



SERVICE CONNECTION VERIFICATION

JASON W. PHILLIPS

WATER SUPERINTENDENT



CITY OF FINDLAY WATER SYSTEM

1. 20,000 Service connections
2. 267 total known and unknow lead service connections as of 1-1-2022
3. 41 Inactive and active lead services as of 1-1-2022
4. Renewed or replaced 125 services in 2021
5. Goal is to be at 0 by October 2024



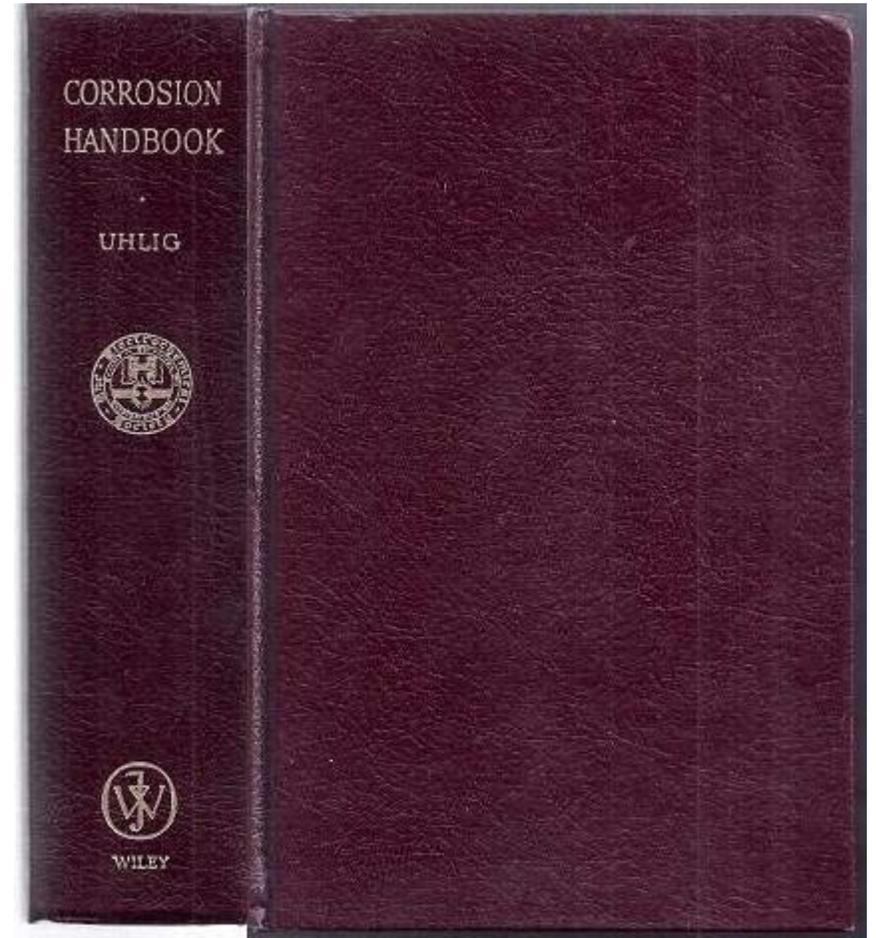
WHY LEAD IN WATER LINES

1. Abundant in supply
2. Easily mined
3. Very easy to work with
4. Highly malleable
5. Very easy to melt



LEAD IN WATER LINES

- ❖ Commercially available pipe sizes are strong enough to use without reinforcement for 100 to 200 psi
- ❖ Potable water are safely conveyed in lead pipes because they contain sufficient silicate and carbonate to provide a protective coating on the lead

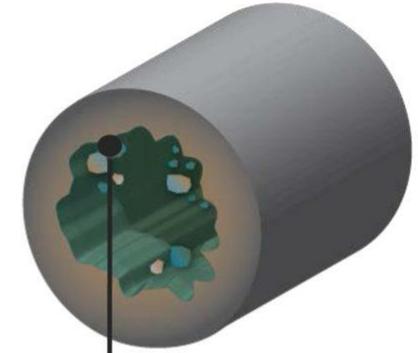


PROTECTIVE MEASURES

- A. Lime or sodium silicates treatment (pH 8 to 9)
- B. Coating of sheet lead and pipe with tar ,asphaltum or bituminous paint
- C. Use of acid brick linings for chemical equipment
- D. Avoidance of large soil particles around bare lead pipe buried underground



A protective layer of **Orthophosphate** forms to prevent pipe corrosion.



