



West Valley Demonstration Project

North Plateau Groundwater Program

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West Valley National Security Complex

October 25, 2006, CTF Meeting

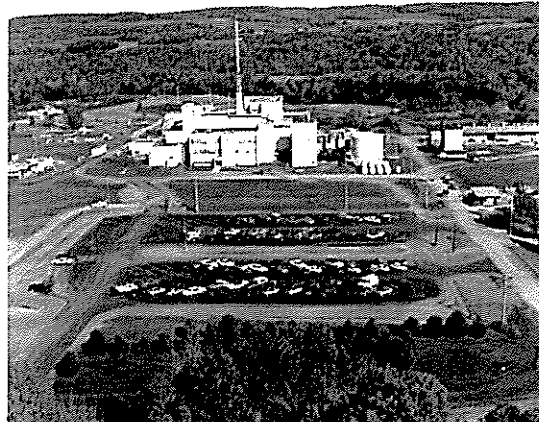
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WVDP – North Plateau Groundwater

◆ North Plateau Groundwater

- In early 1980s, existing groundwater wells were monitored
- Several new wells were installed in 1986
- New wells were installed in 1989 and 1990, increasing the number of on-site wells being monitored from 17 to 86



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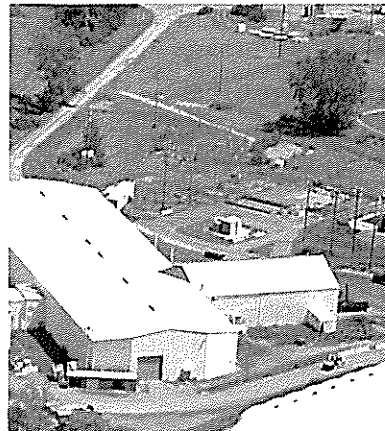
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WVDP – North Plateau Groundwater

- ◆ In late 1993, contaminated groundwater surfaced in ditches on north plateau
- ◆ Geoprobe investigation conducted summer 1994 to determine nature and extent of contamination
- ◆ Report issued April 1995 presented the results of geoprobe investigation
 - Strontium-90 identified as primary isotope (29-year half life)
 - Primary source: process line leaks from acid recovery phase of reprocessing operations



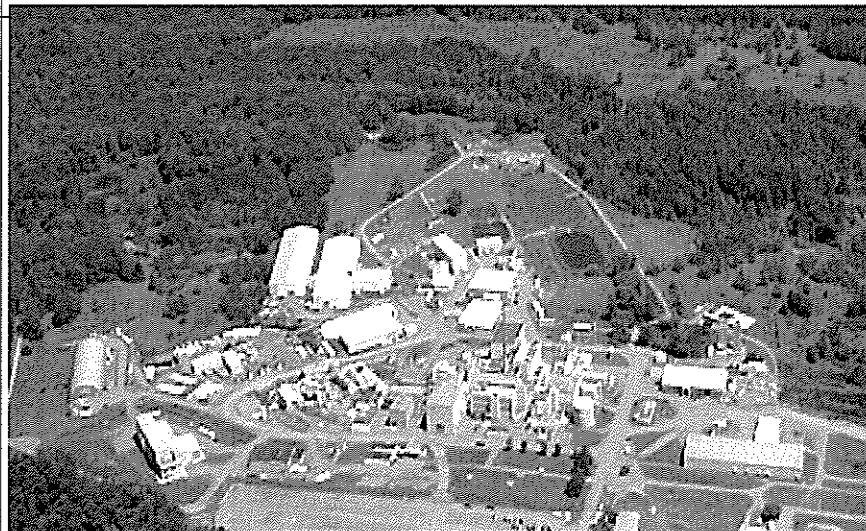
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Developed Portion of the West Valley Site



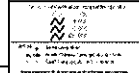
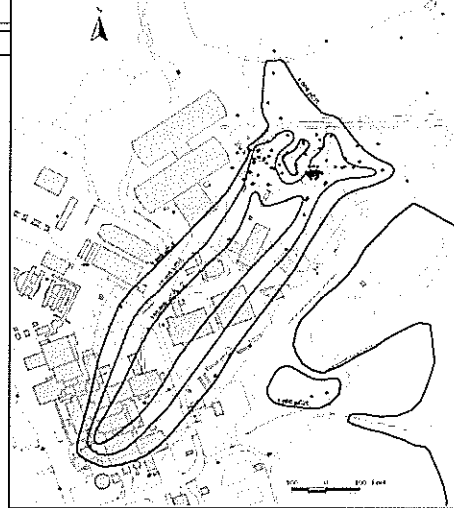
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WVDP – North Plateau Groundwater



