Agenda

- Trust Progress

- Chimney Demolition
  - Chimney Explosive Demolition – The Basics
  - Vibration and Dust Monitoring
  - Public Safety
Project Phasing

- **PHASE I**
  Site Demolition

- **PHASE II**
  Surface Soils and Surface Water

- **PHASE III**
  Ground Water

- **PHASE IV**
  Site Disposition
Remediation Timeline Estimate

- **2010**: Planning & Procurement
- **2011**: Site Demolition
- **2012 - 2013**: Surface Soils & Surface Water Remedy
- **2014 - 2015**: Groundwater Remedy
- **2015 - 2016**: Long Term Maintenance and Monitoring
- **2016 - 2017**: Property Disposition
Site Remedy Components

■ Demolition
  ● Remove all infrastructure to reduce the potential for future mechanical and chemical hazards

■ Soils
  ● Cells (designated waste disposal)
  ● Mono-fill Cover (across entire plant property)

■ Groundwater
  ● PBRs
  ● Hot spot removals and source management
Time Lapse Demolition Video
Similar to the remedy proposed as part of the bankruptcy proceedings, wastes will be contained onsite. Category I materials will be contained in a TCEQ approved lined and capped landfill.

The Trust is proposing to install up to five feet of cover on top of the Site to increase the ease for installation of utilities and infrastructure during redevelopment.
Waste Types and Final Disposition
Waste Disposal: Design Drawings

Category I Landfill – Cell 4
Waste Cell Liner and Cover Cross-Section
(currently under TCEQ/EPA review)
Parker Brothers Arroyo is critical to the groundwater remedy. The Trust proposed remedy will remove and contain slag, create an aesthetic surface water conveyance, and reduce impacted groundwater flux.
Parker Brothers Arroyo: Time-Lapse Video
Groundwater Conceptual Site Model

- Groundwater flow occurs primarily along former arroyos.
- Flux-based approach employed: Contaminant flux = discharge volume x discharge concentration. Areas of highest contaminant flux are primary remediation targets.
- The Parker Brothers arroyo has the largest drainage area and carries most flow.
- Flow from the arroyos discharges to the floodplain and ultimately to the Rio Grande River.
- The American Canal interacts with Site groundwater (gain/loss).
- Enhanced groundwater recharge occurs near unlined channels and ponds and from upgradient drainages east of I-10.
Revised Groundwater Treatment Remedy

Trust Proposed Remedy

- Create groundwater to surface water diversion (keeping clean water clean)
- Source removal and treatment
- In-situ groundwater treatment
- Rio Grande Floodplain – polishing of groundwater if necessary
End Vision of Remediated Site
Chimney Demolition

- April 13, 2013 – Sunrise

- Explosive demolition is one of the most commonly used techniques for large chimney demolition

- Both chimneys to be demolished during one event
Chimney Explosive Demolition Team

- Dykon Explosive Demolition, Inc. has more than 30 years in explosive demolition experience.
- Dykon is responsible for the felling of more than 100 chimneys around the world, including the felling of chimneys with similar construction and size to the ASARCO stacks.
- Dykon has performed multiple simultaneous explosive demolitions.
- Of note, Dykon recently executed the successful implosion of Texas Stadium in Arlington, TX and Brandenburg executed the successful implosion of Veteran's Stadium in Philadelphia, PA.

- Brandenburg and ERM staff have been involved in the management, planning, oversight and implementation of many explosive demolitions, several of which have been chimney demolitions.
- Brandenburg and ERM also have experience in coordinating such events with local authorities and external stakeholders.
- Brandenburg, ERM and Dykon have a long working relationship.
Chimney Explosive Demolition: The Basics

1. Steel at the base of the chimney opposite the direction of fall is cut prior to the blast.

2. Explosives are used to remove a section of the chimney in the direction of fall.

3. The chimney falls like a tree.
Chimney Explosive Demolition: The Basics

Blast holes are marked on the chimney in preparation for drilling and explosives placement.

Example Photo – Not ASARCO
An access point is made on the fall side of the chimney to facilitate explosives placement.
Chimney Explosive Demolition: The Basics

A hinge point is made on each side of the chimney.
Chimney Explosive Demolition: The Basics

Rebar on the back of the chimney is cut on the day of the blast.

