



U.S. Department of Energy

*National  
Transportation  
Program*



# ***TRANSPORTATION BASELINE SCHEDULE***

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# National Transportation Program 1999 Transportation Baseline Schedule

## 1.0 Introduction

The “1999 National Transportation Program - Transportation Baseline Report” presents data that form a baseline to enable analysis and planning for future Department of Energy (DOE) Environmental Management (EM) waste/material transportation. The companion “1999 Transportation ‘Barriers’ Analysis” analyzes the data and identifies existing and potential problems that may prevent or delay transportation activities based on the data presented. The “1999 Transportation Baseline Schedule” (this report) uses the same data to provide an overview of the transportation activities of DOE EM waste/materials.

This report can be used to identify areas where stakeholder interface is needed, and to communicate to stakeholders the quantity/schedule of shipments going through their area. Potential bottlenecks in the transportation system can be identified; the number of packages needed, and the capacity needed at receiving facilities can be planned. This report offers a visualization of baseline DOE EM transportation activities for the 11 major sites and the “Geologic Repository Disposal” site (GRD).

## 1.1 Objective

The objective of this report is to provide an overview of the planned transportation activities for DOE EM waste and materials as reported in the FY 1999 Integrated Planning, Accountability, and Budgeting System (IPABS) Stream Disposition Data (SDD).

## 1.2 Scope

This report gives a graphical view of planned transportation activities for the 11 major DOE EM sites and for the GRD (tentatively Yucca Mountain). For sites that may act as repositories, (i.e., Hanford, Nevada Test Site (NTS), WIPP, and Yucca Mountain for this report) all incoming shipment data is included (e.g., shipments from small sites). The 11 major sites included are:

*Fernald Environmental Management Project  
Hanford Site  
Idaho National Engineering and Environmental Laboratory  
Los Alamos National Laboratory  
Nevada Test Site*

*Oak Ridge Reservation  
Rocky Flats Environmental Technology Site  
Sandia National Laboratory  
Savannah River Site  
Waste Isolation Pilot Plant  
West Valley Demonstration Project*

Data presented is from the 7/30/99 version of the “Stream Disposition Data” (SDD) captured in IPABS. It includes information on Mixed/Low Level Waste (M/LLW), Transuranic (TRU), High Level Waste (HLW), and Spent Nuclear Fuel (SNF) waste/material streams. Data used for the Geologic Repository Disposal map includes information collected in conjunction with the Integrated Repository Receipts Workshop conducted during FY 1999. This report focuses on the number of shipments. However, volume schedule data are presented where number of shipments information was not available.

## **2.0 Methodology**

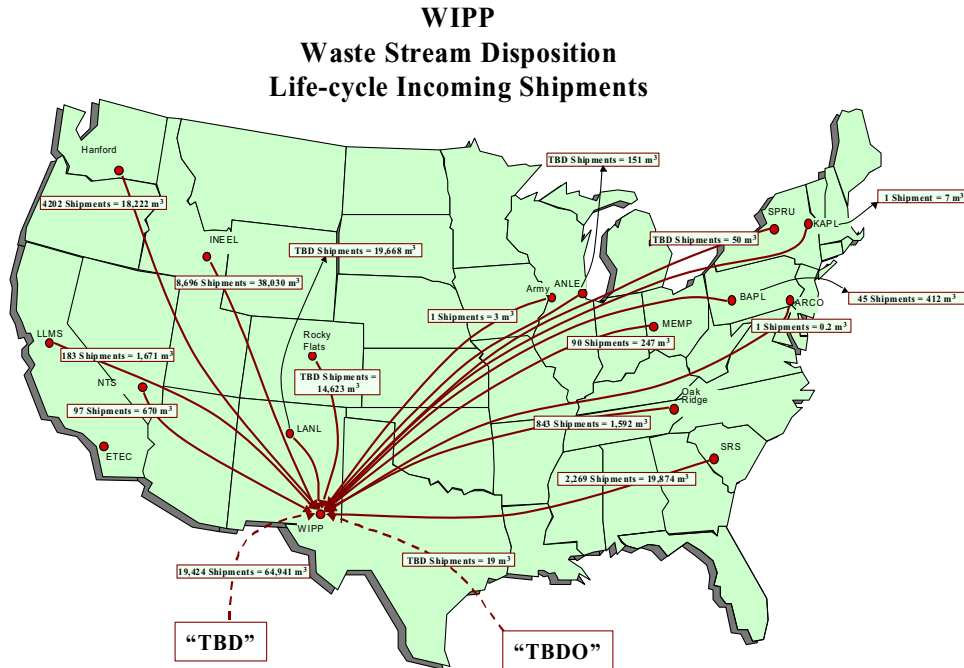
One of the transportation related data elements captured in IPABS is “Number of Shipments.” The following is the definition for “Number of Shipments” from IPABS:

- **# of Shipments** is the number of shipments during the reporting period that are planned for the disposition quantity of the stream that is within the specified combination of Material Category, Package Type/Capacity, and Mode. For the rail mode, each rail car is considered a shipment. For the truck mode, a single trailer is considered a shipment.

The “Number of Shipments” data element was entered into IPABS by each site. It is not derived in from waste/material volumes.

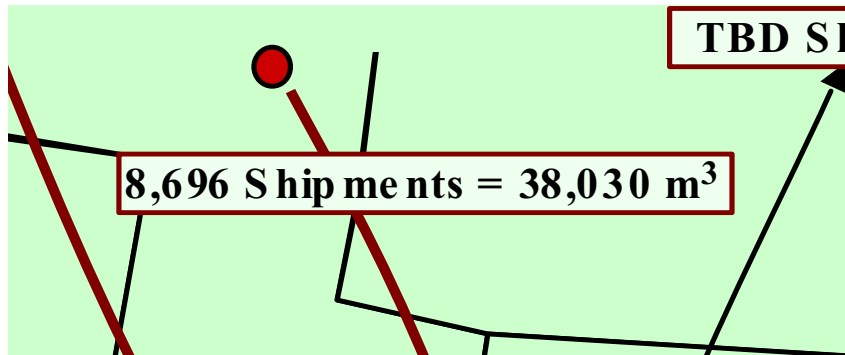
For each waste/material stream the annual number of shipments were reported. For this report, those numbers were summed to obtain the life-cycle number of shipments for each origin – destination pair.

Figure 1 is an example of a 1999 Transportation Baseline Schedule map (shown full size in Appendix A). It is a high level view of incoming/outgoing shipments for the specified site with the accompanying origin/destination.



**Figure 1. Transportation Baseline Schedule Map.**

An information box appears on (or near) the red arrow for each origin-destination pair. The total life-cycle number of shipments from 7/30/99 SDD in IPABS is indicated for each site with its accompanying volume (Figure 2).



**Figure 2. Total life-cycle number of shipments and associated volume as reported in IPABS SDD.**

If a waste/material stream volume is present in the SDD with no shipping information, it is indicated as “TBD Shipments.” Figure 3 is an example of a baseline schedule map containing a volume with no corresponding shipping information.

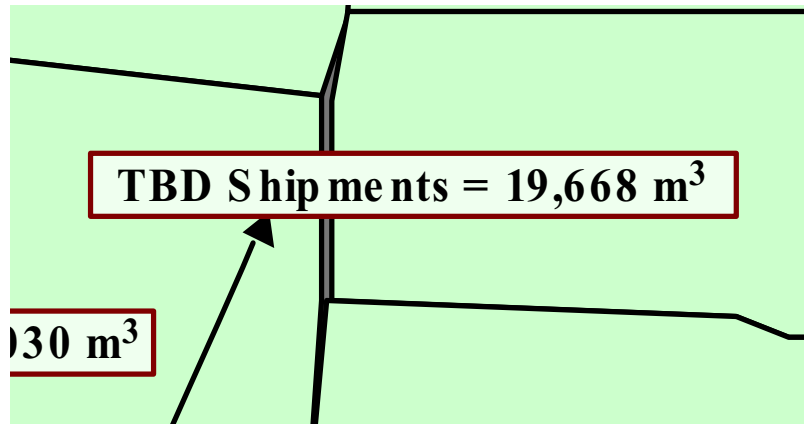


Figure 3. Volume reported in IPABS SDD with no shipping information.

If some of the waste/material has shipping information in IPABS SDD for a given origin – destination pair and others do not, both are displayed in the information box. Figure 4 is an example of an origin-destination pair where the SDD contains the number of shipments for 38,030 m<sup>3</sup>, but has 19,668 m<sup>3</sup> with no shipping information.

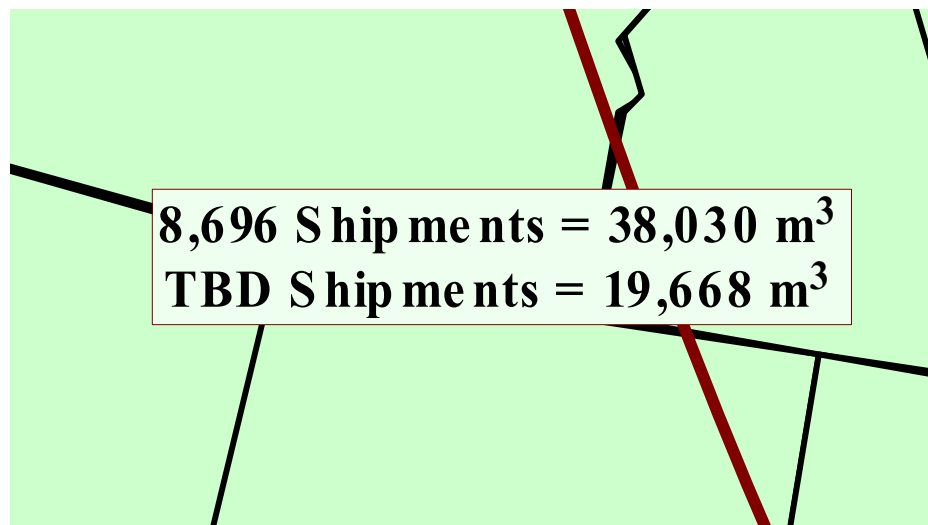


Figure 4. Volume reported in IPABS SDD with and without shipping information.

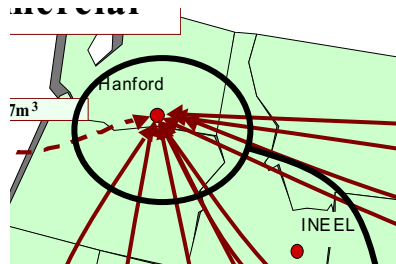


Following the baseline schedule map are graphs showing the detailed information used to generate the map. The graphics include:

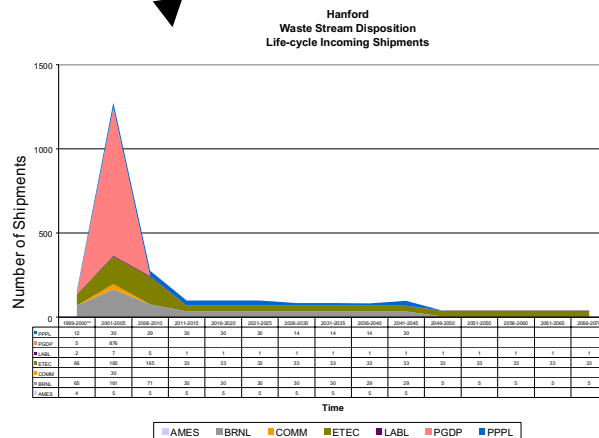
- A composite graph of the annual number of shipments by origin/destination used to obtain the total life-cycle number of shipments (for example, see Figure 5),
- A site specific graph of the annual number of shipments from/to the origin/destination (for example, see Figure 6),
- A composite graph of the origin/destination of the total life-cycle volume where shipping details were not available (for example, see Figure 7) and,
- A site specific graph of the annual volume from/to the origin/destination (for example, see Figure 8).

Details of the graphics are as follows:

The total life-cycle number of shipments to/from a given site is displayed in a composite graph. Figure 5 is an example of a composite graph showing incoming shipments to Hanford. It is a high level schedule of the incoming number of shipments by origin/destination.



The composite graph showing incoming shipments to Hanford appears immediately following the Transportation Baseline Schedule map.



**Figure 5. Composite graph showing incoming shipments to Hanford.**

The data used to ascertain the total life-cycle number of shipments for a given origin - destination pair (as seen in the information box) is displayed in a graph. It shows the combined shipping schedule for all waste/material streams for a given site.

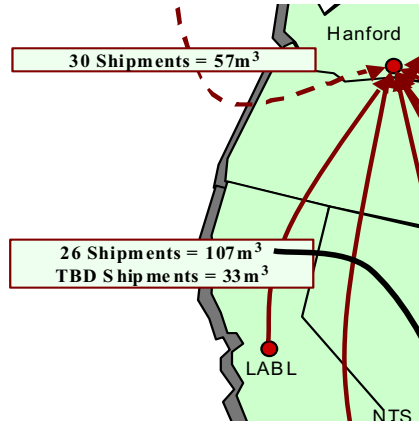


Figure 6 is an example of a site specific shipping schedule graph. It shows the annual number of shipments to the specified destination. A site specific shipping schedule graph for each of the sites shipping to Hanford is included after the composite graph. This graph will include all waste/material streams to be shipped from the origin to Hanford.

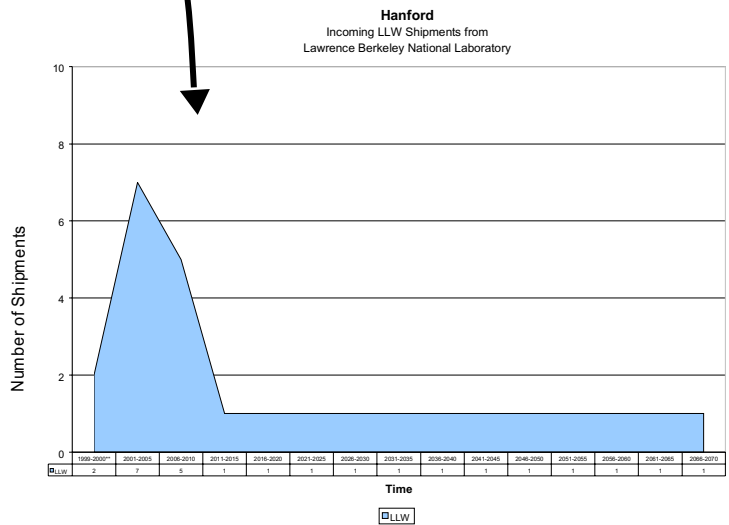
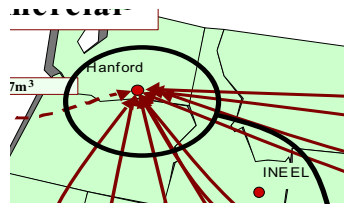


Figure 6. Site specific number of shipments schedule.

For waste/material streams where no number of shipments was provided, a volume graph is included. As with the “number of shipments” graphs, a composite graph of the incoming volume is followed by graphs showing a site specific volume schedule. Figures 7 and 8 are examples of this situation.



Hanford  
Waste Stream Disposition  
Life-cycle Incoming Volume

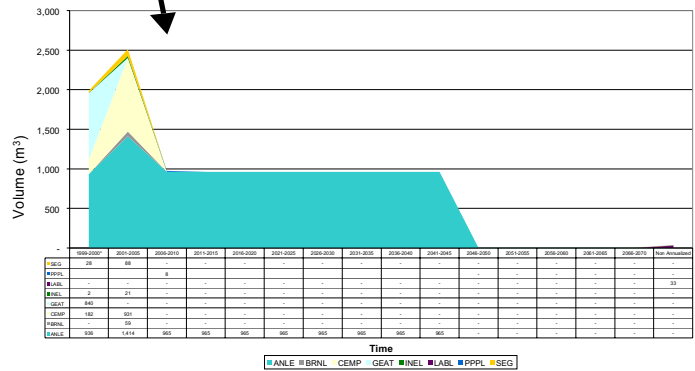
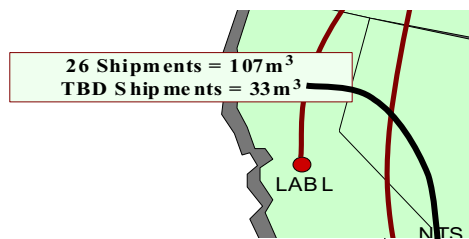
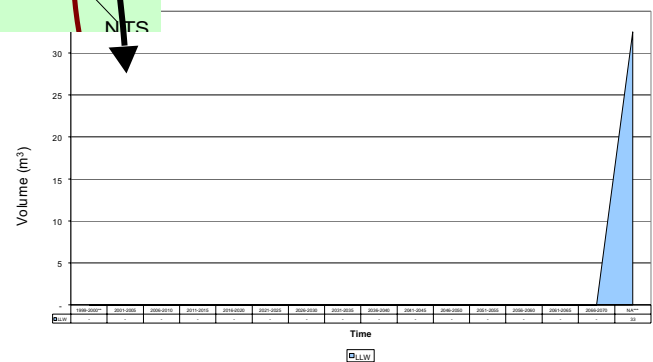


Figure 7 is a composite graph of incoming volume. It includes only those incoming volumes that did not have associated shipping information. If present, the composite volume graph follows the site specific “number of shipments” graphs.

