

2019 Ruhr Oel GmbH – BP Gelsenkirchen We ensure mobility

- If an alarm sounds, please leave the building/plant unit calmly
- Follow the signs to the emergency exits

For your safety, please note the following information

Welcome!

- Proceed to the nearest assembly point
- Please wait here for further instructions (completeness check)
- Taking photos is inherently forbidden on the site
- Smoking is only allowed in designated smoking rooms
- It is strictly forbidden to bring in or consume any alcohol or drugs







Assembly points – Scholven site





Our activities worldwide









- Day by day in Germany, we ensure mobility and energy supplies for millions of people with our BP, Aral and Castrol brands
- Therefore, our people produce and sell high-grade petroleum products



Ruhr Oel GmbH – BP Gelsenkirchen





Scholven refinery

approx. 250 ha in size





Hassel office location



Horst refineryapprox. 160 ha in size

Origin of the crude oil refined in Gelsenkirchen





- The distillation capacity of the Ruhr Oel plants in Gelsenkirchen is 12.7 million tonnes. The amount of crude actually processed is less than this due to turnarounds or repair work.
- The crude oil processed in the refinery comes from various regions of the world and is piped to the refinery.
- The largest regions are Russia, the North Sea and North Africa.

Products: Shares in overall production We produce primarily fuels, heating oil and olefins





More than 50% of our products are fuels

Ruhr Oel GmbH – BP Gelsenkirchen

The crude oil is refined in a complex system





Our products reach our customers by road, rail, ship or pipeline









Logistics



Refinery sites and pipelines of all operators



 Cru	ıde	oil	pip	elines
_				

- Product pipelines
- Crude oil processing refineries (with atmospheric distillation)
 Processing capacity in thousand t/a 1 box equals 1 million t
- Former refinery/closed-down crude oil processing facilities

- Ruhr Oel GmbH BP Gelsenkirchen has a 1,900-strong workforce, making it one of the largest employers in the city and its region
- At almost 10%, the vocational training quota is well above the average for the chemical industry
- Approx. 22% of the workforce are fully qualified *Meister* or *Techniker*, and around 9% have an university degree

In 2019, BP was named as one of the top employers in Germany – for the 15th time in succession.







Our people

Gelsenkirchen – Stephan Hüsken



The Environmental Legal Framework for Refineries



EU Laws:



- IED Directive 2010/75/EU
- BREFs (e.g. Refinery BREF)
- NECD (National Emissions Ceiling Directive)
- EU ETS (CO₂ Trading System)

German Environmental Law:

- Federal Immission
 Control Act
- Federal Water Act
- Federal Soil Protection
 Act

...

• ...

The Environmental Legal Framework for <u>Refineries</u>







European Industrial Emissions Directive (IED)



BREF – Best Available Technique Reference Document

- All BREFs are basically **technical documents** culminating in the **BAT Conclusions** to define and detail BAT "Best-Available-Techniques" that are commonly applicable to specific European Industry Sectors (e.g. EU Refining Sector)
- Under the lead of the EU Commission, EU Member States, NGOs and Industry Associations are involved in the drawing up of the BREFs
- The whole BREF process is divided into several steps, starting with data collection and concluding with political decisions (trialogue process)
- The BREF drawing up process may last 3-5 years from the kick-off meeting until publication in the Official Journal of the EU Commission

European Industrial Emissions Directive (IED)





• Publication in the Official Journal of the EU Commission

European Industrial Emissions Directive (IED)





REF BREF

New environmental standard regulating emissions from refineries into the air and water

EFS BREF

New cross-sectorial standard regulating emissions from storage and transfer/handling of liquids

Now standard for combustion
plants (>=50MW) that may
affect refinery power plants and
petrochemical installations at
Refineries

CD DDEE

LVOC BREF
New standard regulating
emissions from chemical
installations into the air and
water



Resource Efficiency BREF

New cross-sectorial standard for energy efficiency in industry and industry cooling systems affecting refineries+petchems This BREF merges the ICS and ENE BREFs to one BREF

CWW BREF

New standard regulating aqueous and gaseous release from chemical installations

WI BREF

New standard for installations incinerating hazardous waste (e.g. sewage sludge)

Refinery BREF (REF BREF)





- REF Regulation (Appendix to Technical Instruction on Air Quality Control)
- Amendments to Appendix 45 of Waste Water Decree

