Field Study and Peer Review for Determination of Holocene Displacement at the C-746-U Landfill

Paducah Gaseous Diffusion Plant

Paducah, Kentucky

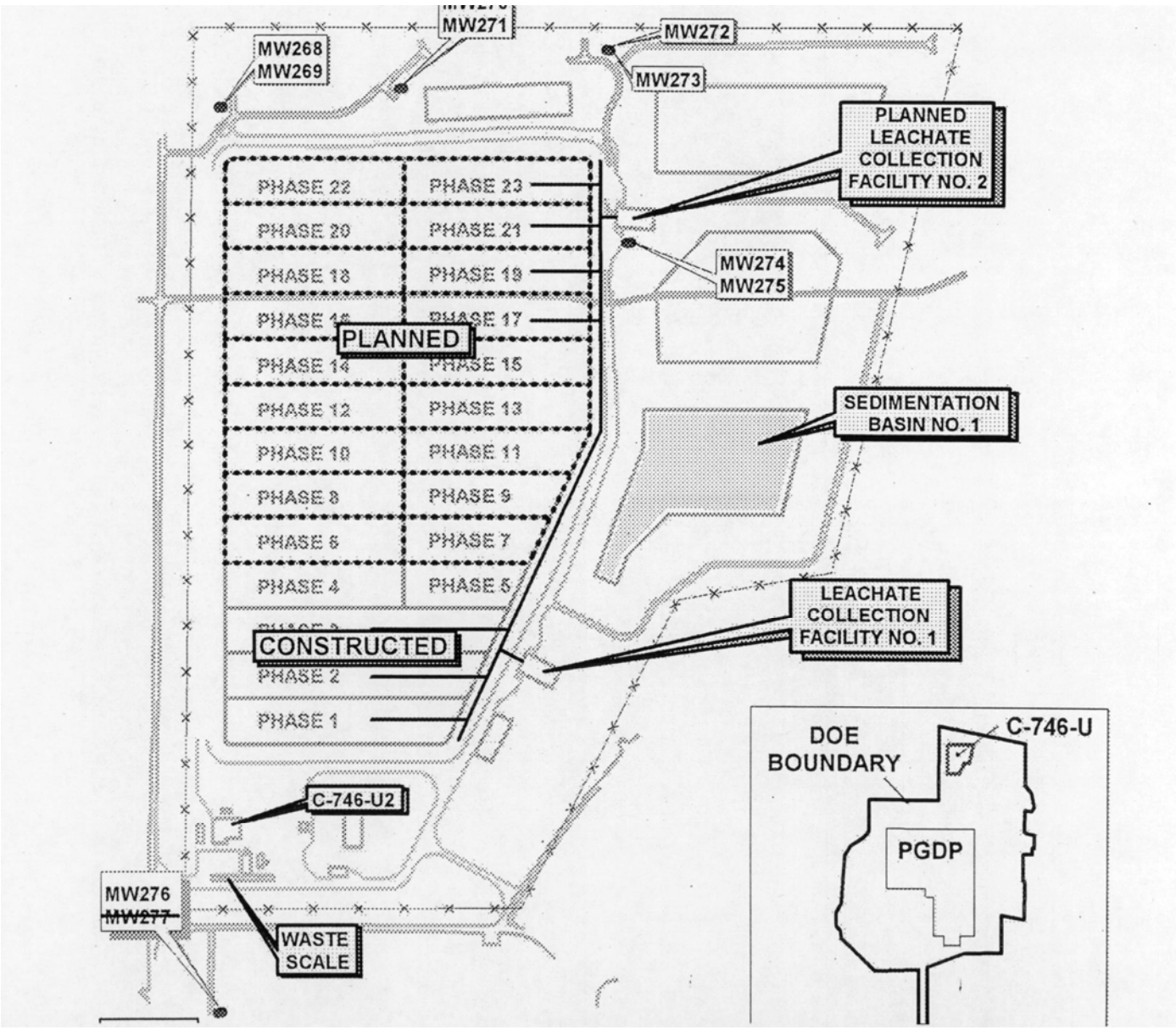
Citizens Advisory Board Meeting
March 17, 2005