Figure 7. Composite graph showing incoming volume to Hanford.



Hanford  
Incoming LLW Volume from LABL



If “TBD Shipments = x m³” appears in the information box, a schedule graph of volume to be shipped is provided. Figure 8 is an example of a site specific volume schedule. If needed, it is located after the composite volume graph.

Figure 8. Site specific shipment volume schedule.

The volume graphs show metric tons of heavy metal (MTHM), metric tons (MT), or number of canisters (NC) as needed.

Two maps were developed for Nevada Test Site (NTS). One map shows the incoming shipments recorded in the SDD. The second map includes the SDD shipments to NTS and all shipments of LLW to “TBD” and “TBDO.” They were included as “potential” shipments to NTS.

### **3.0 Summary**

The “Number of Shipments” data element captured in IPABS was used to generate a baseline shipping schedule. Annual numbers of shipments were combined to obtain the total life-cycle number of shipments for a given site. That information is graphically displayed in an integrated view of the transportation activities for a given site. A graph compiling all shipments to/from a site by origin/destination was developed. The combination of these pieces of information provides a graphical view of the shipping schedule to and from each of the 11 major sites and the Geologic Repository Disposal site.

**ABBREVIATIONS  
and  
GEOGRAPHICAL SITE ACRONYM LIST**

AEMP	Ashtabula Environmental Management Project
AMES	Ames Laboratory
ANLE	Argonne National Laboratory - East
ANLW	Argonne National Laboratory - West
ARCO	ARCO Medical Products Company
ARMY	U.S. Army Material Command
BAPL	Bettis Atomic Power Laboratory
BRNL	Brookhaven National Laboratory
CEMP (BCLJ)	Columbus Environmental Management Project - West Jefferson
CNS	Charleston Naval Shipyard
COMM	Commercial Site – TBD
CWM	Chemical Waste Management
DOE	DOE Site – TBD
DSSI	Diversified Scientific Services, Inc.
ENVR	Envirocare
ETEC	Energy Technology Engineering Center
FEMP	Fernald Environmental Management Project
GEAT	General Atomics
GRD	Geologic Repository Disposal
HASI	Hanford Site
HLW	High Level Waste
INEL, INEEL	Idaho National Engineering and Environmental Laboratory
KAPL	Knolls Atomic Power Laboratory - Schenectady
KESS	Knolls Atomic Power Laboratory - Kesselring
KWIN	Knolls Atomic Power Laboratory - Windsor
LABL	Lawrence Berkeley National Laboratory
LANL	Los Alamos National Laboratory
LL	Laidlaw
LLMS	Lawrence Livermore National Laboratory - Main Site
LLW	Low Level Waste
LRRI	Lovelace Respiratory Research Institute
M/LLW	Mixed Low Level Waste and Low Level Waste
MEMP	Miamisburg Environmental Management Project
MINS	Mare Island Naval Shipyard
MLLW	Mixed Low Level Waste
MURR	Missouri University Research Reactor
NAVY	Naval Reactors Site - TBD
NNS	Norfolk Naval Shipyard
NRF	Naval Reactor Facility
NVTS, NTS	Nevada Test Site
ORR, ORTN	Oak Ridge Reservation
PAPL	Pantex Plant
PGDP	Paducah Gaseous Diffusion Plant
PHNS	Pearl Harbor Naval Shipyard
PNS	Portsmouth Naval Shipyard

**ABBREVIATIONS  
and  
GEOGRAPHICAL SITE ACRONYM LIST**

PORT	Portsmouth Gaseous Diffusion Plant
PPPL	Princeton Plasma Physics Laboratory
PSNS	Puget Sound Naval Shipyard
RFTS	Rocky Flats Environmental Technology Site
SARS, SRS	Savannah River Site
SEG	GTS Duratek (formerly, Scientific Ecology Group)
SK	SafetyKleen
SNF	Spent Nuclear Fuel
SNLN	Sandia National Laboratories – NM
SPRU	Separations Process Research Unit
TBD	To Be Determined
TBDO	To Be Determined/Off-Site
TRU	Transuranic Waste
WIPP	Waste Isolation Pilot Plant
WVDP	West Valley Demonstration Project

## GLOSSARY

<b>Hazardous Material</b>	A substance or material, which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated. The term includes hazardous substances, hazardous wastes, marine pollutants, and elevated temperature materials as defined in this section, materials designated as hazardous under the provisions of Sec. 172.101 of this subchapter, and materials that meet the defining criteria for hazard classes and divisions in Part 173 of this subchapter (49 CFR 171.8).
<b>High Level Radioactive Waste</b>	(A) The highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and (B) other highly radioactive material that the Commission consistent with existing law, determines by rule requires permanent isolation (42 USC 10101, 10 CFR 72.3, 10 CFR 960.2).
<b>Low Level Radioactive Waste</b>	Radioactive material that (A) is not high-level radioactive waste, spent nuclear fuel, Transuranic waste, or by-product material as defined in section 2014(e)(2) of this title; and (B) the NRC Commission, consistent with existing law, classifies as low level radioactive waste (42 USC 10101, 10 CFR 62.2).
<b>Mixed Waste</b>	Waste that contains both hazardous waste and source special nuclear, or by-product material subject to the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq., 42 USC 6903).
<b>Spent Nuclear Fuel</b>	Fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated by reprocessing (42 USC 10101, 10 CFR 960.2).
<b>Transuranic Waste</b>	Material contaminated with elements that have an atomic number greater than 92, including neptunium, plutonium, americium, and curium, and that are in concentrations greater than 10 nCi/g, or in such other concentrations as the Nuclear Regulatory Commission may prescribe to protect the public health and safety (42 USC 2014).



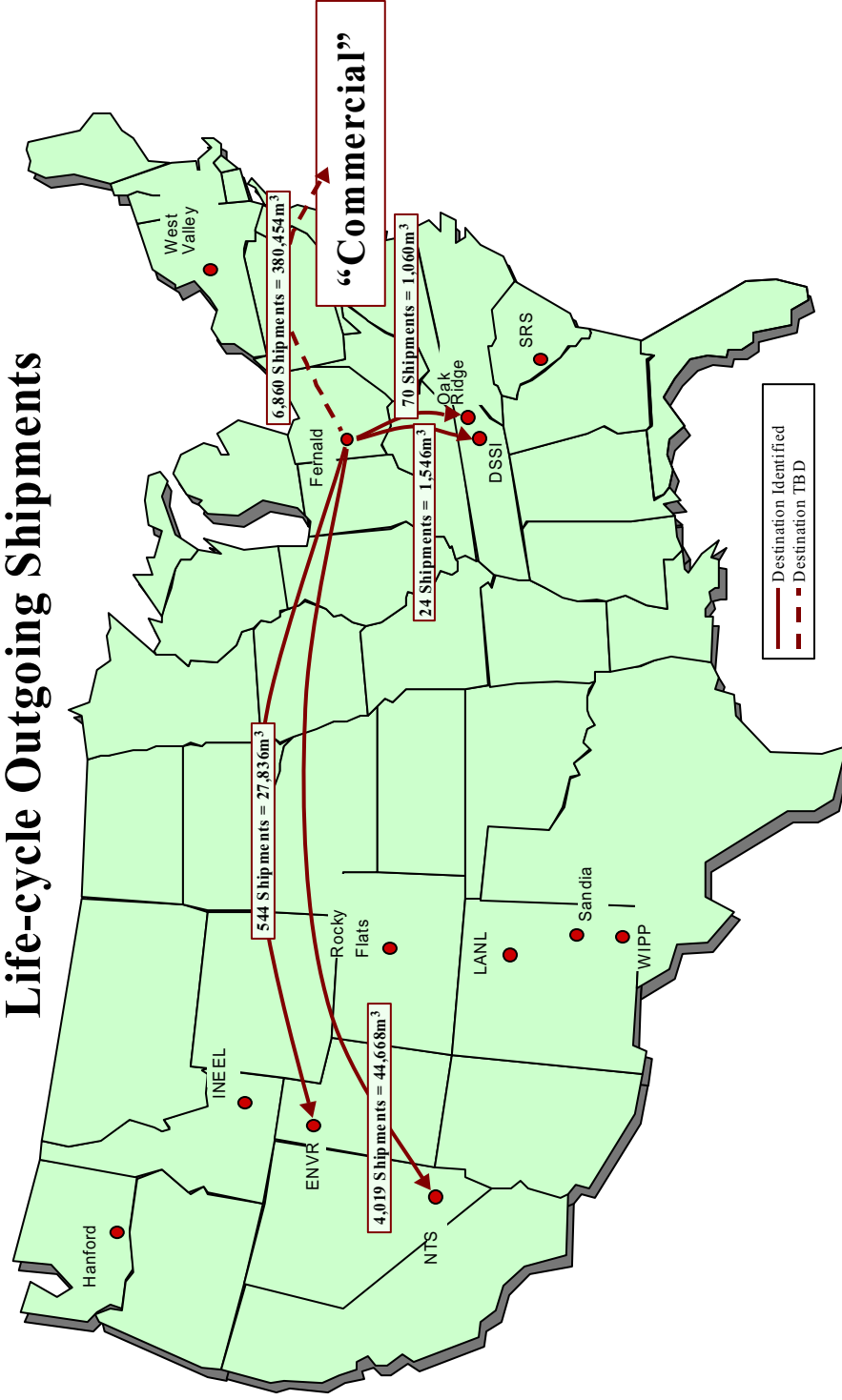


**Attachment A**

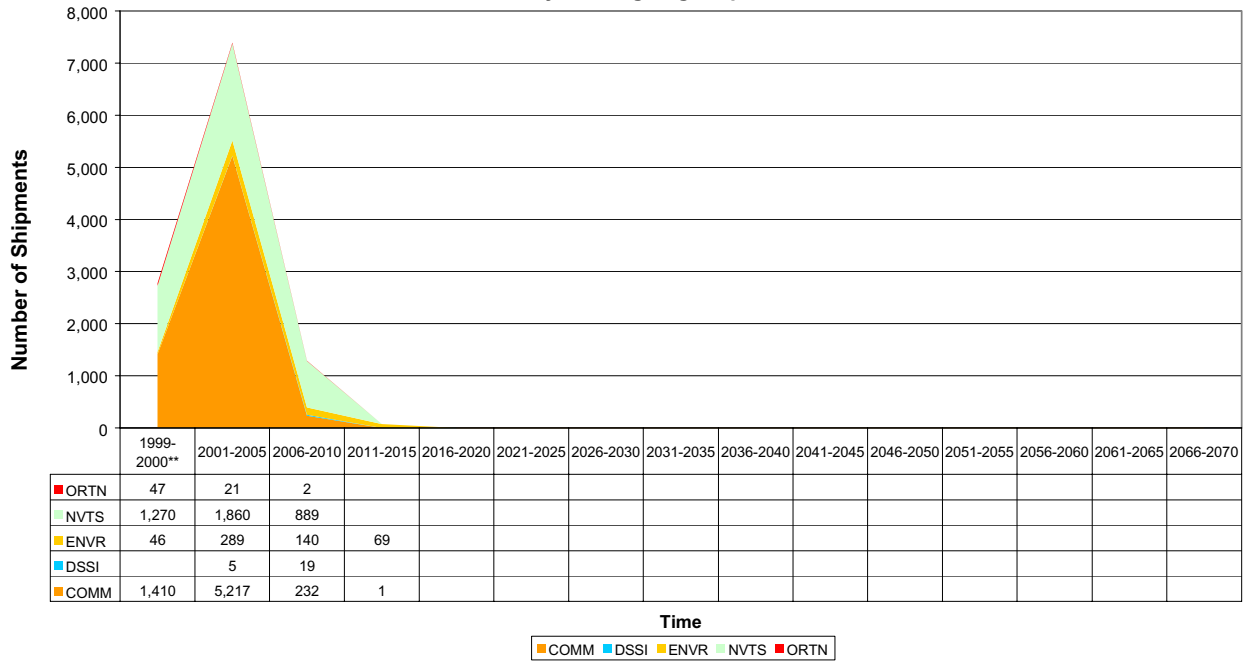
**1999 Transportation Baseline  
Schedule Maps  
and  
Number of Shipments/Volume  
Graphs**



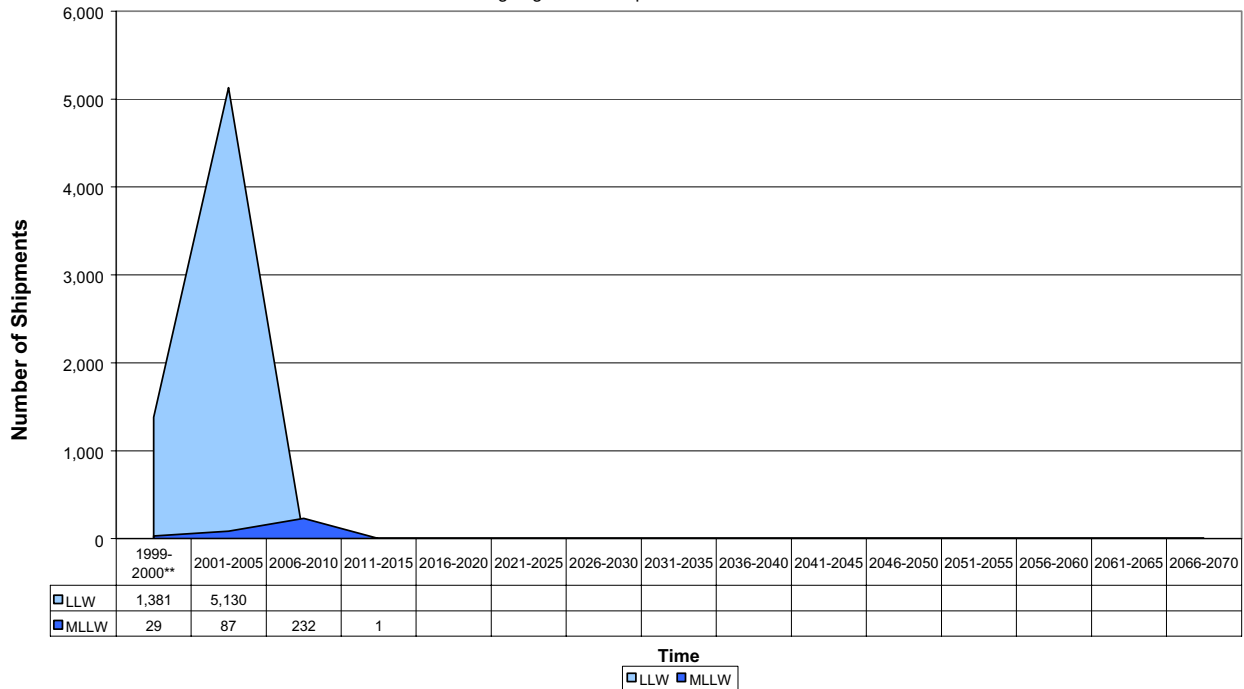
# Fernald Waste Stream Disposition Life-cycle Outgoing Shipments



