

Sampling & Monitoring around Heath Elementary School

Presentation for Paducah CAB

January 21, 2009



EM Environmental Management

safety ♦ performance ♦ cleanup ♦ closure

Background

- Statement received by DOE December 14, 2009
- Reviewed records
- Objectives
 1. Ensure protection of school students, staff, and visitors
 2. Results before school resumed
 3. High level of confidence

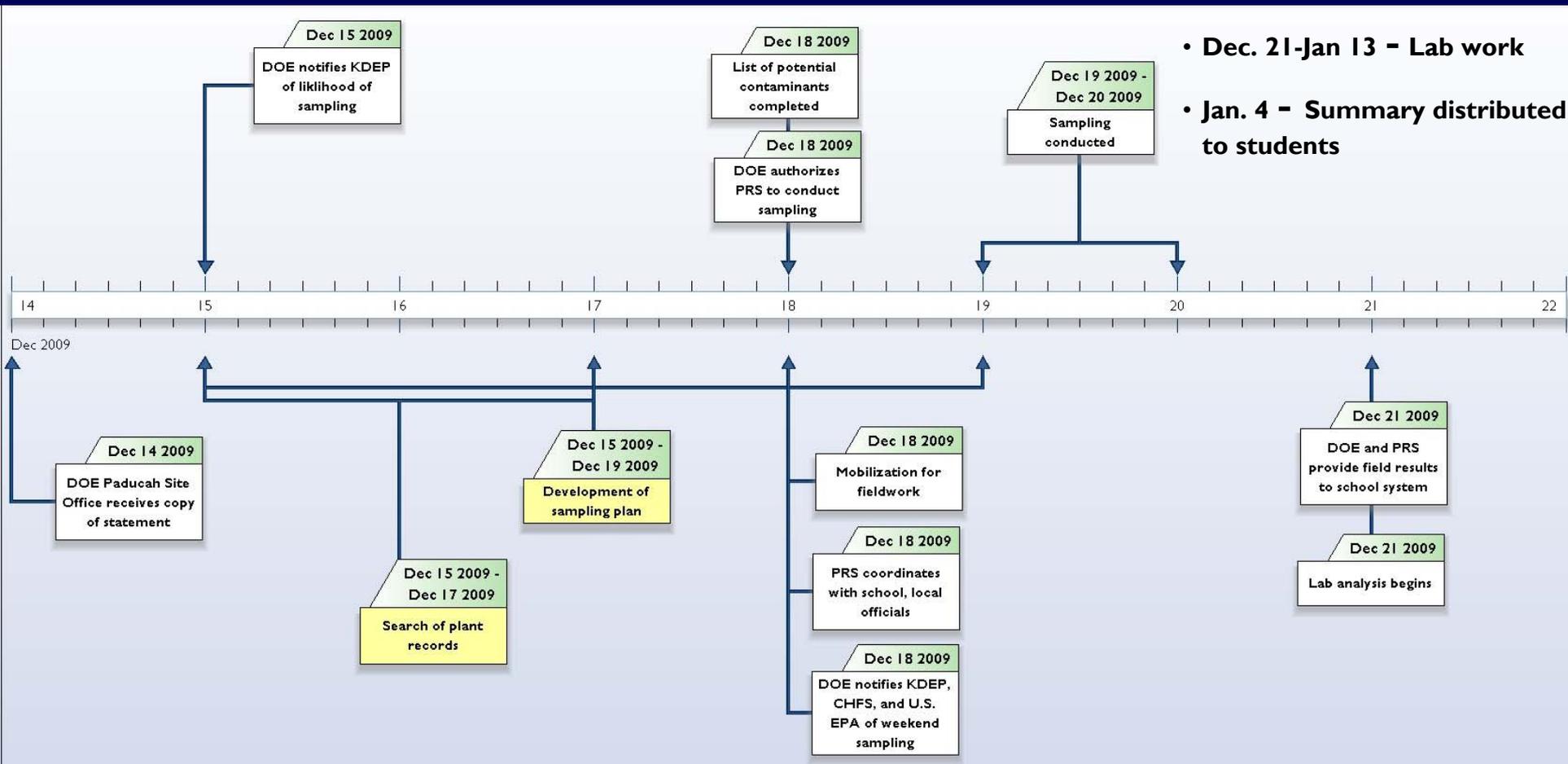
of Robert [REDACTED] telling the truth & the whole truth nothing but the truth;

