

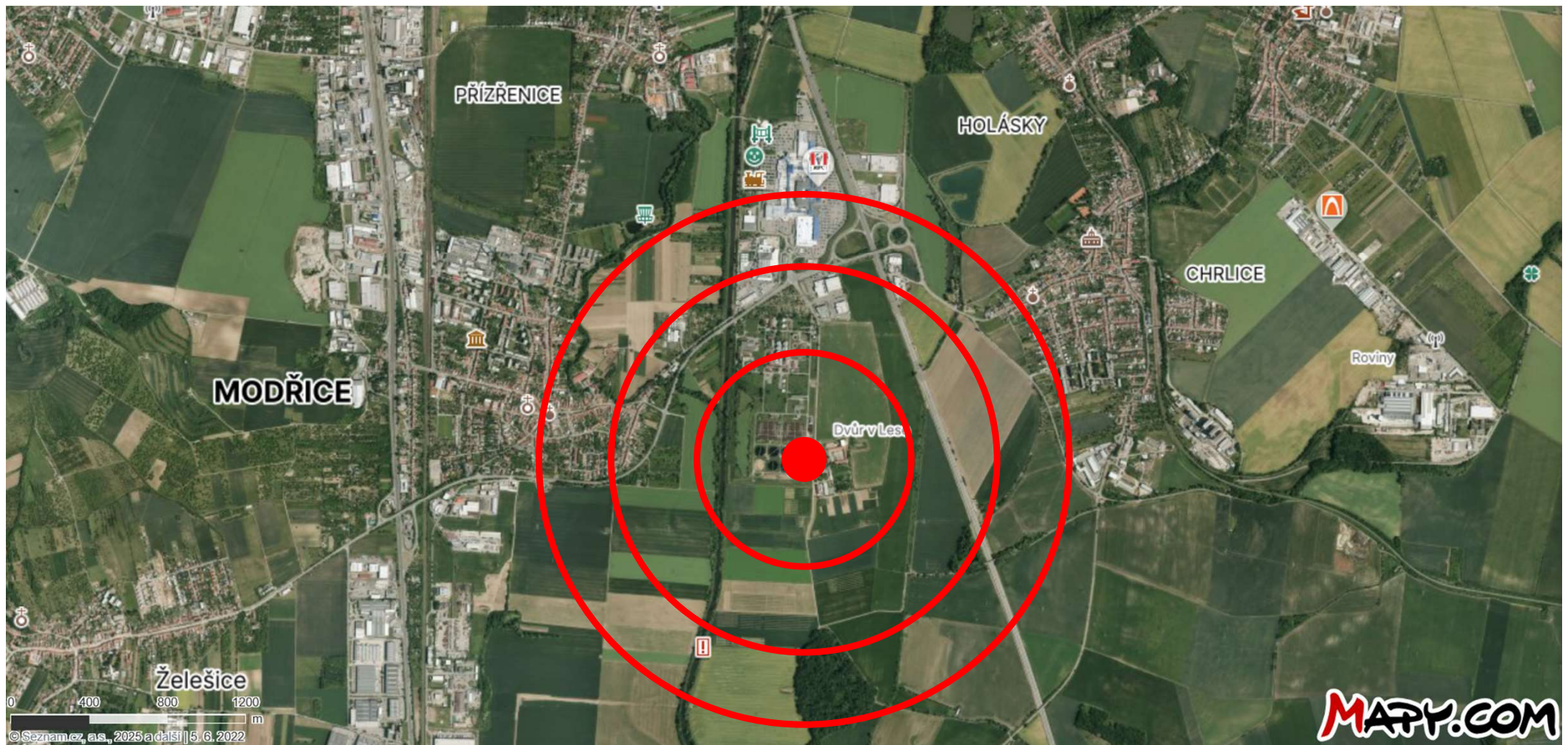


Odor removal using photocatalytic oxidation – AS-PCO references

Examples of AS-PCO technology implementations designed for locations where odor is not acceptable.



NDS Modřice – 3 deodorization lines (VII/2025)

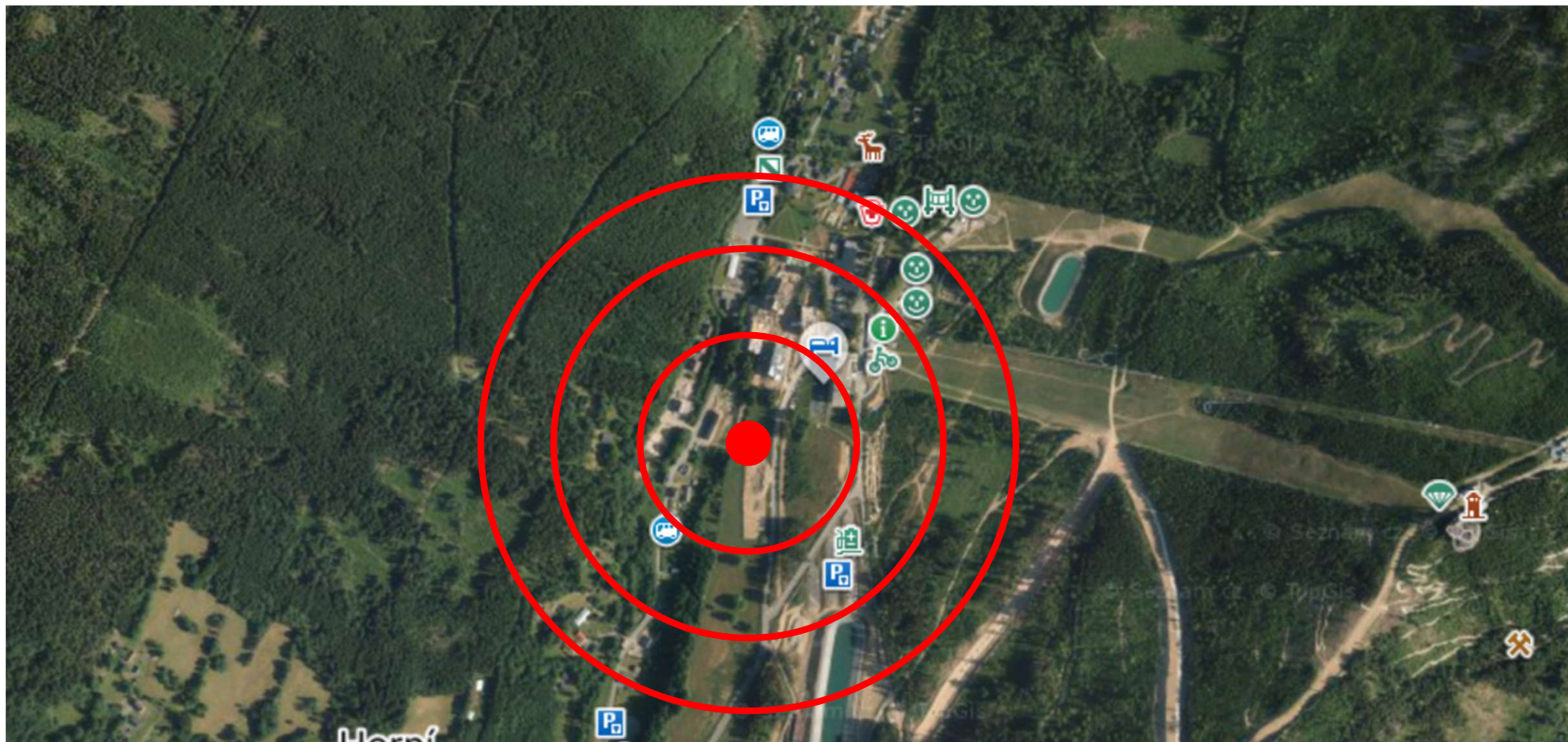


NDS Modřice – 3 deodorization lines (VII/2025)

Three technological lines for odor control of air from liquid waste treatment operations, with a total capacity of 8,440 m³/h. The technology is based on AS-PCO photocatalytic oxidation, our flagship solution in the field of odor removal in wastewater treatment. The most heavily loaded branch includes an acid and alkaline adsorption column and automatic online monitoring of pollutant gases with sample pre-treatment.



