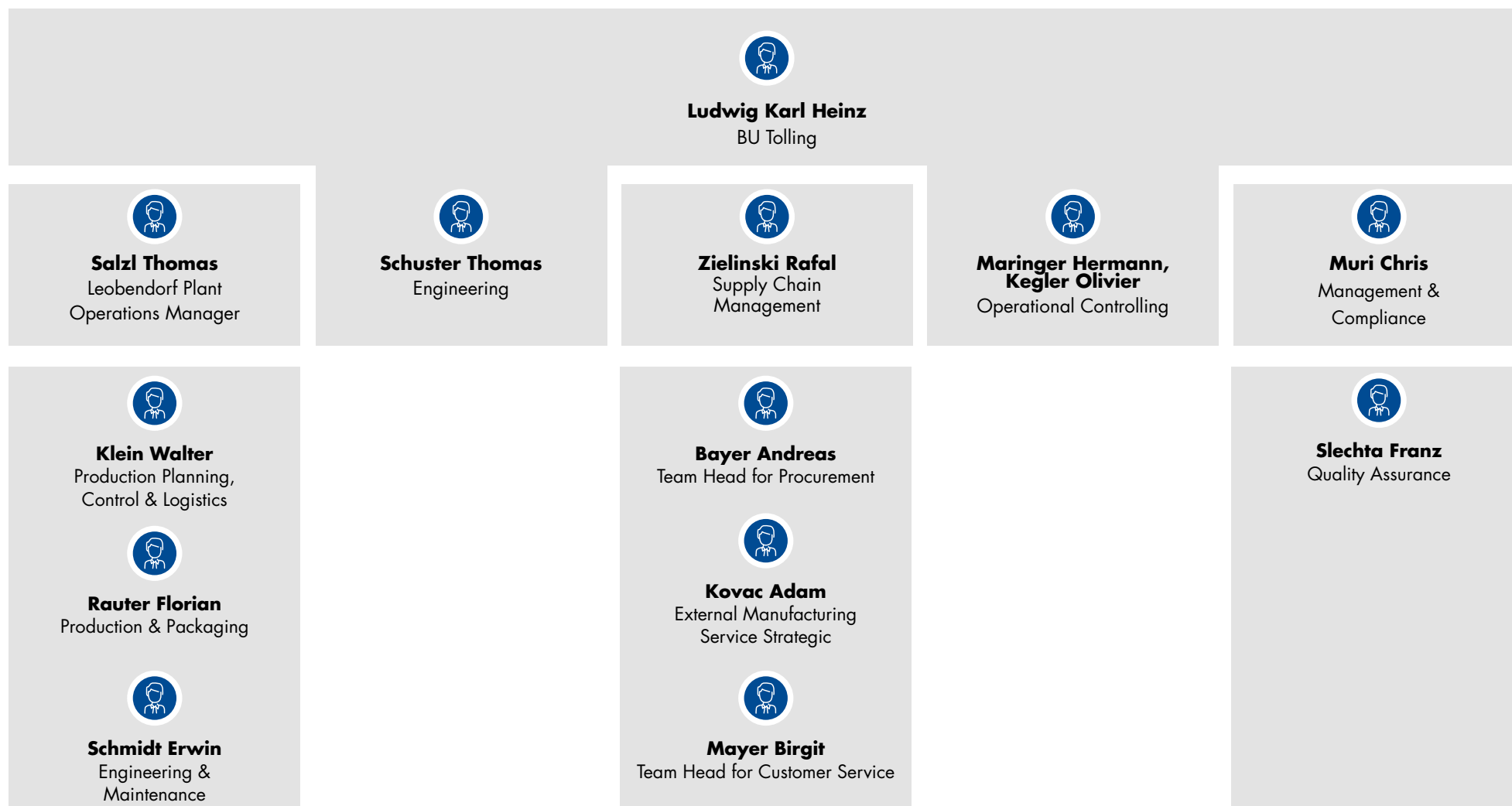
This construction reaches down to the groundwater aquifuge at a depth of around 15 m and separates the groundwater body around the factory from the surrounding groundwater body. It is, therefore, an effective way of preventing potential pollutants from leaching from the site into the groundwater body "Korneuburger Bucht".

Constant pumping keeps the water level on the factory site about 50 cm below the level of the surrounding waterbody. The groundwater that is pumped off is removed on the factory site, purified using activated carbon and allowed to drain away in the downstream area of the surrounding groundwater body.

In 2021, the VIB wall was built around the planned hazardous goods warehouse in the western section of the factory grounds.

ORGANISATION

Kwizda Agro generated strong sales growth in 2020/2021, and it has also expanded its headcount aggressively. Since growth is projected to continue in the coming years, Kwizda Agro must realign its organization as part of its strategy development project. The sales units were decoupled from the manufacturing areas (factories), and a new BU Tolling sales unit was founded. The factories are now combined in the Operations business unit, which also manages all external toll production activities. During the course of the reorganization process, the Formulation & Process Development department was assigned to the management.



SPECIALIST POSITIONS IN OPERATIONS (LEOBENDORF FACTORY)



QUALITY SUPERVISOR
MURI Chris



ENVIRONMENTAL OFFICER
MURI Chris



SAFETY OFFICER/SAFETY SPECIALIST
KACETL Regine



OCCUPATIONAL HEALTH PRACTITIONER
ASZ LINZ, DR. GRÜNER Sylvia



MANAGING DIRECTOR ACC.
TO TRADE LAW
SALZL Thomas



WASTE MANAGEMENT OFFICER
MURI Chris



FIRE PREVENTION OFFICER
TROLLMANN Robert



DANGEROUS GOODS OFFICER
KREUZER Gerhard



TOXICOLOGY OFFICER
RAUCH Andreas

WASTE MANAGEMENT OFFICER
(DEPUTY)
TROLLMANN Robert

DANGEROUS GOODS OFFICER
(DEPUTY)
SCHWARZENBRUNNER Peter

The Environmental Officer reports to Quality Management & Compliance. The company employs around 156 people. Production is based on a 3-shift operation and runs continuously.

(Dated March 2022)

INVESTMENT PROGRAMME

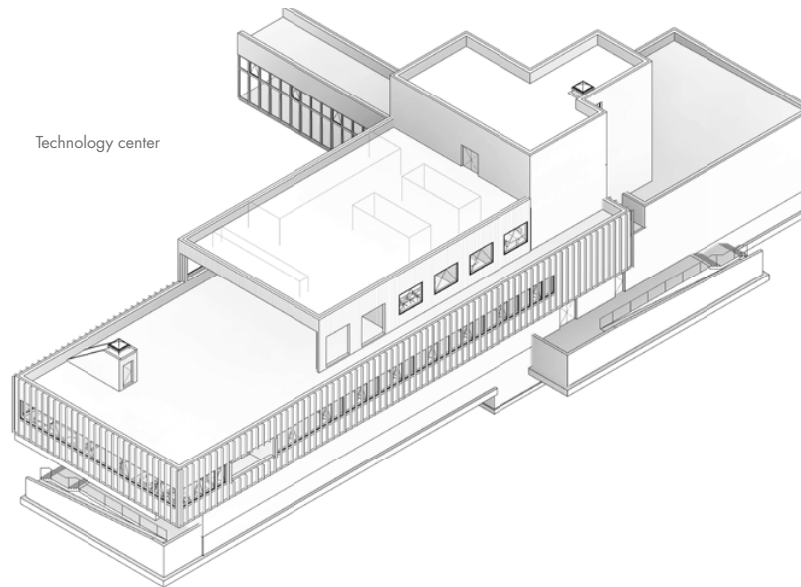
Kwizda Agro is continuing the investment programme for the Leobendorf plant and in the coming years will maintain its focus on the key aspects of safety and sustainable growth.



To ensure the medium to long-term development of the Leobendorf factory, the company started to draft a master plan in November 2021.

The aim of this plan is, on the one hand, to secure the growth of Kwizda Agro's future production volume by renewing or expanding production, bottling, and storage capacities, particularly in the area of its alternative organic product portfolio. On the other hand, the construction of a technology centre with chemical and organic research and development laboratories, a pilot plant, and a quality assurance laboratory is intended to allow the company to consolidate research, development, and quality assurance activities at one location and thus meet the needs for new product developments, especially in the area of its alternative organic product portfolio.

First of all, the construction of the new hazardous goods warehouse will begin in May 2022 (which is approximately 1 year late due to delays caused by the pandemic and tenders). Thanks to this project, the current storage capacity will more than double from about 4,600 to 9,600 pallet spaces, and we will also institute the best available safety technology for modern and efficient warehouse management in close cooperation with technical and other experts. This includes, among other things, fully automatic extinguishing systems and retention systems for liquids, the use of a fire-resistant and self-supporting reinforced concrete design for the entire building, and an extension of the barrier wall that has been in successful operation since 2014 (impermeable separation of the groundwater) to enclose the factory grounds. The new warehouse building will help to significantly reduce CO2 emissions by eliminating the need for several external warehouses.



*The „2030+“
investment
programme: The
Leobendorf site will
be „future ready“*

The relocation from the current finished goods warehouse will be completed by the end of 2023.

Fluidized bed granulation plants will be further upgraded starting in July 2022. Following the already completed WG1 and WG2 plants, the WG3 plant will also be retrofitted with modern explosion suppression systems. At the same time, our factory monitoring systems are being overhauled, and all process equipment is being optimized to ensure energy efficiency.

Starting in late 2023, Kwizda Agro will start consolidating and developing its research, development, and quality assurance competencies thanks to the construction of the new technology centre. This building will make it possible to double the company's existing chemical and organic laboratory capacities, supplemented by modern offices, meeting rooms, and ancillary premises. This building is planned to be completed in the first half of 2025.

The hermetic (physical) separation of the herbicide production and bottling areas from the non-herbicide areas is planned for 2024. This project will include constructing modern meeting rooms and separating clean and dirty areas to prevent product carryover.

Finally, to consider the promising expansion in the production volume of the alternative (organic) product portfolio, the existing production and filling plants for organic products will be consolidated at a new company building starting in 2030, and new production capacities will be built.

ENVIRONMENTAL MANAGEMENT

HOW DO YOU CONTRIBUTE TO
THE ENVIRONMENT AND SAFETY
THROUGH YOUR WORK?



ENVIRONMENTAL MANAGEMENT

ORGANISATION OF OUR ENVIRONMENTAL MANAGEMENT SYSTEM

The management of Kwizda Agro GmbH and the operations manager are generally responsible for the environmental management system. Responsibility for and implementation of individual environment-related tasks lies with the operational area, i.e. with the plant manager or department heads.

Operations executives are given expert support by the Environmental Officer and his team in the discharge of their duties. In addition, the Environmental Officer is responsible for ensuring compliance with all relevant environmental regulations and requirements.
(See page 26, organisational chart of the Leobendorf plant)

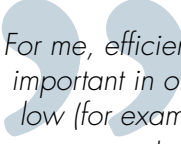
DOCUMENTATION OF THE SYSTEM

Documentation of the system is carried out as part of the integrated management system using a software system (ConSense) which can be accessed by all employees via the intranet (PCs or terminals in the production areas).

The environmental requirements are an integral part of the system documentation, which is divided according to processes, and in the individual process and work instructions as well as any further applicable documents, such as technical descriptions of processes, operating instructions, forms, checklists, etc.

Environmental data are not collected in the system documentation but in a clearly legible form in a digital storage system; they are evaluated annually when the environmental statement is updated.

The environmental statement can be accessed by all employees via the intranet, and by interested parties via the website of Kwizda Agro GmbH/Leobendorf plant. (www.werk-leobendorf.at)



For me, efficient operation of the plant is important in order to keep energy costs low (for example, when operating the steam generator).

Markus Bernhaus – Shift supervisor, Production

Personally I focus a lot on hygiene at work. I never go into contamination-free rooms wearing dirty work clothes and without washing my hands.

Marcus Schäfer – Production staff

I am currently developing a system to digitize forms and process them digitally in order to reduce waste.

Ronald Hackl – fire safety and training officer

GUARANTEEING COMPLIANCE WITH THE RELEVANT ENVIRONMENTAL REGULATIONS AND LEGAL STANDARDS

An Internet-based legal management system is used at the Leobendorf site to keep track of the numerous relevant legal provisions and their amendments. The most important legal provisions can be found in the German Commercial Code (GewO), the Water Rights Act (WRG 1959), the Employee Protection Act (ASchG), the EU and German Chemicals Act (Chemikalienrecht), the Investment Company Ordinance (IUV), and the Best Available Technology guidelines. The system tracks legal amendments using a database of legal obligations that apply to the company, and it evaluates their relevance and the company's compliance. In addition, the system provides direct links to the underlying legal provisions. Thus, an amendment to a legal provision can be read and evaluated together with the resulting changed legal obligation. The register is updated monthly by the software owner. An updated assessment of the legal provisions is carried out no less than once per year by the Quality Management and Compliance department together with the relevant specialist departments.

All individually applicable legal acts (administrative acts, notices, submission documents, and plans), as well as other documents relevant to the authorities, are stored in a clear manner (categorized by project or system and labelled chronologically) in a central database (Saperion), where all involved employees can access them at any time. All original documents are also stored in paper form in the factory archive.

Tasks, such as special recurring inspection obligations or notification requirements, are assigned to the respective task managers by the Quality Management and Compliance department in the measures database of the ConSense IT system. These managers will be responsible for carrying

out the tasks. General recurring inspection requirements are documented and processed by the Technology and Maintenance department in the SAP system.

In 2021, the operating plant was inspected by an accredited auditing company (TüV AUSTRIA CERT GMBH) in accordance with Section 82b of the German Commercial Code (GewO). The inspection certificate was received in July 2021 and forwarded to the relevant government authority. The next inspection is therefore scheduled for 2026 and will be planned in a timely manner by the Quality Management and Compliance department. The combination of all these steps ensures that we comply with all relevant legal provisions.

Since 2018 the Tolling BU (Leobendorf plant and staff functions) carry out a Corporate Social Responsibility (CSR) evaluation each year.

CSR stands for a responsible, voluntary contribution to sustainable development which goes beyond legal requirements. The concept is used as a basis for the integration of social and environmental concerns in our corporate activities and in our relations with the relevant stakeholders.

Aspects such as the environment, sustainable procurement, honest business practices and fair working conditions are examined in detail during the evaluation.

Very good results were achieved in the environment section with regard to transparent reporting of CO₂ emissions, NO_x and SO_x values and water and energy consumption.