North Plateau
5100 Groundwater Concentration
(Data for June 1995)

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WVDP – North Plateau Groundwater

◆ North Plateau Groundwater

- Pump and treat system installed in fall 1995 to mitigate surfacing and off-site movement of contaminated groundwater
- Approximately 43 million gallons of contaminated groundwater has been recovered and processed since November 1995



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WVDP – North Plateau Groundwater

◆ 1996 – 1997

- Drainage improvements were made to reduce surface water recharge of plume
- Additional geoprobe sampling in summer and fall of 1997
 - Further characterized / mapped plume
- Technical Peer Review convened October 1997
 - Group agreed that the contaminated plume does not pose a present or future health risk to either on-site workers or off-site receptors
- NYSERDA convened Technical Review Group
 - Group concurred with earlier reviews that the plume does not pose a health risk to on-site workers or off-site receptors



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WVDP – North Plateau Groundwater



- ◆ 1998
 - Core area geoprobe study conducted in and around the Main Plant
- ◆ 1999
 - Technical Peer Review Group convened to review the north plateau groundwater program status
 - Review Group determined that suggestions from 1997 Technical Peer Review Group had been followed
 - Suggested proceeding with a pilot permeable treatment wall
 - Pilot permeable treatment wall (PTW) was installed on the eastern lobe of the plume as a test
- ◆ 2002
 - Assessment of Pilot PTW function was completed in fall of 2002

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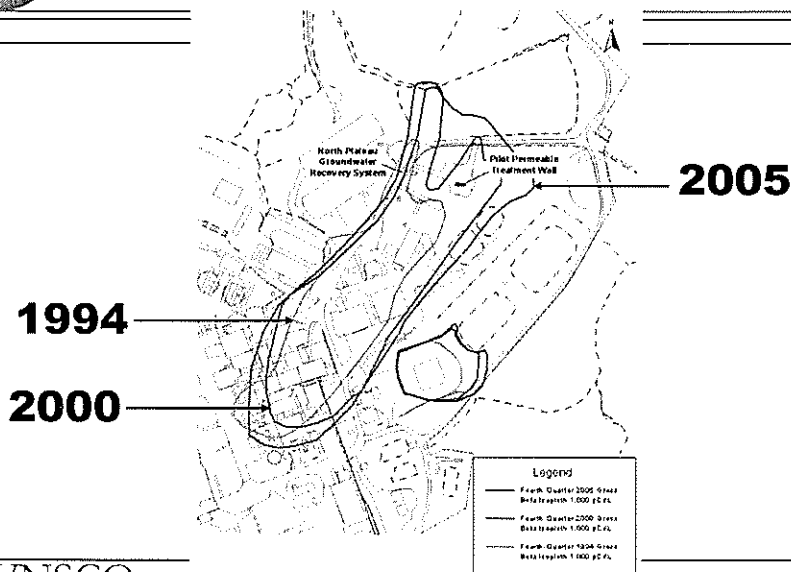


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- ◆ 2003
 - Evaluation of estimated doses to humans and biota potentially affected by the Strontium-90 groundwater plume
 - Estimated doses to humans and biota for current and projected releases of Sr-90 well below the dose limits and guidance values
- ◆ 2005
 - WVDP Annual Site Environmental Report
 - Maximum dose to an offsite individual from North Plateau drainage was 0.035 mrem
 - Populations of aquatic and terrestrial biota on the Western New York Nuclear Services Center are not being exposed to doses in excess of the DOE and international dose standards



WVDP – North Plateau Groundwater





WVDP – North Plateau Groundwater

Nuclear Regulator Commission (NRC) Input

- ◆ NRC letter (3/7/02) to the New York State Department of Environmental Conservation
 - Regarding contamination at the site – *NRC concluded, throughout the years, that contamination levels do not pose any imminent health risks to the general public.*
 - NRC confirmed regulatory jurisdiction over radiological releases from reprocessing
- ◆ NRC Monitoring Visit (4/24-27/06)
 - North Plateau groundwater monitoring program one area of focus
 - NRC report submitted to DOE on 9/1/06
 - Report Conclusions
 - Current monitoring program is adequate to ensure the health and safety of the public
 - Evaluation of certain aspects of current monitoring program should be considered to facilitate interpretations of monitoring data



WVDP – North Plateau Groundwater

◆ Path Forward

- Continue pump and treat system
- Continue monitoring to ensure public health and safety
- Review September 1, 2006, NRC report and suggestions