WWTP Dolní Morava – AS-PCO NX4000 (XII/2023)



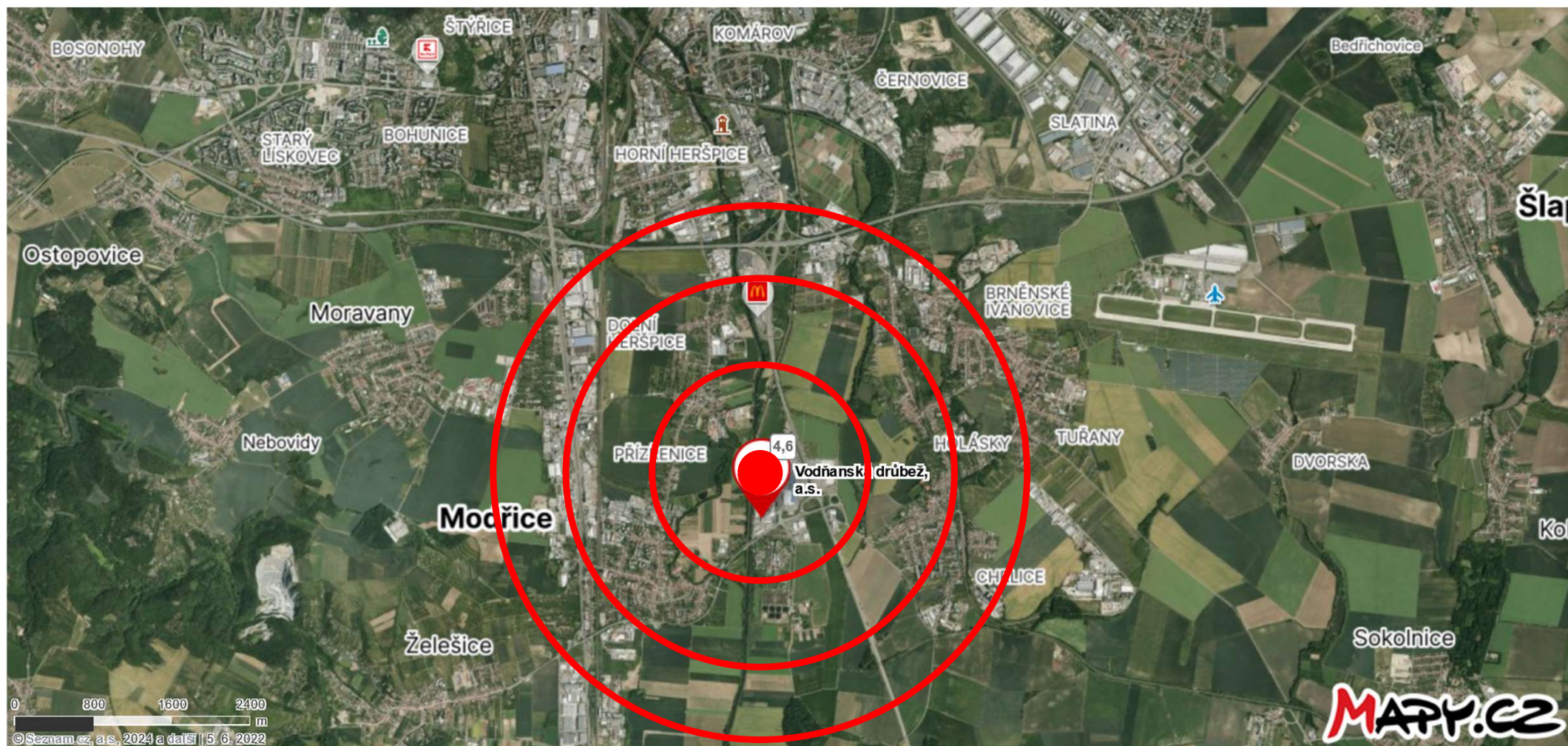
WWTP Dolní Morava – AS-PCO NX4000 (XII/2023)

Deodorization unit for the mechanical pre-treatment and sludge dewatering facilities at the municipal wastewater treatment plant in the Dolní Morava recreational resort.

WWTP capacity: 4,305 PE;
deodorization unit capacity: 4,000 m³/h.



WWTP Vodňanská drůbež, Modřice – AS-PCO NX3500 (XI/2022)



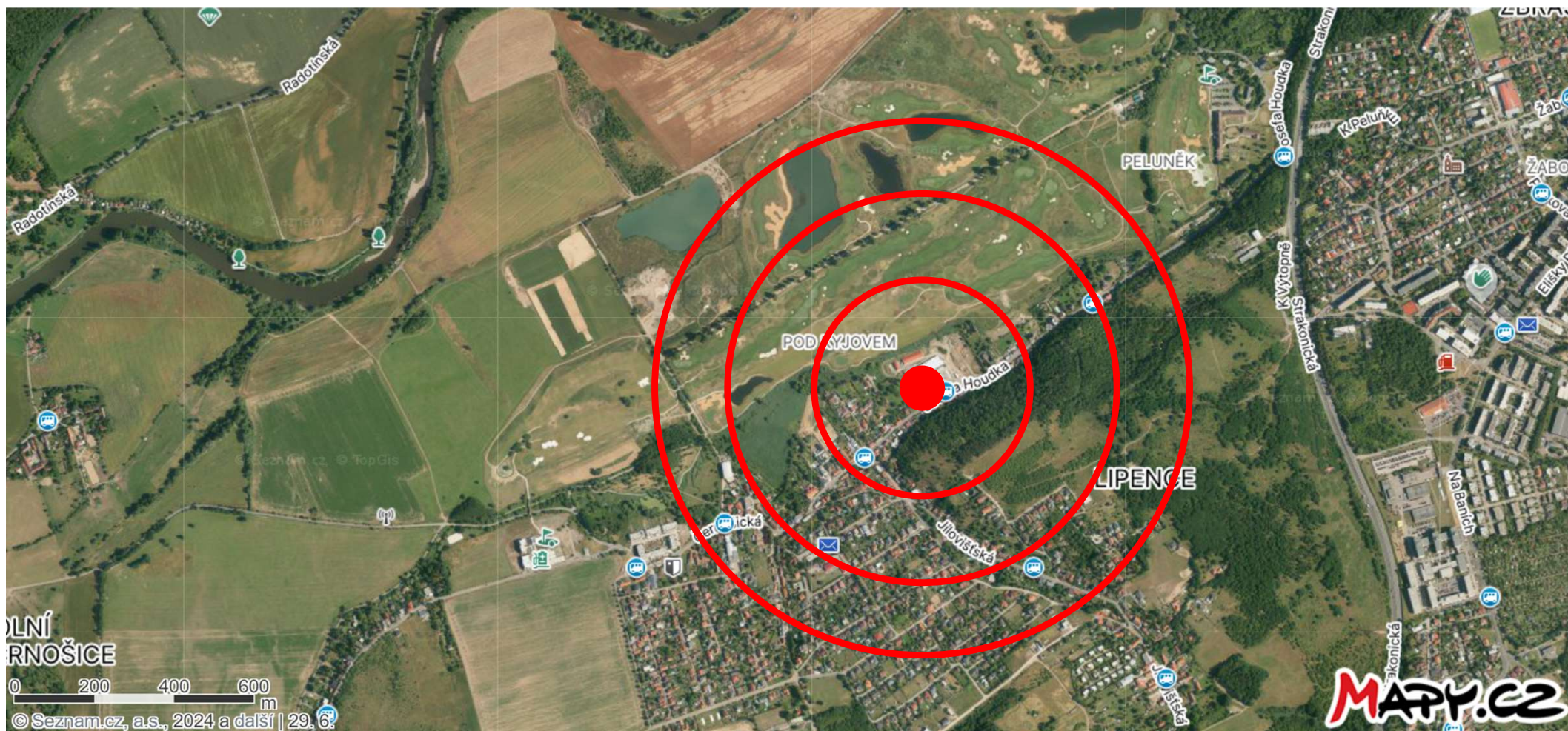
WWTP Vodňanská drůbež, Modřice – AS-PCO NX3500 (XI/2022)

