Off site soil sampling and status of cleanup work at PCC Johnson Creek facility

- Introductions
- Air Sampling Update
- Soil sampling for metals in surrounding area soils
- Overview and status of cleanup project
- Question and answer session

Precision Cast Parts
Campus/Surrounding Area

Precision Cast Parts Area-wide Soil Sampling And Analysis Plan

Objective:

1. Determine if air emissions from industrial activities at the facility have impacted off-site soil.

2. Determine if concentrations of metals found in soil may pose a risk to human health.

Sampling details

- DEQ sampling analysis plan (SAP).
- Contractors hired by DEQ will complete field work
- Samples run in certified lab, and results QA'd and verified
- PCC contractor will observe field work
- Costs paid by PCC under cleanup agreement

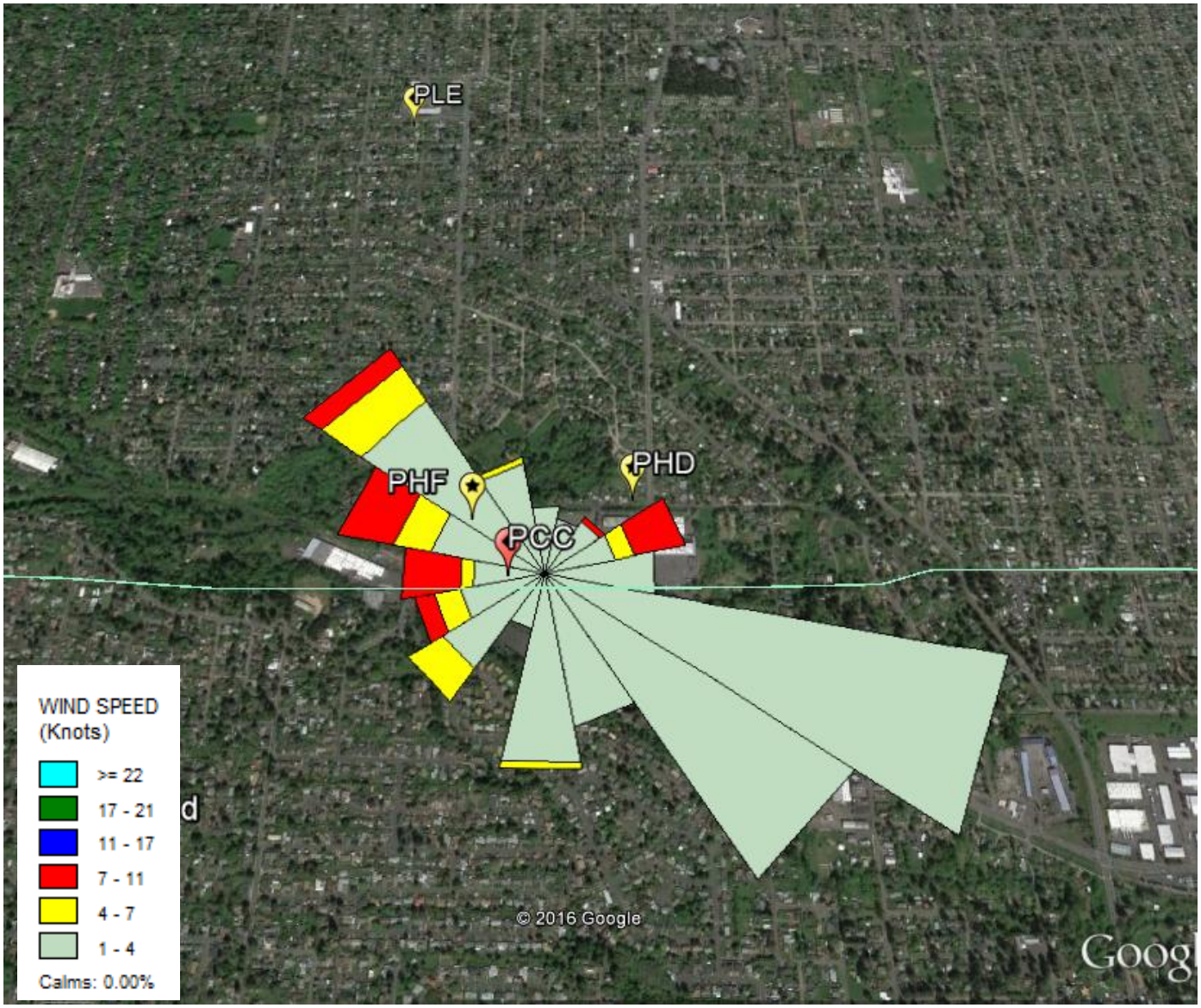
How pollutants and locations were selected