With regard to working conditions, the ongoing training programmes and strong accident prevention scheme were highlighted as positive aspects. Room for improvement was identified in the area of sustainable procurement. The open issues will be dealt with successively by 2023.

Kwizda supports the United Nations' Sustainable Development Goals (SDGs). At the economic, social and ecological level, we are sure that these goals will help to implement the necessary actions and innovations for a better and sustainable future. We are coordinating with our customers to work on new, eco-friendly technologies and products. We understand that we can only achieve this goal if we work together.

As Safety Officer I think it is important to help all employees in questions of Health & Safety.

Gert Hauptmann – T&I member of staff and Safety Officer

Every day at the end of the shift I turn off the Kardex (labelling storage system) properly so as to save electricity.

Milodija Biresic – Packaging preparation

SDGs

Our contribution

**END HUNGER**

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

We see improving sustainability in agriculture as one of our main aims. This is why we are investing in agricultural research, agricultural advisory services and technological development.

**GOOD HEALTH AND WELL-BEING**

Ensure healthy lives and promote well-being for all at all ages

The production and application of plant protection products harbours numerous risks caused by contact with dangerous substances. We protect our employees through technical, organisational and personal measures against the negative effects of these substances.

We share our findings from handling dangerous substances with our customers with the aim of generally improving safety at work in the agricultural sector.

**CLEAN WATER AND SANITATION**

Ensure availability and sustainable management of water and sanitation for all

Clean drinking and groundwater are a basic concern for us: in order to exclude any potential further contamination of the groundwater body Korneuburger Bucht, we have separated our production facilities hermetically via a VIB wall from the surrounding groundwater current (see page 25) and updated our whole wastewater system to state of the art. Cleaning the groundwater body of residues from plant protection products is progressing rapidly – at the end of 2021, almost 100% had been removed from the groundwater.

**DECENT WORK AND ECONOMIC GROWTH**

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

As a company committed to sustainability, the creation of secure and long-term jobs is a key concern. We protect jobs, respect human rights and create a working environment that ensures the highest productivity of our employees in the long term. We have enshrined our principles in our Corporate Social Responsibility Company Policy.

SDGs

Our contribution



RESPONSIBLE CONSUMPTION AND PRODUCTION

Ensure sustainable consumption and production patterns

Our strategy to avoid negative environmental effects consists of determining specific measures for improvement in those areas where our greatest potential for improvement lies: First of all, this applies to the use of raw materials and energy for the production of goods; and secondly to the generation of waste and wastewater as an undesirable side effect of our production processes. When working with our suppliers and logistics service providers we take care to ensure they share our standards.



CLIMATE ACTION

Take urgent action to combat climate change and its impacts

The effects of climate change are already clearly noticeable, particularly in the field of agriculture. We support our customers in adapting to changing environmental conditions through product innovations in the area of plant protection.

In our production facilities we strive to minimise our climate-related emissions and so help to combat climate change through careful use of raw materials and energy sources and efficient machinery. As from 2023 we will obtain 13.6 % of our energy consumption climate-friendly, based on new photovoltaic systems.



PARTNERSHIPS FOR THE GOALS

Strengthen the means for implementation and revitalise the global partnership for sustainable development

We place great importance on collaboration: We work with universities, technical colleges, non-university research facilities, authorities and municipalities in order to apply the broadest spectrum of knowledge and resources to tackle our future challenges with the aim of increasing resource efficiency.

TRAINING, AWARENESS AND EXPERTISE

Our complex production and logistics processes require competent employees.

The key to ensuring this competence is our extensive qualification and training programme, which all employees go through. During level 1, employees receive all the necessary basic training to be able to start in compliance with safety regulations. Level 2 is „on-the-job training,“ during which employees are trained to perform their work independently for a certain period of time. Once this has been achieved, the employee can be trained in level 3 to become a qualified plant operator who can operate a production or packaging plant independently. At the highest level of training, level 4, employees receive further in-depth training to be able to train employees themselves.

Training is very important to us because it allows us to maintain and further develop our quality and safety standards.

EFFECTIVENESS OF THE ENVIRONMENTAL MANAGEMENT SYSTEM

Internal audits, safety and environmental inspections, comprehensive key data monitoring and the obligatory reporting of safety and environmental incidents ensure that our environmental management system remains permanently effective.

If deficits (deviations, potential for improvement, etc.) are recognised, a detailed analysis of the causes is carried out and corrective measures are introduced.

These are assigned to the people responsible for implementation by the Quality Management & Compliance department in a special action database (in the software-based ConSense system). The status of actions taken can be retrieved at any time in the system and also dealt with four times a year at the meetings of the Quality Management & Compliance department.

Following the annual management review, which takes place at the beginning of the year, the effectiveness of the environmental management system and progress of action taken on the environmental programme is assessed.

INVOLVEMENT OF ALL EMPLOYEES

In our company, protecting the environment is the responsibility of every single one of us, which is why works managers give their staff an opportunity to be actively involved in the continuous improvement of our green credentials by presenting their own ideas and suggestions for improvement.

A suggestion scheme has been implemented in the factory to this end. Furthermore, suggestions for improvements are presented in shop floor meetings as part of our shop floor management (a concept on “leadership where added value is created” – in the production and bottling and filling facilities).

EXTERNAL COMMUNICATIONS

External communication of environmental concerns is done via the plant’s own website www.werkleobendorf.at as well as via diverse social media such as LinkedIn, Facebook and others.

Kwizda Agro promotes transparent dealings with interested parties and is listed in the register for factory tours for school classes (NFB Land NÖ Forschung & Bildung <http://www.nfb.at>).

As part of my work I am involved in compliance with all legal requirements for the factory. In addition I directly help to reduce the environmental impact through the optimisation of processes.

Gerold Hörmann – QMC member of staff

INTERVIEW WITH RONALD HACKL (FIRE PREVENTION AND TRAINING OFFICER) AND GEROLD HÖRMANN (QMC) ON THE TOPICS OF SAFETY, HEALTH, AND ENVIRONMENTAL PROTECTION

Mr Hackl, you are the new fire protection officer and training officer at Kwizda Agro. How do you increase the level of safety?

As a fire protection officer, the safety of our employees and our factory is very important to me. For us, safety does not end with fire protection, but thanks to our training matrix, we can guarantee, expand and, of course, improve the safety of all our employees, systems, and equipment.

And how can you improve environmental protection at the company, Mr Hackl?

Thanks to the increasing adoption of digital technologies, the amount of waste paper can be reduced. There are always opportunities to reduce waste. I am currently developing a system to digitise forms and process them digitally to reduce waste.

Mr Hörmann, how do you ensure legal compliance at the Leobendorf site?

Firstly we use an internet-based legal amendment service at the site, which provides us with an overview of the amended legal regulations on a monthly basis. Secondly, I have taken out a personal subscription to the newsletter of the Federal Chancellery which provides prompt information on publications in the Federal Gazette. With a little practice it is easy to identify the issues that need a closer look and you can keep track of things.

I immediately pass on information about changing requirements due to administrative decisions to the relevant department head and I check compliance via the action management system.

Mr Hörmann, your duties include the management of measurements relating to the environment such as emission measurements. What are the challenges you face?

The work relating to environmental measurements is very broad and includes identifying the constraints contained in the relevant official notices, coordinating the measurements to be carried out and making analytical and technical checks of measurement reports.

Since delays can always occur due to planning and production issues, direct coordination with external measurement partners is essential. However, this works excellently due to our long years of cooperation.

In order to ensure that no measurements are forgotten, I use our action management system. A reminder is scheduled for every measuring point in the system. I personally enter any changes to requirements in the system. Consistent use of the systems allows me to contribute to the environmentally friendly production of our products.

THE ENVIRONMENT: EFFECTS, ACHIEVEMENTS, OBJECTIVES

WE HAVE LEARNT FROM THE PAST
AND ARE NOW INVESTING
CONSISTENTLY IN PREVENTIVE
ENVIRONMENTAL PROTECTION.



OUR ENVIRONMENTAL IMPACT

DIRECT ENVIRONMENTAL ASPECTS

The environmental impact of the factory was investigated with regard to the following aspects: resources, air, soil, water and biodiversity. The findings are used as the foundation for in-plant environmental protection.

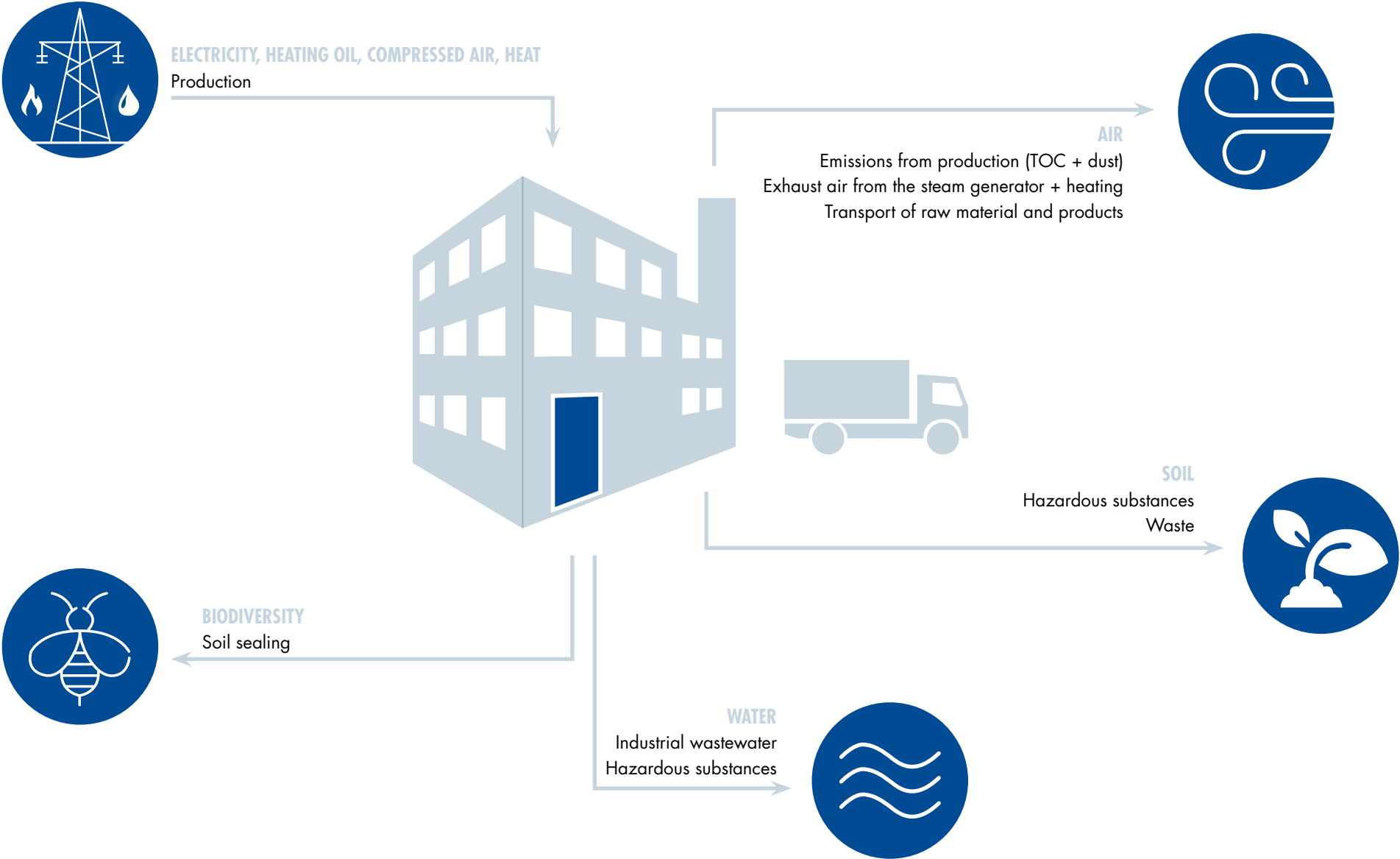
- The emissions of organic carbon (TOC) and dust produced by the production facilities as well as the exhaust air emissions from the steam generator and heating installations and – generally speaking – the CO₂ emissions caused by activities on the site are of importance for the “air” aspect. Air scrubbers using various types of technology (wet scrubbing, dry scrubbing) are implemented to reduce these emissions. The intention is to reduce the relative CO₂ emissions (adjusted for production output) by increasing the efficiency of energy conversion (steam and heat generation) and production processes.
- The consumption of utilities such as electricity, heating oil, compressed air, heat and water are evaluated for the “resources” aspect.
- Both the volume and type of industrial wastewater (hazardous waste) generated on site as well as handling dangerous substances in the plant are relevant for the “water” aspect (groundwater, process water). In addition to the legally compliant recording and disposal of industrial wastewater, careful handling of dangerous substances in accordance with regulations is essential.
- Handling hazardous substances as well as the volume and type of hazardous and non-hazardous waste generated on-site are relevant criteria for the “soil” aspect. The correct segregation and collection (mixing is prohibited) and the proper disposal of waste as well as careful handling of hazardous substances in accordance with regulations are essential.
- The direct environmental aspect of „biological diversity“ is not only influenced by land use but also by how undeveloped and built-up areas are designed.

Detailed information on the individual environmental aspects can be found in the chapter on “Figures, Data, Facts”. Every (relevant) company process has been evaluated with regard to its environmental impact.

A quantitative assessment of environmental aspects is carried out in the plant-related risk analyses, which are compiled as part of the safety report in accordance with the Industrial Accident Act (Industrieunfallverordnung) and are updated annually.

For all aspects with a high impact on the environment or safety the corresponding measures or instructions on how to behave are set out in operative work instructions in order to control the potential risks inherent in these aspects.

ENVIRONMENT-RELATED INPUTS AND OUTPUTS



EVALUATION OF INDIRECT ENVIRONMENTAL ASPECTS

ECO-FRIENDLY PROCUREMENT: Many of the raw materials used in the factory (in particular active substances) are provided by our customers. Regarding the raw materials we procure ourselves, we are committed to ensuring the procurement process and the raw materials we procure have the lowest possible environmental impact by preferring local suppliers (wherever possible, allowing for customers' requirements). We also try to generate as little packaging as possible (through a circular economy, e.g. returning pallets and cardboard interlayers). We are using outer boxes made of recycled material for in-house Kwizda products.

As far as we can justify it in technical and economic terms, we prefer to use eco-friendly materials and construction materials, e.g. biodegradable cleaning materials, PVC-free cables, non-synthetic insulation materials, etc.

