

COMMUNITIES WITH ACTIVE LEAD SMELTERS — PORT PIRIE, SOUTH AUSTRALIA, TRAIL, CANADA AND HOBOKEN, BELGIUM

COMMUNITY OF PRACTICE (COP) YEAR ONE

Who We Are

Communities situated near active lead smelting facilities face distinct challenges as they strive for thriving families, a healthy environment, and a robust economy. A key part of this journey involves minimizing exposure to metals and other emissions that could affect the community's well-being.

Over the past year, Port Pirie in Australia, Hoboken in Belgium, and Trail in Canada have formed a CoP consisting of representatives from the smelter, exposure reduction programs, health departments, and environment agencies. This collaboration aims to collectively learn from one another's experiences in reducing children's lead exposure in areas with active lead smelters. Each location employs a unique approach, and this initiative has facilitated exploration of their similarities, differences, and shared lessons.

<u>PORT PIRIE, AUSTRALIA</u>	<u>TRAIL, CANADA</u>	<u>HOBOKEN, BELGIUM</u>
		
POPULATION: 13,896	POPULATION: 7,920	POPULATION: 41,463
CLIMATE: Semi-arid, hot, dry summers, cool, wetter winters. Winds blow from the direction of the smelter towards the city during winter.	CLIMATE: Hot, dry summers and cold, moist, snowy winter. Prevailing winds follow the Columbia River, blowing from the site toward neighbourhoods to the south and north.	CLIMATE: Temperate, maritime climate, consistent precipitation and humidity year-round. Summers are mild, with cool and damp winters. Prevailing wind from the site towards the neighborhood year-round.
SMELTER: Multi-metals processing in continuous operation since 1889, with a major upgrade in 2018 from sintering to top submerged lance (TSL). Major employer and economic contributor.	SMELTER: One of the world's largest lead and zinc smelting and refining facilities operating since 1890s. 99.5% reduction in lead stack emissions since 1997. Major employer and economic driver for the local area.	SMELTER: Started in 1887 as a small lead-desilvering plant, growing into a major metallurgical complex. Major upgrade in 1997 replacing the traditional sinter/lead-blast-furnace, focus on recycling lead-copper and precious metals. Shift since 2001 towards sustainable recycling and precious-metal refining.
COMMUNITY PROGRAMS TO REDUCE LEAD EXPOSURE: 1984: Port Pirie Lead Implementation Program of South Australian Government. Delivered by Yorke and Northern Local Health Network and local Environmental Health Centre. 2005-2010: Ten by 10 program. 2014-present: Targeted Lead Abatement Program (TLAP), a joint program between smelter and the government.	COMMUNITY PROGRAMS TO REDUCE LEAD EXPOSURE: 1990-2000: Trail Community Lead Task Force. 2001-present: Trail Area Health & Environment Program and Committee. Multi-stakeholder partnership of government, industry and community with local leadership by City of Trail.	COMMUNITY PROGRAMS TO REDUCE LEAD EXPOSURE: 1978 – began blood lead level follow up for children in Moretusburg-Hertogvelden. 2007 onward: soil remediation in the community; cleaning in the neighborhood, green buffer zone creation, increased coverage area for blood lead monitoring (2023).

WHAT WE TALKED ABOUT

Four topic areas were explored in 2025:

- Interventions and Monitoring for Health
- Technical and Regulatory Aspects related to Blood Lead and Air Quality
- Collaboration and Stakeholder Engagement
- Community Health and Safety

Key learnings:

- No regrets - every little bit of exposure minimisation helps.
- Everyone monitors blood lead and environmental lead levels although the age groups, media type and standards might differ.
- Collaboration and stakeholder engagement looks different in the different communities but is a vital component.
- Community sentiments can vary but transparency and communication are essential to maintaining community health and safety.

WHAT WE NOTICED



There is no silver bullet - ongoing effort is required by everyone



Communities are not defined by lead contamination



Lead exposure is not always the most pressing issue for the communities



The lower blood lead levels go, the relative influence of other sources of lead increases



There are similarities and differences between the sites

Similarities	Differences
Buffer zones, greening programs, blood lead and environmental monitoring	Community program structure, governance and priorities
All communities have regulatory requirements around lead emissions minimisation	Climatic conditions e.g. drier conditions in Australia makes dust control and water use more challenging
All communities have community lead abatement and education programs	An older, bigger city has more confounding factors relative to smaller, rural communities



WHAT'S NEXT...

The CoP agreed that there is much more to be shared and learnt and will continue on in 2026!