Deodorization unit for the chemical pre-treatment facility of the largest chicken slaughterhouse in the Czech Republic. The plant is located near a residential and commercial area.

WWTP capacity: 2,450 m³/d; deodorization unit capacity: 3,500 m³/h.



WWTP Lipence – deodorization system (X/2021)

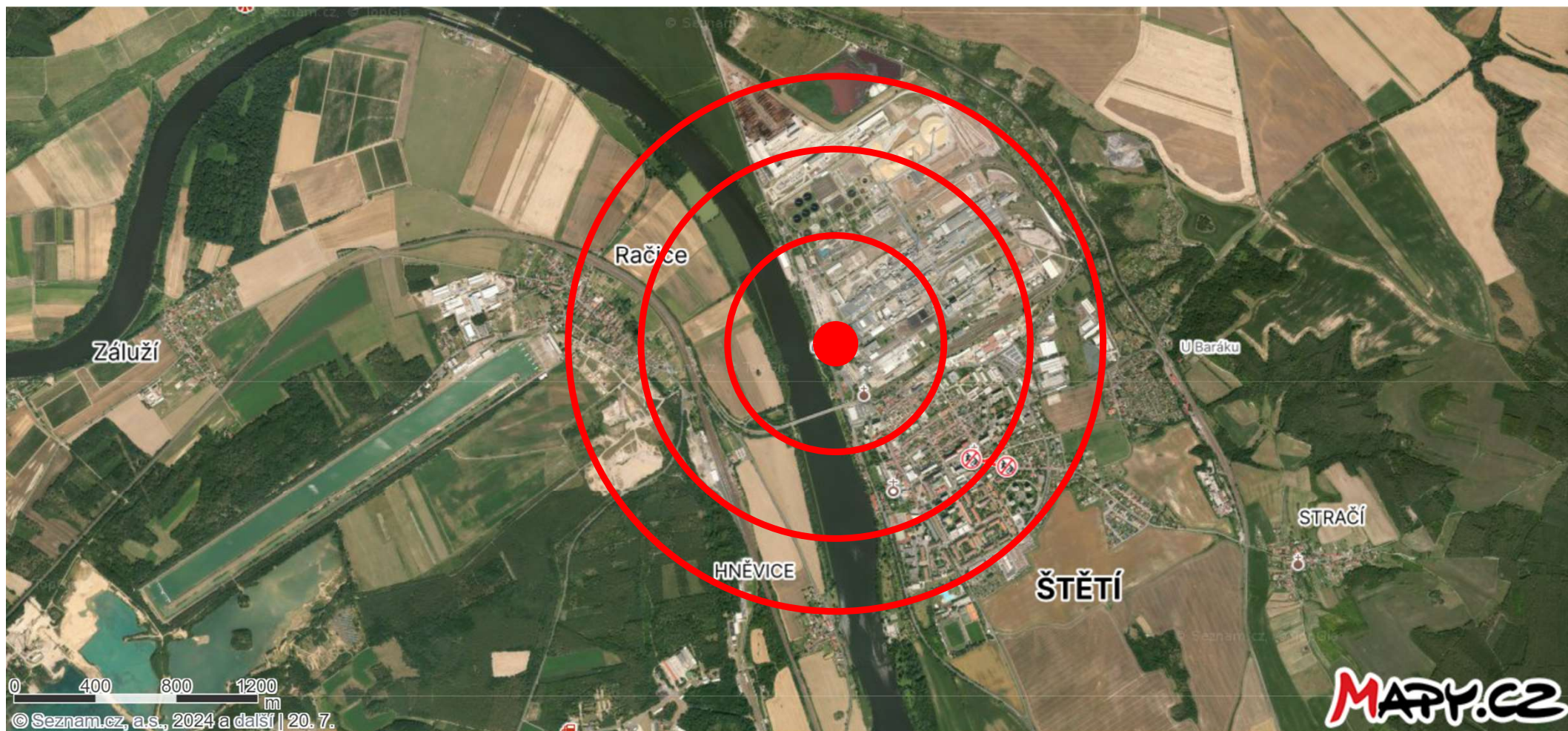


WWTP Lipence – deodorization system (X/2021)

Implementation of AS-PCO NX 6500 and AS-PCO NX 9000 units for deodorization in both operational facilities. The wastewater treatment plant is located in a residential area near the town and a golf course.



Mondi Štětí – deodorization of sludge treatment (II/2020)



Mondi Štětí – deodorization of sludge treatment (II/2020)

Implementation of the AS-PCO 250 unit for sludge treatment from a paper packaging and pulp production facility. The plant is located next to a river at the outskirts of the town.



WWTP Davle – Mechanical pretreatment hall deodorization (XII/2020)



WWTP Davle – Mechanical pretreatment hall deodorization (XII/2020)

Implementation of the AS-PCO NX1400 unit in the mechanical pretreatment hall with a connection to the pressure sewer.



WWTP Prague – deodorization of the screening facility on Císařský island (XII/2019)



WWTP Praha – deodorization of the screening facility on Císařský island (XII/2019)