Example Photo – Not ASARCO
Chimney Demolition Layout
Chimney Demolition Simulation
Chimney Demolition Simulation
Chimney Demolition: Vibrations & Noise

- Vibration Prediction and Monitoring
  - Vibration modeling
    - Explosive-generated vibrations
    - Ground slap
  - No vibration impact anticipated to on-site or off-site buildings
  - Continuous monitoring with field seismographs
    - On-site and off-site

- Noise
  - Explosives
  - Structure falling
Chimney Demolition: Wind

- Pre-Demolition Conditions
  - Tolerances (<20 mph)
  - Timing
    - Preparation sequence
    - Time of day

- Site Wind Data
  - On-site meteorological station
  - Two years of data
Chimney Demolition: Dust Reduction

- Vacuum gross dust from the annulus base of the 828’ chimney
- Remove insulation material from the interior of the 828’ chimney
- Vacuum gross dust from the interior base of the 612’ chimney
- Construct berms along the fall zones
Chimney Demolition: Berm Construction
Chimney Demolition: Dust Reduction

- Cover the fall zones with imported soil
- Apply tactifier to fall zone soils
- Cover fall zone with geotextile materials
Chimney Demolition: Dust Suppression

- Install water mist system along the length of the fall zones, at the chimney bases and edge of the fall zone.
- Install elevated water mist units at the edge of the fall zone.
- Install several hundred linear feet of covers over the canal near the site.
Chimney Demolition: Dust Suppression
Chimney Demolition: Dust Monitoring

- Dust Modeling and Monitoring
  - Modeling using TCEQ-developed model
  - Comparing results to EPA, TCEQ and OSHA standards
  - Working with TCEQ to review results and monitoring plan
  - Real-time total dust monitoring on site
Chimney Demolition: Perimeter Dust Monitoring
Chimney Demolition: Event Coordination

- Local
  - City Engineer - City liaison
  - El Paso Fire Department - Permitting and command center
  - El Paso Police Department - Security, traffic control and command center
  - Transportation Department - City street closures and inspections
Chimney Demolition: Event Coordination

- **State**
  - TCEQ - Lead agency for site and review demolition plan
  - TxDOT - Traffic control on I-10 and Executive

- **Federal**
  - EPA - Review demolition plan
  - FAA - Air traffic control
  - US Border Patrol - Security and on site presence

- **International**
  - International Boundary & Water Commission - Canal coordination and inspection
  - City of Juarez - Traffic control
Chimney Demolition: Event Coordination

- Other Stakeholders
  - La Calavera Residents - Temporary relocation
  - Paisano Businesses - Limited access
  - Union Pacific - Rail traffic control & inspection
  - BNSF - Rail traffic control & inspection
  - UTEP - General coordination
  - Community - Public safety communication
  - Media - Media coverage on the day of the blast
  - Catholic Diocese
Chimney Demolition: Public Safety

- Traffic Control & Viewing Areas
  - Best view: At home on TV
  - No Public viewing areas are being coordinated by the Trust
  - Anticipated road closures from 3 hours before and 1 hour after the blast
- Post-Blast Inspections
  - Blaster All Clear
  - Roadways, railways, canal, Calavera Canyon
Chimney Demolition: Public Safety

3 Hours Before Blast

- Green: Open
- Red: Closed
- Yellow: Local traffic only

Road Closure #1
Road Closure #2
Road Closure #3
Road Closure #4

Contro & VIP Area
Rolling Road Closure

1200 ft. Radius Fall Zone
550 ft. Radius Fall Zone
Chimney Demolition: Public Safety

15 Minutes Before Blast

- Green: Open
- Red: Closed
- Orange: Local traffic only

Road Closure #1:
- Control & VIP Area
- Rolling Road Closure

Road Closure #2:
- Rolling Road Closure

Road Closure #3:
- Rolling Road Closure

Road Closure #4:
- Rolling Road Closure
Chimney Demolition: Public Safety

15 Minutes After Blast

- **Open**
- **Closed**
- **Local traffic only**
- **Inspect & Reopen**
Chimney Demolition: Public Safety

1 Hour After Blast

- **Open**
- **Closed**
- **Local traffic only**
- **Inspect & Reopen**
Questions?

- The Trust website will be updated as additional details are available. Please visit [www.recastingthesmelter.com](http://www.recastingthesmelter.com) often to stay up to date on the chimney demolition.