The procurement of environmentally relevant products and services follows exact criteria, insofar as these are not products provided by customers. We also regularly review our environmentally relevant suppliers and waste disposal companies and carry out an evaluation in accordance with clearly defined, specific and environmentally relevant criteria during supplier audits and an annual supplier assessment.

ECO-FRIENDLY BEHAVIOUR OF CONTRACTORS: At the Leobendorf plant in recent years a comprehensive investment programme has been implemented to modernise and secure the plant economically and sustainably. Further extensive investments are planned for the coming years in the expansion of our production and logistics capabilities. This investment programme comprises several individual projects which will be tendered out to various contractors (builders, plant manufacturers, HVAC companies).

The eco-friendly approach of these contractors is a special challenge for us in terms of comprehensive environmental responsibility.

That is why we endeavour to specify our exact requirements regarding an eco-friendly approach in the tender documentation (conditions of contract, schedule of services). Contracts are awarded on the principle of the best, not the cheapest, bidder. Contractors are monitored to ensure they comply with our environmental requirements when they provide their services.



ENVIRONMENTAL ACHIEVEMENTS 2021

NO.	ENVIRONMENTAL OBJECTIVE	AREA	MEASURES TAKEN	SAVINGS IN MWH/YEAR OR TONS CO ₂ /YEAR
1	Increase in the energy efficiency	compressed air boiler house	modernisation of the compressed air system control system	64/34
2	Switching to a more environmentally friendly refrigerant	WG3	modernisation of the WG3 refrigeration system (switching to a new refrigerant (propane) and taking advantage of opportunities for free cooling) in the WG3 granulation system	k.A.
3	Increase in the energy efficiency and level of decarbonisation	Leobendorf site	launch of the „KWIGGE“ energy efficiency initiative of the Kwizda Group (managed by the Agro holding and division)	k.A.

ENVIRONMENTAL PROGRAMME 2022

NO..	ENVIRONMENTAL OBJECTIVE	AREA	MEASURES TAKEN	SAVINGS IN MWH/YEAR OR TONS CO ₂ /YEAR
1	Conversion to electric company vehicles and support for guest electric cars	parking lot	installation of 5 x 2 electric car charging stations, min. 11 kW charger capacity, and planned to be connected to PV system in 2023	k.A.
2	Increase in energy efficiency	boiler house/heating station	the retirement of the remaining oil-fired boilers and conversion to natural gas, and modernisation of the hot water treatment system (condensing technology) in Q3/2022	404/245
3	More environmentally friendly packaging	production	conversion of various (primary/secondary) packaging and labels for some of Kwizda's own products to recycled material or bio-HDPE material: Reduction of the CO ₂ footprint of Kwizda's own products, 150,000 labels, and 14,000 outer boxes, conversion performed in 2021/2022	k.A.

ENVIRONMENTAL PROGRAMME 2022

NO.	ENVIRONMENTAL OBJECTIVE	AREA	MEASURES TAKEN	SAVINGS IN MWH/YEAR OR TONS CO ₂ /YEAR
4	Decarbonisation of power generation	Leobendorf site	planning/submission/approval of a 630.8 kWp PV system in a „green field,“ to be implemented in 2023 (positive feasibility study in 2020)	700/192
5	Increase in the energy efficiency	Leobendorf site	the continuation of the „KWIGGE“ energy efficiency initiative of the Kwizda Group (managed by the Agro holding and division)	k.A.

SECURITY SYSTEMS

WE SPARE NO COSTS OR EFFORTS
TO SECURE OUR PLANT USING
STATE-OF-THE-ART TECHNOLOGY.



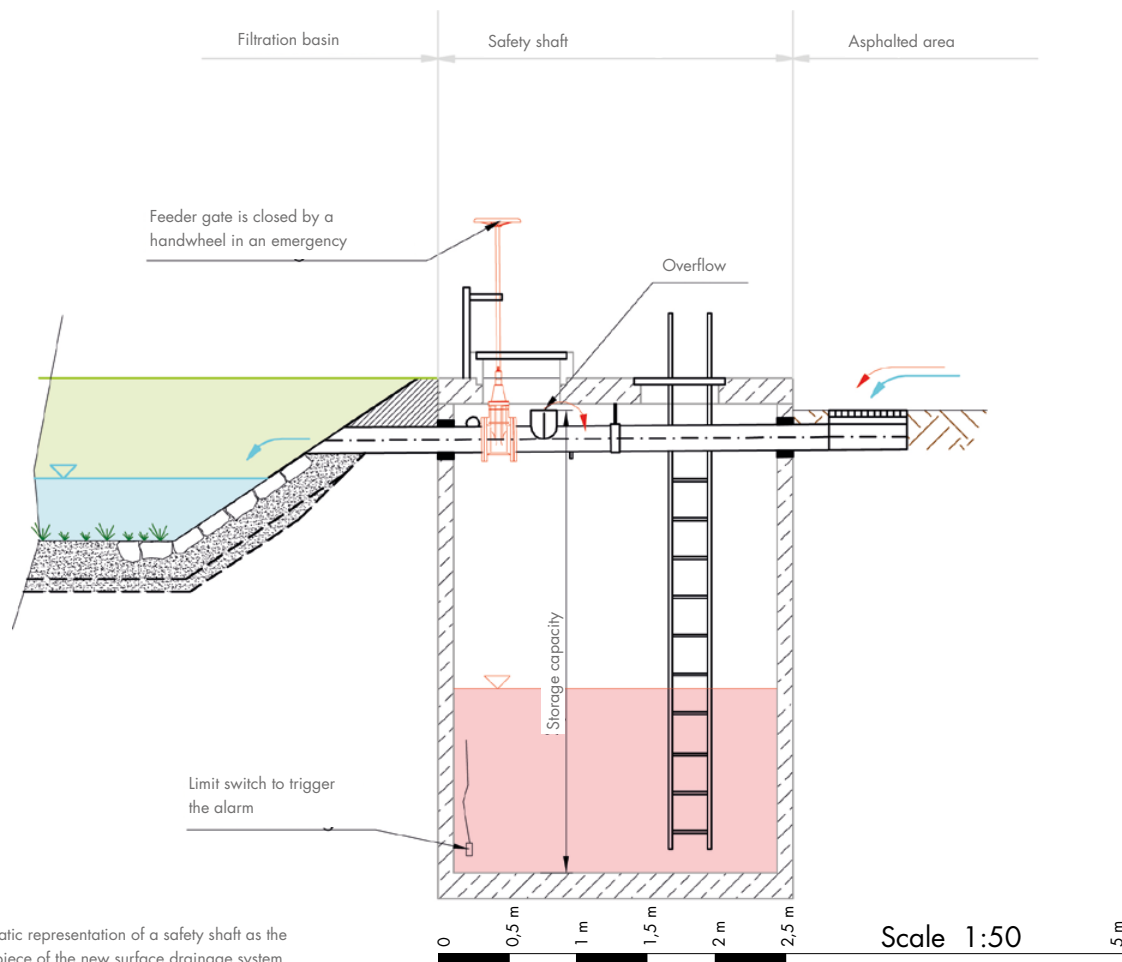
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DESCRIPTION OF THE SAFETY ARRANGEMENTS



Schematic representation of a safety shaft as the centrepiece of the new surface drainage system

SURFACE DRAINAGE, ADJUSTMENT TO STATE OF THE ART

The whole surface drainage at the Leobendorf site was reviewed and adjusted to state of the art. The precipitation falling on traffic areas passes through a humus filter layer into filtration basins on site for infiltration into the ground. Based on a risk assessment, five new safety shafts were installed in the areas with the most-used loading ramps. As shown in the diagram, precipitation normally passes through the shaft and infiltrates the ground. If contamination occurs on the asphalted area, the feeder gate in the safety shaft is closed manually and the contamination stored in the safety shaft. A water-level control triggers an automatic alarm. Rain falling at the same time is taken into consideration when calculating the storage volume.

NEW INDUSTRIAL WASTEWATER SYSTEM



Three new underground wastewater collection tanks with 30m³ each capacity

The new industrial wastewater system is intended to ensure the environmentally sound collection and disposal of the industrial wastewater generated. In order to exclude contaminants from leaching out of the wastewater system, the wastewater system was constructed with a double wall and permanent leak monitoring. The diagram shows the three new central wastewater collection tanks.

SLURRY WALL AND GROUNDWATER PURIFICATION – ACTIVATED CARBON FILTERS

In order to prevent contaminants from the site leaching into the groundwater body “Korneuburger Bucht”, a VIB wall was erected around the site; this reaches down to the aquifuge and separates the groundwater body below the factory site from the surrounding groundwater body. The groundwater body within the VIB wall is lowered artificially by approximately 50 cm through constant pumping. The used pump water is purified via activated carbon filters.

The following diagrams illustrate the principle for building the VIB wall and construction work in the south-west of the construction area:



Rammer with suspension silos

FIREWATER RETENTION BARRIERS

In case of fire, foam dispensers have been fitted in the relevant sections to douse the flames. In order to prevent quench water and foam and contaminants from escaping in the case of accidents, all gate openings in the new herbicide warehouse and herbicide production construction areas have been fitted with stationary firewater retention barriers which close automatically, or can be closed manually, when a fire breaks out. The figure here shows a firewater retention barrier in the production area:



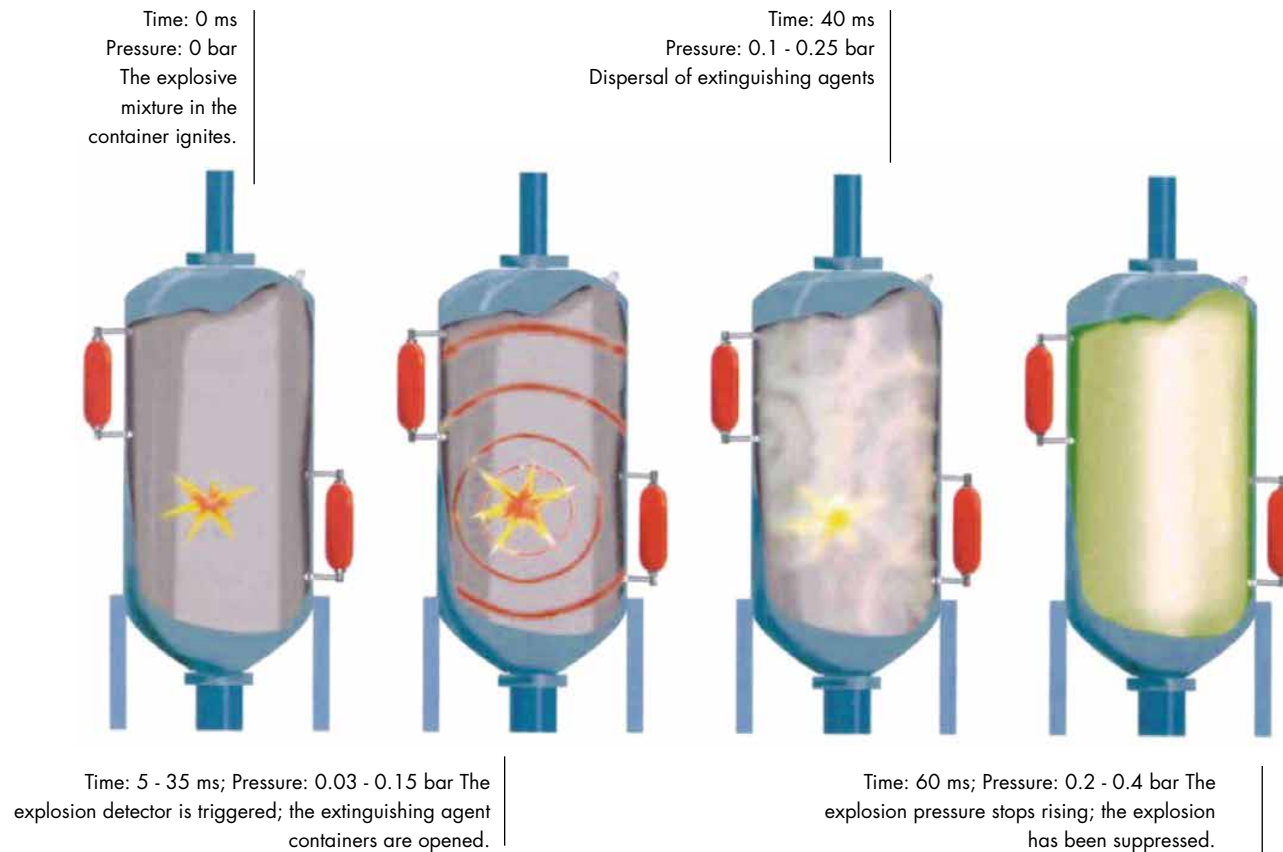
Firewater retention barriers at all exits



EXPLOSION SUPPRESSION SYSTEMS

Under certain conditions the substances processed in the fluidised bed granulators can generate explosive dust/air mixtures. In order to exclude dust explosions, the granulators were fitted with explosion suppression systems; if a dust explosion should occur, the increase in pressure is reduced by extinguishing agents to the point that no blow-out discs are needed to lower the pressure in the containers and thus prevent contaminants from escaping. The following figures illustrate the principle of an explosion suppression system.

Theoretical sequence of an explosion suppression (Container protected by an HRD explosion suppression system)



MEASURES TO PREVENT ACCIDENTS AND INCIDENTS

WE ARE COMMITTED TO PROVIDING
REGULAR TRAINING.

BECAUSE WE CAN ONLY AVOID INCIDENTS
WHEN WE KNOW THE DANGERS.



1. Temperature

2. Pressure

3. Flow



MEASURES TO PREVENT ACCIDENTS AND INCIDENTS

ORGANISATIONAL PRECAUTIONS

In order to avoid accidents and incidents a safety management system in accordance with ISO 45001 was implemented, amongst other measures, and integrated into the on-site management system. Existing organisational structures, processes and documents are used to manage and operate the safety management system and are supplemented where necessary with the corresponding specific processes.

The organisation and responsibilities of operating personnel are documented at each site in an up-to-date organisational chart which is supplemented with the corresponding job descriptions. Detailed responsibilities and tasks within processes are defined in the relevant process descriptions.

Training courses and sessions are carried out and documented in accordance with legal regulations and operational needs. Maintaining a high level of knowledge and awareness of safety through training on health, safety and the environment (HSE) are in any case an integral part of our safety objectives.

All production facilities are documented in up-to-date descriptions. They contain the technical installations, the processes used and the safety precautions applied. A risk analysis is compiled based on these descriptions of facilities and an on-site inspection; possible sources of risk are identified and their impact assessed.

If changes occur within the facilities or new processes are introduced, the production area as a whole is subject to a new risk analysis. New facilities are evaluated before normal commissioning.