Lack of corrosion control allows lead to leach from pipes into water.

THE CORROSION HANDBOOK

- I. Edited by Herbert H Uhlig PhD
- II. Copyright 1948
- III. Seventh Printing November 1961
- IV. Not new information









LEAD SERVICE

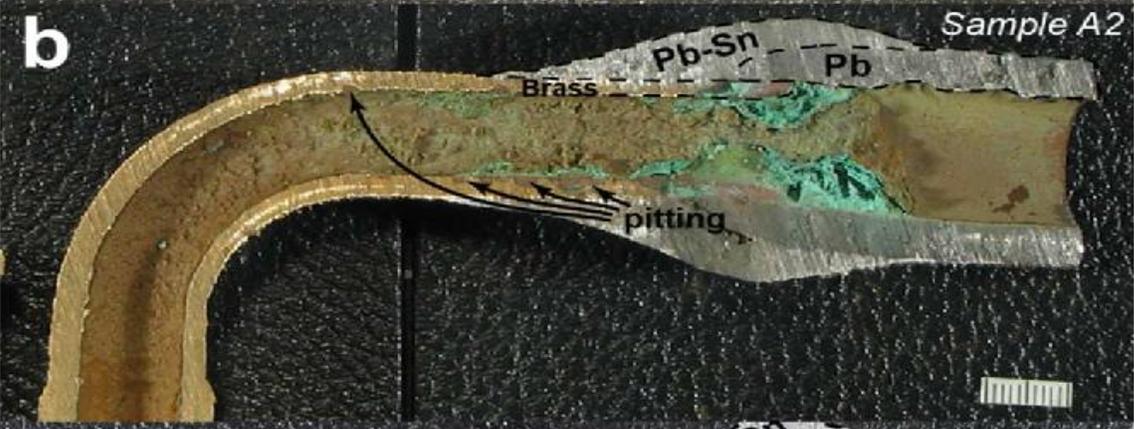
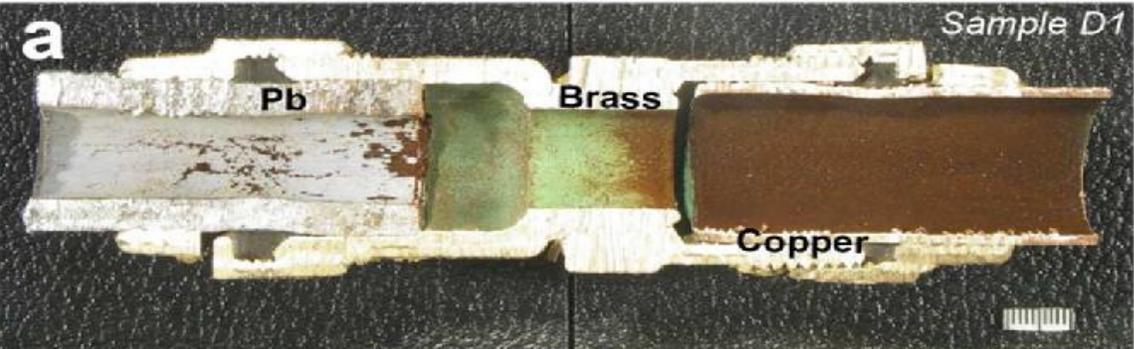


















THE MAIN TOOL USED



HYDRO EXCAVATOR

- Peterbilt Model 567
 - Locally purchased
 - Can be repaired in town
- Mud Dog 1200
 - 12.0 cubic yard box
 - Holds 1500 gallons of water
 - 18 GPM and 3,000 PSI
 - Positive Displacement vacuum pump
 - 705,000 BTU/ Hr. Water Heater
 - Has 335° rotation boom
 - 27 foot reach



STEP ONE



STEP TWO



OPENING UP THE ASPHALT



FIRST HOLE



FINDING THE PIPE





THREE HOLES TO FIND LEAD SERVICE AND NEW COPPER SERVICE











QUESTIONS?

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