- DEQ consulted moss maps, AQ permit and factory processes to determine metals to sample
- Stormwater data

Each Sample Will Be Analyzed For:

- Arsenic (As)
- Cadmium
- Chromium (Cr) and
- Hexavalent Chromium (Cr +6)
- Cobalt
- Lead (Pb)
- Manganese (Mn)
- Mercury (Hg)
- Nickel (Ni)
- Zinc (Zn)

Wind Directions near PCC



Sampling Areas around PCC

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LEGEND

- Decision Unit
- Impervious Surface or Obstruction

0 150 300 600 Feet

Note: Feature locations are approximate.

N

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Precision Castparts
Portland, OR

Site Location and Decision Unit Sampling Map

150-001-049 4/16

HARTCROWSER

Figure A

Incremental Sampling Methodology (ISM)

Incremental Sampling Methodology (ISM)

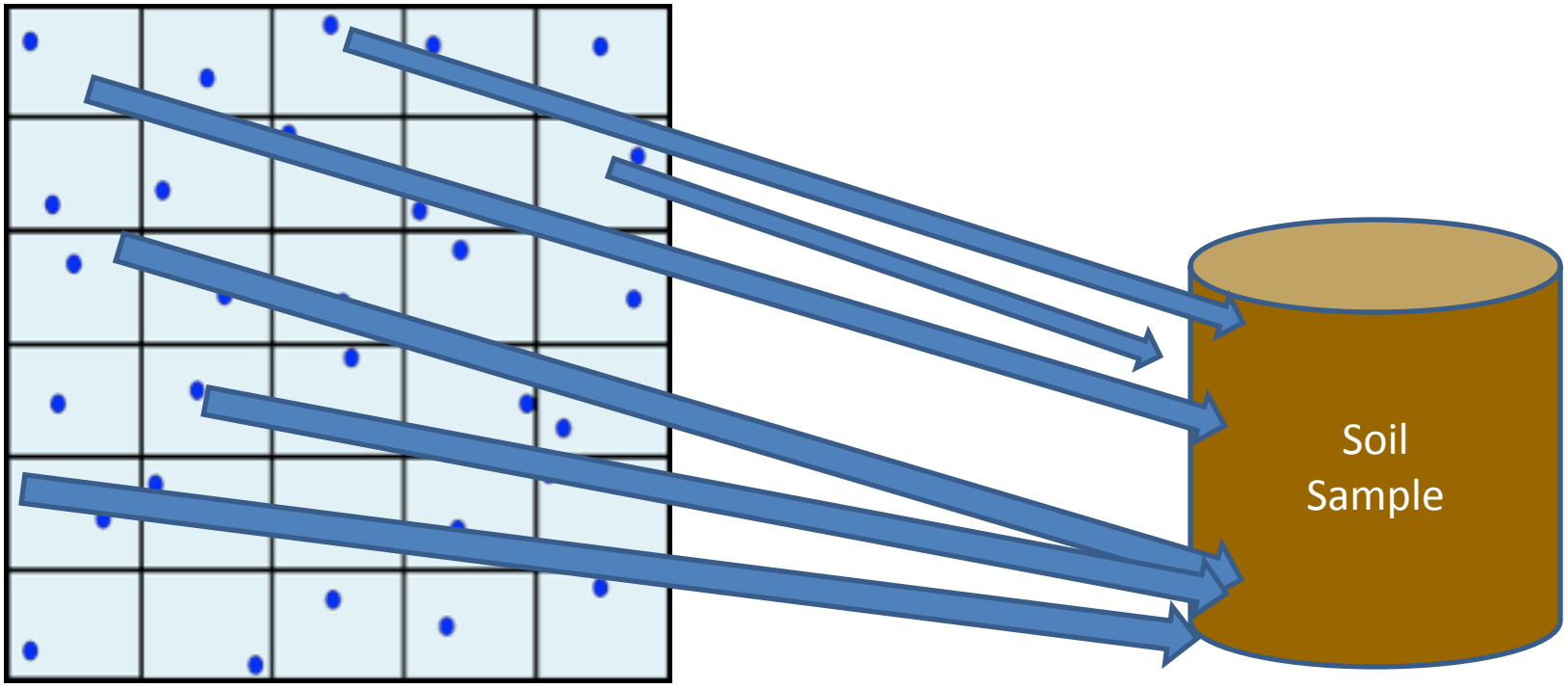
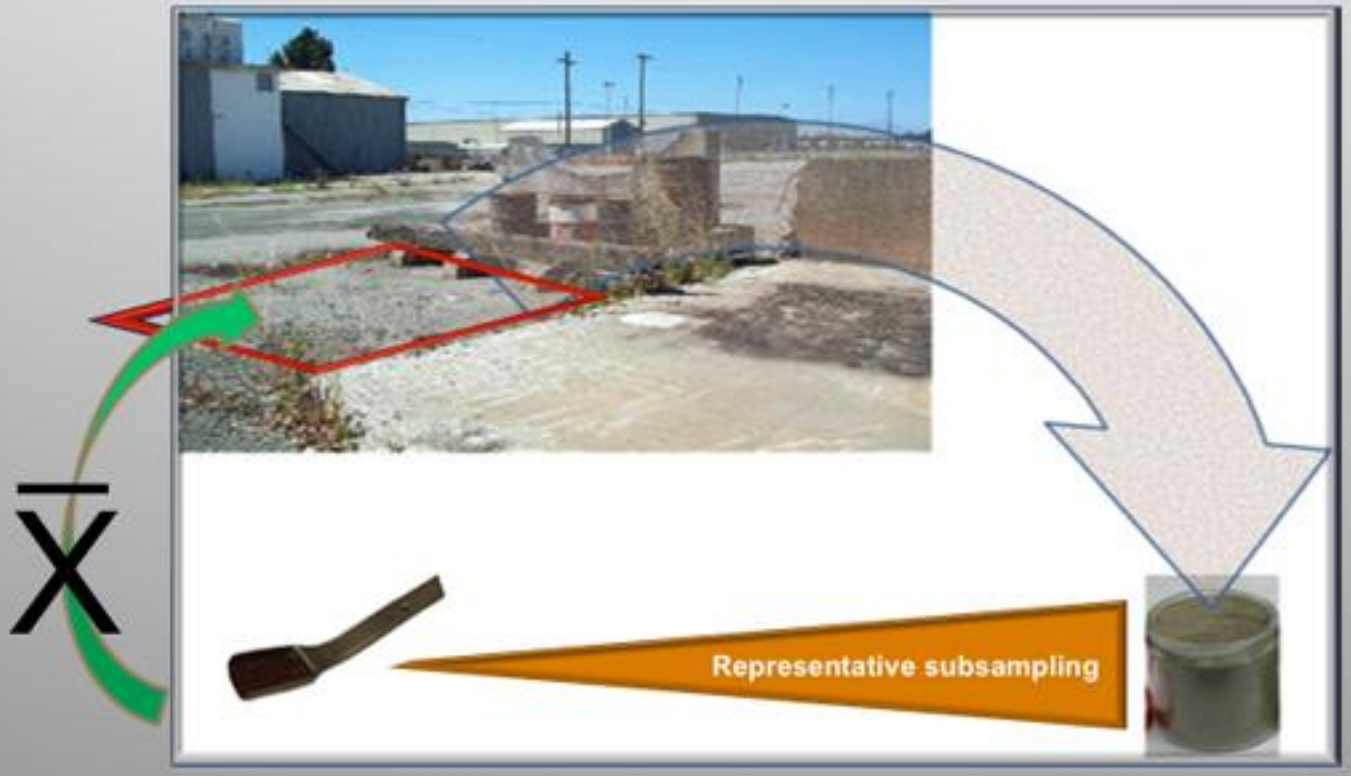


Figure: ITRC (Interstate Technology & Regulatory Council). 2012. Incremental Sampling Methodology. ISM-1. Washington, D.C.: Interstate Technology & Regulatory Council, Incremental Sampling Methodology Team. www.itrcweb.org).

