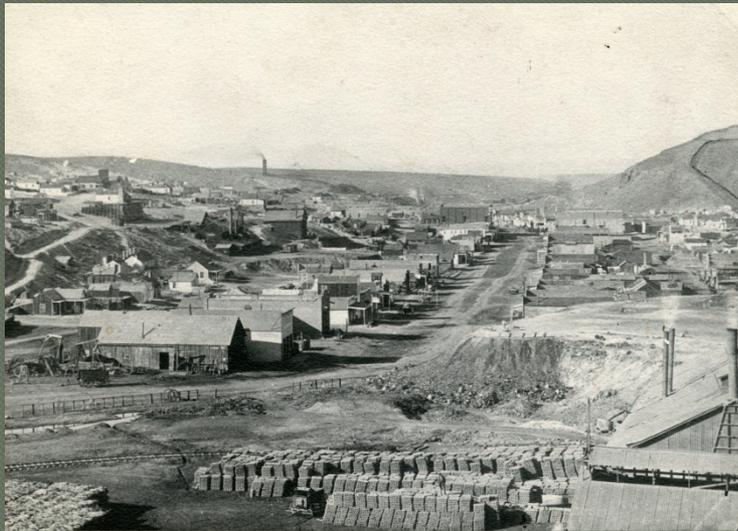


EUREKA HISTORIC SMELTER ASSESSMENT October 2012



Nevada
Division of Environmental Protection

Overview

- Plan and Objectives Review
- Soil Sampling
- Soil Sampling Results Evaluation
- Long Term Management Options

Plan and Objectives

- Evaluate potential human health impacts
 - None so far, additional blood lead testing is available now
- Determine extent of contaminants
 - Soil sampling is underway
- Evaluate the need for property cleanups
 - Develop site specific soil cleanup level
 - Prioritize properties, based on concentration, exposure potential and funding
- Evaluate options for long-term management of source areas (slag piles, smelter and mill sites)

Estimated Schedule

Date	Event
October 2012	First phase of soil sampling
November 2012	Blood lead level testing through end of the month
January 2013	Soil sampling results provided
March 2013	Soil cleanup levels developed
April 2013	Second phase of soil sampling, if necessary
Summer 2013	If needed, propose property cleanup based on: <ul style="list-style-type: none">- Access- Concentrations of lead and arsenic- Priority- Funding
Late Summer 2013	As needed, initiate property cleanups and evaluate long term management options

Soil Sampling--Access

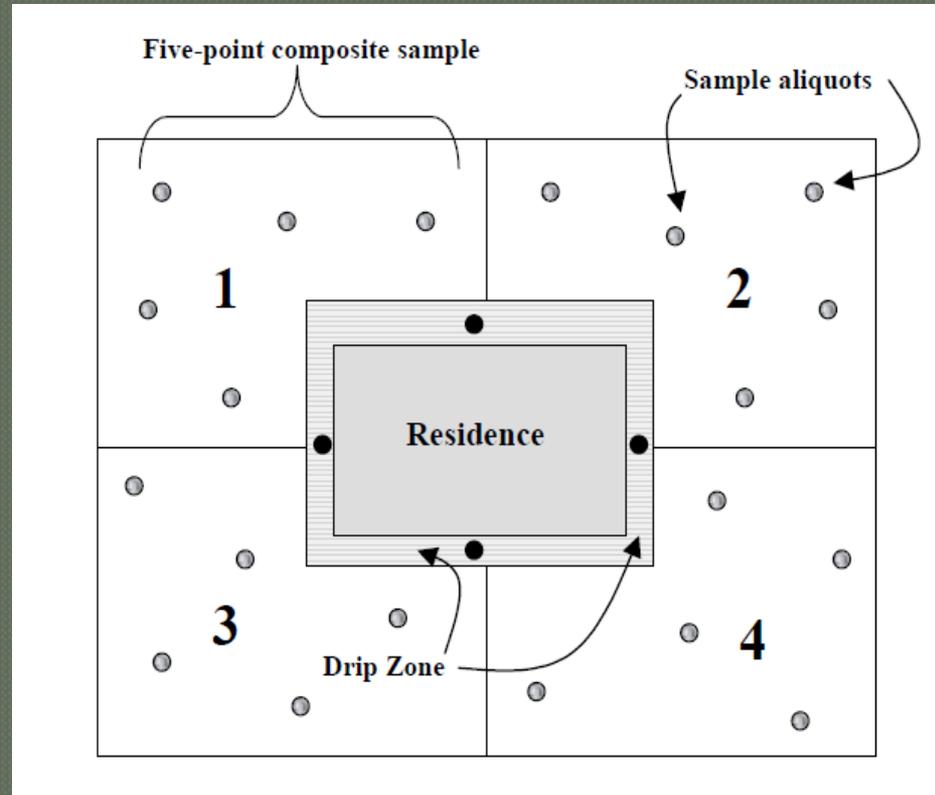
- A signed access agreement is necessary.
- Access agreement forms were mailed to all Eureka property owners. Access to over 100 properties have been received.
- Access agreements are also available on NDEP's website.
- Physical access to your property is only needed for approximately one hour. Sampling is available thru approximately October 27, 2012.

Soil Sampling--Method

Your yard will be divided into sections based on a number of factors.