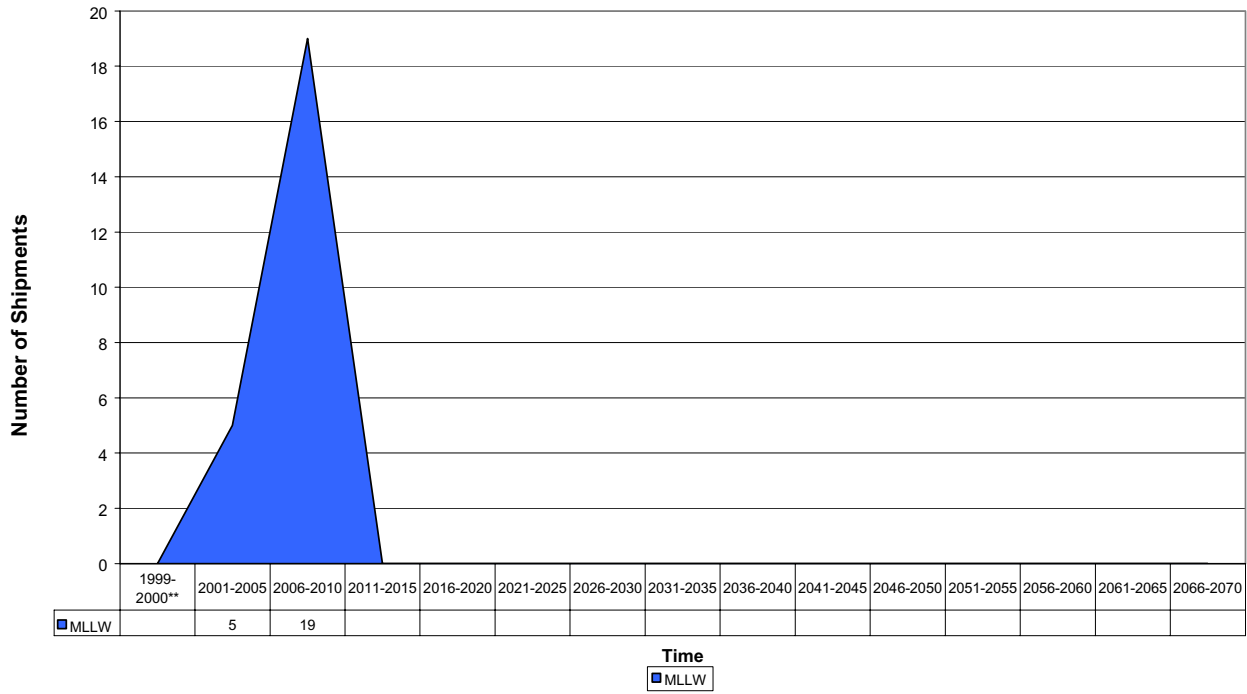
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Waste Stream Disposition  
Life-cycle Outgoing Shipments**



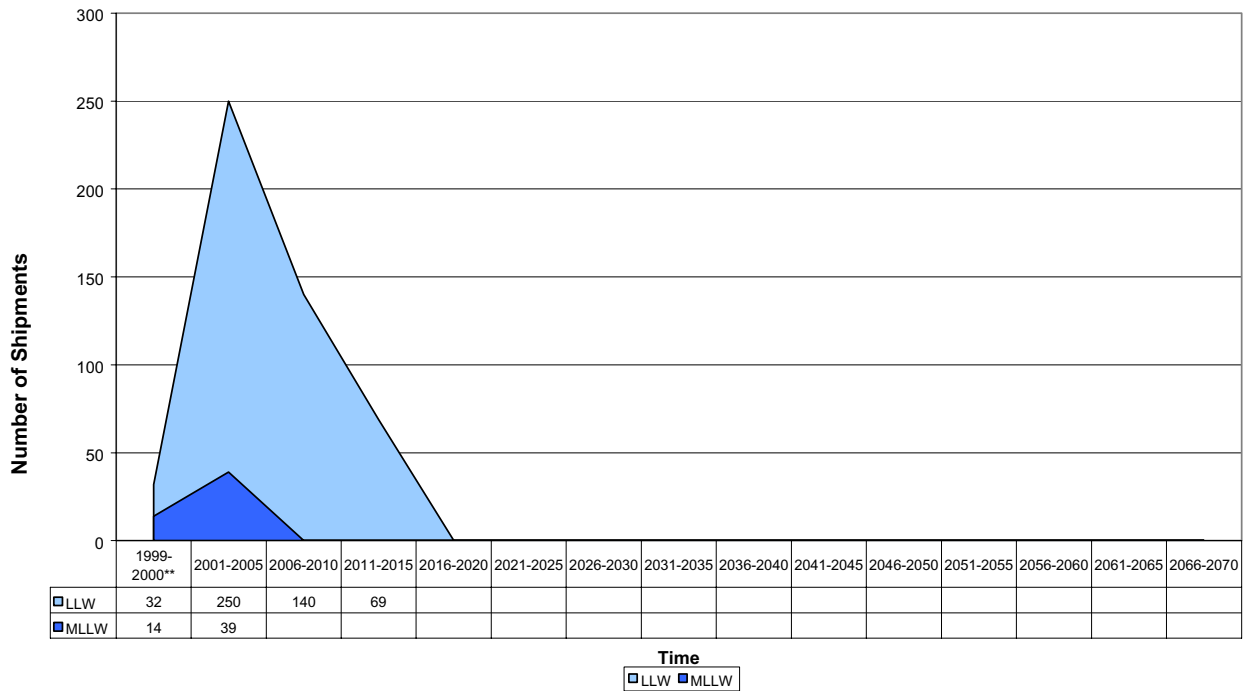
**Fernald  
Outgoing M/LLW Shipments to "Commercial"**



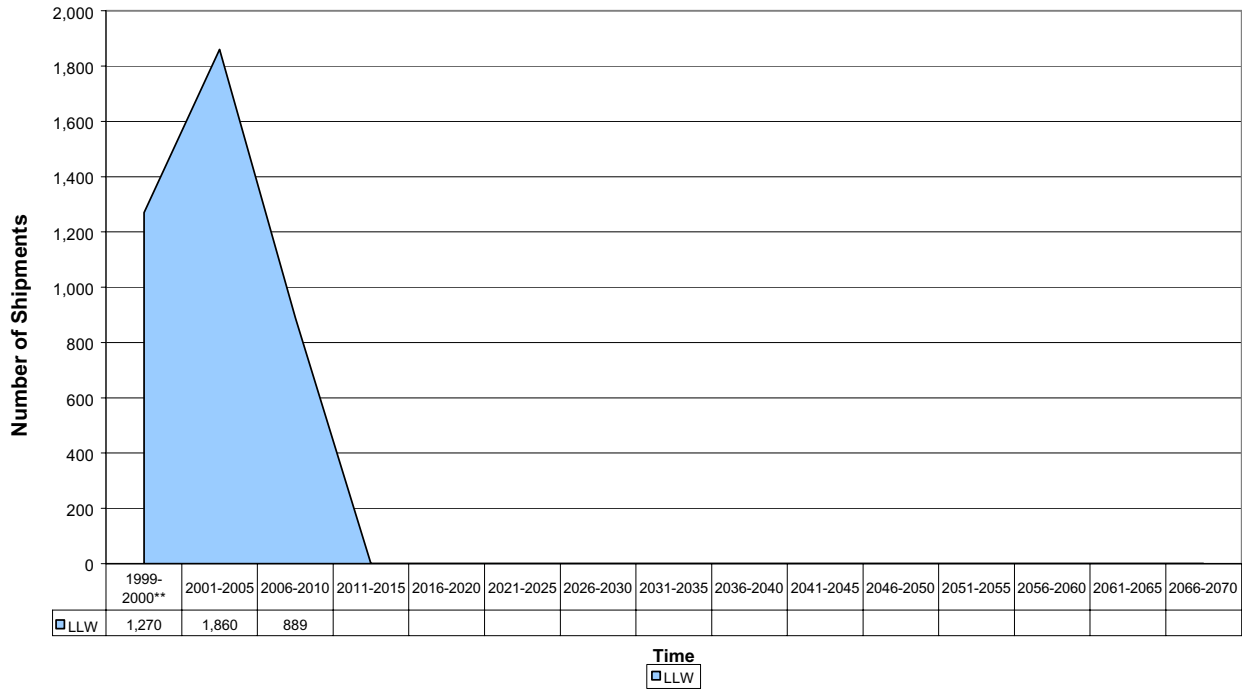
**Fernald**  
Outgoing MLLW Shipments to Diversified Scientific Services, Inc.



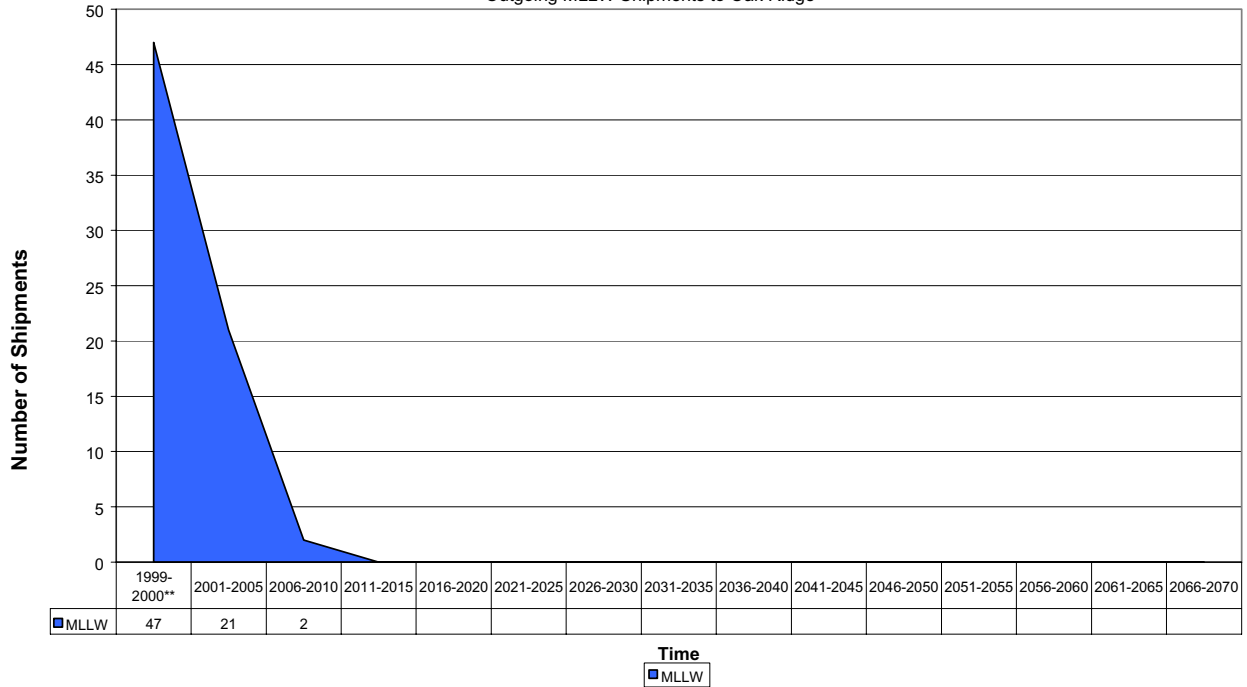
**Fernald**  
Outgoing M/LLW Shipments to Envirocare



**Fernald**  
Outgoing LLW Shipments to Nevada Test Site



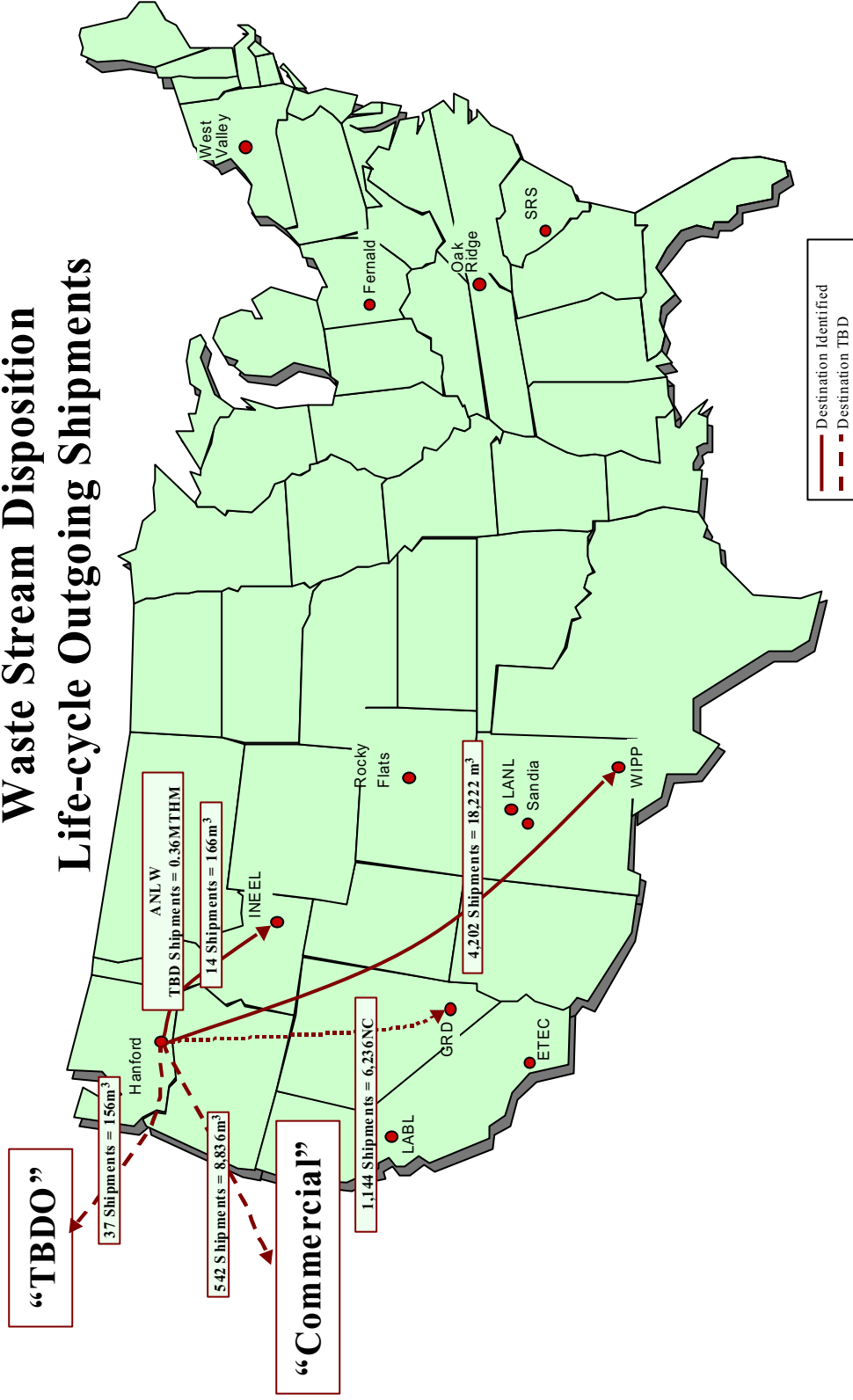
**Fernald**  
Outgoing MLLW Shipments to Oak Ridge