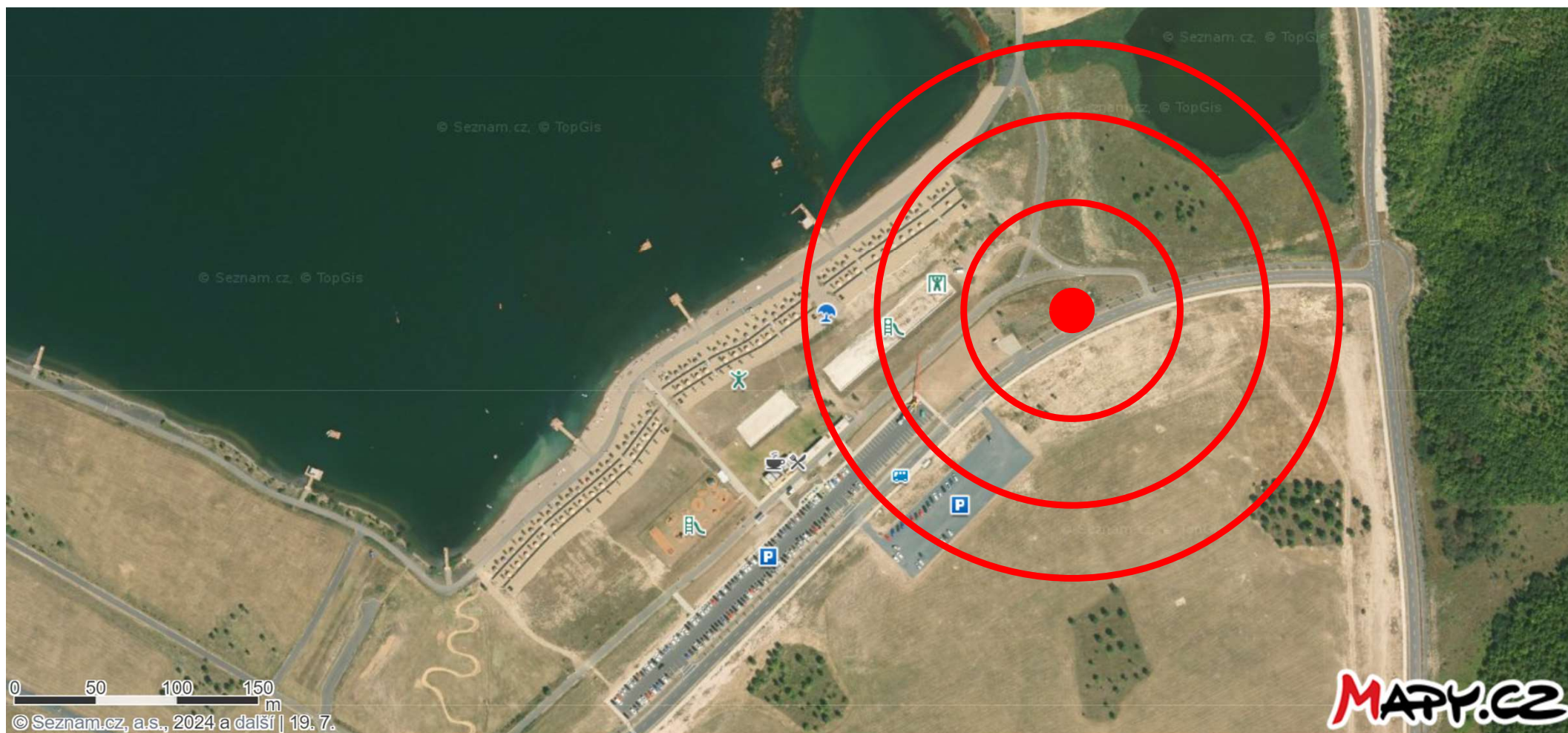
Implementation of the AS-PCO NX 6500 unit.

Deodorization of the screening facility, the switchgear room, adjacent areas, and sanitary facilities.

Capacity: 6,500 m³/h.



Most lake – deodorization of wastewater from wet well (XIII/2021)

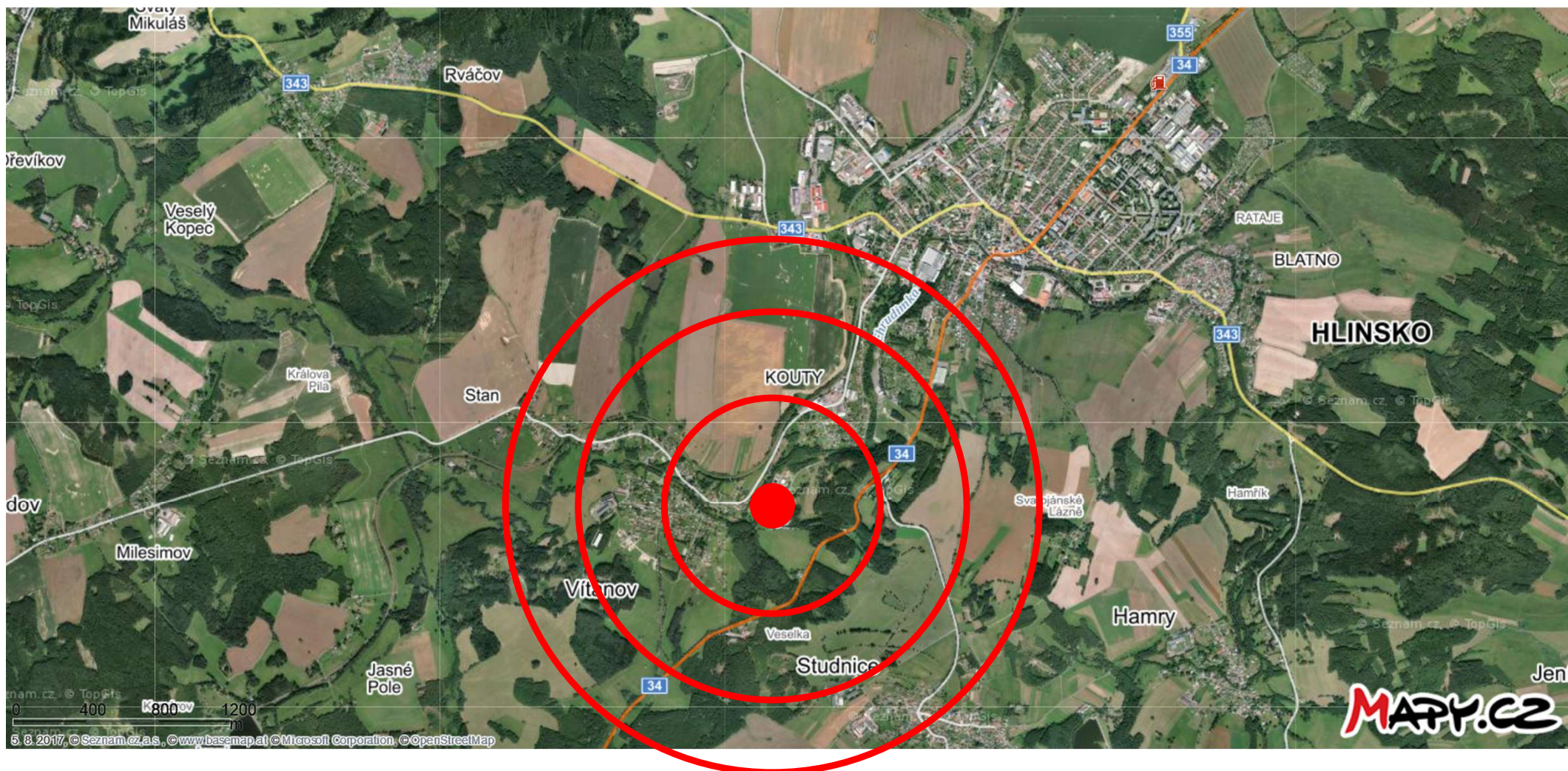


Most lake – deodorization of wastewater from wet well (XIII/2021)

Implementation of the AS-PCO NX 150 unit for deodorization of the wet well at the wastewater pumping station on Lake Most. The lake is heavily used for recreational purposes.



