Hanford Waste Diversion

SAN Teleconference

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Hanford Site Mission

The Hanford Site is engaged in one of the largest and most complex environmental cleanup projects in the world stemming from the 40-year legacy of the Manhattan Project including:

- Deactivation, decommissioning and demolition of facilities and structures
- Remediation of contaminated soils and groundwater
- Treatment of liquid waste in tanks

Hanford Site Information

- DOE's Office of Environmental Management (EM) is responsible for the cleanup mission activities on the Hanford Site
- Hanford has two DOE offices carrying out cleanup:
  - The DOE Richland Operations Office (RL)
  - The DOE Office of River Protection (ORP)
- Seven prime contractors are contracted to support the two DOE Offices:
  - DOE-RL:
    - CSC Hanford Occupational Health Services (CSC HOHS)
    - CH2M HILL Plateau Remediation Company (CHPRC)
    - Mission Support Alliance (MSA)
    - Washington Closure Hanford (WCH)
  - DOE-ORP:
    - Advanced Technologies and Laboratories International, Inc. (ATL)
    - Bechtel National, Inc. (BNI)
    - Washington River Protection Solutions, LLC (WRPS)

Waste Diversion Programs & Projects

- Hanford Site Recycling Programs
- U-Canyon Barrier Construction
- Rail Car Preservation
- Reuse of Rail Line
- Recycled Scrap Metal
- Reuse of Radioactive Contaminated Lead Bricks

Hanford Site Recycling Programs

- MSA Operates Hanford Site Recycling Programs
  - Central Consolidated/Recycling Center (CCRC)
    - *Universal Wastes* - ***Recycled 87.5 metric tons***
    - *Regulated Materials* - ***Recycled 177 metric tons***
  - Plastic Recycling Program
    - ***Recycled 21.56 metric tons***
  - Cardboard Recycling Program
    - ***Recycled 54.47 metric tons***
  - Paper Recycling Program (CI Shred)
    - ***Recycled 528.5 metric tons***
  - Wood and Furniture Recycling
    - ***Recycled 202 metric tons***
  - Scrap Metals Recycling
    - **Recycled 901 metric tons**
  - Electronic Recycling
    - ***Recycled 1.79 metric tons***

U Canyon Barrier Construction

- CHPRC to reuse debris in construction of the Canyon Barrier
  - Remedial action is to partially demolish and close in place
- Teamed with WCH to identify debris for reuse
  - Diverted **200,200 cubic yards** of debris to this project

Rail Car Preservation

- CHPRC diverted railcars from disposal at the Environmental Restoration Disposal Facility (ERDF)
- Relocated 2 locomotives and 2 cask cars to B-Reactor

Removal & Reuse of Rail Line

- WCH avoided disposal of 30 miles of old rail line
  - Established a “material for services” contract
  - Surveyed 30 miles of abandoned railroad track using an innovative cart with GPS and radiation monitoring equipment
  - Identified 5,000 tons of rail to be removed and released for reuse offsite
- Saved approximately $2 Million

Recycled Scrap Metal

- WCH avoided disposal of demolition debris from C Reactor water treatment facilities through advance planning and design efforts.
- Recycled 630 metric tons of scrap metal:
  - Piping, rebar, grating, and structural steel
  - Sent to a local offsite company for recycling
- Cost avoidance for shipping, disposal, and grouting was ~$700K

Reuse of Radioactive Contaminated Lead Bricks

- WRPS successfully identified a reuse for radioactive contaminated lead bricks initially destined for disposal at the ERDF.
- Utilized Philotechnics, who recycles the lead and sells it for reuse in shielding in the nuclear industry:
  - Sent 6,775 kilograms of lead
  - Avoided treatment and disposal costs

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