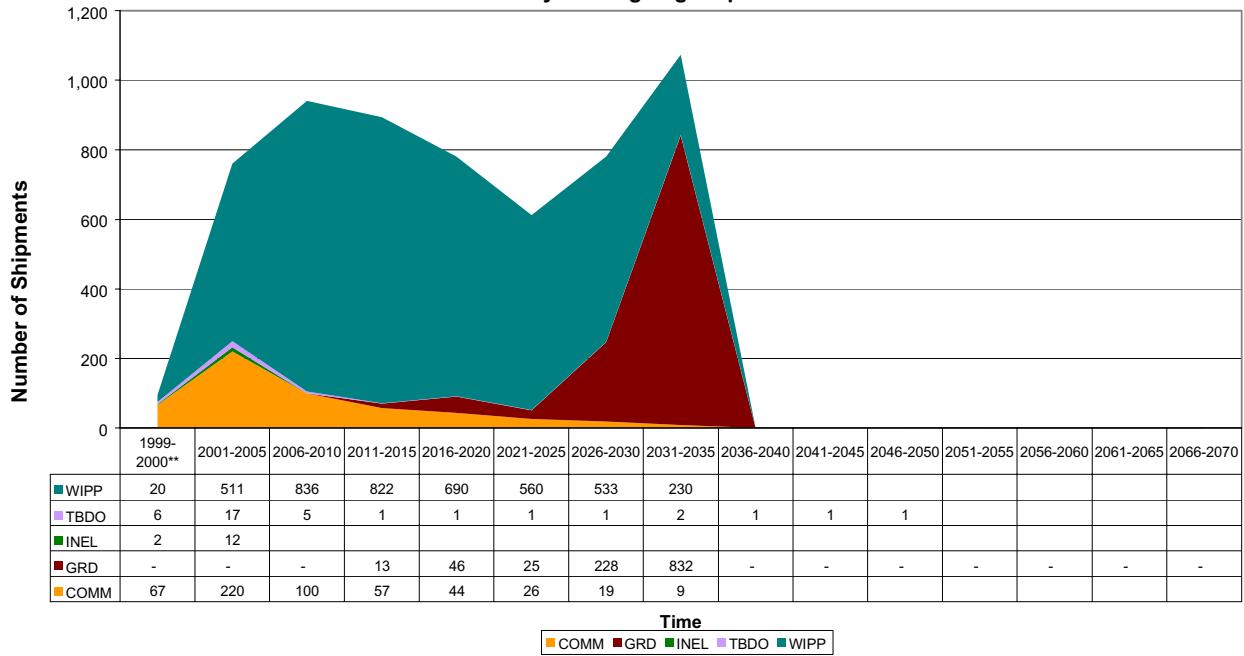
# Hanford

## Waste Stream Disposition

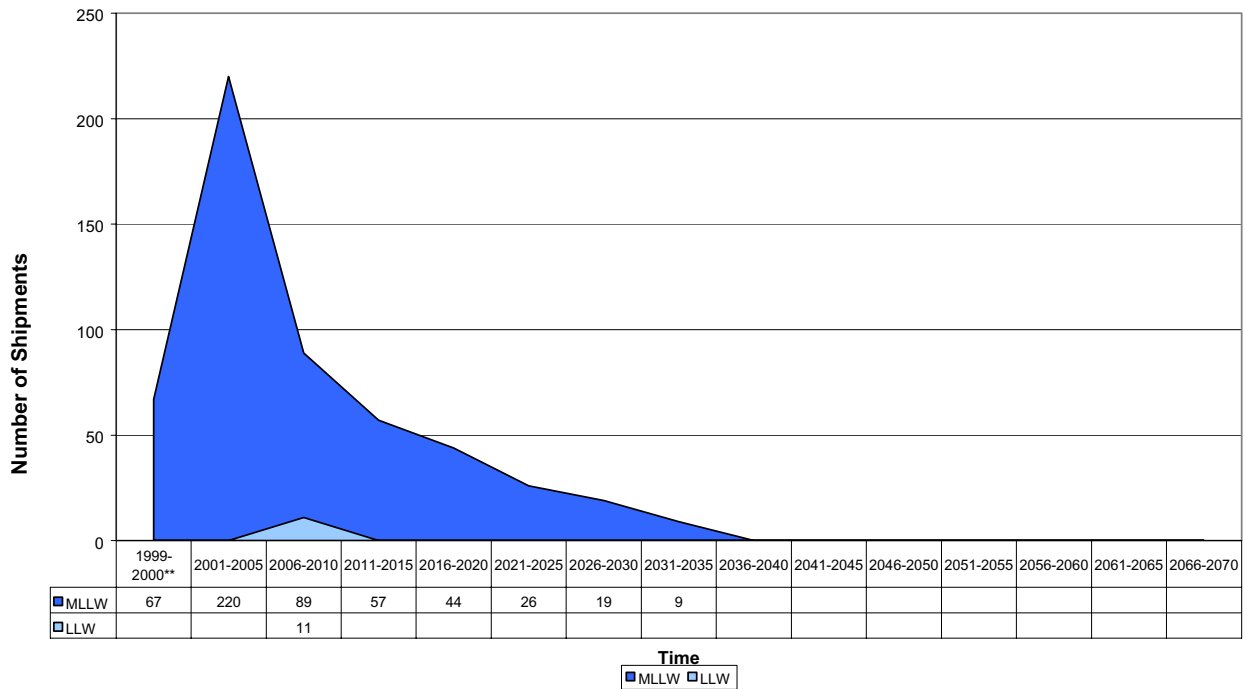
### Life-cycle Outgoing Shipments



**Hanford  
Waste Stream Disposition  
Life-cycle Outgoing Shipments**



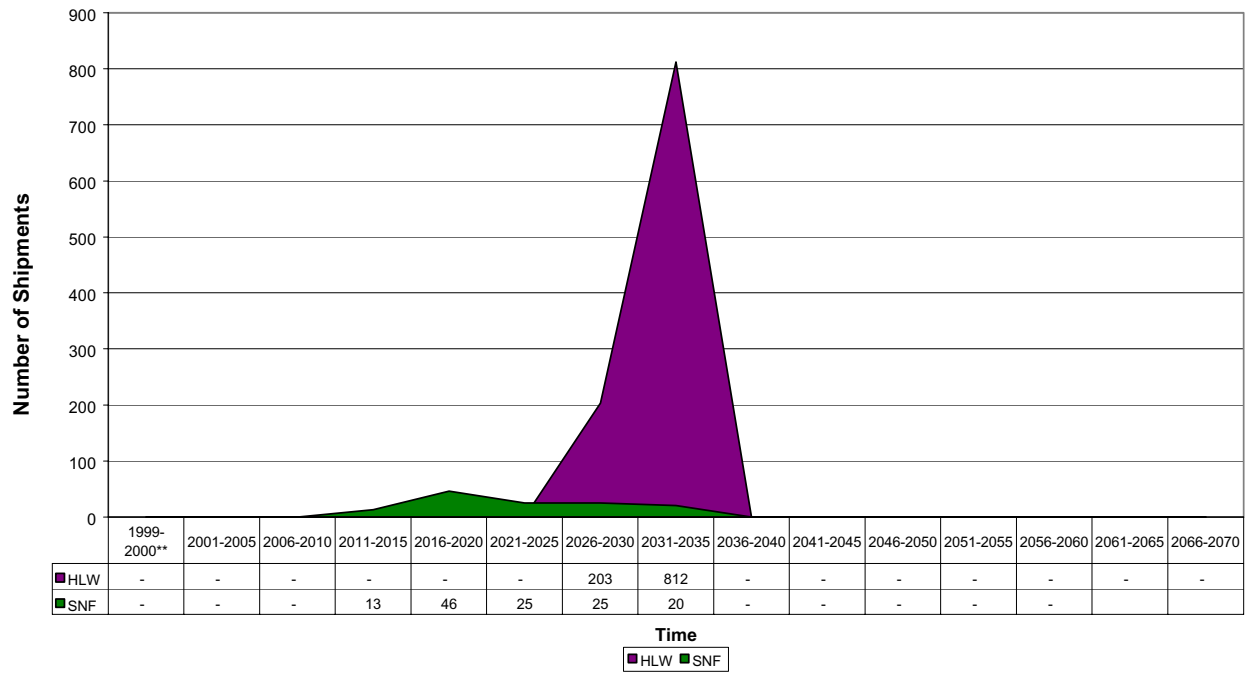
**Hanford  
Outgoing M/LLW Shipments to "Commercial"**



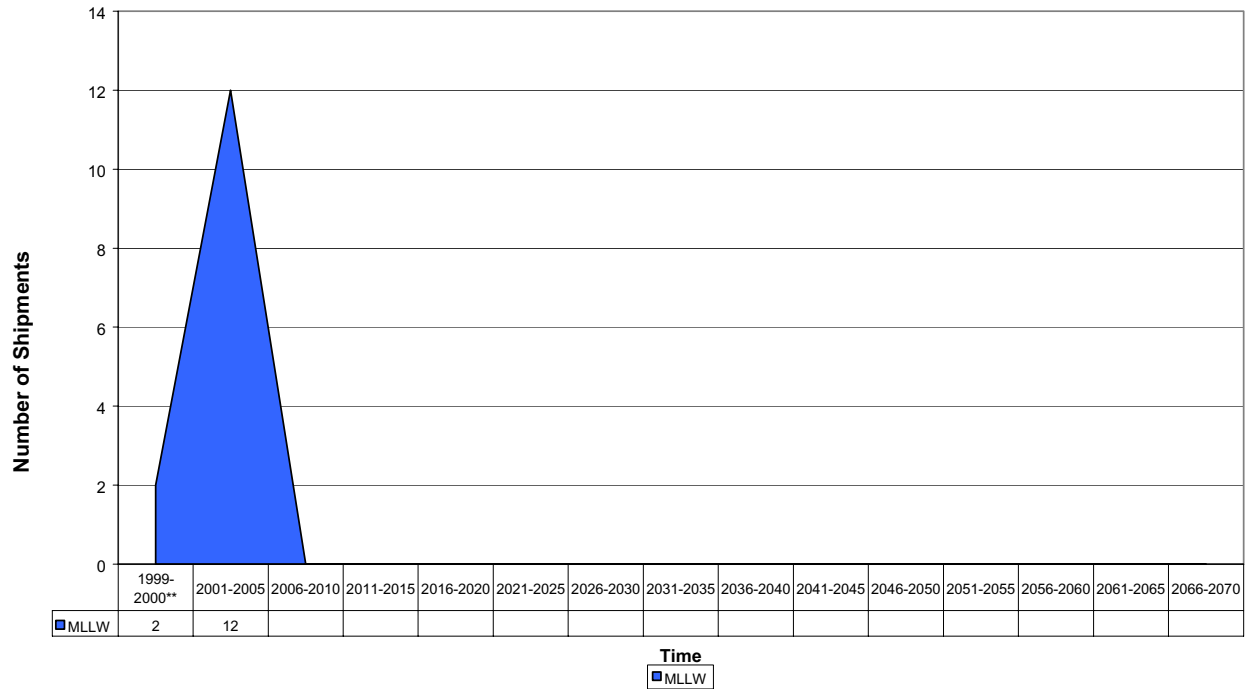
Total life-cycle values per 7/30/99 Stream Disposition Data (SDD) (<http://id.inel.gov/avs/>) (and/or 1999 Integrated Repository Receipts Workshop for GRD data). Printed: March 30, 2000  
 \*\* Represents data for a two year period.



**Hanford**  
 Outgoing HLW & SNF Shipments to Geologic Repository Disposal  
 (Tentatively Yucca Mtn.)

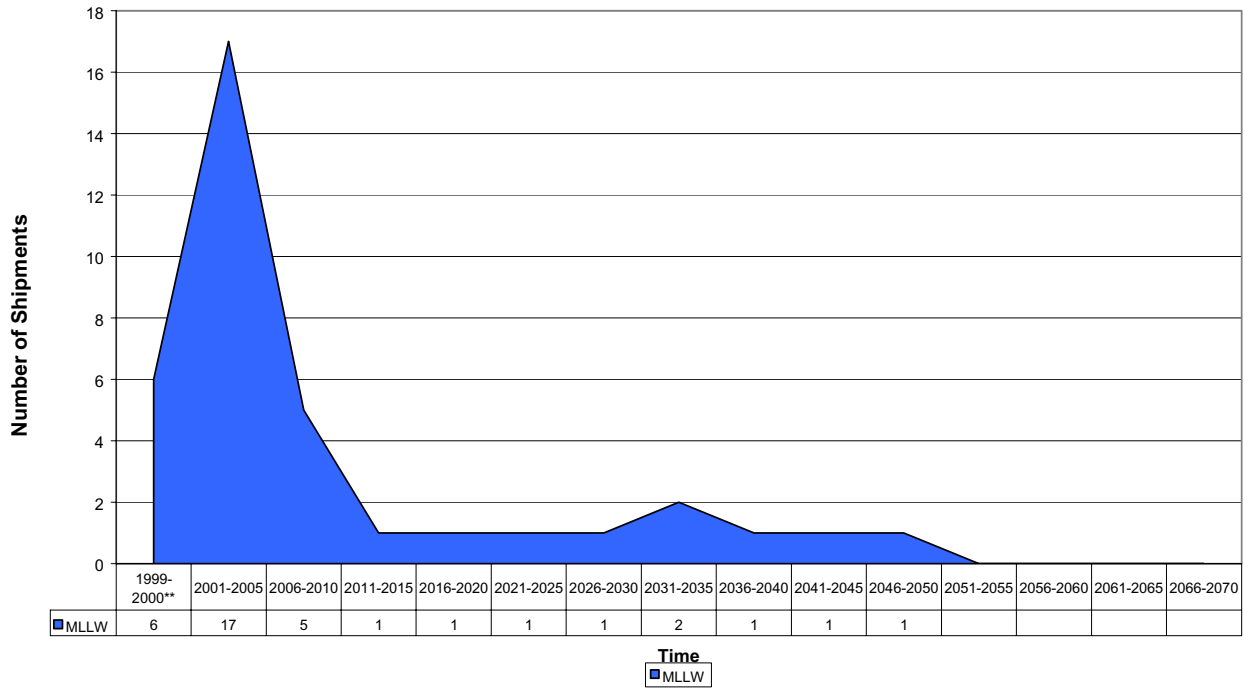


**Hanford**  
 Outgoing MLLW Shipments to INEEL



Total life-cycle values per 7/30/99 Stream Disposition Data (SDD) (<http://id.inel.gov/avs/>) (and/or 1999 Integrated Repository Receipts Workshop for GRD data). Printed: March 30, 2000  
 \*\* Represents data for a two year period.

**Hanford**  
Outgoing MLLW Shipments to "TBDO"

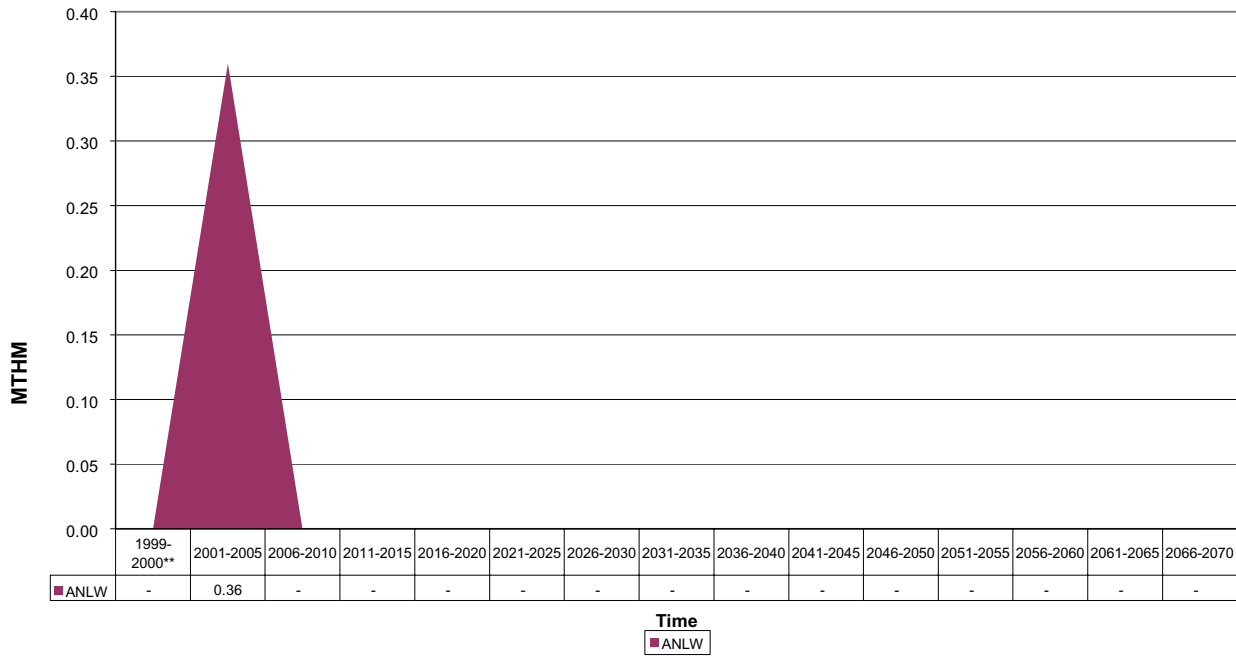


**Hanford**  
Outgoing TRU Shipments to WIPP

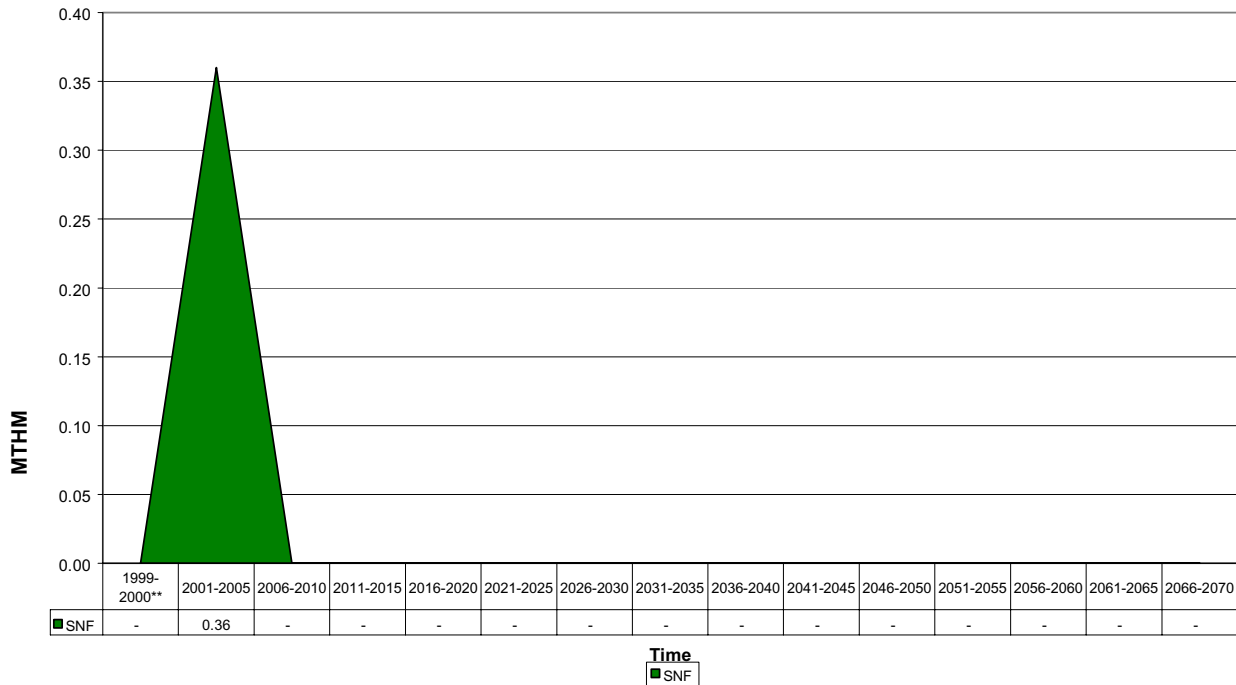


Total life-cycle values per 7/30/99 Stream Disposition Data (SDD) (<http://id.inel.gov/avs/>) (and/or 1999 Integrated Repository Receipts Workshop for GRD data). Printed: March 30, 2000  
\*\* Represents data for a two year period.

