

# Polychlorinated Biphenyls (PCBs) Tracking at a Metal Recycling Facility

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City of Richmond

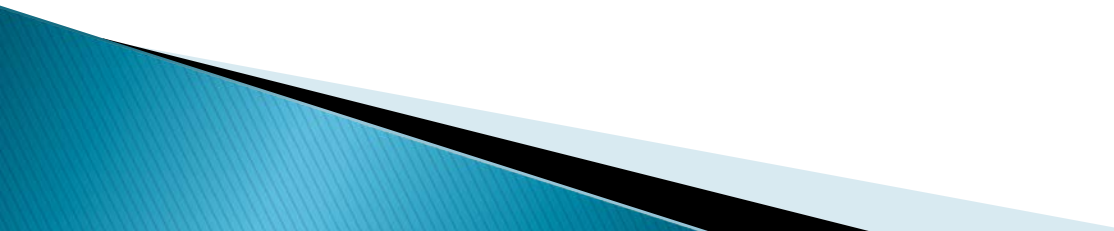
# PCBs

- ▶ Manmade chemical that was commonly used between 1950s and 1970s
  - Capacitors and transformers
  - Building materials (caulking, paints)
- ▶ Banned in late 1970s due to its toxicity
- ▶ Bind to soil and sediment, thus tend to be persistent in the environment

# Regulatory Requirement

- ▶ Municipal Regional Permit (MRP) 2.0 includes a Total Maximum Daily Load (TMDL) for PCBs
  - Health risk to people consuming fish from the San Francisco Bay, thus designated as an impaired water body on the Clean Water Act “Section 303(d) list”
  - Municipal separate sewer systems (MS4) has been identified as a pathway
- ▶ All municipalities covered under this permit are allocated a PCBs load to be reduced, but how?
  - Source property identification and abatement
  - Enhanced O&M activities (street sweeping, storm drain inlet cleaning, etc.)
  - Implementation of Green Infrastructure
  - Implementation of Building Demolition Program

# Source Identification and Referral Process

- ▶ Land-use
  - ▶ Monitoring of sediments and stormwater collected on public streets to confirm the source
  - ▶ Refer to Water Board to claim reduction credits
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# City of Richmond

- ▶ Industrial City currently and historically = one of the PCBs hot spots in Contra Costa County
  - More than 50 NOI facilities.
  - High PCBs concentration detected in soil collected in Public ROW in industrial part of the City that drains to the Santa Fe Watershed (Lauritzen Canal).

# Where to look?

- ▶ Industrial Sources
  - PGE Substation and Maintenance Yard
  - Metal Recycling (SIMs Metal) and demolition facilities

# Santa Fe Channel



# SIMS Metal – Facility Layout





# SIMS Metal Facility

- ▶ Historic land-use
  - Kaiser Shipyard in 1940s (WW II)
- ▶ Current land-use
  - Scrap metal recycling yard since 1985
  - Purchases and processes ferrous & non-ferrous scrap metals
  - Recycling bus, railcars and aluminum trailer
  - Previously recycled electric transformers and this practice has ceased

# SIMS Metal Compliance History

- ▶ NOI facility but lack monitoring data
  - In 2010, the Water Board required the facility, under the IGP, to submit a monitoring plan
    - Claimed to be zero-discharger
    - Capture and reuse stormwater as dust control onsite
  - In 2017, the facility worked on a treatment system
    - Capture and store stormwater in railcars, settling, polymer treatment
  - In 2019, the facility discharged stormwater

# Best Management Practices (BMPs)

- ▶ Dust control (2011)
  - ▶ Installed permanent berm along property line to prevent run-on of stormwater from South 4<sup>th</sup> Street (2013)
  - ▶ Metal plates at main entrance to address dirt on truck tires (2015)
  - ▶ Street sweeping on South 4<sup>th</sup> Street during business hours (2013–current)
  - ▶ Paved surfaces (2018–2019)
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# BMPs (con't)



2011



2015

# SIMS Metal – Referral process

- ▶ Monitoring results of samples collected on public streets around SIMS Metal facility
  - 2007 (EOA): 0.639–2.789 mg/kg
  - 2010 (SFEI): 0.567–1.187 mg/kg
  - 2012–2013 (CW4CB): 0.119 – 1.450 mg/kg
  - 2018 (CCCWP): 432–1,846 ppb\*
- ▶ The facility was referred to the Water Board in 2016 and again 2018
- ▶ Water Board wasn't convinced the facility was a source property

# Now What?

- ▶ In March, 2020, the Water Board, through its authority of the IGP, issued SIMS Metal a letter requiring the facility to submit a technical report evaluating potential PCBs contamination on site pursuant to California Water Code section 13267
  - SIMS required to submit this report no later than June 30, 2020

# Conclusion

- ▶ Municipalities continue to do search for high opportunity sites for source control, thus receiving credits from the Water Board.
- ▶ Inspectors can assist with this efforts through thorough inspections and reports.
  - If necessary, inform municipality staff immediate when sources of PCBs identified.
- ▶ Efforts in tracking PCBs at SIMS Metal compelled the facility source properties to implement structural BMPs and advanced treatment that ultimately address other pollutants of concern such as metals.