Environmental Protection at ROG – BP Gelsenkirchen



Holistic Environmental Protection Approach



- The Environmental Protection Department with more than 10 environmental experts care about all environmental topics on the basis of applying a certified Environmental Management Concept that encompasses...
 - Air Emissions Control
 - Waste Water Management
 - Waste and Recycling Management
 - Soil and Groundwater Monitoring and Remediation Management
- Continuous emissions monitoring (e.g. SO2, NOx, dust) at each stack of large combustion plants and direct transmission of data to the authority allows for independent monitoring in the interest of transparency
- In total 7 emission monitoring stations equipped with lots of sophisticated measurements devices are distributed across both production sites on important locations to monitor air quality (airborne pollutants such as hydrocarbons, H₂S etc.)
- Application of a specific refinery information system tool ensures holistic monitoring all emissions into air and water for a better controlling of compliance with environmental permit requirements

Environmental Protection at ROG – BP Gelsenkirchen





- Monitoring of waste water stemming from different process units and having different compositions with respect to physical, chemical and biological parameters is a crucial task to ensure that the refinery meets legal requirements
- Waster Water Treatment plants operated at both sides clean the waste water and removes contaminants
- The different cleaning steps and the final effluent water from the waste water treatment plants are continuously monitored to allow for immediate intervention in case of an upset
- The own and certified laboratory takes samples and analyses the water quality all time

Environmental Protection at ROG – BP Gelsenkirchen

- The ultimate objective in the context of Waste Management is to minimize and prevent the occurrence of waste and only in case that no other option is possible the disposal of waste has to be initiated in accordance with German law and under the control and surveillance of the competent authority
- The disposal of dangerous waste has to be applied for by using an internet based tool operated by the authority that allows the exact tracking of the whole waste disposal proceeding





Gelsenkirchen – Peter Alexewicz



Starting position

- The refinery is 90 years old and has grown a lot over the years.
- Neighborhood is very close to both plants.
- Originally, many employees lived near the sites.
- Over the years this has changed, new homeowners do not know the refinery environment - conflict potential
- Critical attitude towards industry has increased.
- Ecological issues are gaining in importance in the political environment in Germany.

Scholven refinery - Neighbourhood





Horst refinery - Neighbourhood





Investment in Communication and Transparency





Establishment of a separate intranet section on the local intranet to keep employees informed on a regular basis. 27

Dialogue with environmental committees

Deutschland

Aktivitäten in Deutschland

Úber BP

Auf einen Blir

Aktivitäten is

Raffinerie

Geleenkirche

• Wer wir sind

Was wir tur Wo wir eine

Sicherhe

Qualität

Publikationer

Arbeiteplätze Regionales Engage

Reise durch die Buhr C Raffinerie Kontaki

Rußpellets

Umweltministerium: Einsatz der Ölpellets rechtmäßig NRW-Umweltministerin Ursula Heinen-Esser legte gestern Bericht vor

BP: Produktion umstrittener Ölpellets soll 2022 enden

Dusseleer/schaven. Nach einem Laut Ministerium sind die sim stonsnegrenzungen in den zurutet. Berricht die NRW-Umwelministe. Kraftwerk Scholven eingesetzten liegenden Jahren stes eingehalten. zwanzigseitigen Papier zum Thema. Bericht auch darauf, dass "die Emis-