**Hanford  
Waste Stream Disposition  
Life-cycle Outgoing SNF**



**Hanford  
Outgoing SNF to Argonne National Laboratory West**



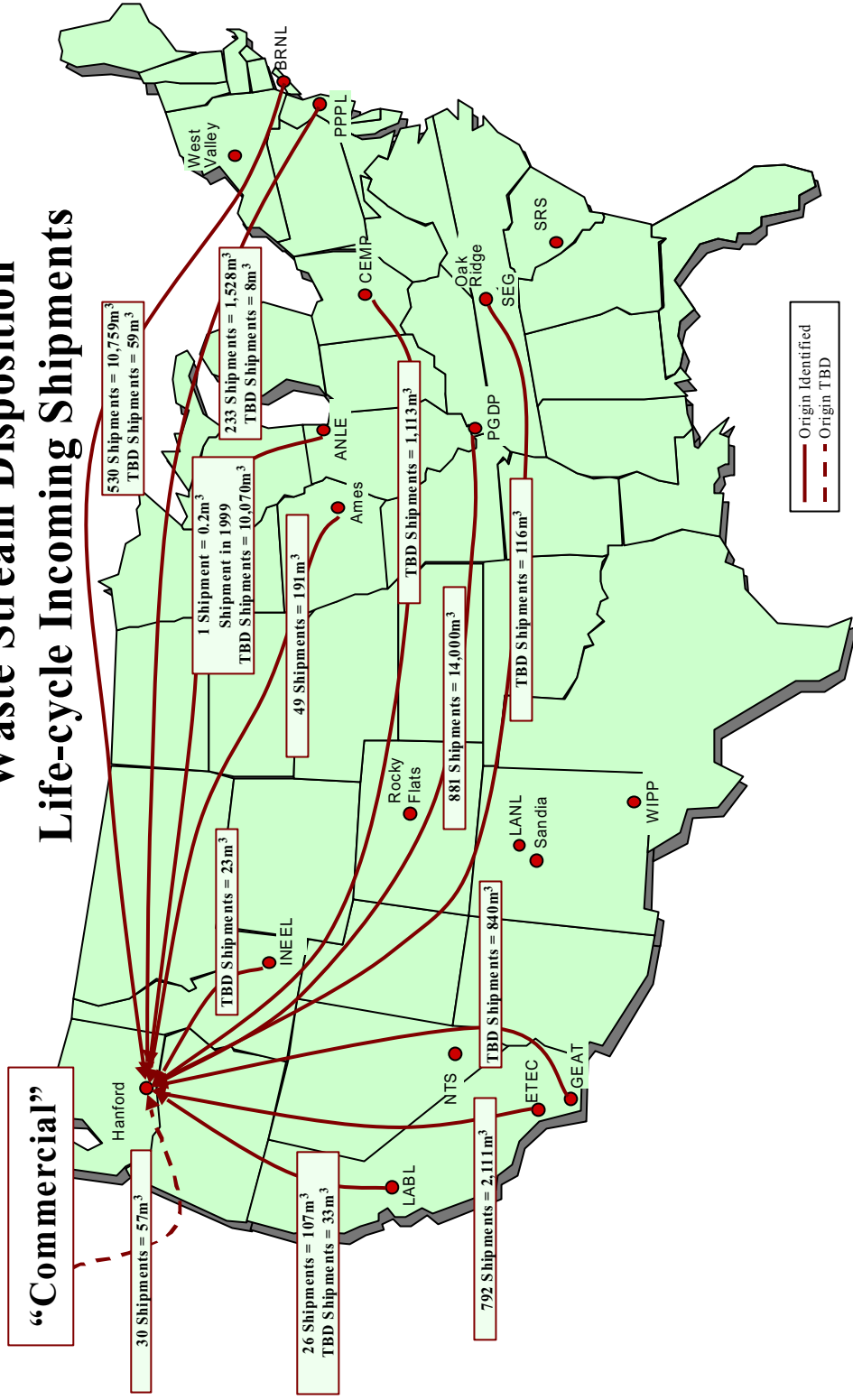
Total life-cycle values per 7/30/99 Stream Disposition Data (SDD) (<http://id.inel.gov/avs/>) (and/or 1999 Integrated Repository Receipts Workshop for GRD data). Printed: March 30, 2000  
\*\* Represents data for a two year period.



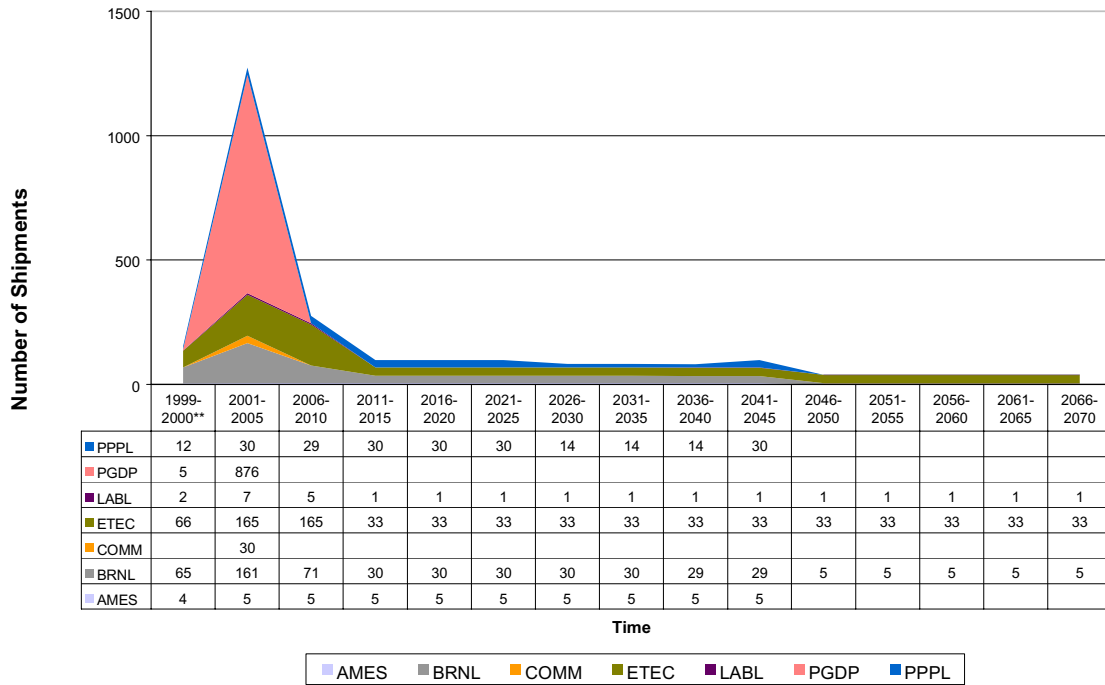
# Hanford

## Waste Stream Disposition

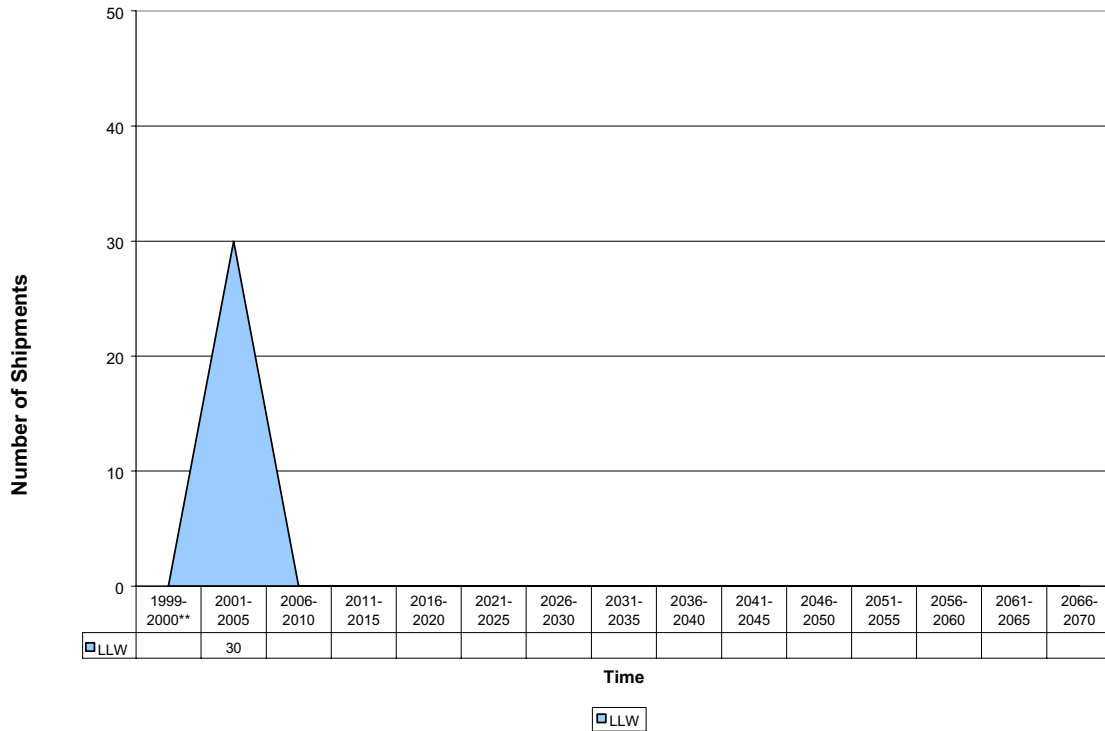
### Life-cycle Incoming Shipments



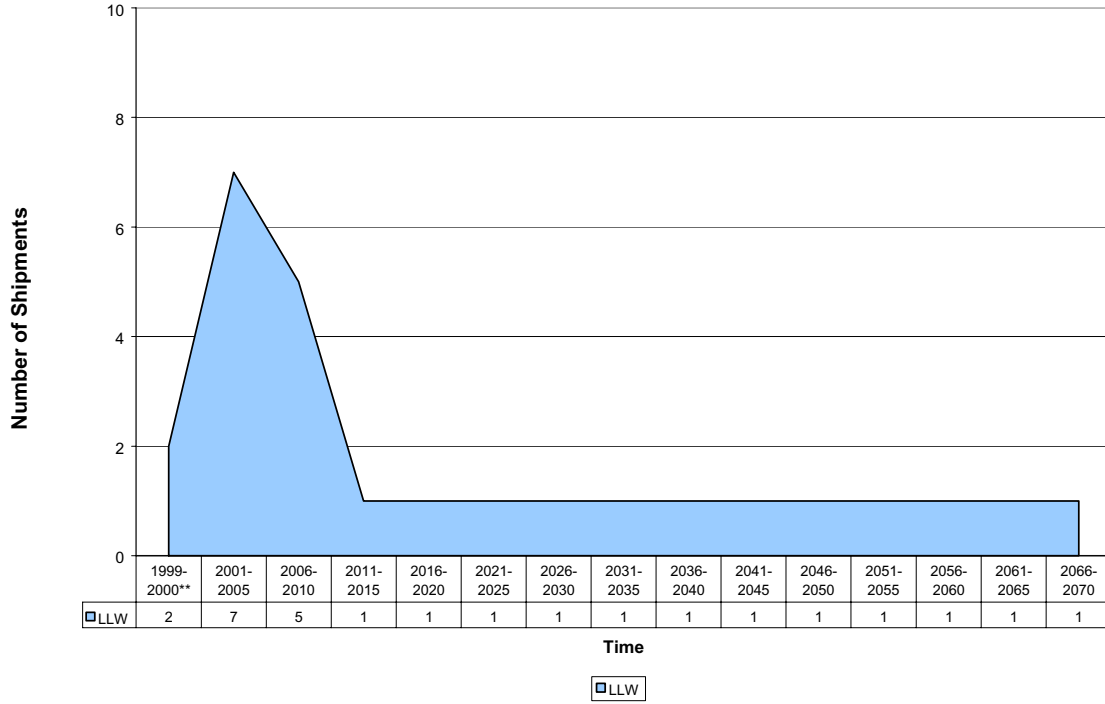
**Hanford  
Waste Stream Disposition  
Life-cycle Incoming Shipments**



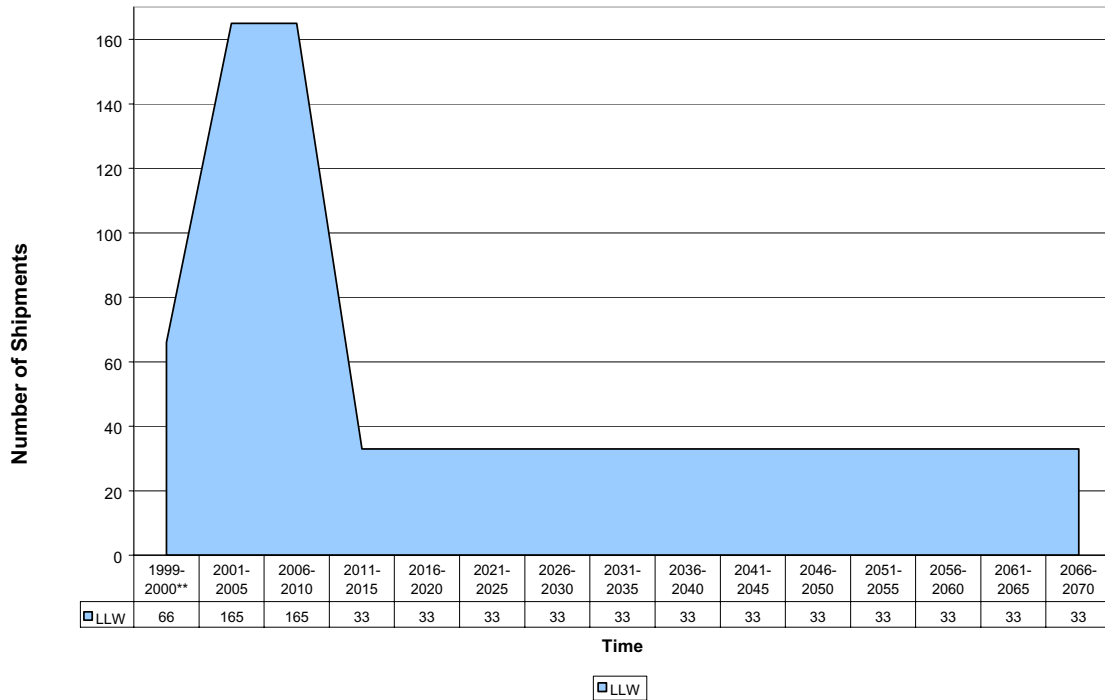
**Hanford  
Incoming LLW Shipments from "Commercial"**