I worked for Presky Plumbing & Heating Construction Company in 1980 at the Paducah Gaseous Diffusion Plant, I was a Laborer & Bill [REDACTED] was a operator with me, I pulled down Drain lines, Man holes, sewerage lines at the Paducah Plant. They had me to Drive a twin screw Dump truck to haul out several loads of dirt to Heath Elementary School Area. My Boss was Scott [REDACTED] at both places.

Robert [REDACTED]



Sampling Timeline

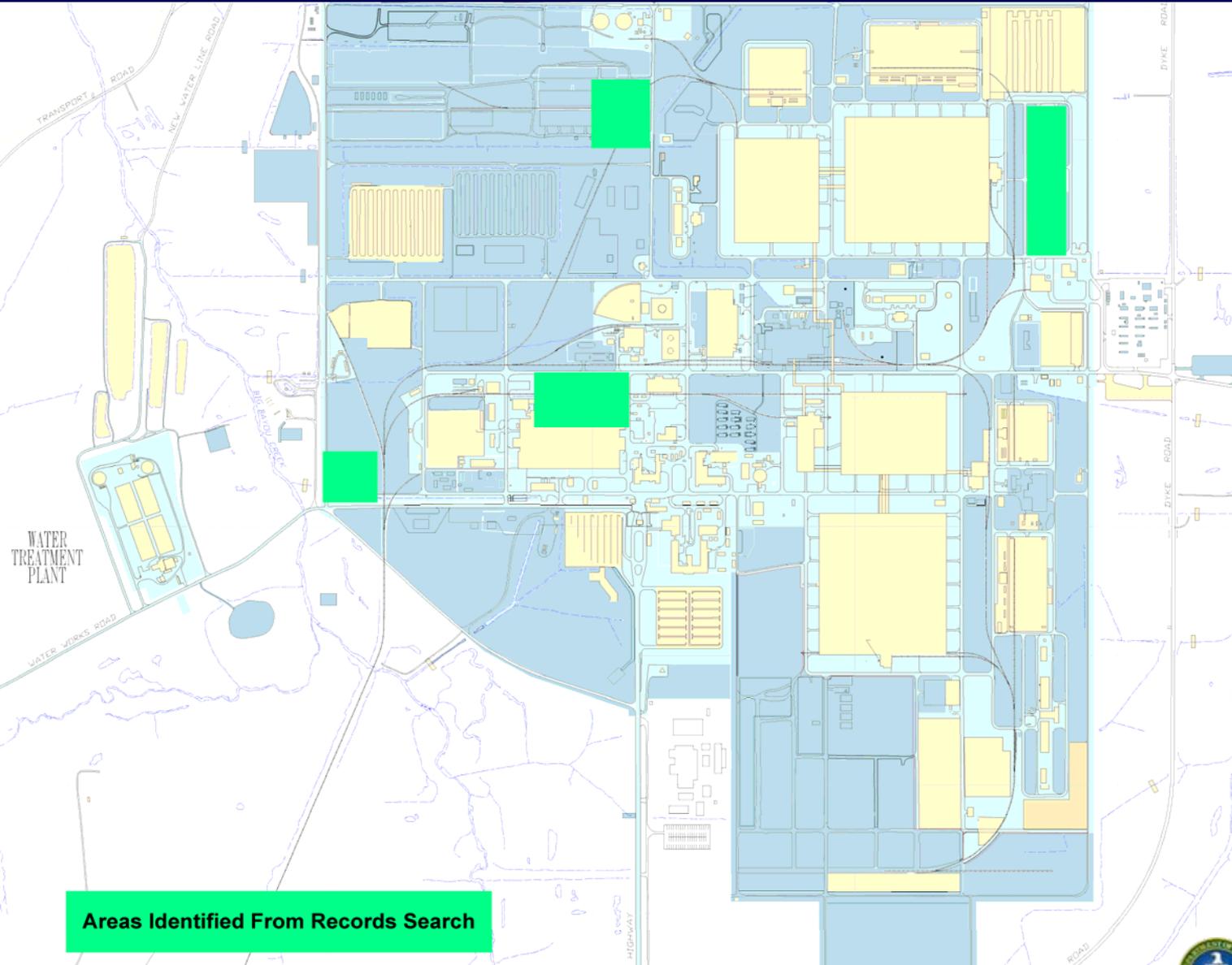


- Dec. 21-Jan 13 - Lab work
- Jan. 4 - Summary distributed to students

Heath Elementary School



Areas Identified from Records Search



Areas Identified From Records Search



Development of Sampling Plan

- Contractor work locations determined list of potential contaminants
- Items we looked for at the school included these:
 - Radionuclides
 - Chromium and nickel
 - PCBs
- PRS developed a systematic unbiased plan to cover entire school site
- Plan specifics
 - Site walkover radiation survey with 59,000 data points
 - 19 gamma spectroscopy locations
 - 55 soil samples
- Kentucky officials consulted on sampling approach

Sitewide Radiological Survey

Soil Sample Locations



Conclusion

We found no indication of contamination; there is no risk to students, staff, or visitors

- Site walkover showed no radiation readings indicating contaminated soils
- Gamma spectroscopy showed normal background readings
- Soil samples showed chromium and nickel at normal background levels
- Radioactive isotopes were at naturally occurring background levels
- PCBs were not detected

Summary Provided to Heath Students

Soil Sampling at Heath Elementary School UPDATE

Environmental soil sampling and monitoring recently were conducted at Heath Elementary School on Saturday and Sunday, December 19 and 20, 2009. The field testing results show the composition of the soil to be what is normally expected in Western Kentucky and indicate there is no danger associated with exposure to the soils at the school or use of its playgrounds and ball fields. The sampling and monitoring consisted of a radiation survey and soil sampling for PCBs and for metals specific to operations at the Paducah Gaseous Diffusion Plant (PGDP). Laboratory analytical methods, which can detect much smaller quantities of these materials than the field testing, are used to confirm the initial field data. The laboratory analyses are expected to be completed by mid-January.