Safe operation is ensured firstly by regular maintenance and careful handling of installations and equipment and, secondly, the corresponding training courses enable employees to work with the installations according to their proper use and in a responsible manner. This applies both to production and to storage in the plants or for outgoing shipments.

An internal emergency planning for each site aims to limit damage to people, environment and facilities should an incident occur. To this end emergency scenarios were devised and emergency plans developed for typical incidents which are intended to enable the site to deal with the incident efficiently and limit its impact for operations and surroundings as far as possible. Regular safety audits are carried out by the Safety Office or Safety Supervisors as part of the audit process; they monitor the validity of the risk analyses and search for possible deviations from the current safety regulations or potential to improve safety.

INDUSTRIAL SAFETY COMMITTEE

The mandatory industrial safety committee (ISC) meets three times a year.

The task of the ISC is to ensure a two-way information flow, exchange of views and ideas and coordination of operational safety installations and work towards improving health & safety and working conditions. The ISC discusses in particular the reports and suggestions of safety supervisors, the safety officer and the works doctor. The ISC plays an extremely important role in promoting in-house cooperation in all questions of health & safety.

The person responsible for the safety report, the production manager, the production manager, the head of formulation and process development, the fire officers and the safety supervisors are responsible for issuing safety instructions and determining training needs of individual employees as well as carrying out the training courses and sessions. Where necessary they are supported by specialists at Kwizda Holding GmbH or by external experts. Everyone entrusted with special safety-related tasks (safety supervisors, boiler and elevator maintenance personnel, etc.) receives appropriate training.



2021 SAFETY AND HEALTH DAYS

On September 13 and 14, 2021, two event days devoted to safety and health were held at Kwizda Agro in Leobendorf. The event on 09/13 was all about occupational health and safety in the factory. Ronald Hamedl and Karl Heinz Ludwig were also invited to emphasize the importance of this topic and to provide information about current and future developments at Kwizda Agro.

Employees participating in groups corresponding to their departments completed eight different stations. During the diversified program, employees were able to put out fires themselves, contain material spills, complete a safety quiz, and learn about the latest personal protective equipment from UVEX and how to use it correctly.

During the morning of Health Day on 09/14, the highlight was Sportunion's fitness station. Bold participants tried their hands at the challenge disc, and the fitness tests showed where and with whom our strengths lie. The hearing test by Neuroth and the „Fill up – switch off – feel good“ workshop conducted by ASZ Linz were also well received.

QUALIFICATION OF EMPLOYEES THROUGH THE “TRAIN THE TRAINER” PROGRAMME

One of the aims of our corporate policy is to ensure our staff are well trained and act responsibly. Targeted training courses on the machines during live production are intended to give employees confidence to carry out their work safely. Both the appropriate behaviour in emergencies and an awareness of eco-friendly behaviour at work are promoted explicitly by training. Independent trainers receive extensive training on certain installations by senior management as part of their own training programme.

After a written and oral test the trainers receive the “Train the Trainer” certificate and are qualified to train employees in consultation with the relevant plant. The programme started in 2016 with the first trainer receiving training. By 2019 three additional employees had been trained and another two trainer courses are planned for 2022/23.

SHOPFLOOR MANAGEMENT (SFM)

Shopfloor management is a key management instrument in implementing a LEAN organisation at Kwizda Agro. It is used to transfer process objectives at the place of action, informs everyone of the current process state, current issues and safety measures and makes it possible to identify deviations at an early stage. Employees are very involved in tracking the achievement of objectives at regular, short intervals. The high level of transparency achieved by displaying the process figures ensures clarity for employees, creates a common understanding across business units and prompts the need for action.

Leadership, decision-making, guiding and communication are the key elements of shopfloor management.

It tracks compliance with standards (comparison of target/actual state) at short intervals and at different levels, involving both management and employees. If the SFM detects deviations, a decision is taken on which measures to implement immediately. Repeated errors or chronic

deviations are documented, evaluated and a decision taken on how to address them (e.g. focus project, structured troubleshooting). The SFM board communicates and tracks progress.

Furthermore, the SFM communicates targeted improvements to processes and monitors their progress at regular intervals.

STORAGE OF RAW MATERIALS, HALF-FINISHED AND FINISHED GOODS

Plant-specific risk analyses, according to the HAZAN system, prove that the sources or risk in the area under review can be managed securely by the type of technical installation and organisation of operations. Potential risks are evaluated according to their probability and possible extent of damage regarding injury to persons, environmental damage and economic parameters. This applies in particular to the storage of raw materials in the raw materials warehouse as well as the storage of half-finished and finished goods in the finished goods warehouse.

The **raw materials warehouse** is used to store raw materials, half-finished goods, auxiliary products and operating supplies as well as packaging after delivery.

The following groups of risks or individual risks have been identified as relevant for the raw materials warehouse:

- Risks related to leaching of liquids hazardous to water due to mechanical damage to containers
- Risks related to the risk of fire
- Risks related to firefighting with foam

All risks or the effects of risks that occur can be reduced to an acceptable level, i.e. within the risk acceptance range, by appropriate measures (e.g. provision of emergency sets, maintenance and inspection of warning installations in accordance with generally accepted codes of practice or legal/administrative requirements, employee training).



PERMITTED VOLUMES OF RAW MATERIALS IN STORE:

Storage class – SC 4.1/ 6.1/ 9 or storage classes with a low potential risk	600 t
of which max. SC 4.1/6.1	200 t
In addition to 600t SC 4.1/ 6.1 / 9: SC 3.3 (Flammable Liquids Ordinance III)	50 t
Total raw materials warehouse	700 t



The **finished goods warehouse** is used to store raw, auxiliary and operating materials, half-finished and finished products and hazardous production waste. In addition, the area of WG2 (fluidised bed granulator 2) has a further warehouse which is also used to store raw, auxiliary and operating materials, half-finished and finished products.

Compressed gas packs are stored in Warehouse C (storeroom for compressed gas packs and retained samples). Warehouse D is used to store raw, auxiliary and operating materials, half-finished and finished products. Warehouse E is currently not in use.

PERMITTED VOLUMES OF FINISHED GOODS IN STORE:

Storage class – SC 4.1/ 6.1/ 9 or storage classes with a low potential risk	2.000 t
Total for finished goods warehouse	2.000 t

The **herbicide warehouse** is used to store raw, auxiliary and operating materials, half-finished goods, packaging and finished goods.

PERMITTED VOLUMES OF HERBICIDE IN STORE:

Storage class – SC 4.1/ 6.1/ 9 or storage classes with a low potential risk	700 t
In addition to 700 t SC 4.1 / 6.1 / 9: (Flammable Liquids Ordinance) SC 3.2 / 3.3	120 t
In addition to 700 t SC 4.1 / 6.1 / 9: Oxidisable substances SC 5.1	20 t
Total for herbicide warehouse	840 t

PRODUCTS, PRODUCTION METHODS AND INSTALLATIONS

OUR INNOVATIVE PRODUCTS
ENSURE ENVIRONMENTALLY
FRIENDLY AGRICULTURE



PRODUCTS, PRODUCTION METHODS AND INSTALLATIONS



The Leobendorf plant of Kwizda Agro GmbH produces and stores plant protection products, such as insecticides (plant protection products to control pests at all stages of development), fungicides (plant protection products to control fungal infections), herbicides (plant protection products to control weeds in agricultural crops) and biocides (insecticidal pest control products and wood protection agents), primarily for use in agriculture at the behest of the customers of Kwizda Agro. Plant protection products do not contain chemical or biological active substances. Production should be understood as the formulation of products through the dilution, mixing, dispersion, wet milling and fluid bed spray granulation processes of active substances and adjuvants in accordance with precisely defined production processes, or their bottling, filling and packaging. The substances required for formulation are provided by the customer (purchaser) or are bought in.

PRODUCTS

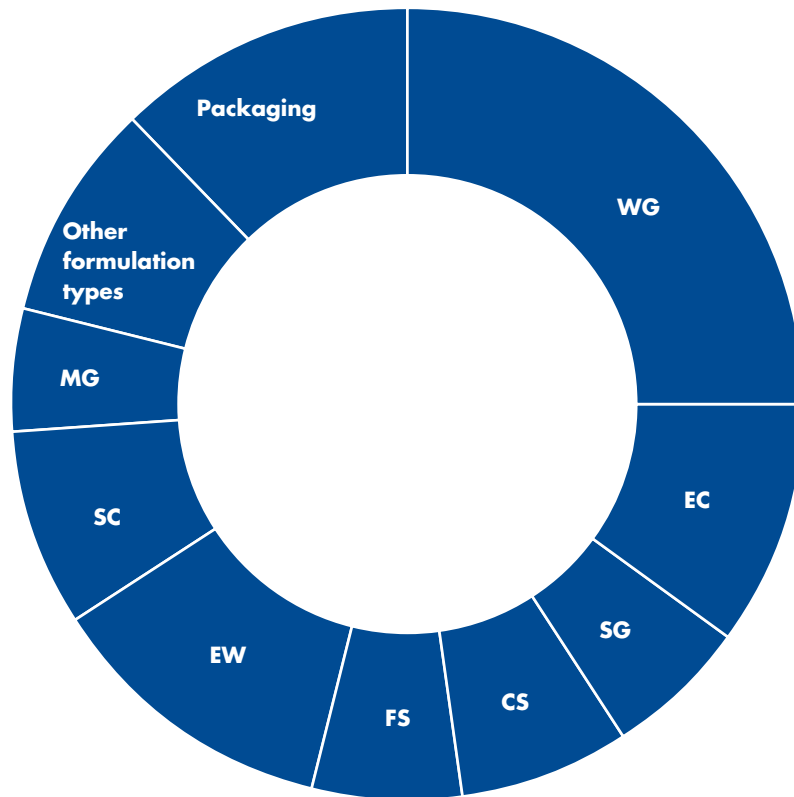
Products are divided into 4 (main) products types according to application, namely:

- **Water dispersible granules:** "WG formulation" type: granular products composed of active substances and adjuvant(s); the granulate material is dispersed in water to create a suspension that is then applied.
- **Suspension concentrates:** "SC formulation" type: water-based liquid products – the active substance is suspended in water; the suspension is thinned with water before application.
- **Emulsion concentrates:** "EC formulation" type: solvent-based liquid products – the active substance is dissolved in an organic solvent; the product is mixed with water for application – the emulsifiers contained as additives create a sprayable emulsion.
- **Micro capsule suspensions:** "CS formulation" type: water-based liquid products – the active substance is encased in a thin, water-soluble polymer layer or "micro capsule"; the suspension is diluted with water before application.

PRODUCTION METHODS

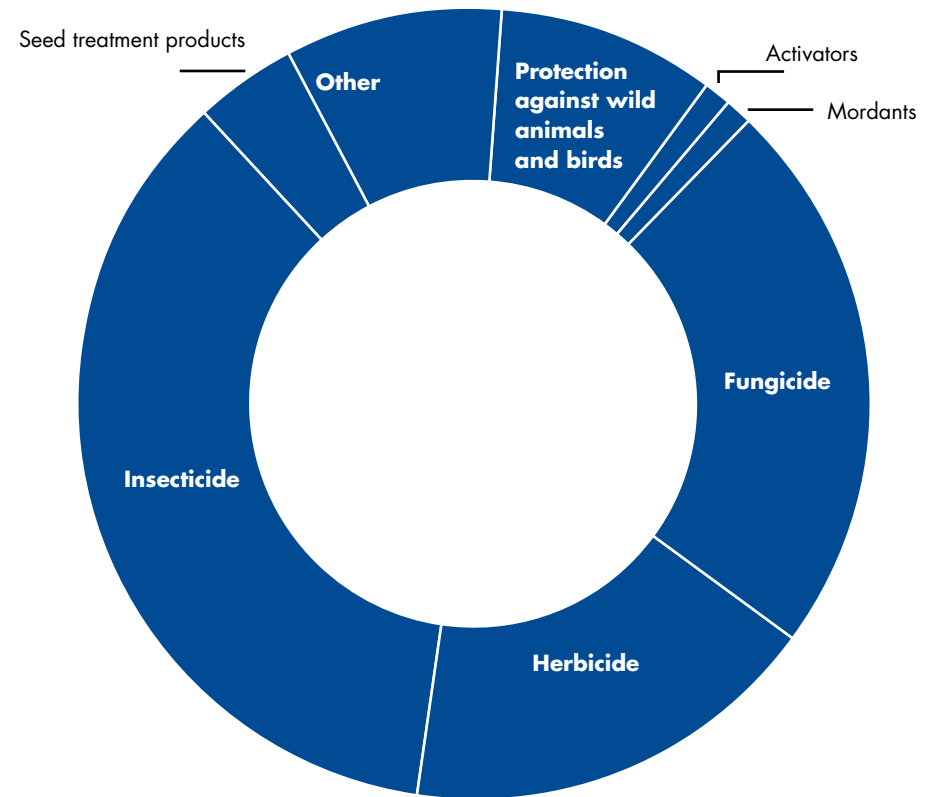
- Production of liquid formulations through dilution, dissolving and mixing processes or through micro encapsulation.
- Production of granules: through initial dispersing, dissolving and mixing processes or through micro encapsulation a spray feed is created which is then fluid bed spray granulated.