- Yard size
- Location of house on the property
- Drip zone
- Landscaping
- Hard and soft surfaces
- Vegetable gardens
- Play areas for children

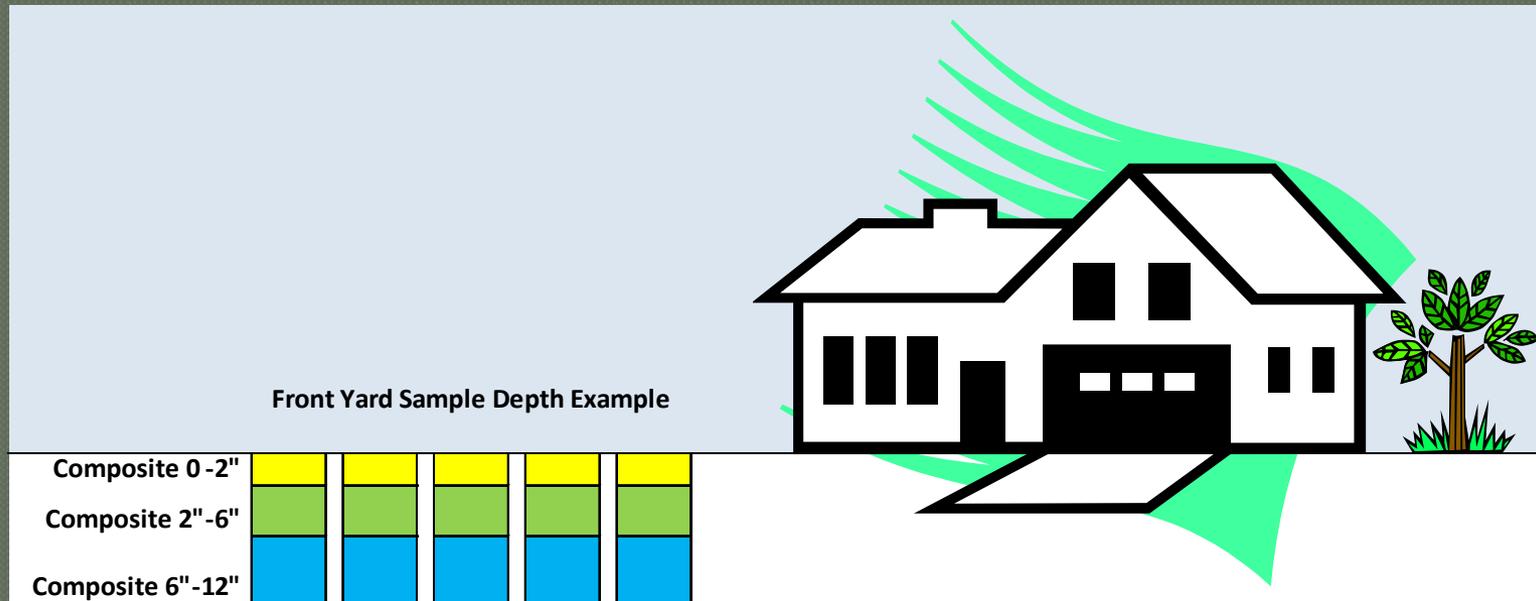
Soil Sampling--Method



Example of soil sample locations at a residence.

Soil Sampling--Method

- **The five individual samples collected from 0-2" (yellow) within each yard section will be combined to characterize that specific depth. The 2"-6" (green) and 6"-12" (blue) depths will also be combined the same way.**



Soil Sampling--Method



Soil Sampling--Method



Soil Sampling--Method

- Small scoops of soil are being taken from three different depths (0-2", 2"-6" and 6"-12") to a total depth of 12 inches.
- Hand tools are used to collect samples.
- Permeable surfaces are sampled (lawns, soil and other soft surfaces).
- Boreholes are being backfilled.

Soil Sampling--Analysis

- Soil samples will be analyzed for lead and arsenic.
- Results will be mailed to residents approximately 2 months after all soil sampling is completed (January 2013).

Evaluation of Soil Sampling Results

- NDEP and EPA will evaluate soil sampling results to determine whether cleanup actions are recommended for your property. Based on the following:
 - Human health risk assessment
 - The ability for the present type of lead and arsenic in the soil to be absorbed and retained by the body
 - Eureka specific cleanup levels

If Cleanup is Needed

- At similar former smelter sites, the typical cleanup of residential property involves removal of the top 18 inches of soil, replacement with clean soil and restoration of landscaping.
- If cleanup is needed, the prioritization schedule will be based on concentrations of lead and arsenic, potential for exposure and funding.
- Property owners would again need to grant access before any cleanup action could be undertaken.
- As needed, Eureka's historic resource protection will be coordinated with the State Historic Preservation Office.

Long Term Management

- Need to characterize extent of contaminants at source areas (slag piles, former mill and smelter sites). Access agreements will be needed.
- Evaluate human health risk of on-going exposure and distribution of contaminants.
- Evaluate options for long term management. Solicit community input.

Long Term Management

Some potential options (community support will be needed):

- No further action is possible.
- Information and education, institutional controls.
- Capping of slag + cleanup of known mill and smelter sites, as needed.
- Removal of slag + cleanup of mill and smelter sites, as needed.

How to Stay Informed

➤ NDEP and EPA have websites at

- www.ndep.nv.gov/eurekasmelter
- www.epaosc.org/eurekasmelter

➤ Call us

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