Samplers collect soil from the school grounds for analysis.

A team of more than 30 people conducted the sampling in response to a statement from a former PGDP subcontract employee that dirt from PGDP had been used in the area of the school during its construction in 1980. The team included U.S. Department of Energy (DOE) contractor staff and representatives from the Kentucky Energy and Environment Cabinet and the Radiation Health Branch of the Kentucky Cabinet for Health and Family Services.

DOE contractor staff conducted a search of PGDP records and was unable to confirm whether soils were moved to the school; however, in the interest of ensuring public health protection, soil samples were collected, and a sitewide radiation survey of the school property was conducted.

These surface soil samples were collected (i.e., from 55 locations) in accordance with industry practice. The radiation survey consisted of 4-person teams equipped with global positioning system (GPS) units and radiation detectors walking the grassy areas in a line approximately 10 ft apart. The sampling methods used for both soil and radiation are the same standard procedures used by DOE at the PGDP site. The sampling and monitoring approach was discussed with Kentucky officials prior to beginning work, and the effort was monitored by Kentucky regulatory officials. The field testing results show the composition of the soil to be what is normally expected in Western Kentucky and indicate there is no danger associated with exposure to the soils at the school or use of its playgrounds and ball fields.



Technicians walk the school grounds with radiation detectors integrated with a GPS that allows results to be mapped.

After the laboratory results are compiled and the data evaluated, pertinent information will be made available. If you have any questions or would like additional information, call the number below and leave your contact information. You will receive a return call.

(270) 441-2219

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