Products made according to formulation type (2021)



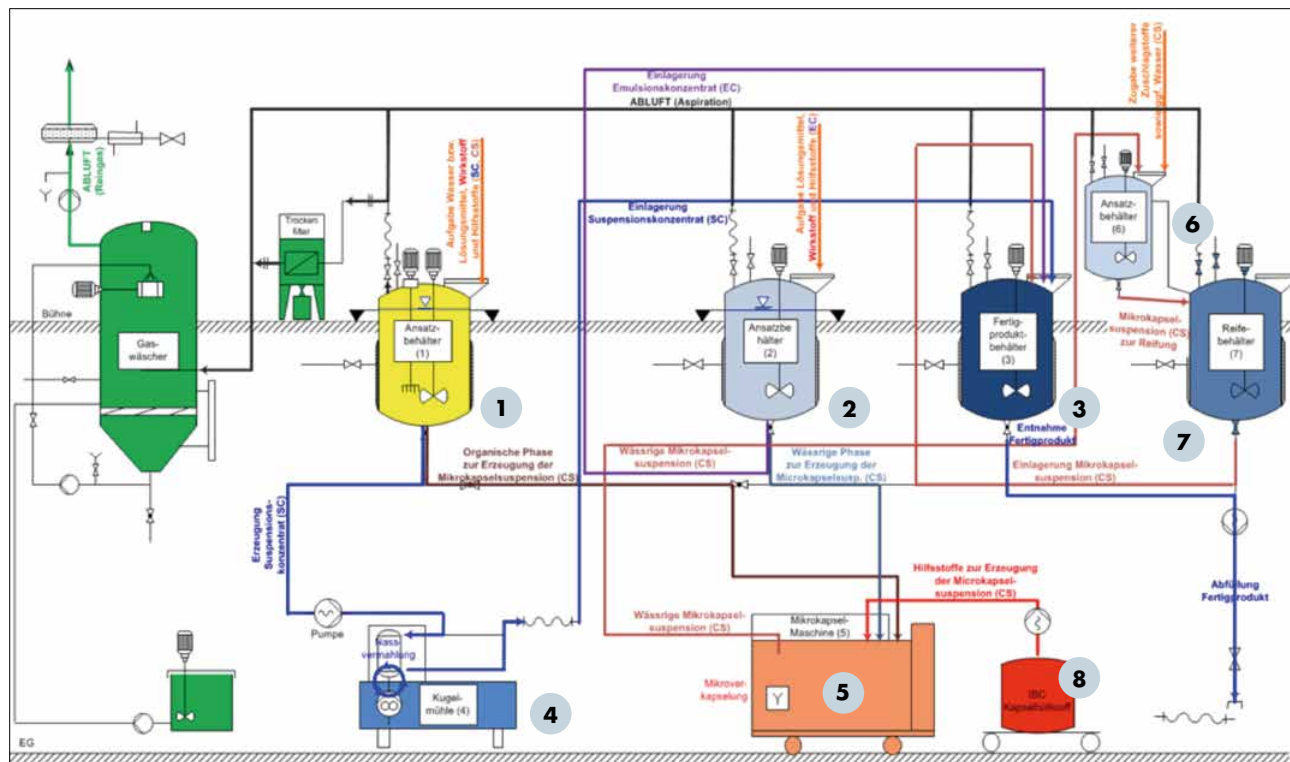
- 25 % **WG** Water dispersible granules
- 10 % **EC** Emulsion concentrates
- 6 % **SG** Water-soluble granules
- 7 % **CS** Micro capsule suspensions
- 6 % **FS** Suspension concentrates for seed treatment
- 12 % **EW** Emulsion in water
- 8 % **SC** Suspension concentrates
- 5 % **MG** Microgranules
- 9 % Other formulation types
- 12 % Packaging

Products made according to application type (2021)



- 23 % Fungicide
- 17 % Herbicide
- 36 % Insecticide
- 4 % Seed treatment products
- 9 % Other
- 9 % Protection against wild animals
- 1 % Activators
- 1 % Mordants

PRODUCTION OF LIQUID FORMULATIONS

**PRODUCTION OF SUSPENSION CONCENTRATES (SC)**

To create the primary dispersion in the dispersion vessel container (1), water or a solvent is used. The active substance is supplied in drums, tank containers, bags or supersacks. It is metered into the dispersing vessel by pumping or manually. The adjuvants are added and dispersed or dissolved by the integrated high shear mixer. Small ingredients are added by hand dosing. The primary dispersion is pumped through the bead mill (4) using an eccentric screw pump. The ground suspension is fed into second tank (3) or (7) where the product is finalized by adding those ingredients that should not be wet milled.

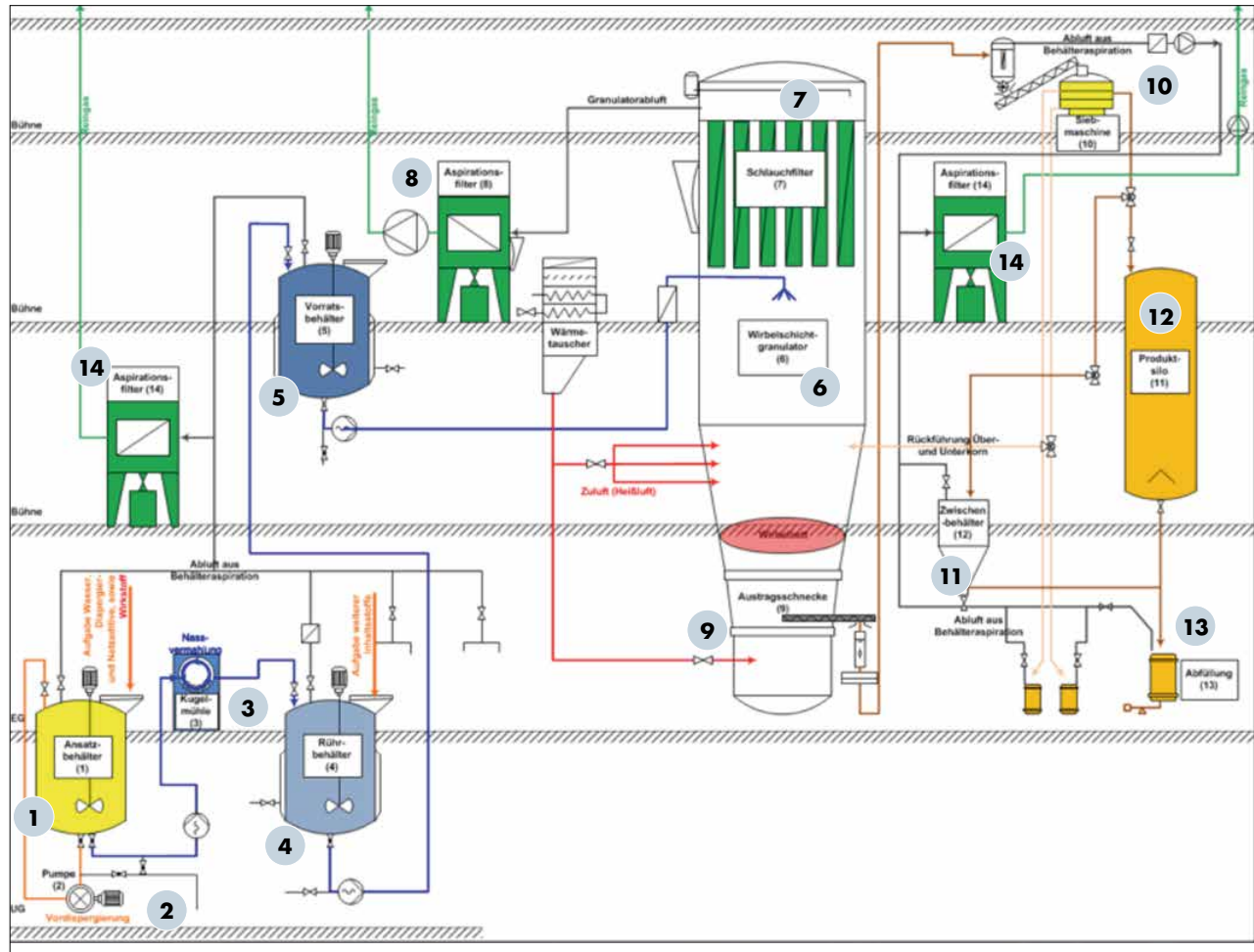
PRODUCTION OF MICRO CAPSULE SUSPENSIONS (CS)

The organic phase with the molecular dissolved active substance (1) is emulsified in a continuous mixer (micro capsule machine) (5) together with the aqueous phase (2) and the capsule forming polymer (8). The active substance is enclosed in a capsule shell wall by interfacial polymerization and is thus turned into an aqueous suspension of microcapsules. In the next step the preparation is allowed to cure (6), (7) and finally transferred into the finished product container (3).

PRODUCTION OF EMULSION CONCENTRATES (EC)

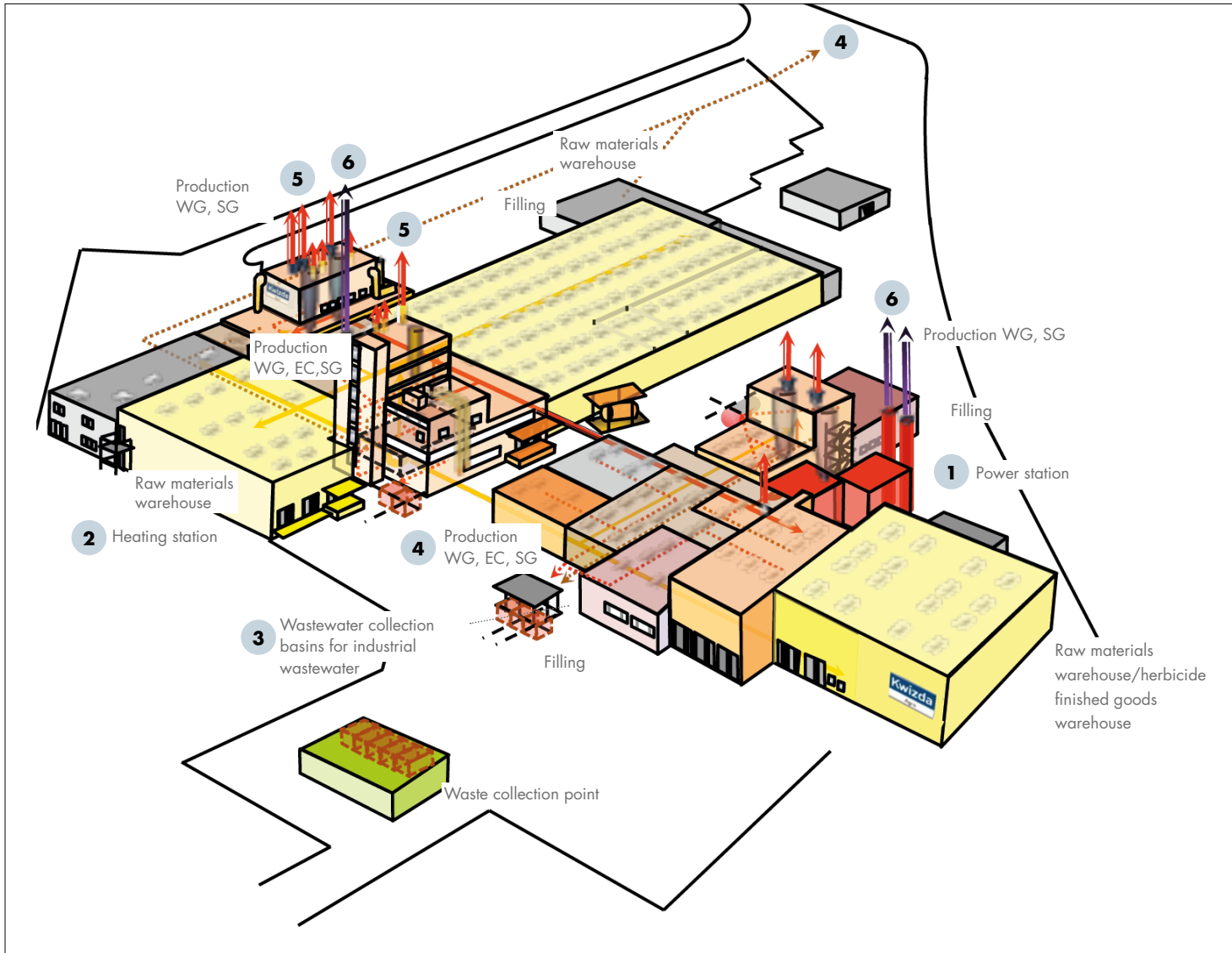
Solvent, active substance and adjuvants are mixed in the preparation container (2) to form a concentrate and the finished product is pumped into the finished product container (3).

PRODUCTION OF WATER DISPERSIBLE GRANULES



In the first step, dispersing and wetting additives are mixed with water in a mixer and the active substance is added (1). The ingredients are pre-dispersed using an inline homogenizer and a high shear mixer (2). The mixture then further dispersed in a bead mill (3). The spray feed suspension is prepared in another tank by adding further ingredients (4). In order to maintain a continuous process the spray feed is transferred portion wise to a buffer tank (5). The spray feed suspension is sprayed continuously on top of the fluidised bed and agglomerates to solid granules with a berry-like structure (6). The exhaust air (including steam) is purified in 2 steps, first by a bag filter (7) and an then through an aspiration filter (8). The ready made granules are removed from the lower end of the granulator via a discharge screw (9) and separated in a 2-stage vibrating sieve (10) into finished product, oversized and undersized granules. The undersized granules are recycled directly into the granulator, the oversize material is dispersed within the next sprayfeed batch. The finished product is stored temporarily in interim product silo (11) and then packed or in product silos (12) and in big bags or drums (13). The exhaust air from all tanks and silos is purified through a 2 stage aspiration filter (14).