ISM Goal = obtain a representative sample!



(ITRC (Interstate Technology & Regulatory Council). 2012. Incremental Sampling Methodology. ISM-1. Washington, D.C.: Interstate Technology & Regulatory Council, Incremental Sampling Methodology Team. www.itrcweb.org).

Tentative Project Schedule

May 10

Final date for receiving public feedback

May 23

Start soil sampling

May 30- June 17

Complete sampling, transfer to laboratory for processing and analysis

Review laboratory results, compare results to health-based screening values (available on line at Safer Air Oregon website), prepare report narrative, tables, and figures.

June 20- July 8

Evaluate next steps, report distribution and outreach

Resources:

- http://saferair.oregon.gov/Pages/index.aspx
  - Health Risks
  - Learn about healthy urban gardening
  - Have your soil tests evaluated

Questions?

Please address feedback or comments by 5/10/16 to:

soilsampling@deq.state.or.us

Investigation and Cleanup Overview

- PCC enters into a voluntary agreement with DEQ's Northwest Region Cleanup Program in 2008 to:
  1. Investigate releases of hazardous substances
  2. Evaluate environmental risk potential
  3. Evaluate, determine and implement needed cleanup actions

- Initial investigation focused on solvent contamination in groundwater.

- Between 2008 and 2016, multiple phases of soil, groundwater, sediment, and surface water investigation have been completed.

- Cleanup work is ongoing under DEQ and EPA Region X staff.

- Future work to evaluate cleanup options forthcoming.

Summary of findings

- **Groundwater**: contamination is present and extends off-site, but does not impact known drinking water wells. Will be included in risk evaluation.

- **Stormwater**: PCC sources are not entirely controlled, but will be addressed by a treatment system scheduled to being operation in 2016.

- **Johnson Creek Sediment**: sediment contamination is present in an approximately 150-foot section of Johnson Creek. A risk evaluation by DEQ identified no concern for people using the creek. To be further considered for ecological impact.

- **Johnson Creek Surface Water**: Low levels of metals detected in surface water, no screening criteria exceeded. Will be included in risk evaluation.

- **PCC Workers**: Solvent contamination beneath the facility will be addressed in upcoming work under DEQ oversight.

Investigation Summary – Soil

- Initial site-wide screening/sampling was completed starting in 2009 as part of groundwater investigation work. 57 borings in total.

- Expanded Investigation to include additional pollutants (PCBs) in on site soil.

- Soil contamination present near the northern building boundaries. Cleanup (soil removals) currently in planning.

- One goal is preventing pollutants from getting into storm drain system.

Investigation Summary – Groundwater

- Investigation from 2009 to present, with sampling occurring at multiple locations and depths from ground surface to over 140 feet deep. Fourteen wells installed on and off-site for longer-term monitoring.