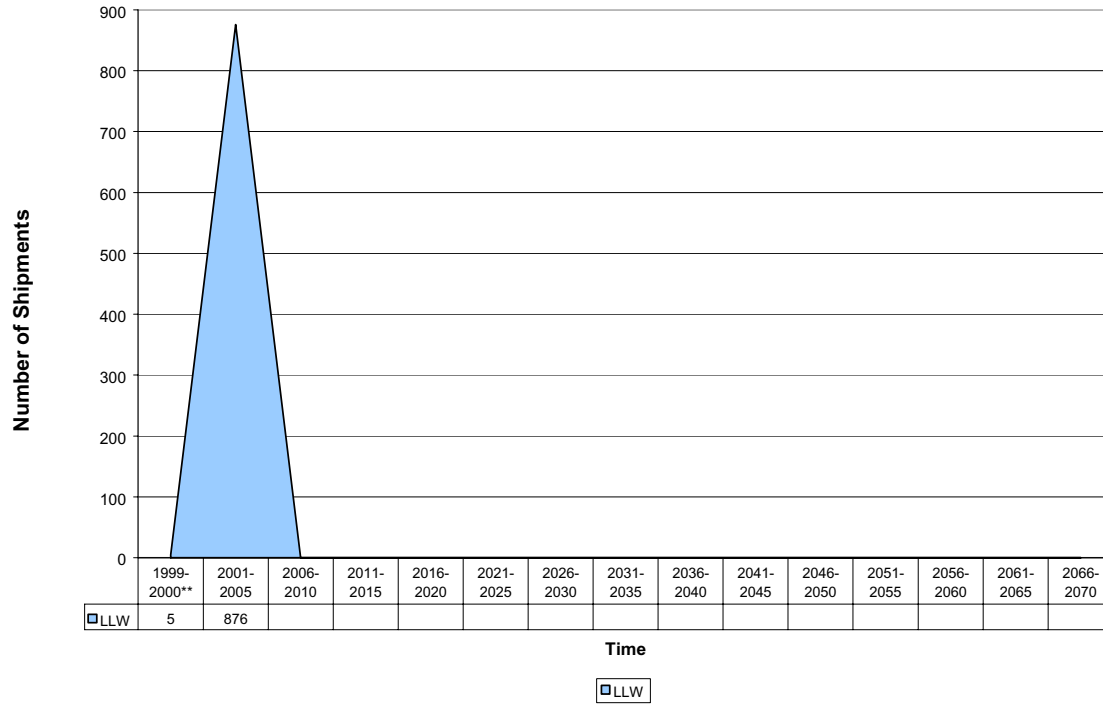
**Hanford**  
Incoming LLW Shipments from  
Lawrence Berkeley National Laboratory



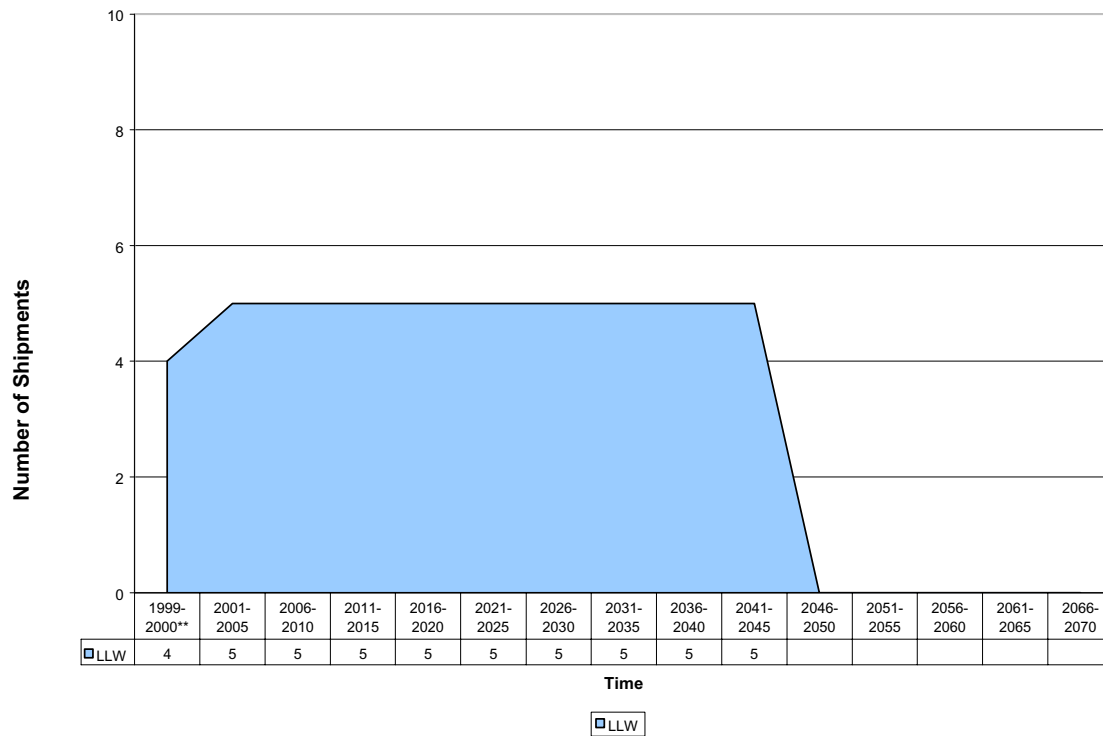
**Hanford**  
Incoming LLW Shipments from  
Energy Technology Engineering Center



**Hanford**  
Incoming LLW Shipments from  
Paducah Gaseous Diffusion Plant

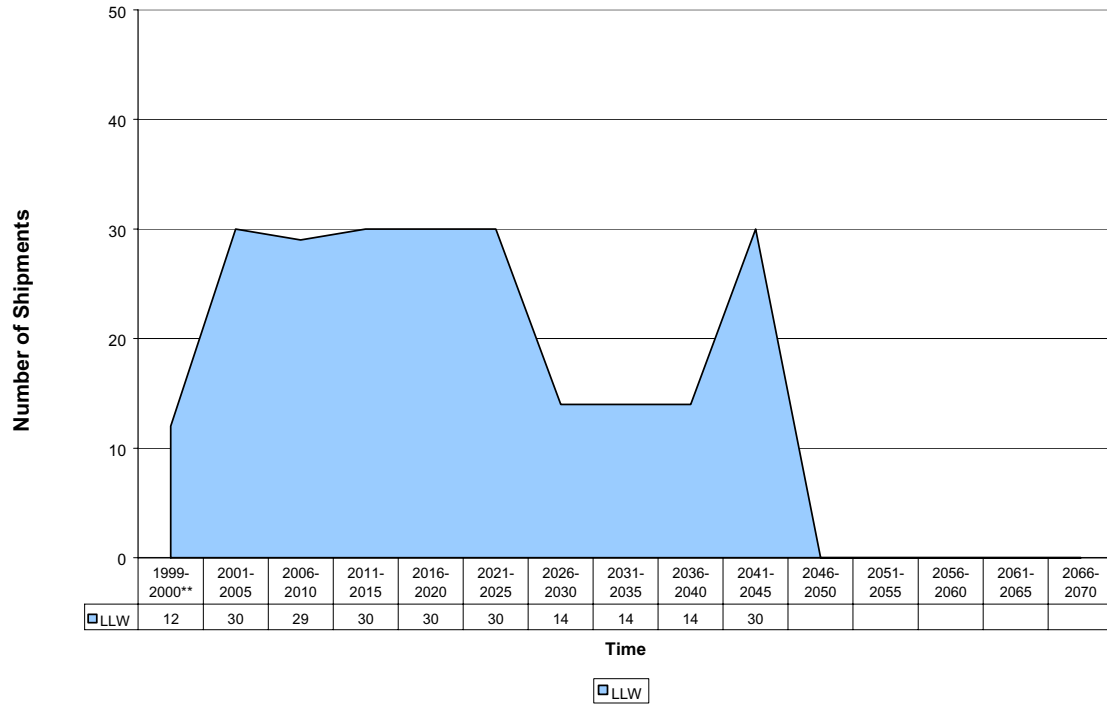


**Hanford**  
Incoming LLW Shipments from AMES

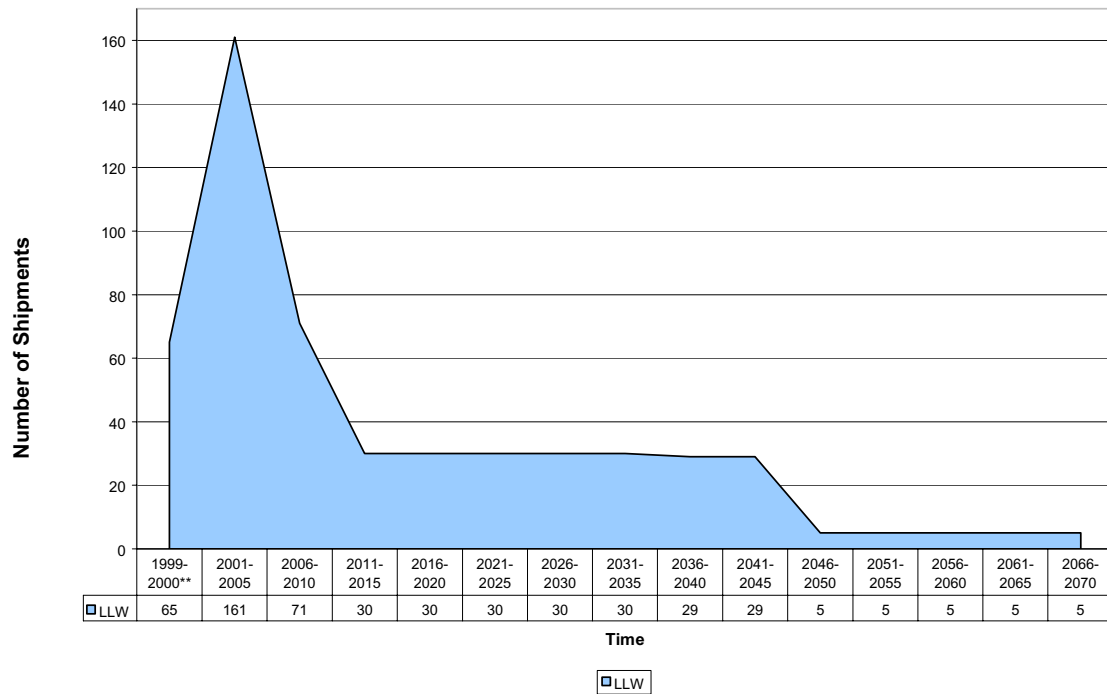




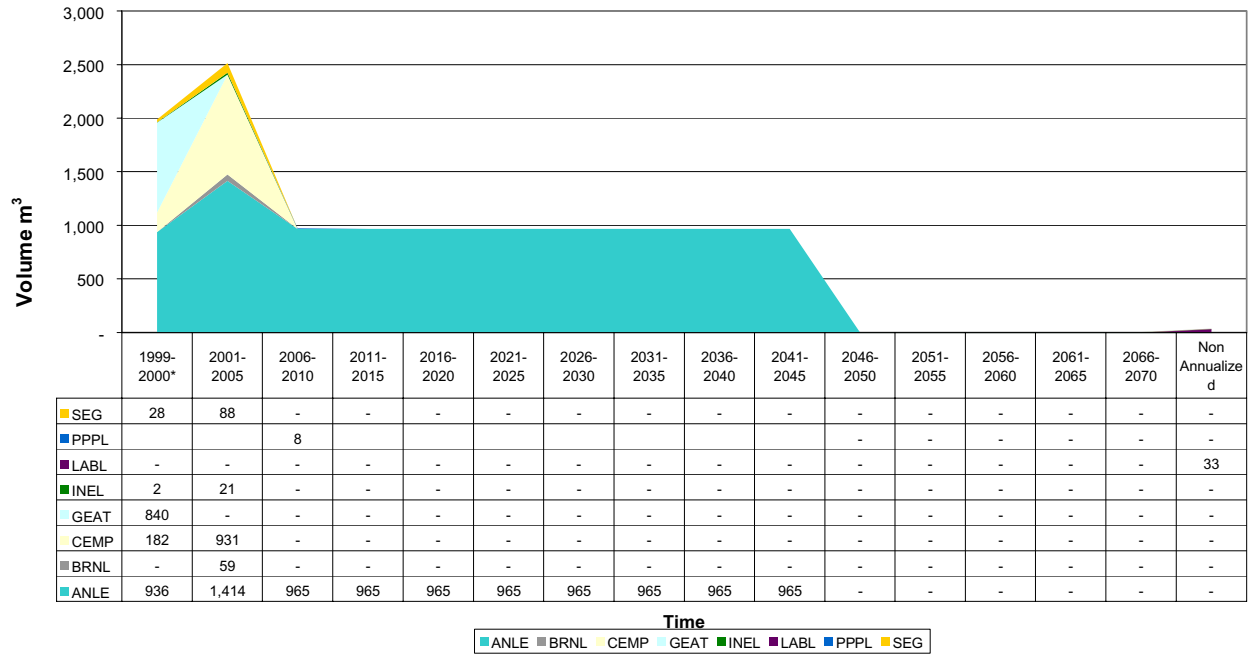
**Hanford**  
Incoming LLW Shipments from  
Princeton Plasma Physics Laboratory



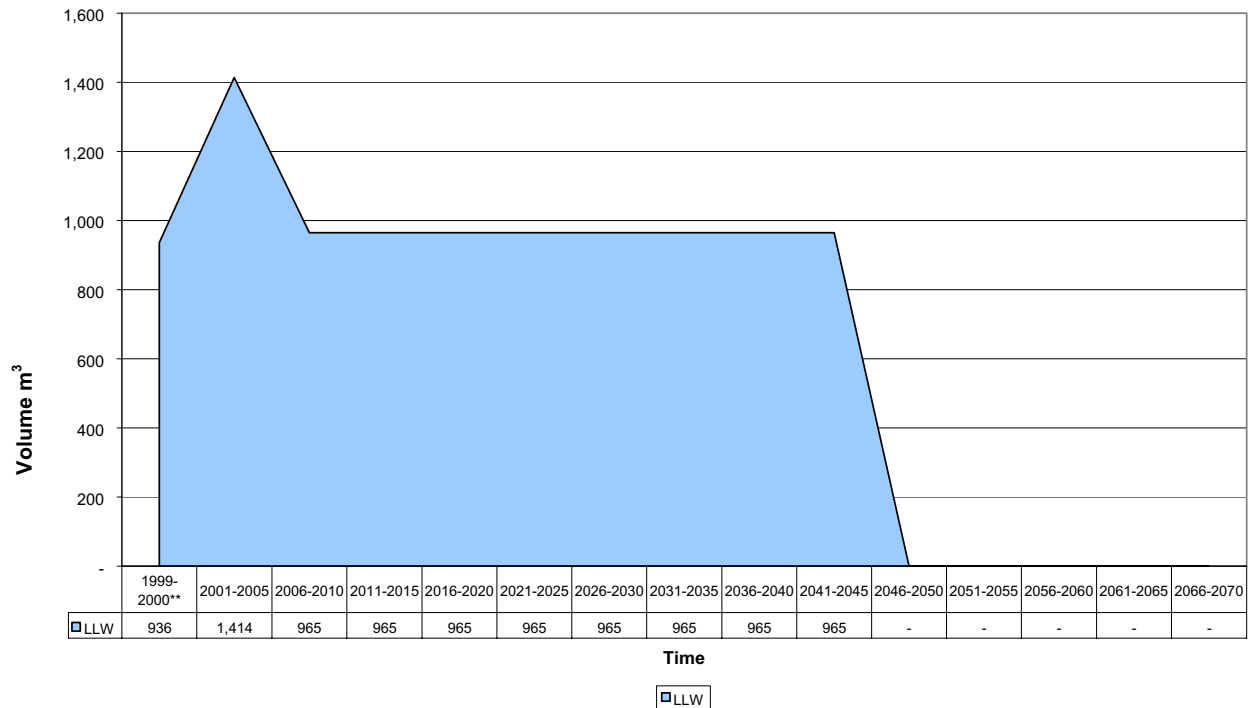
**Hanford**  
Incoming LLW Shipments from  
Brookhaven National Laboratory