MEDIA SUPPLY AND EMISSIONS



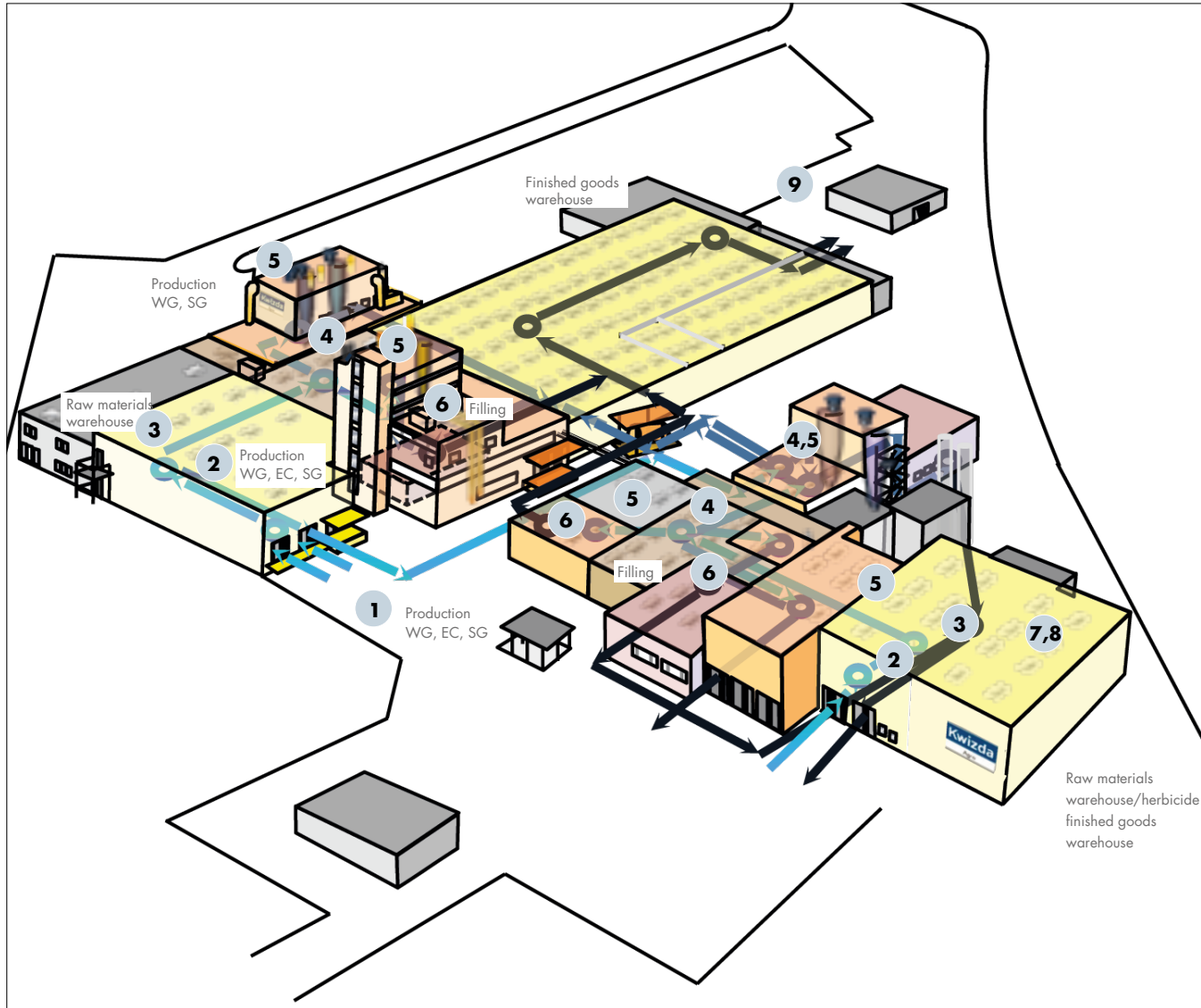
- Steam supply
- Heat supply
- Industrial wastewater
- Domestic wastewater
- Exhaust air from production
- Exhaust air from steam/heat generation

- Store
- Production preparation
- Production
- Filling
- Power station

DESCRIPTION OF MEDIA SUPPLY AND EMISSIONS

- 1** A power station with 2 steam generators supplies the factory (in particular the production facilities) with saturated steam and process heat.
- 2** A heating station with 2 boilers supplies the factory with space heating.
- 3** The production wastewater collection system comprises run-in points (floor drains, sinks) in production and laboratory areas, the piping within the building, the piping outside the building and the wastewater collection basins or tanks. It is used to collect wastewater contaminated with chemicals which normally occurs in water-based cleaning processes in the production units.
- 4** The collection system for domestic wastewater (toilet waste collection system) is fed into a collection basin for domestic wastewater or into the public sewerage network.
- 5** Exhaust air is generated in the production facilities, firstly during the granulation processes in the fluidised bed granulators, and secondly when pumping out the various preparation, mixing, storage and finished product containers. The exhaust air is contaminated with organic carbon components and dust and is purified to comply with the prescribed thresholds using various purification methods (baghouse filters, scrubbing towers, aspiration filters).
- 6** The steam and heating installations run on light heating oil or gas; all limit values of the relevant legal regulations are checked regularly to ensure compliance.

MATERIAL FLOWS



Production stages:

- 1 Delivery
- 2 Incoming goods (inspection)
- 3 Storage
- 4 Production preparation
- 5 Production
- 6 Filling and packaging
- 7 Storage
- 8 Order picking
- 9 Delivery

- Raw materials (active substances, adjuvants)
- Half-finished products (big bag, IBC)
- Packaged finished goods

- Store
- Production preparation
- Production
- Filling

DESCRIPTION OF MATERIAL FLOWS

- 1 2** Raw materials are delivered directly to the two raw material warehouses (separated according to herbicides and insecticides or fungicides). After the trucks are unloaded, the goods are inspected before being stored. During the incoming goods inspection the raw materials are inspected to ensure the delivery is complete and correct and to identify any damage. Any claims are reported to the supervisor, and to the Customer Service, Procurement and Quality Management & Compliance departments.
- 3** The supplied materials are stored in the raw materials warehouses in accordance with the storage strategy recorded in SAP. The warehouse management system is used for end-to-end documentation of the flow of raw and other materials and can be traced at any time. Handheld scanners are used to scan the materials every time they are moved so they can always be located in the system.
- 4** Once the production order is created by the planning department, the staff in the warehouse receive a transport order. They remove the required raw materials and adjuvants from the raw materials warehouse and send them to the production supply areas of the relevant production line so that the raw materials only have to be transported short distances during production. The production supply areas are located immediately before the relevant production facilities.
- 5 6** During production, employees remove the necessary raw materials from the production supply areas. The amount used is documented precisely. If raw materials are not used, a campaign inventory is carried out after production, which involves booking the returned raw materials back into the warehouse for further storage. If finished goods are produced that do not have to be filled into small containers or packaged, these products are stored directly in the relevant finished goods warehouse. Half-finished goods are normally stored temporarily in the finished goods warehouse before filling and packaging.
- 7** Storage or temporary storage of finished or half-finished goods follows the storage strategy recorded in SAP and supported by the warehouse management system in the finished goods warehouse, separated according to insecticides, fungicides and herbicides.
- 8 9** For delivery to the customer, the finished goods are placed in the delivery area of the finished goods warehouse in accordance with the internal transport order for picking by warehouse staff and made ready for shipping/loading. The trucks can be loaded directly from the ramps.

**PROMOTION OF BIODIVERSITY
AT THE LEOBENDORF SITE**
EVERY CONTRIBUTION COUNTS

OUR CONSTRUCTION KIT FOR MORE BIODIVERSITY

The state of biological diversity in Austria and worldwide is in dramatic decline. Through a combination of various „building blocks,“ we can make a small contribution to promoting biodiversity on our company premises. Below we present which building blocks we have already implemented and which are scheduled for future implementation.

BUILDING BLOCK 1 „LIVING PAVEMENT SURFACES“

As an alternative to conventional asphalt surfacing, paving stones or gravel can be selected as pavement surfaces. Plants that can withstand heavy loads can settle into the ground by themselves. The lower the soil sealing level, the less the natural water cycle is disturbed.

Due to the fact that we handle hazardous substances on our company premises, we often need to seal areas. In places where dangerous substances do not need to be handled, we have already tried to apply the minimum possible amount of sealing. For example, our access roads to the fire water wells are not paved with asphalt. Rather, they are designed to be water-permeable. Most of the car parking spaces are also not sealed.

BUILDING BLOCK 2 „NATURAL RECEPTION AREA“

The company's entrance areas are key spaces for making a good impression on customers. By combining different natural garden elements, we can create a variety of habitats in even the smallest of spaces.

The existing reception area in the front of the west office building will be redesigned in 2022. A valuable habitat for animals and plants will be created using a variety of structures and a colourful mixture of native or ecologically valuable plants. The reception areas of the currently planned buildings, such as the technology centre and the new office building, should also be designed to be natural and attractive.

BUILDING BLOCK 3 „NATIVE TREES AND PLANTS INSTEAD OF EXOTICS“

Trees play an important role in outdoor space design. They can enliven high-traffic areas, accent the reception area, and upgrade outdoor lounges. They help to improve the local environment by acting as a wind break and providing a privacy barrier. In particular, old trees with many niches offer a habitat for countless species of birds, insects, and mammals, such as squirrels and dormice. When replacing old plantings in the future, care should be taken to procure native plants. The company has an official policy against planting trees or shrubs within five meters of the slurry cut-off wall (see also building block 4), and in many places, on the factory grounds, there are underground pipelines and channels, and trees or shrubs cannot be planted above these.



BUILDING BLOCK 4 "HEDGES MADE OF WILD SHRUBS & COPSES"

A diverse wild shrub hedge has numerous habitat niches, such as for insects, small mammals, and birds. They provide food, shelter, and breeding grounds.

One place where this building block can be carried out is in the remaining open areas after constructing the new dangerous goods warehouse.

BUILDING BLOCK 5 „HABITATS ON UNDEVELOPED LAND“

The company premises contain areas that do not fulfil any actual function in the operational process. They serve as separating greens and clearance or reserved areas for future operational use. Whether designed as ruderal meadows, rough pastures, or wetlands, they can act as a natural habitat, although potentially only for a limited period of time.

A rough pasture could be created on and next to the newly built underground sealing wall around the new hazardous goods warehouse.

BUILDING BLOCK 6 "GREEN FACADES"

When properly planned, a green facade can provide a cost-effective shading and sun protection function, improve the local climate, and at the same time provide protection against rain, overheating, frost, and air pollutants. Green facades promote biodiversity and the utilization of different structures. They create habitats and refuges for animals, particularly breeding niches for songbirds.

The newly built gatehouse is already being planned with a green facade. This will also be taken into account in the planning of the office building and the technology centre.



BUILDING BLOCK 7 "GREEN ROOFS"

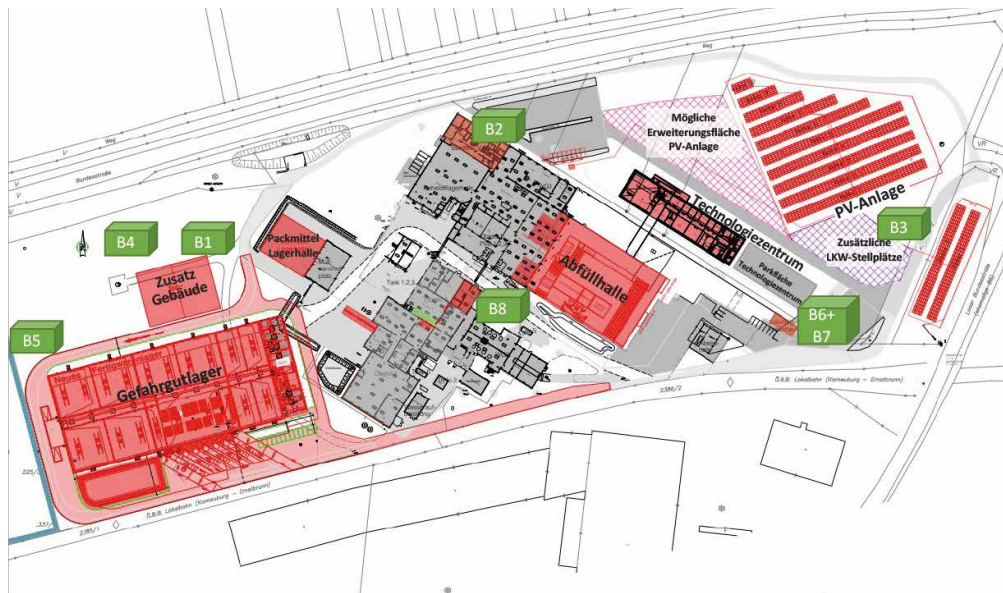
Like the green facade, a green roof also improves the surrounding area and local climate. It mitigates weather extremes and thus provides for greater longevity compared to conventional gravel roofs. Efficient water retention significantly relieves the burden on sewage treatment plants. Planting with drought-resistant herbs and grasses encourages species that have become rare.

A green roof is already envisioned for the planned gatehouse.

BUILDING BLOCK 8 „INSECT-FRIENDLY LIGHTING“

Excessive light disturbs the rhythm of life of many nocturnal animals, such as moths and migratory birds. They can lose their orientation and fly until they are exhausted, or they can burn themselves on open light bulbs. LED lamps, for example, are both energy-efficient and insect-friendly.

The outdoor lighting on the factory premises was completely converted to LEDs in August 2019.



Building block 1 „Living pavement surfaces“ | Building block 2 „Natural reception area“ | Building block 3 „Native trees and plants instead of exotics“ | Building block 4 „Hedges made of wild shrubs & copses“ | Building block 5 „Habitat on undeveloped land“ | Building block 6 „Green facades“ | Building block 7 „Green roofs“ | Building block 8 „Insect-friendly lighting“




FIGURES, DATA, FACTS

WE CONTINUE TO PURSUE AN
OPEN AND TRANSPARENT
COMMUNICATIONS STRATEGY



FIGURES, DATA, FACTS

INPUT-OUTPUT ANALYSIS (2021)

RAW MATERIALS			PRODUCTS	
Active substances	3.395 t		Granulate material	4.730 t
Other raw materials	5.600 t		Emulsions, emulsion concentrates	2.876 t
Finished products	1.209 t		Suspensions, suspension concentrates	2.675 t
Packaging	1.498 t		Other formulations	1.201 t
ADJUVANTS AND OPERATING SUPPLIES			EXHAUST AIR	
Lubricants, cleaning materials	118 l / 18 kg		Dust (production facilities)	21 kg
Liquefied gas	1.680 kg		Dust (utilities)	94 kg
Laboratory chemicals	1.594 l / 31 kg		CO	656 kg
			NO _x	5.310 kg
			CO ₂	4.448 t
CONSUMPTION OF UTILITIES			WASTE, WASTEWATER	
Electricity	5.147 MWh		Hazardous waste	3.900 t
Light heating oil	3.017 MWh		Non-hazardous waste	108 t
Natural gas	9.402 MWh		Industrial wastewater	3.558 m ³
Fresh water	13.622 m ³			

INPUT – RAW MATERIALS (Material efficiency)

A large percentage of raw materials (up to 60%) is provided by customers. The raw materials are delivered to the two raw materials warehouses by trucks.

INPUT - RAW MATERIALS AND ADJUVANTS	2019 amount (kg)	2020 amount (kg)	2021 amount (kg)
Active substances*	1.759.541	2.650.428	3.395.144
Other raw materials	4.147.777	4.862.754	5.599.657
Finished products (for filling or repackaging)	754.988	710.180	1.209.256
Packaging (drum, box, labels)	1.087.557	1.363.305	1.498.024
Total amount	7.749.863	9.586.668	11.702.081
of which raw materials supplied	2.767.543	4.079.953	5.093.798

INPUT – OPERATING MATERIALS (Material efficiency)

The bulk of operating materials comprise materials used in plant operation and maintenance of the production and utility supply systems as well as in the laboratory or technical centre.

INPUT - LIQUID OPERATING MATERIALS	2019 amount (l)	2020 amount (l)	2021 amount (l)
Lubricants	32	26	36
Cleaning agents	1.058	83	82
Laboratory chemicals	920	1.302	1.594
Total amount	2.010	1.411	1.712

INPUT - SOLID OPERATING MATERIALS	2019 amount (kg)	2020 amount (kg)	2021 amount (kg)
Lubricants	31	13	18
Liquefied gas	960	1.200	1.680
Laboratory chemicals	18	41	31
Total amount	7.850	1.254	1.729

*Approximately 50 active substances with properties harmful to the environment and health are processed; of these, 20 pose an elevated risk (suspicion of carcinogenicity or reproductive toxicity). Particularly strict exhaust air thresholds apply to the latter materials.