WWTP Hlinsko – deodorization of the mechanical pretreatment hall (odor removal) (XII/2018)

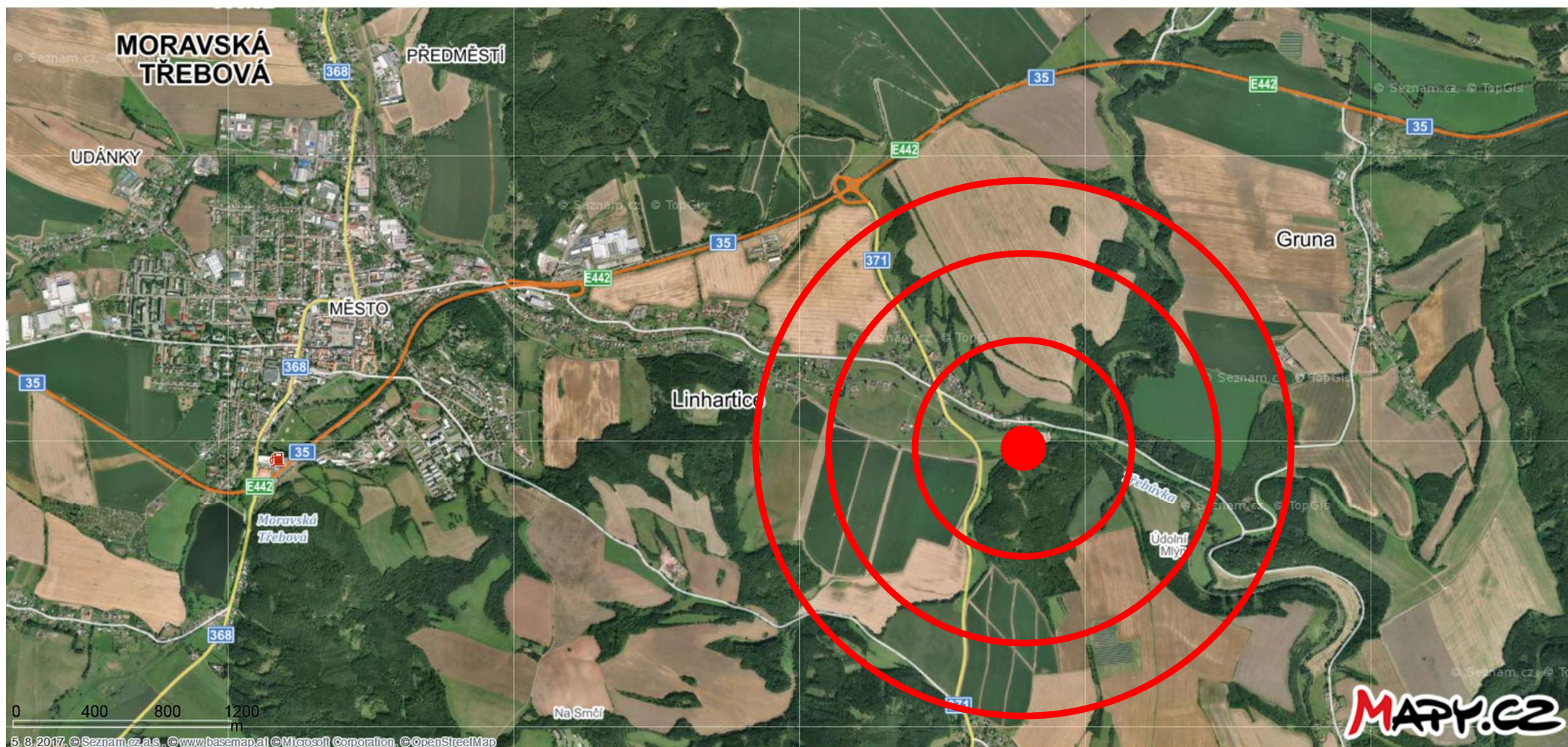


WWTP Hlinsko – deodorization of the mechanical pretreatment hall (odor removal) (XII/2018)

Implementation of the AS-PCO 7600 unit at a municipal wastewater treatment plant, which—due to its location in the Chrudimka River valley, where wind carried odors to residential areas—was the subject of complaints. Turnkey delivery, including air handling ductwork.



Deodorization WWTP Linhartice – Moravská Třebová (XII/2018)

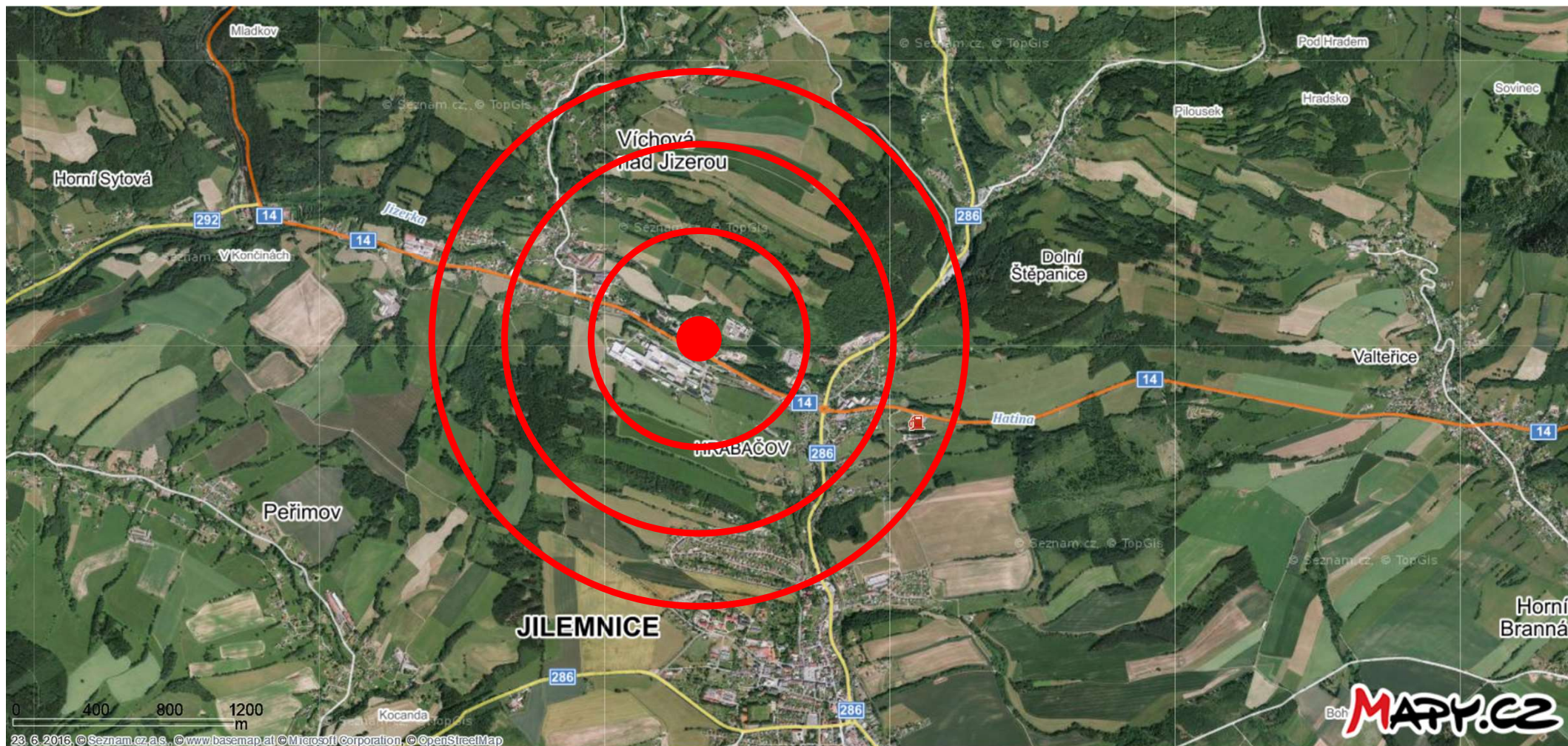


Deodorization WWTP Linhartice – Moravská Třebová (XII/2018)

Implementation of two units (AS-PCO NOX900, AS-PCO NOX4800) at the sludge management facility of a municipal wastewater treatment plant. Turnkey delivery, including air ductwork. One unit is equipped with a preceding spray column for cooling air from the thermophilic process.