### Hanford Waste Stream Disposition Life-cycle Incoming Volume



### Hanford Incoming LLW Volume from Argonne National Laboratory East

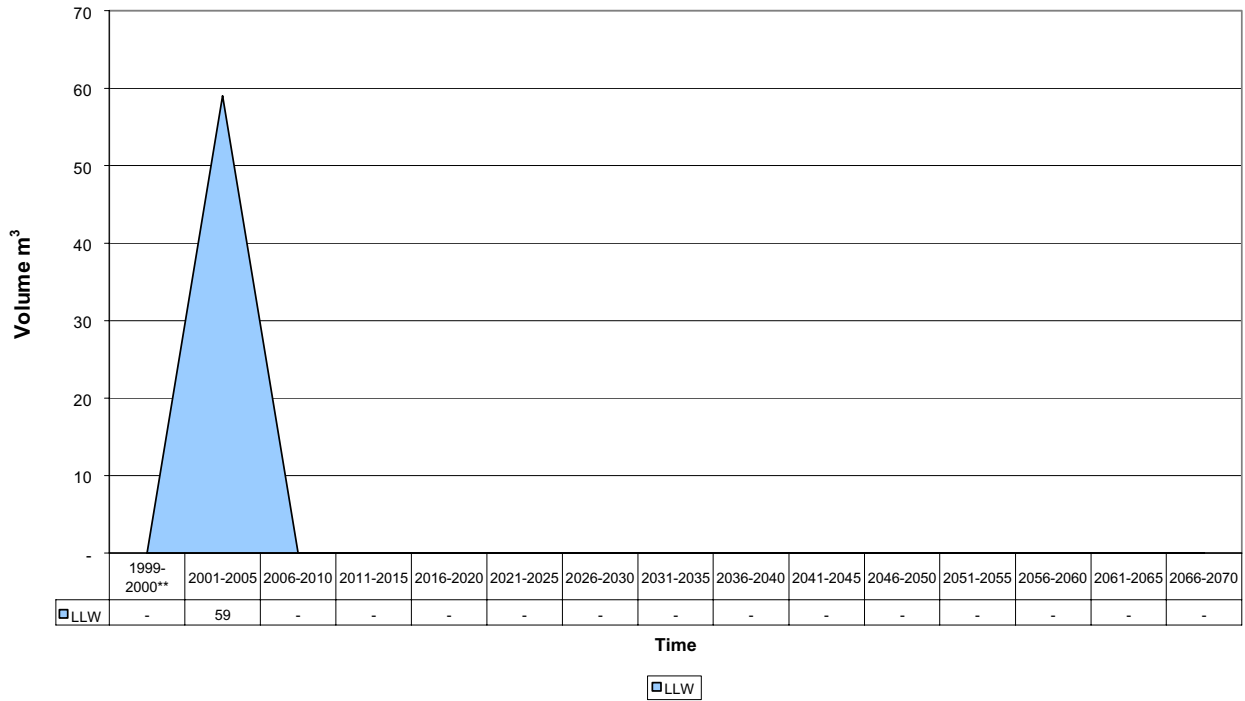


Total life-cycle values per 7/30/99 Stream Disposition Data (SDD) (<http://id.inel.gov/avs/>).

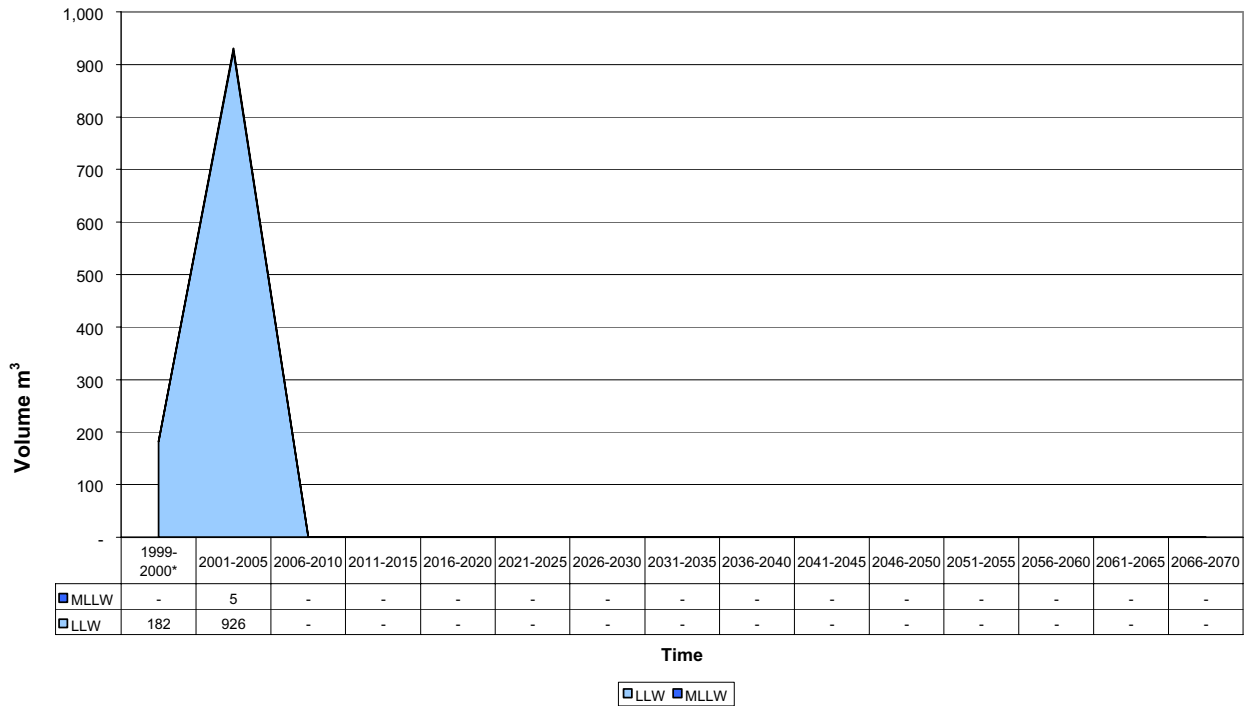
Printed: March 30, 2000

\*\* Represents data for a two year period.

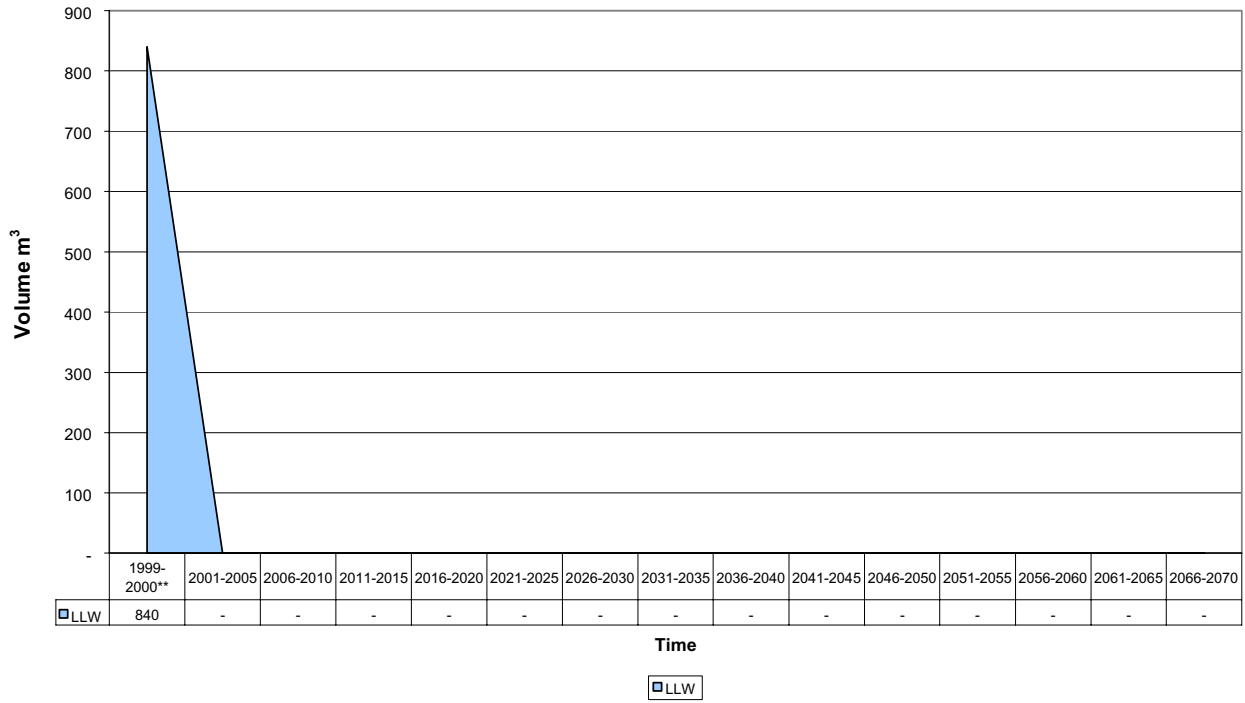
**Hanford**  
Incoming LLW Volume from Brookhaven National Laboratory



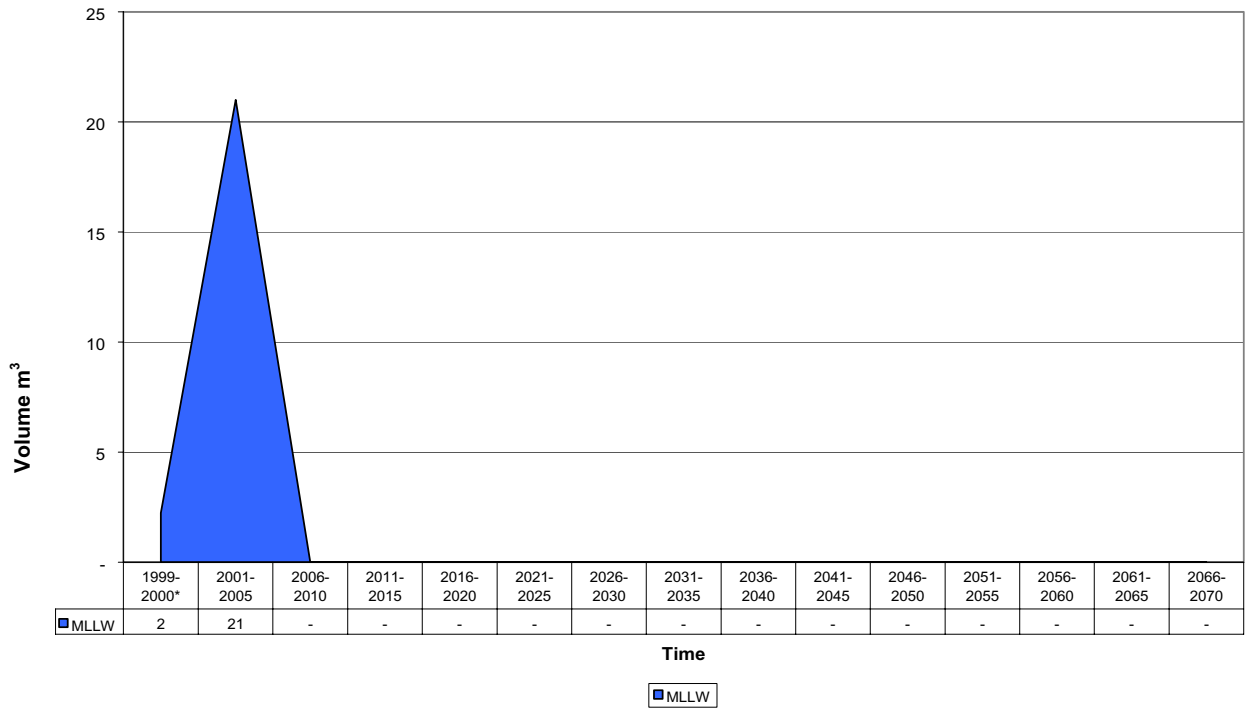
**Hanford**  
Incoming M/LLW Volume from Columbus Environmental Management Project (WJ)



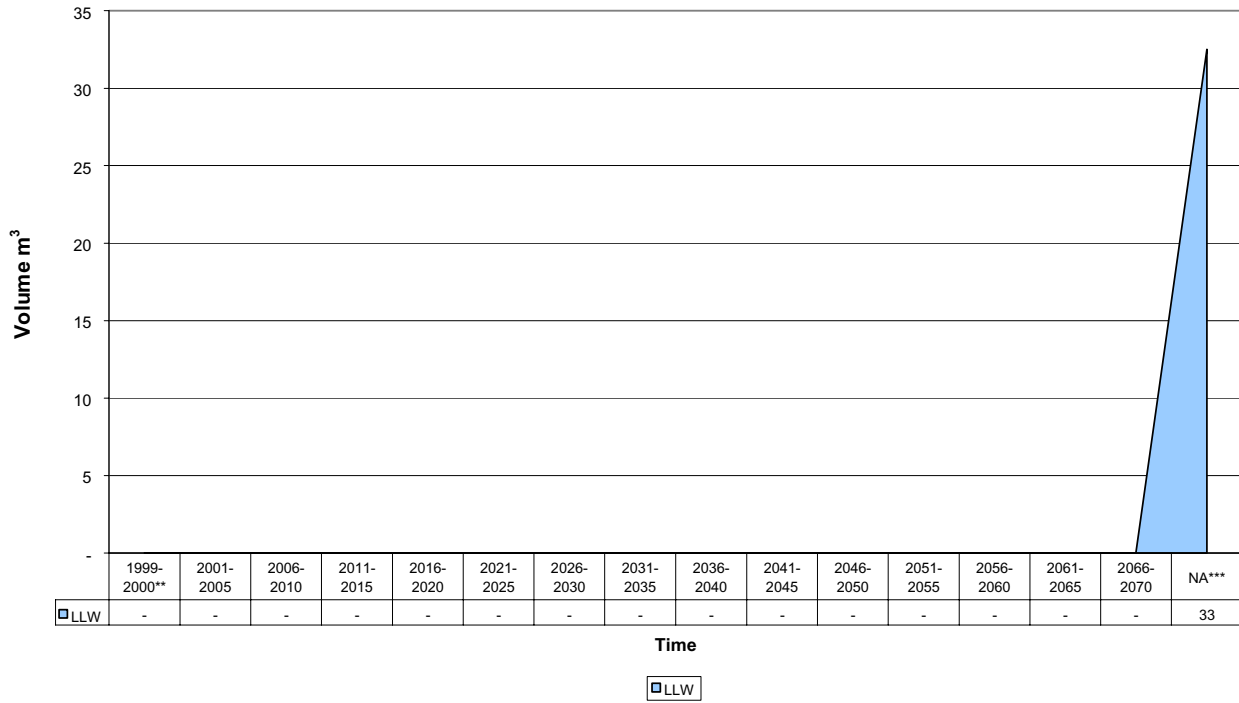
**Hanford**  
Incoming LLW Volume from General Atomics



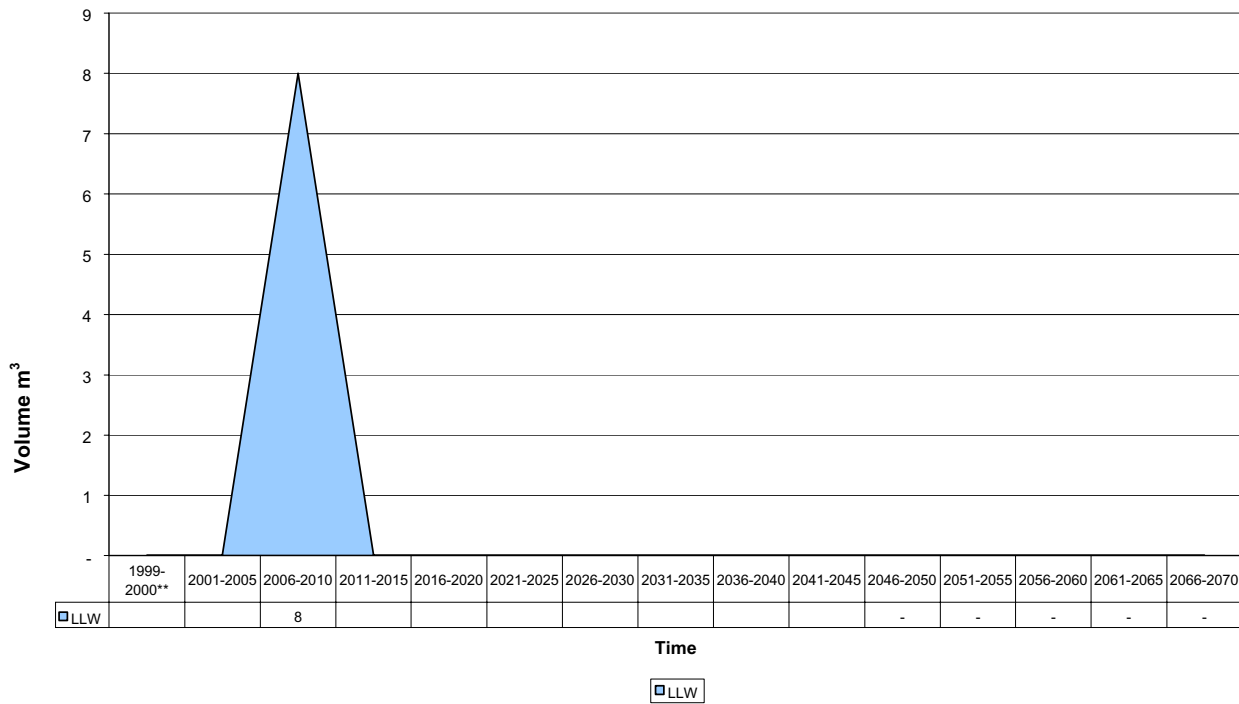
**Hanford**  
Incoming MLLW Volume from INEEL