RAFFINERIE SCHOLVEN

Angelika Wölke29.01.2019 - 17:40 Uhr

dorf vorgestellt wurde, ist die um. seien gemäß der Verordnung zur schritten wurden- ist unahnange strittene Verbrennung der Ölpellets Verbrennung und der Mitverbren- ger Gutachter soll sich jedoch um wurde im biogiann Universitenet, wurde sich sichen der Stanliche der ihnerde Abladen von Windlete im striltene Verbrennung der Olpeltets Verbrennung und der Mitverbren. ger Gutachter son auch jedoen um von BP im hiesigen Uniper-Kraft. nung von Abfallen als "ähnliche das illegale Abladen von Ölpeltets in nung von Abfallen als "ähnliche das illegale Abladen von Ölpeltets in Tranerabas Mühlenberg in seine s von BP im meingen Uniper-tvran, nung von Ablaßen als "ahnliche das lifegate Abladen von Unpelletis in werzh rechtmäßig, "Uniter Berück, breinhare Stoffe" einzustufen. Die der Tongrube Mühlenberg in eichlichung Aus vordiogenzien Infore. Ganschmiermen zur Vorbrechnung der Schormhorke/Schlein klimmern. "Es werst reentmasse "Unter Bernes, brennbare Staffe" einzustuten. Lije der Tongrube Munienberg in schligung der vorliegenden Infor-Genehmigung zur Verbrennung der Schermbeck-Gahlen Kämmern. "En sichtigung der vorliegenden Intor- Genehmigung zur Verbrennung der SchermbecksGahlen Kummern. ste mationen kommt die (...) vorgenom- Pellets sei, wie bereits bekannt, erst- geht darum, herauszufinden, weiche mationen kommt die (...) vorgenom. Petiets sei, wie bereits bekannt, erst. geht darum, herauszuhnden, weiche mais 1972 erteilt worden. "Danach Stoffe noch in der Torgenbe sein der terstenden erteilt werden. "Danach Stoffe noch in der Torgenbe sein der terstenden erteilt werden. "Danach Stoffe noch in der Torgenbe sein der terstenden erteilt werden. "Danach Stoffe noch in der Torgenbe sein der terstenden erteilt werden. "Danach Stoffe noch in der Torgenbe sein der terstenden erteilt werden. "Danach Stoffe noch in der Torgenbe sein der terstenden erteilt werden erteilt werden. "Danach Stoffe noch in der Torgenbe sein der terstenden erteilt werden erteilt werde mene Prüfung der Rechts- und Ge-nehmigungssituation zu dem Ergeb-erfolgten mehrere Genehmigungs- könnten", so Umwellsministerin Undersen Unterseifersterinder die Go-Undersen Unterseifersterinder die Go-Unterseifersterinder die Go-Unterseiferst neumgeupperumuon zu sem zigen-nis, dass der Einsatz der Ülpellets verfahren. Letztmalig wurde die Ge-den entwarten Benteten ein nehmioune in ishre 2016 ossindere "Usula Heinen-Esser (CDU) am nis, dass der Einsatz der Olpellets, vertanren, Letztmang wurde die Ge-geltenden Rechtslage ent. nehmigung im Jahre 2016 gelindert." Dienstag in Düsseldorf.

+ Informationen zur Herstellung von Rußpellets als Nebenprodukt am Standort Scholven

worden. Die Ruhr Oel GmbH - BP Gelsenkirchen ist um Aufklärung bemüht und möchte Transparenz bei der Herstellung und der Zusammensetzung der Rußpellets und deren weiteren Behandlung schaffen



Unter anderem durch die Medienberichterstattung sind Anwohner in Gelsenkirchen in Verbindung mit dem Thema Rußpellets und deren Einsatz als Brennstoff verunsichert

Raffinerie Gelsenkirchen > Sicherheit/Umweltschutz/Qualität > Qualität

Brochure

informing

about our site and

production

pellets

Stakeholder Management / Community Engagement



Our approach: structured, strategic, sustainable

External Stakeholder management: pro-active development of contact to most important stakeholders / target groups: politics, media, associations

Activities: F2F talks, explaining our business, pro active information about potential issues, roundtable discussions, offering site visits, publication about certain topics

Community engagement: higher visibility in the neighbourhood e.g. participating in local city events, image ads, banner ads, neighbourhood newspaper, establishing a direct channel, neighbourhood dialogue format, sustainable donation concept

90 Years Gelsenkirchen Refinery

- Two employee events (including partner) ٠
- Open Day for neighbours and stakeholder
- Official Reception for guests from politics and ٠ economy















Petrochemical products







- Ethylene 1,060
- Propylene 590
- Toluene (HQ) 150
- Xylene 350
- Cumene 370
- Methanol 300

in thousands of tonnes per annum



... and also e.g. in central heating, aeroplanes or road surfaces.

- Jet fuel
- Gasolines
- Diesel

1,000 2,100 4,800

- Heating oil 1,100
- Petroleum coke 400
 - in thousands of tonnes per annum



Processing plant capacities

bp

- Crude oil destillation 12.5 m t/a
- Vacuum destillation 5.3 m t/a
- Hydrocracker and Fluid Catalytic Cracker 4.5 m t/a
- Coker and Visbreaker 2.7 m t/a
- Catalytic reformer
- Hydration 4.9 m t/a 1.0 m t/a
- Steamcracker (C₂ production)



1.3 m t/a

Petrochemicals – important production lines