Devro Jilemnice – Deodorization of the sludge end section and drop shaft

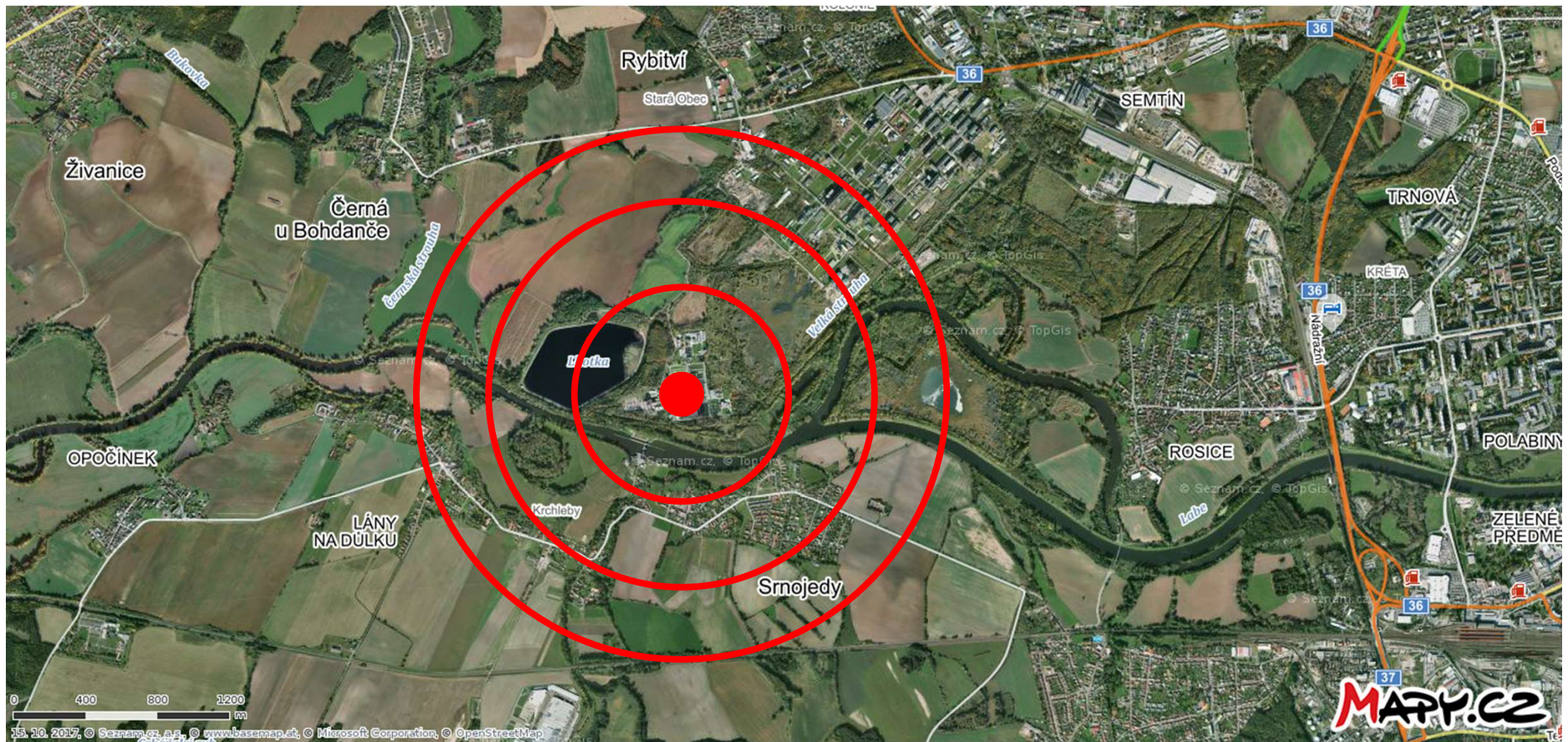


Devro Jilemnice – Deodorization of the sludge end section and drop shaft

Implementation of the AS-PCO NOX2000 unit at an industrial wastewater treatment plant. Delivery includes air ductwork.



Odor removal from the covered aeration tank and deodorization of the screening facility at the WWTP Pardubice (V/2018)

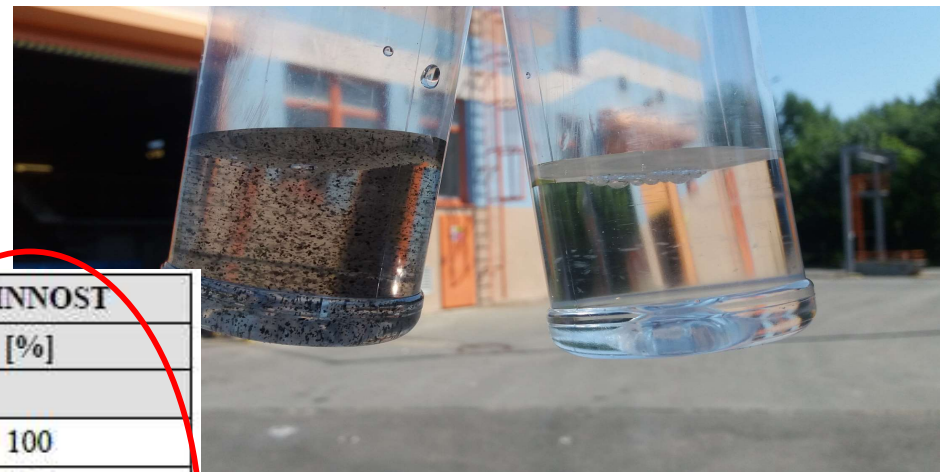


Odor removal from the covered aeration tank and deodorization of the screening facility at the WWTP Pardubice (V/2018)

Implementation supported by a grant from the State Environmental Fund of the Czech Republic (SFŽP) under Call 1/2016.

Technology performance verified by measuring H_2S concentration at the inlet and outlet (requirement: minimum 90 % hydrogen sulfide removal efficiency).

Efficiency ~100%!



vzorek	VSTUP	VÝSTUP	ÚČINNOST
	$C_N [\text{mg.m}^{-3}]$	$C_N [\text{mg.m}^{-3}]$	[%]
AS – PCO NOX NOX2000 v.č. 9934-2 (zakrytovaná nádrž)			
1	49,02	< 0,23	100
2	46,08	< 0,29	100
3	46,74	< 0,31	100
AS – PCO NOX NOX2000 v.č. 9934-1 (česlovna)			
1	76,88	< 0,25	100
2	111,50	< 0,19	100
3	1108,94	0,75	99,93



WWTP Prague – Deodorization station for air treatment in wet wells (IV/2018)



WWTP Prague – Deodorization station for air treatment in wet wells (IV/2018)

Supply of a proven unit for the new wet wells designated for the NVL at Prague WWTP.