INPUT – CONSUMPTION OF UTILITIES AND ENERGY SOURCES (Energy efficiency)

100% of energy sources (electricity, light heating oil, natural gas) are supplied by external suppliers. The factors that determine consumption of utilities are production output, product mix (ratio of granules to other types of formulation) and the number of employees. In order to ensure a transparent representation of the energy consumption per production unit, the detailed production-related structure of meters (sub-meters) is being expanded continuously. Production output increased by 18 % year on year. The total energy consumption increased by nine per cent, but related to the production output even seven per cent less energy was used compared to the previous year. The reason for this was the low heating oil consumption due to the mild winter of 2020.

TYPE OF UTILITY	2019 absolute	2020 absolute	2021 absolute	2019 per kg product output	2020 per kg product output	2021 per kg product output
Electricity consumption (kWh)	3.969.670	4.626.660	5.147.430	0,52	0,49	0,46
Consumption of heating oil (kWh)	3.023.230	3.576.004	3.016.613	0,39	0,38	0,27
Consumption of natural gas (kWh)	5.930.750	7.849.991	9.402.117	0,77	0,83	0,84
Total energy consumption (kWh)	12.923.650	16.052.655	17.566.160	1,68	1,70	1,57

INPUT - TOTAL CONSUMPTION OF RENEWABLE ENERGY (Energy efficiency)

The input of renewable energy is largely determined by electricity consumption. According to the information provided by the electricity company, approximately 19% of electricity supplied comes from renewable sources.

INPUT - CONSUMPTION OF FRESH WATER

Fresh water is supplied by the Leobendorf authorities. The factors that determine consumption of fresh water are production output, product mix (ratio of granules to other types of formulation), the number of product changes (cleaning production equipment following a change of product), the number of employees and the space used. Fresh water consumption dropped significantly in 2020 and in 2021, compared to previous years. This is attributable to a leak at a water hydrant which was discovered during construction work at the end of September 2020 and repaired. The water lost in 2020 was estimated at 3.500 m³. It was not possible to ascertain when the leakage started.

TYPE OF UTILITY	2019 absolute	2020 absolute	2021 absolute	2019 per kg product output	2020 per kg product output	2021 per kg product output
Fresh water consumption (m ³)	16.784	14.115	13.622	2,19	1,48	1,21

INDICATOR: "BIOLOGICAL DIVERSITY"

SURFACE AREA USED	2019	2020	2021
Area of the factory site (m ²)	92.000	92.000	92.000
Built-up area (m ²)	13.425	13.425	13.425
Percentage of built-up area (%)	14,59	14,59	14,59

OUTPUT – PRODUCTS

PRODUCTION OUTPUT ACCORDING TO FORMULATION TYPE	2019 amount (kg)	2020 amount (kg)	2021 amount (kg)
WG - Water dispersible granules	2.171.684	2.686.721	3.309.993
EC - Emulsion concentrates	1.368.843	1.143.046	1.362.373
SG - Water-soluble granules	399.834	724.301	758.158
CS - Micro capsule suspensions	572.423	668.479	964.626
FS - Suspension concentrates for seed treatment	402.532	638.477	720.621
EW - Emulsion in water	1.335.483	1.464.665	1.513.420
SC - Suspension concentrates	279.616	826.862	989.686
MG - Microgranules	368.190	410.848	661.595
Other formulation types	947.407	1.177.446	1.200.886
Packaging	1.087.557	1.363.305	1.498.024
Total output	8.933.569	11.104.152	12.979.382

(LICENSED) PACKAGES PUT ON THE DOMESTIC MARKET

PACKAGING TYPE	2019 amount (kg)	2020 amount (kg)	2021 amount (kg)
Paper/cardboard (Sales and transport packaging)	41.034	53.645	57.627
Metal packaging (ferrous metals, aluminium)	11.554	11.061	9.363
Hollow containers made of PE and PP	67.097	63.120	78.860
EPS	45	835	1.665
Composite materials	2.007	1.545	1.268
Secondary packaging (films)	23.981	24.059	26.740
Glass packaging	64	51	182
Total	145.782	154.315	175.705

EMISSIONS

A significant proportion of air pollutants are emitted as exhaust air from the production facilities in the form of dust and solvent emissions (organic carbon compounds) and as exhaust gases from the steam generators in the form of carbon dioxide, carbon monoxide, nitrogen oxide and dust. With the use of modern exhaust gas purification methods, the official thresholds (based on the Clean Air Guidelines (TA Luft1) or the relevant legal regulations) can be complied with or even operate below those thresholds. Solvents are separated via absorption in wet or inverse wet scrubbers, dust particles are removed by surface filters (dry air filters, aspiration filters). Emissions are measured in accordance with the Combustion Plant Ordinance (Feuerungsanlagen-Verordnung) at the intervals prescribed officially (1 to 5 years).



1) Technical Instructions on Air Quality Control (Technische Anleitung zur Reinhaltung der Luft (Administrative Directive to the Federal Immission Control Act (Bundesimmissionsschutzgesetz); since no equivalent administrative directive exists in Austria, the Technical Instructions on Air Quality Control are generally used to aid interpretation by experts, administrative authorities and the law courts


PRODUCTION FACILITIES - Officially prescribed emission thresholds and measurements 2021

TYPE OF PLANT	PARAMETERS	UNIT	THRESHOLD	MEASURED VALUES ²⁾
Wet scrubbers of the fluidised bed granulators and production units for liquid products	Staub	mg/m ³	1,00	0,25 – 0,64
	TOC ³⁾	mg/m ³	20,00	1,30 – 3,90
Dry air filters in the fluidised bed granulators	Staub	mg/m ³	1,00 (0,05) ⁴⁾	<0,001 – 0,004
	TOC	mg/m ³	20,00	2,90 – 12,10
Aspiration filters in the preparation containers and the sieve shakers and filling facilities	Staub	mg/m ³	1,00 (0,05) ⁴⁾	<0,001 – 0,01
	TOC	mg/m ³	20,00	<1,00 – 5,90

BOILER PLANTS - Officially prescribed emission thresholds and measurements

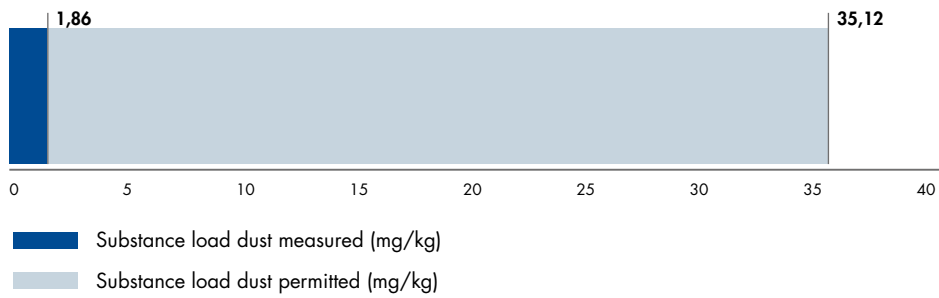
TYPE OF PLANT	PARAMETERS	UNIT	THRESHOLD	MEASURED VALUES
Steam generators ⁵⁾ (Natural gas) measurements 2019	CO	mg/m ³	80	22,5
	NO _x	mg/m ³	100	89
	Staub	mg/m ³	5	<3
Boiler plants for heat generation ⁶⁾ (Light heating oil) measurements 2021	CO	mg/m ³	80	<4
	NO _x	mg/m ³	450	413
	Staub	mg/m ³	20	not measured

2) The range of values varies due to the variability of the substances processed and also due to the varying efficiency of the filters 3) Total carbon 4) Substances with reprotoxic effects
5) Emission thresholds based on the Emission Control Act for Boiler Plants (Emissionsschutzgesetz für Kesselanlagen) 6) Emission thresholds based on the Combustion Plant Ordinance (Feuerungsanlagenverordnung)

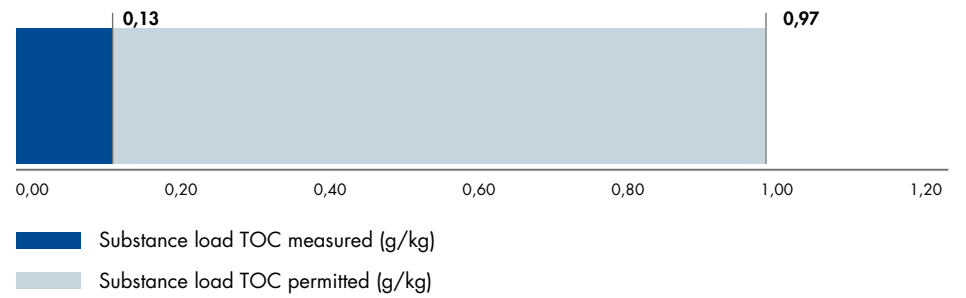
EMISSIONS OF DUST UND ORGANIC CARBON FROM PRODUCTION FACILITIES

The following diagrams show the loads of emissions of dust and organic carbon in relation to production output. Our installations are state of the art and achieve levels below the official thresholds.

RELATIVE DUST LOAD (production)



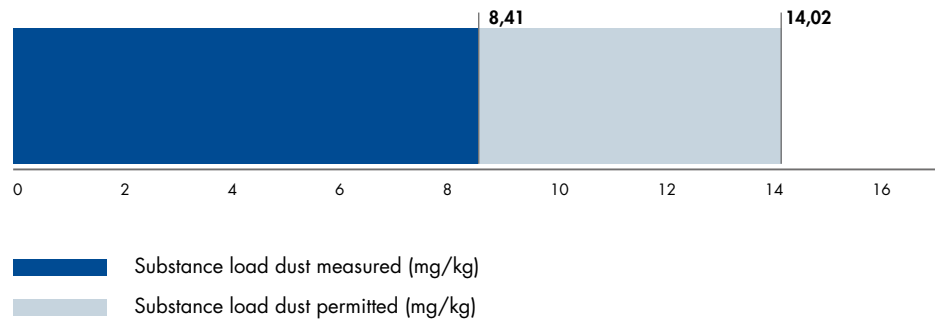
RELATIVE CARBON LOAD (production)



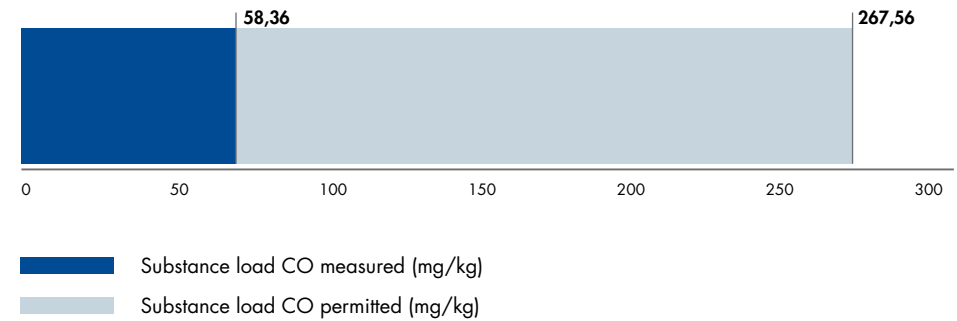
EMISSIONS OF CO, NOX, DUST FROM THE BOILER PLANTS (STEAM AND HEAT GENERATION)

The following diagrams show the loads of pollutant emissions from the boiler plants used for steam and heat generation in relation to production output.

RELATIVE DUST LOAD from the supply of utilities

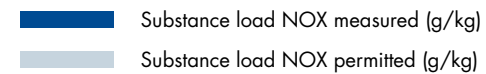
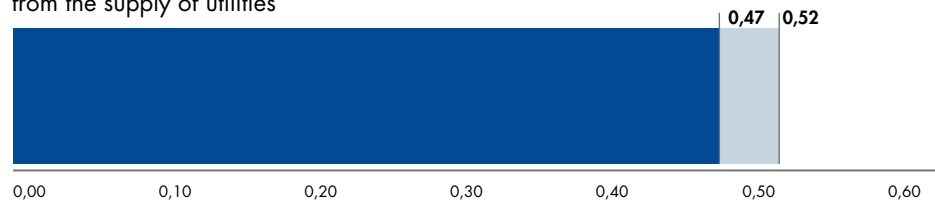


RELATIVE CARBON MONOXIDE LOADS from the supply of utilities



RELATIVE NITROGEN LOADS

from the supply of utilities



CO₂ - EMISSIONS

CO₂ - EMISSIONS FROM ELECTRICITY AS AN ENERGY SOURCE

Our electricity consumption of 5.147 MWh in 2021 produced 1.127 tons of CO₂ emissions ¹⁾.

CO₂ - EMISSIONS FROM THE SUPPLY OF UTILITIES

The supply of utilities (provision of room heating, process heat and process steam) in the heating and steam power houses fired with light heating oil and gas generates around 3.521 t CO₂ ¹⁾.

ACOUSTIC (NOISE) EMISSIONS

The local level of noise is determined by the traffic on the dual carriageway S1 and the Laaer Strasse. Acoustic emissions from the factory do not exacerbate local noise levels since the roads mentioned above largely determine the noise level in the surrounding neighbourhood.

INDUSTRIAL AND DOMESTIC WASTEWATER

The following table shows the use of fresh water. A percentage of fresh water (up to 35 %) is processed in the products (in particular in liquid products) or during the production process or is emitted as steam during purification of exhaust gases. A further fraction (up to 27%) is used to clean the production facilities and is fed into the industrial wastewater system.

Around 16% of fresh water is used in staff facilities (kitchens, toilets, showers).

Together with the wastewater generated by steam generation and water purification, it is fed via the public sewerage system into the sewage plant of the Korneuburg sewage treatment company.

Due to a leak in a hydrant, fixed in late September 2020, the absolute figures for supplying the social sectors in 2019/2020 are biased.