Holocene Fault Investigation

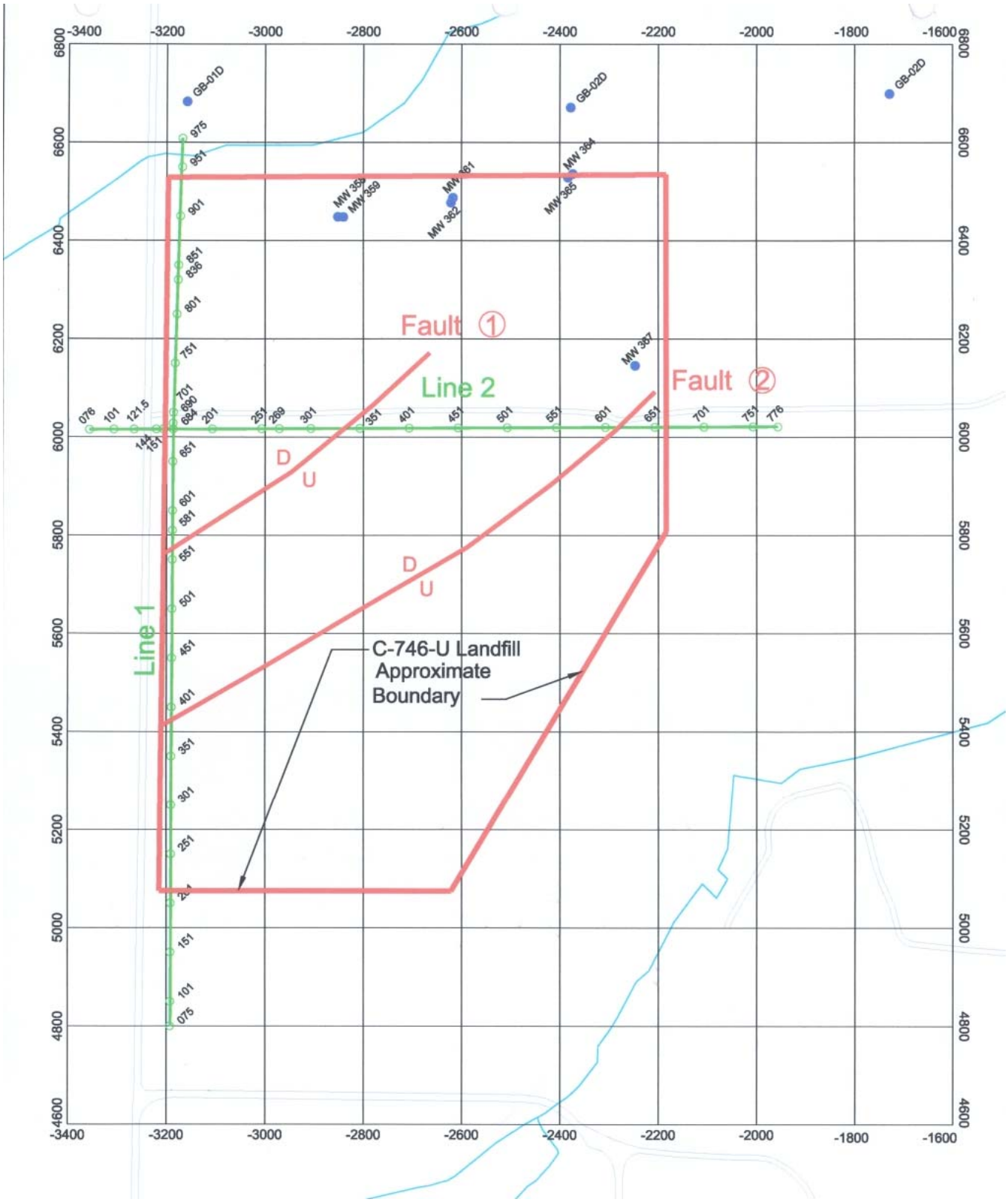
- Additional landfill space is needed at PGDP to dispose of wastes from remediation activities.
- Permit required to expand the existing C-746-U landfill.
- Regulations require that disposal facilities are not located within 200 feet of faults that have exhibited displacement within last 10-11,000 years (start of Holocene time)
- Previous seismic work at site indicates presence of faults under proposed C-746-U Landfill expansion.

Holocene Fault Investigation

C-746-U Landfill



Holocene Fault Investigation



Holocene Fault Investigation

Methods

- May Deployement
- Survey seismic lines
- Obtain initial cores along lines
- ID Holocene horizon (10-15’ bgs)
- Collect Holocene Material (HM)
- Conduct Carbon-14 analysis
- Determine lateral extent of HM
- If extent sufficient-collect 80 cores
- Date 50 – 60 cores
- Transport to KGS Core facility
- Correlate cores
- Write/Distribute/Publish Report

Holocene Fault Investigation

KRCEE

Project Management

UK Geological Sciences

Dr. Ed Woolery, Principal Investigator

Tricord, Inc.

Health and Safety

Wm. Lettis & Associates

Worldwide & New Madrid Project Experience

Miller Drilling

PGDP Project Experience

DOE/Navarro Engineering

Site, Regulatory, & Project Experience

Dr. Tish Tuttle (U of Md.) ITR

Dr. Roy VanArsdale (U of Memphis) ITR

Mr. John Nelson (Illinois Geological Survey) ITR

Dr. Dave Amick (SAIC-Augusta) Project Team

Marshall Davenport (Jacobs Eng.) Project Team