Power: 600 m³/h
Type: two-stage
EX version



WWTP Ivančice – Deodorization of a pair of aerated sludge tanks (VIII/2017)



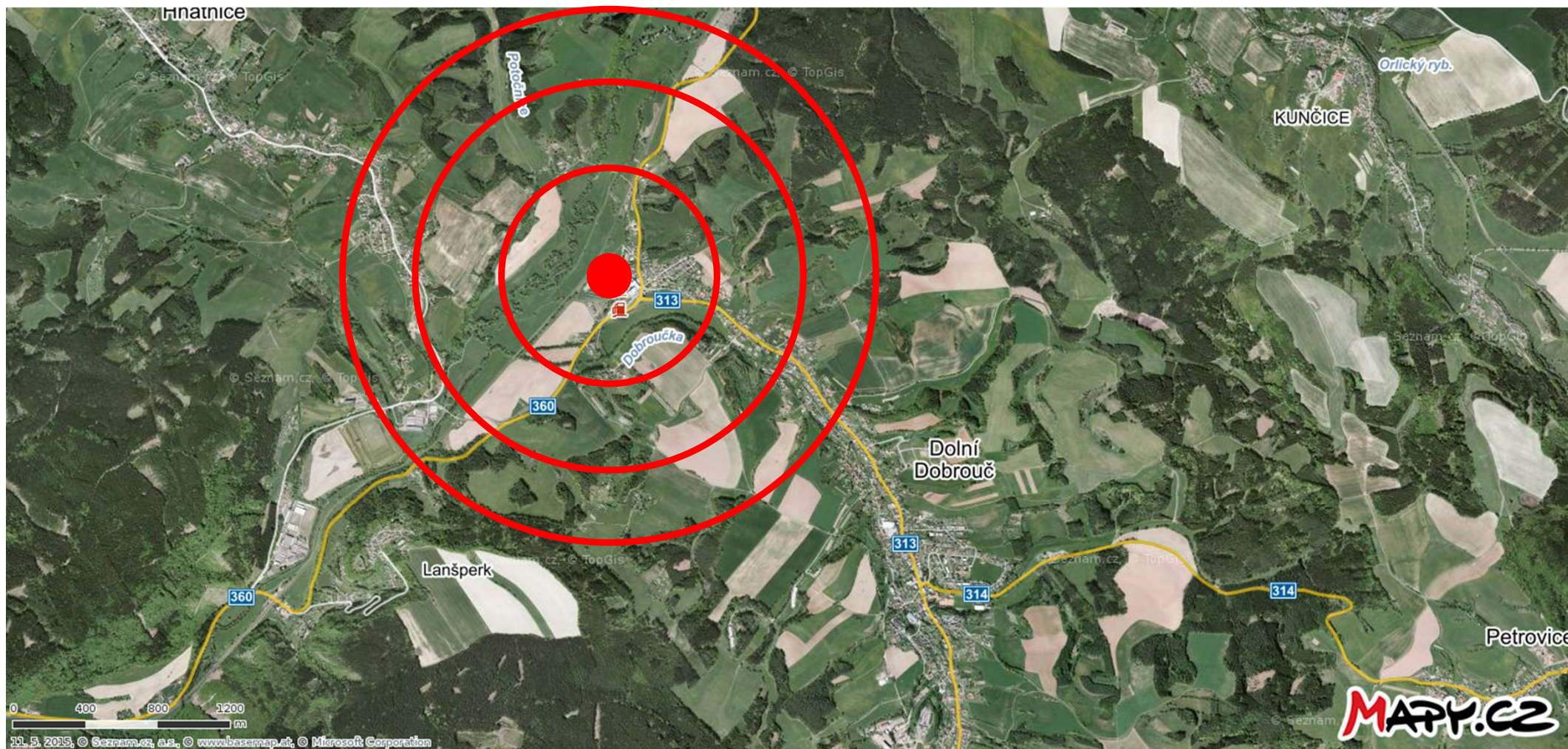
ČOV Ivančice – Deodorization of a pair of aerated sludge tanks (VIII/2017)

Capacity approx. 19 000PE,
After extensive
reconstruction in 2011–
2012, frequent complaints;
delivery supported by a
grant from the State
Environmental Fund of the
Czech Republic (SFŽP).



Dolní Dobrouč – deodorization of fermentors

Contipro a. s. (VII/2017)



Dolní Dobrouč – deodorization of fermentors

Contipro a. s. (VII/2017)

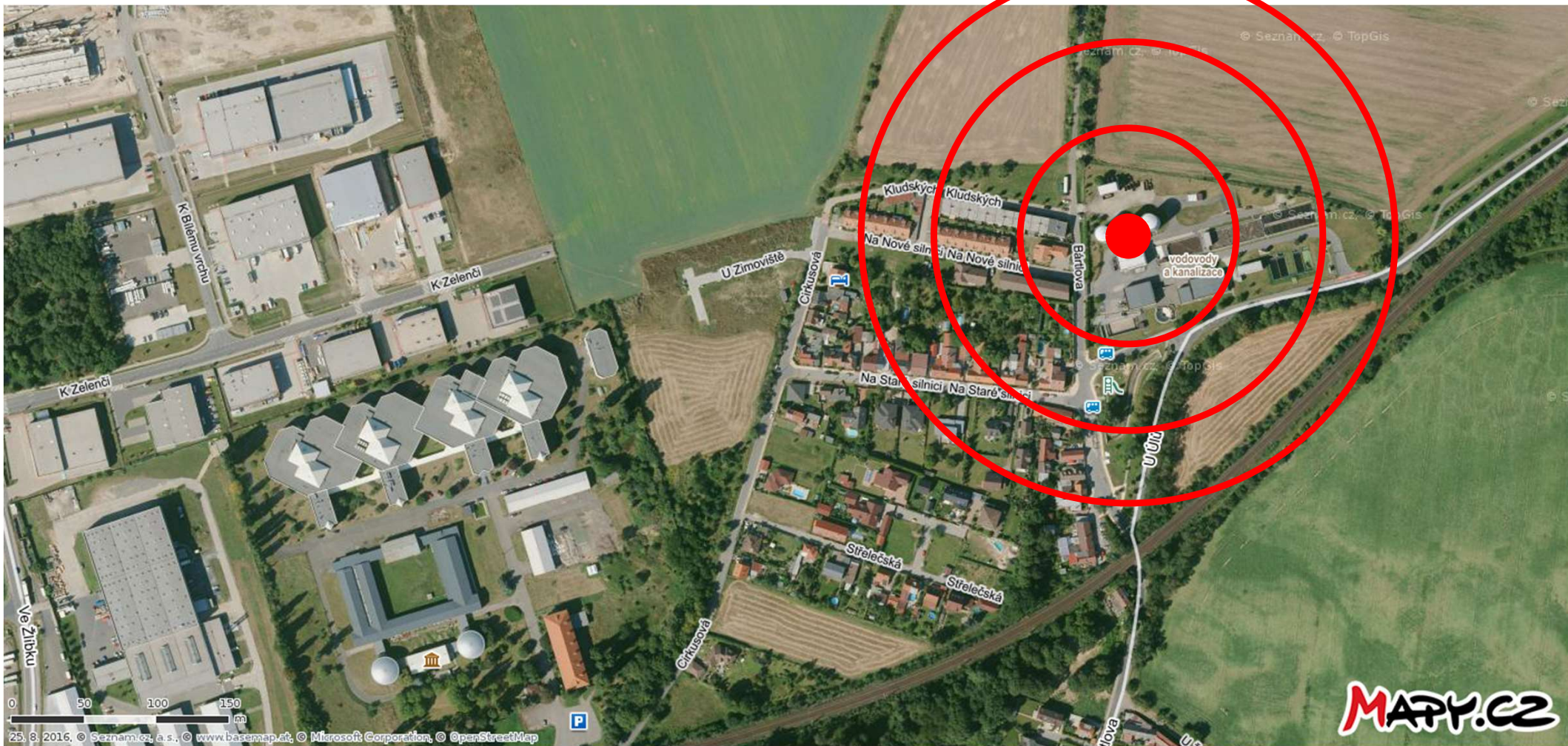
AS-PCO NOX250 with a preceding scrubber

Exhaust air from fermenters in a biotechnological production facility with a capacity of 250 m³/h. The system includes a preceding scrubber to cool the air, which can reach temperatures up to 85 °C.