¹⁾ Calculated using the CO₂ calculator/Environment Agency Austria

WATER CONSUMPTION	2019 (m³)	2020 (m³)	2021 (m³)
Construction water	16.784	14.115	13.622
Construction water	25	30	550
Net consumption minus construction water (m³)	16.759 (-0,3 %)	14.085 (-16 %)	13.072 (-7,2 %)
including estimated water loss due to leak	4.668	3.501	0
Utilisation in production	3.297	4.074	4.659
Washing water	2.523	3.176	3.535
Steam generation	430	430	430
Additional dosage for scrubbing towers	1.559	1.934	2.284
Water supply to staff facilities	8.950	4.471	2.165
Disposal of industrial wastewater	2.523	3.176	3.535
Feed-in to public channel	4.095	4.693	5.054
Feed-in to sewage pit	101	103	124

*) The reason for the higher consumption of H₂O is the higher production output of water-intensive formulations, such as (WG, EW)

INDUSTRIAL WASTEWATER FED INTO THE PUBLIC SEWERAGE NETWORK

Officially prescribed wastewater thresholds and measurements 2021

TYPE OF INDUSTRIAL WASTEWATER	TYPE OF INDUSTRIAL WASTEWATER	UNIT	THRESHOLD	MEASURED VALUES
Steam generators (Mixer cooler)	Substances that can be filtered out	mg/l	150,00	<10,00
	pH-value	-	6,50 – 9,50	7,70
	Total chromium (as Cr)	mg/l	0,50	<0,001
	Copper (as Cu)	mg/l	0,50	0,006
	Hydrazine (as N ₂ H ₂)	mg/l	2,00	<0,05
	Sulphite (as SO ₃)	mg/l	10,00	<0,05
	Adsorbable or bound halogens AOX (as Cl)	mg/l	0,50	<0,01
	Total hydrocarbons	mg/l	15,00	<0,10
Water purification (ion exchanger, reverse osmosis system)	Substances that can be filtered out	mg/l	150,00	<10,00
	pH-value	-	6,50 – 9,50	7,85 – 8,06
	Adsorbable or bound halogens AOX (as Cl)	mg/l	1,00	<0,01
	Free chlorine (as Cl ₂)	mg/l	0,20	<0,05

WASTE, INDUSTRIAL WASTEWATER

In addition to production output, the key factors for the generation of waste are the product mix, the number and scope of unplanned maintenance activities (repairs), the number and scope of conversion or construction projects and the number of employees.

The key factors for the generation of industrial wastewater is the number of product changes.

At over 90%, the majority of waste is made up of liquid industrial wastewater. This is washing water that occurs when cleaning production equipment as a result of product changes.

This water is contaminated with active substances and is collected in a separate wastewater collection system and fed into wastewater collection basins.

Waste is disposed of by a certified specialist company which treats the wastewater in a physiochemical plant with subsequent thermal utilisation. The optimisation measures determined in 2020 for waste collection and segregation were very successful. The relative amount of waste – in relation to production output – could be reduced from 0.41 (2018) to 0.36 (2019-2021) kg/kg output. The amount of liquid production waste increased again in 2021 due to the renewed increase in production output. In 2021, many old stocks of plant treatment products and pesticides were disposed of to free up storage capacities that were urgently needed due to the renewed increase in production output. Due to the higher production output, we also produced more packaging materials with harmful impurities or residual

materials, as well as ferrous metal packaging and containers with harmful residues. Ferrous metal waste was generated during the retrofit of the WG3 granulation plant in 2020. This amount is also included as part of the total waste calculation, but it is also broken out as a special data entry.

The following tables and diagrams detail the amount of waste generated from 2019 to 2021.

HAZARDOUS WASTE (in relation to production)

TYPE OF WASTE	WC	AMOUNT (t) 2019	AMOUNT (t) 2020	AMOUNT (t) 2021
Liquid production waste from plant protection/pest control products	53104	2.464,50	3.127,56	3.557,67
Old stock of plant protection and pest control products	53103	71,75	90,16	230,91
Plastic packaging and containers with hazardous residues	57127	5,95	0,35	1,33
Packaging material contaminated by impurities or residues	18715	74,39	89,21	100,43
Used filters and suction pads with hazardous impurities	31435	2,71	3,66	4,60
Ferrous metal packaging and containers with hazardous residues	35106	1,26	7,74	2,06
Total		2.620,56	3.318,69	3.897,00

VOLUME TREND OF HAZARDOUS WASTE 2019/2020/2021

Amount (t) 2019 Amount (t) 2020 Amount (t) 2021

Metal containers with hazardous residues (WC 35106)



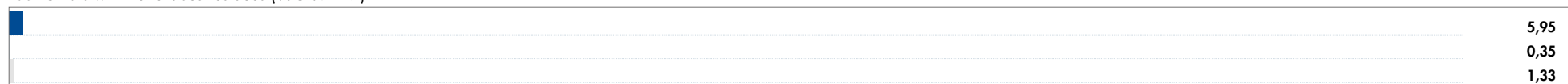
Used filters and suction pads (WC 31435)



Contaminated packaging material (WC 18715)



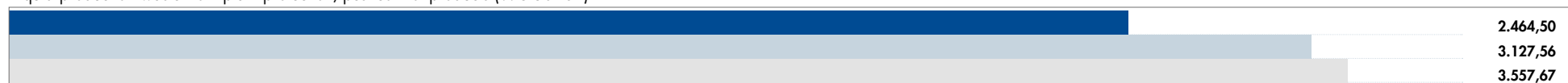
Containers with hazardous residues (WC 57127)



Old stock of plant protection and pest control products (WC 53103)



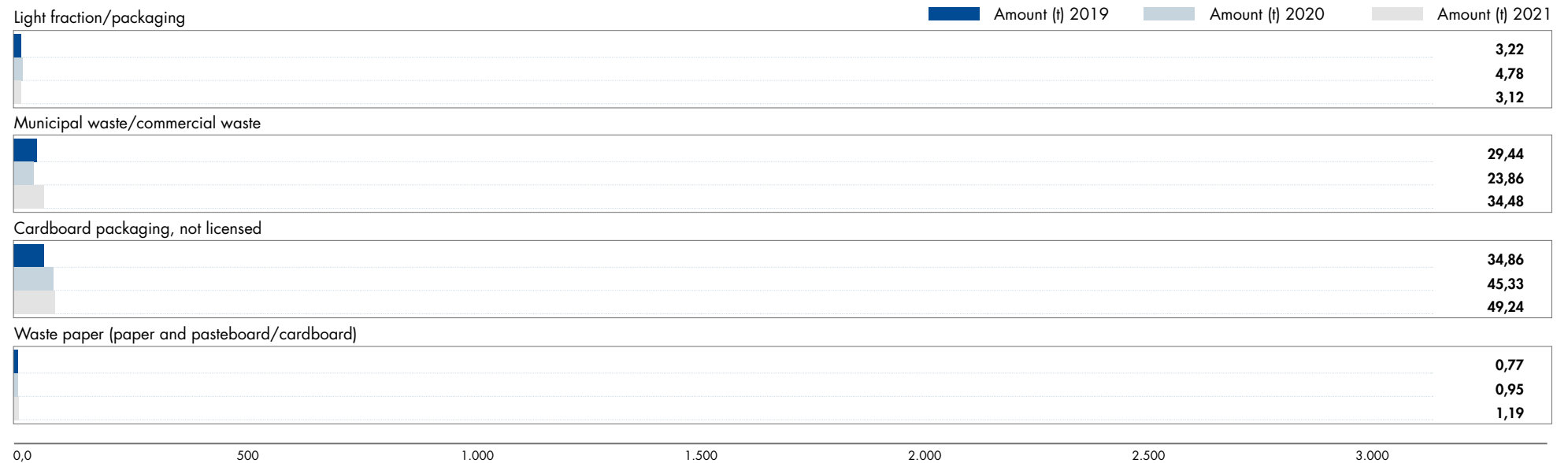
Liquid production waste from plant protection/pest control products (WC 53104)



NON-HAZARDOUS WASTE (in relation to production)

TYPE OF WASTE	AMOUNT (t) 2019	AMOUNT (t) 2020	AMOUNT (t) 2021
Light fraction from the collection of packaging waste not licensed, IBC containers, etc.	3,22	4,78	3,12
Municipal waste and similar commercial waste	29,44	23,86	34,48
Cardboard packaging, not licensed	34,86	45,33	49,24
Other cured plastic waste	6,22	0	0
Waste paper (paper and pasteboard/cardboard) not coated	0,77	0,95	1,19
Total	74,51	74,92	88,03

VOLUME TREND OF NON-HAZARDOUS WASTE 2019/2020/2021



HAZARDOUS WASTE (not relevant to production)

TYPE OF WASTE	WC	AMOUNT (t) 2019	AMOUNT (t) 2020	AMOUNT (t) 2021
Solvent mixtures without halogenated organic compounds	55370	0,00	0,03	0,08
Waste oil	54102	0,74	0,49	2,21
Iron and steel waste, contaminated	35103	5,02	1,00	0,87
Solid grease and oil contaminated operating supplies (workshops, industrial and petrol filling station waste)	54930	0,58	0,11	0,05
Unsorted or hazardous laboratory waste and chemical residues	59305	0,10	0,00	0,00
Gas discharge lamps – fluorescent tubes	35339	0,00	0,00	0,15
Total		6,44	1,63	3,36

NON-HAZARDOUS WASTE (not relevant to production)

TYPE OF WASTE	WC	AMOUNT (t) 2019	AMOUNT (t) 2020	AMOUNT (t) 2021
Bulky waste	91401	19,56	19,79	19,53
Electrical and electronic appliances – large appliances with length > 50cm	35221	0,84	0,00	0,15
Electrical and electronic appliances – large appliances with length < 50cm	35231	0,00	0,00	0,11
Clear glass/coloured glass	31468	0,43	0,46	0,50
Total		20,83	20,25	20,29

TOTAL WASTE GENERATED

TYPE OF WASTE	WC	AMOUNT (t) 2019	AMOUNT (t) 2020	AMOUNT (t) 2021
Liquid production waste from plant protection/pest control products	53104	2.464,50	3.127,56	3.557,67
Old stock of plant protection and pest control products	53103	71,75	90,16	230,91
Plastic packaging and containers with hazardous residues	57127	5,95	0,35	1,33
Packaging material contaminated by impurities or residues	18715	74,39	89,21	100,43
Used filters and suction pads with hazardous impurities	31435	2,71	3,66	4,60
Iron and steel waste, contaminated	35103	5,02	1,00	0,87
Ferrous metal packaging and containers with hazardous residues	35106	1,26	7,74	2,06
Solid grease and oil contaminated operating supplies (workshops, industrial and petrol filling station waste)	54930	0,58	0,11	0,05
Unsorted or hazardous laboratory waste and chemical residues	59305	0,10	0,00	0,00
Gas discharge lamps – fluorescent tubes	35339	0,00	0,00	0,15
Light fraction from the collection of packaging waste not licensed, IBC containers, etc.	91207	3,22	4,78	3,12
Municipal waste and similar commercial waste	91101	29,44	23,86	34,48
Cardboard packaging, not licensed	91201	34,86	45,33	49,24
Other cured plastic waste	57129	6,22	0,00	0,00
Waste paper (paper and pasteboard/cardboard) not coated	18718	0,77	0,95	1,19
Bulky waste	91401	19,56	19,79	19,53
Electrical and electronic appliances – large appliances with length >50 cm	35221	0,84	0,00	0,15
Electrical and electronic appliances – small appliances with length <50 cm	35231	0,00	0,00	0,11
Clear glass/coloured glass	31468	0,43	0,46	0,50
Solvent mixtures without halogenated organic components	55370	0,00	0,03	0,08
Waste oil	54102	0,74	0,49	2,21
Total		2.722,34	3.415,49	4.008,68
Total waste per kg of product (in kg)		0,36	0,36	0,36

DECLARATION OF VALIDITY OF THE ENVIRONMENTAL STATEMENT

ETA Umweltmanagement GmbH, as an accredited environmental verifier organisation in accordance with the Austrian Environmental Management Act (UMG), Federal Gazette I 99/2004, as amended, registration number AT-V-0001, licensed for scope NACE Code 20.20



confirms that

Kwizda Agro GmbH, Leobendorf plant

Kwizda Allee/Laer Straße 1, A-2100 Leobendorf

as described in this 2022 Environmental Statement, meets all the requirements of Regulation (EC) 1221/2009 of the European Parliament and the Council of 25 November 2009, on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), Regulation (EU) No. 1505/2017.

It is confirmed that

- the assessment and validation were carried out fully compliant with the requirements of Regulation (EC) 1221/2009, version Regulation (EU) 1505/2017 and 2026/2018,
- There is no evidence of non-compliance with applicable legal requirements relating to the environment. As environmental experts we have also ascertained the progress made with the remedial measures. These are complied with as prescribed with the remedial plan of the authorities.
- the data and information given in the Environmental Statement reflect a reliable, credible and correct image of all the activities of the organisation within the scope mentioned in the environmental statement.

The declaration of validity of May 2021 thus remains unchanged.

The next comprehensive Environmental Statement will be published in 2024.
Updated and validated Environmental Statements will be published each year.

Vienna, 27.06.22

Dipl.-Ing. Manfred Mühlberger
Senior Environmental Expert

A handwritten signature in black ink, appearing to read 'Manfred Mühlberger'.

Dr. Stefan Gara
Environmental Expert

A handwritten signature in blue ink, appearing to read 'Stefan Gara'.

PRESENTATION OF THE NEXT ENVIRONMENTAL STATEMENT

The date for presentation of the updated environmental statement is 30.04.2023.

PERSONS INVOLVED IN THE COMPILATION OF THE ENVIRONMENTAL STATEMENT:

Regine Kacetzl, Quality Management & Compliance

Karl-Heinz Ludwig, Head of Business Unit Tolling

Chris Muri, Head of Quality Management & Compliance

Thomas Salzl, Leobendorf Plant Operations Manager

Manfred Winter, Head of Business and Site Development

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LIST OF ABBREVIATIONS

acc. to - according to m – metre | BU – Business Unit | Ch. - chapter | cm - centimetre | Dr - Doctor (academic title) | EC - European Community | EDP - electronic data processing | e.g. - for example | Fig. – figure | Flammable Liquids Ordinance (Vbf – Verordnung über brennbare Flüssigkeiten) | g – gram | GW – groundwater | haz. - hazardous | HSE – Healthy Safety Environment | i.e. - that is | incl. - including | kg – kilogram | KR – Kommerzialrat (councillor of commerce) | LKW – Lastkraftwagen (truck) | Mag. – Magister (master's degree at Austrian university) | max. – maximum | PVB – Produktionsvorbereitungsbereiche (supply areas) | Regional administrative authority (BH – Bezirkshauptmannschaft) | SC - storage class (LGK – Lagerklasse) | WC – waste code | t – metric ton | WG - Wirbelschichtgranulator (fluidised bed granulator)

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