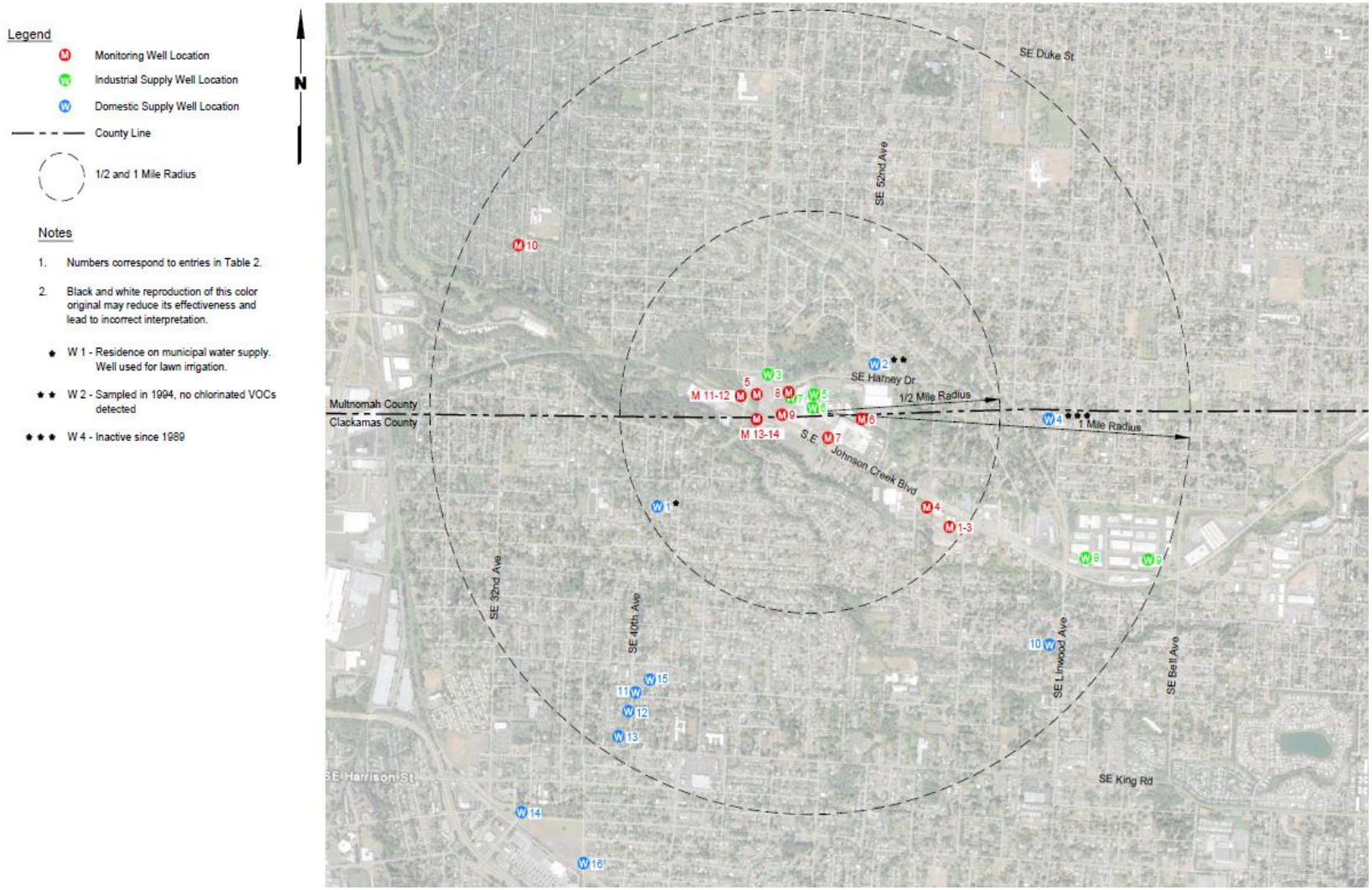
- Solvents including PCE detected in groundwater.

- Four additional wells will be installed SW of facility in Summer 2016 to complete investigation.

- Off-site contamination extends approximately 800 feet SW of PCC, is present to approximately 70 feet deep, at part per billion levels.

- Well surveys found no drinking of groundwater within the contamination area.

Water Wells within 1 Mile



Stormwater and Sediment Investigation – 2013 to 2016

- With the detection of PCBs and metals in stormwater and site catch basins, DEQ required ramped up efforts at PCC to include:
  - Sampling and cleanout of the storm sewer system to its outfall at Johnson Creek;
  - Additional stormwater and catchbasin sampling to assess the effectiveness of PCC work to control their contaminant sources; and
  - Additional sampling of Johnson Creek sediment.

- This work showed improvements by PCC, but incomplete "control" over contaminant releases. DEQ and PCC agreed that end-of-pipe treatment was necessary.

- Sampling of Johnson Creek sediment identified an approximately 150 foot section of the creek with elevated PCBs and metals (nickel and total chromium). Risk analysis by DEQ determined that contamination <u>does not</u> present an recreational exposure risk. Ecological risk will be evaluated.

Current Priority Cleanup Work

- Completing Groundwater Investigation and assessing risks
- Stormwater controls planned for discharges to Johnson Creek
- Soil Removal on Portions of Site
- Updated Investigation Report
- Development of Cleanup Options

How you can learn more

- Visit the “Environmental Cleanup Site Information (ECSI)” database at: www.deq.state.or.us/lq/ecsi/ecsi.htm
- Schedule a file review to view any documents
- Sign up on DEQ’s automated news delivery service (link from DEQ’s home page)
- Submit public comments on final proposed actions.