Operation is controlled by a temperature sensor.



WWTP Čertousy (VII/2015)



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Wastewater treatment plant near a developing agglomeration

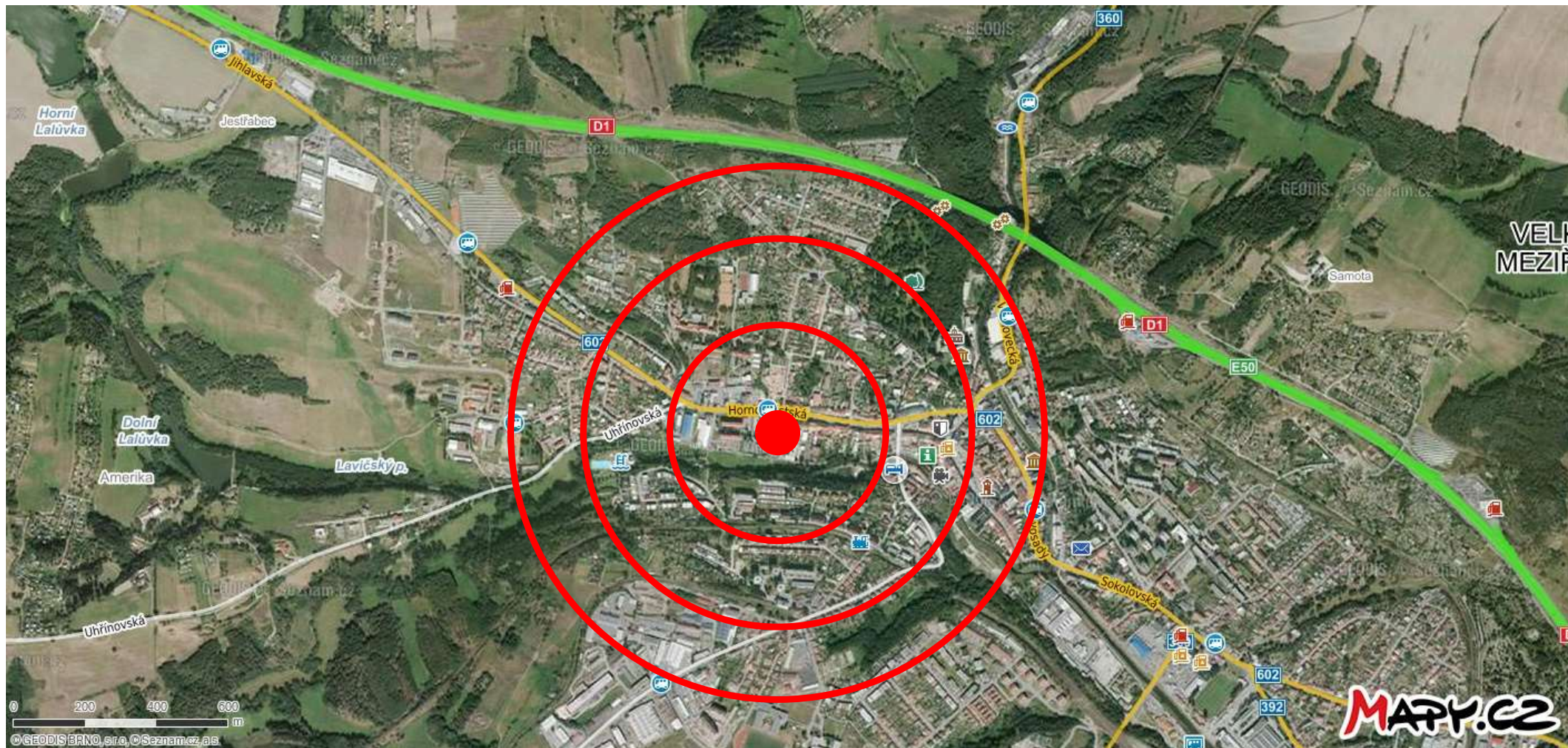
Two-stage unit in explosion-proof design for deodorization of air from sludge tanks.

Power: 250 m³/h

Type: two-stage
EX version



WWTP Velké Meziříčí – dairy factory Lakrum (V/2015)



WWTP Lacrum Velké Meziříčí (V/2015)

AS-PCO NOX 3000

Dairy plant in the city center.

Air extraction from the pilot

WWTP hall for dairy wastewater

(flotation, sludge dewatering).

Unit capacity: 3,000 m³/h.



WWTP Benešov – mechanical pretreatment (III/2015)



WWTP Benešov – mechanical pretreatment (III/2015)

AS-PCO NOX 4200

Air extraction from the extensive mechanical pretreatment hall and grease traps (4,200 m³/h).

Wastewater treatment plant operations manager, Ms. Hana Zbejvalová: “As part of today’s Earth Day, more than 200 schoolchildren visited the mechanical pretreatment hall. They were quite surprised that, although wastewater is handled here, the odor is minimal. I would say that speaks for itself.”



WWTP Prague – „Wet“ well (V/2014)

Pilot implementation at the largest WWTP in the Czech Republic.



WWTP Prague – „Wet“ well (V/2014)

Parametr	Vstup (mg/m ³)	Výstup (mg/m ³)	Účinnost (%)
Sirovodík (H ₂ S)	1,58	< 0,2*	85
Amoniak (NH ₃)	0,83	0,016	98

Pilot implementation at the largest

WWTP in Czech Republic

AS-PCO NOX 600/2s/Ex

Two-stage

EX version



WWTP Prague – Centrifuge facility reconstruction (III/2015)



WWTP Prague – Centrifuge facility reconstruction (III/2015)

AS-PCO NOX 17 000

Two-line unit,
including fans and
exhaust.

H₂S and NH₃
concentrations at the
outlet at the
detection limit.



WWTP Prague – fugate tanks (III/2015)

AS-PCO NOX 600/2s/Ex

Two-stage unit

EX version

Concentration H_2S and NH_3

concentrations at the outlet are

at the detection limit



WWTP Nová Mosilana – mechanical pretreatment (I/2014)



WWTP Nová Mosilana – mechanical pretreatment (I/2014)

Parametr	Vstup (ppm)	Výstup (ppm)	Účinnost (%)
Sirovodík (H ₂ S)	24,0	1,0	95,9
Amoniak (NH ₃)	7,0	0,7	89,6

The pilot wastewater treatment plant (PWWTP) is located near a residential area, with the risk of production shutdown.

AS-PCO NOX 1000.

This is already the second unit on site...



WWTP Česká Třebová (XII/2012) – mechanical pretreatment, sludge treatment



WWTP Česká Třebová (XII/2012)

**WWTP located within the city limits,
with numerous past odor complaints.**

Mechanical pretreatment facility: unit
with a capacity of 1,600 m³/h, installed
inside the hall with exhaust directed to
the facade.

Sludge tank facility: unit with a
capacity of 1,500 m³/h.



WWTP Česká Třebová (XII/2012)

Sludge thickening, dewatering, and storage facility

Unit with a capacity of 2,200 m³/h.

Air extraction from the sludge thickening/dewatering hall and from the covered storage of dewatered sludge.



WWTP Dairy factory Bystřice p. H. (2008)



WWTP Dairy factory Bystřice p. H. (2008)

The Environmental Department in Bystřice pod Hostýnem set a deadline for NET PLASY to resolve the nuisance odor issue by the end of May 2008. In 2007, NET PLASY had attempted to address the odor problem using conventional biofilters. Following poor results with these biofilters, approval was granted for a new odor control technology, namely photocatalytic oxidation (AS-PCO). This was the first implementation in the Czech Republic.