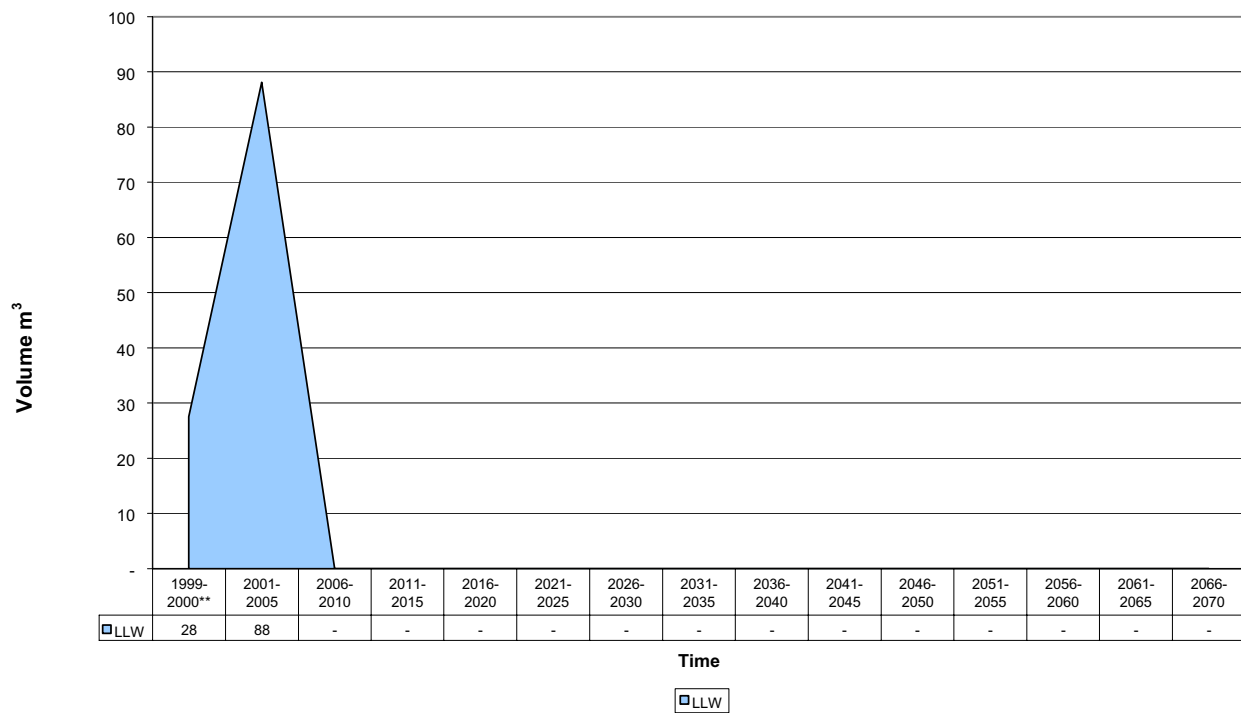
**Hanford**  
Incoming LLW Volume from Lawrence Berkeley National Laboratory



**Hanford**  
Incoming LLW Volume from Princeton Plasma Physics Laboratory

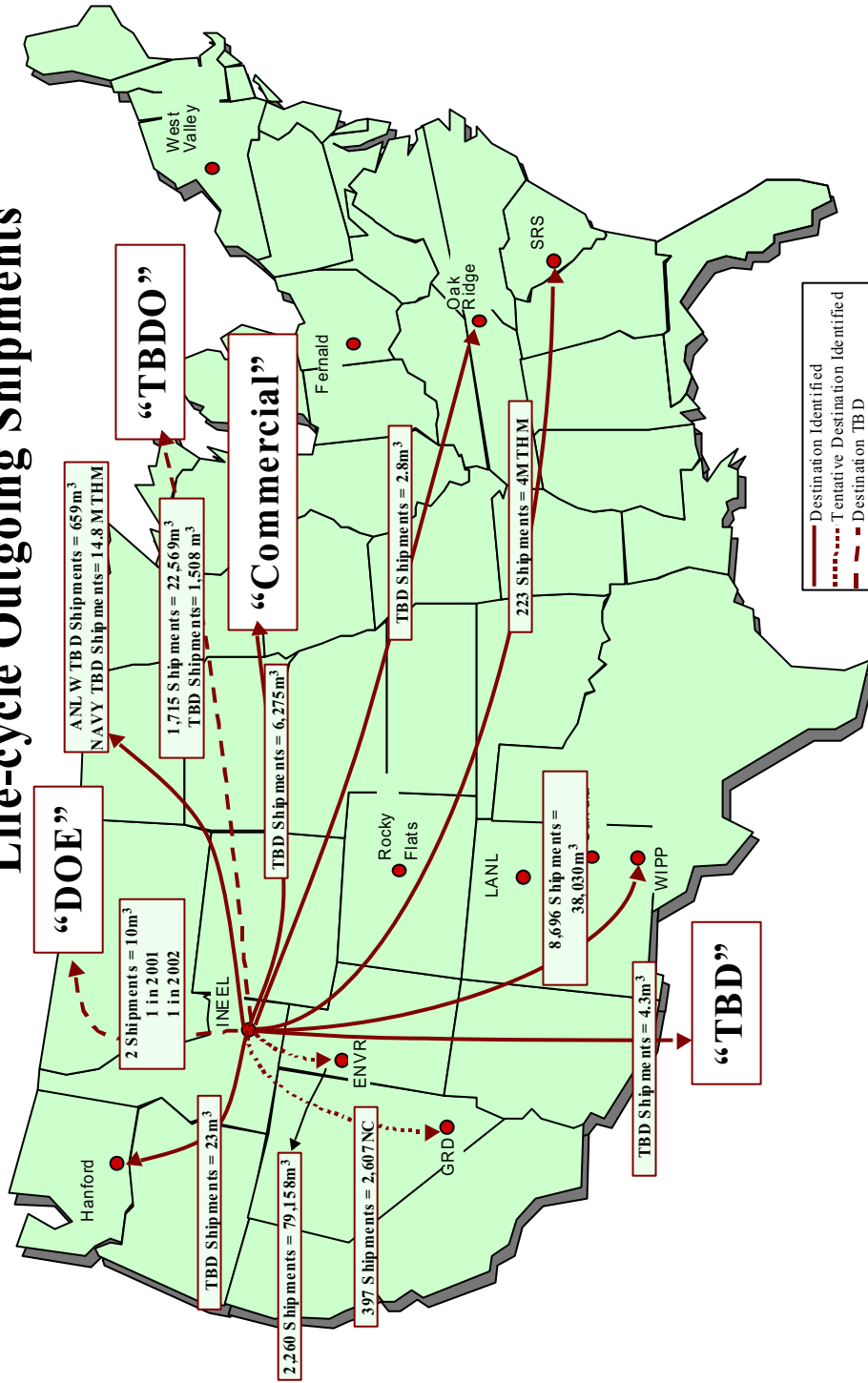


**Hanford**  
Incoming LLW Volume from GTS Duratek (SEG)

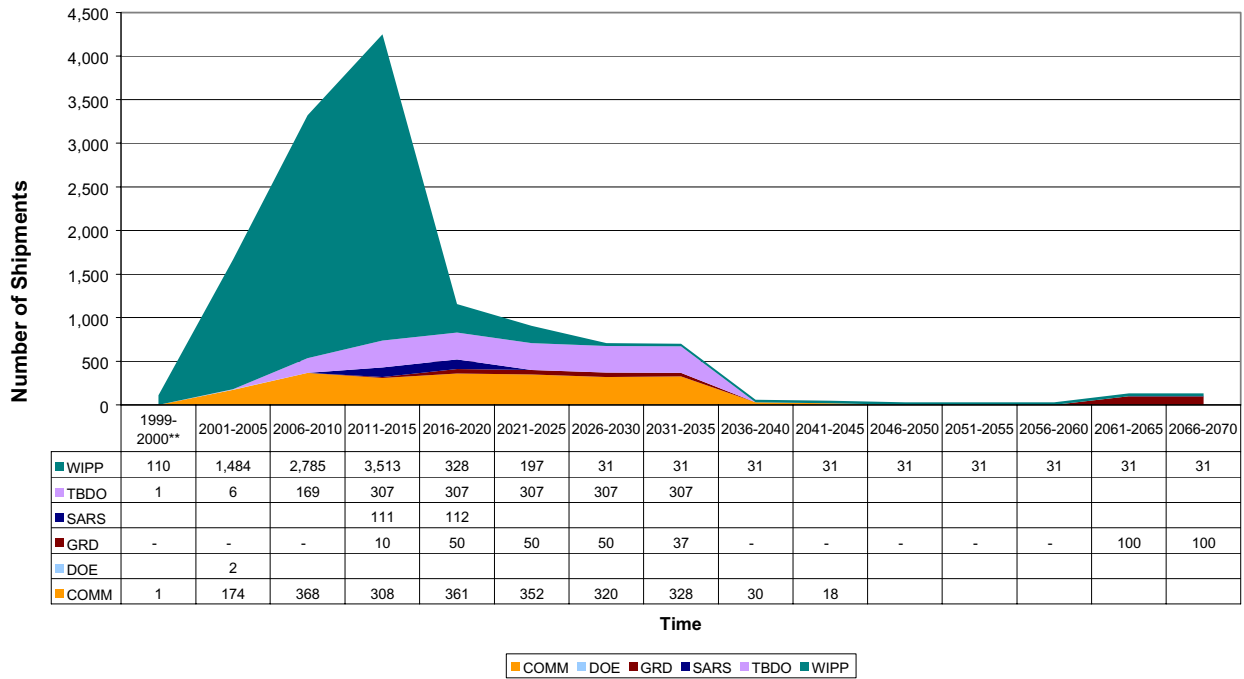


# INEEL

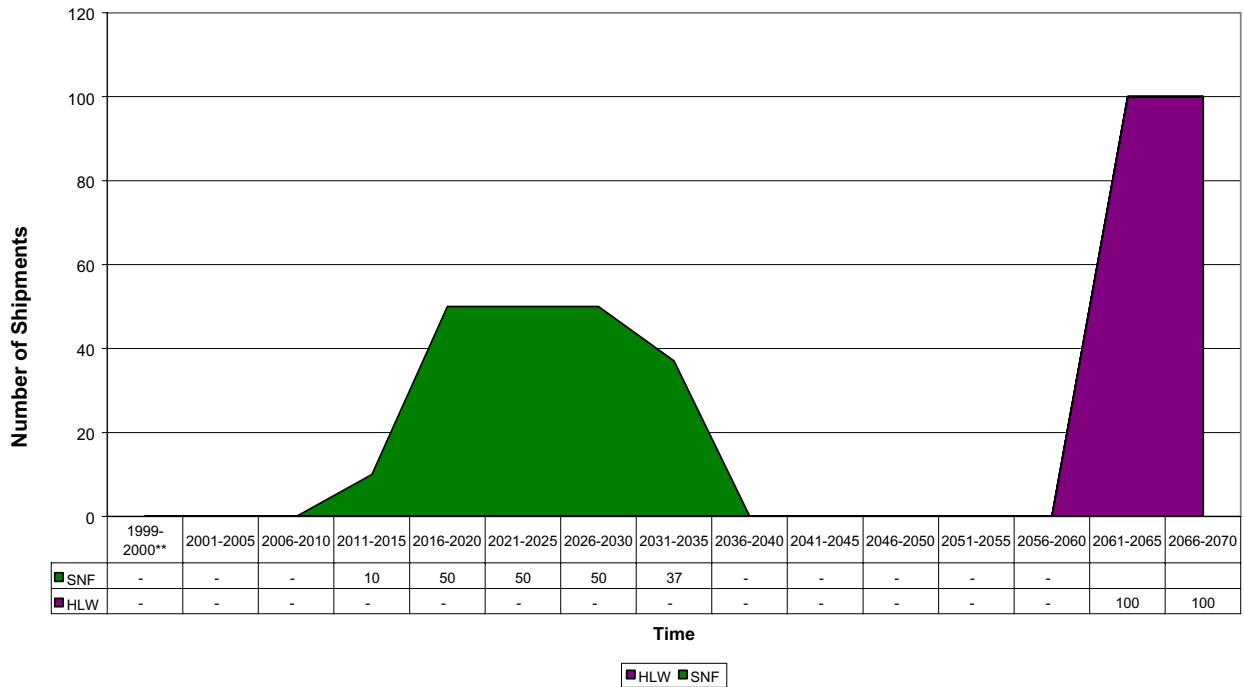
## Waste Stream Disposition Life-cycle Outgoing Shipments



**INEEL  
Waste Stream Disposition  
Life-cycle Outgoing Shipments**



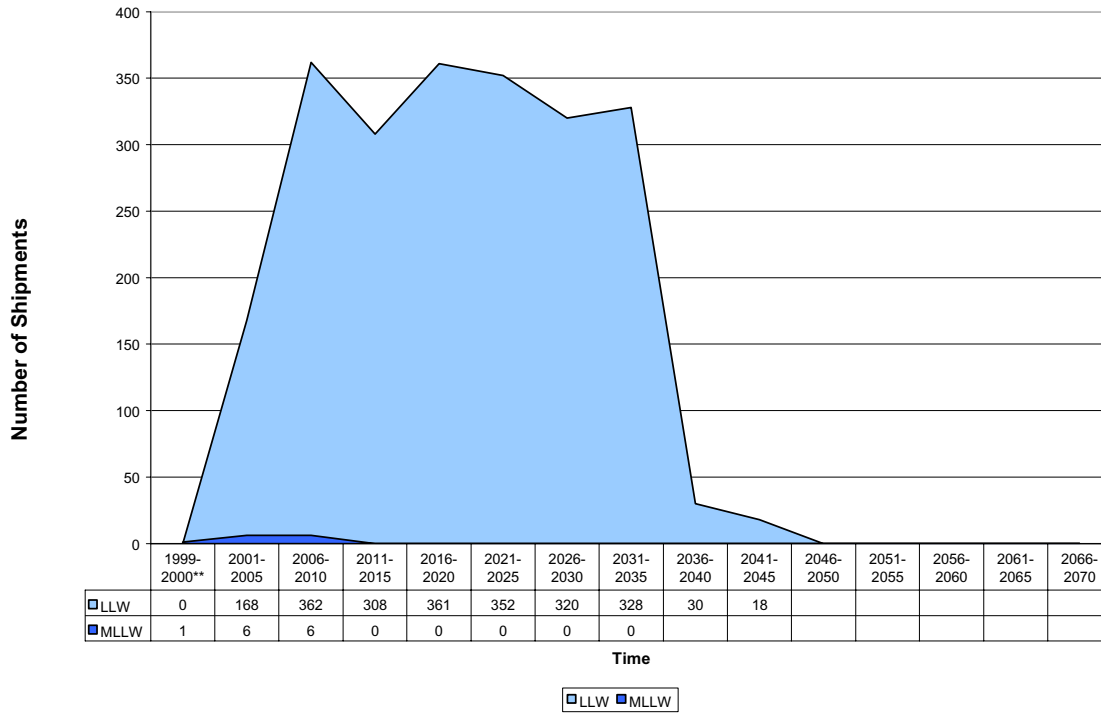
**INEEL  
Outgoing HLW & SNF Shipments to Geologic Repository Disposal  
(Tentatively Yucca Mtn.)**



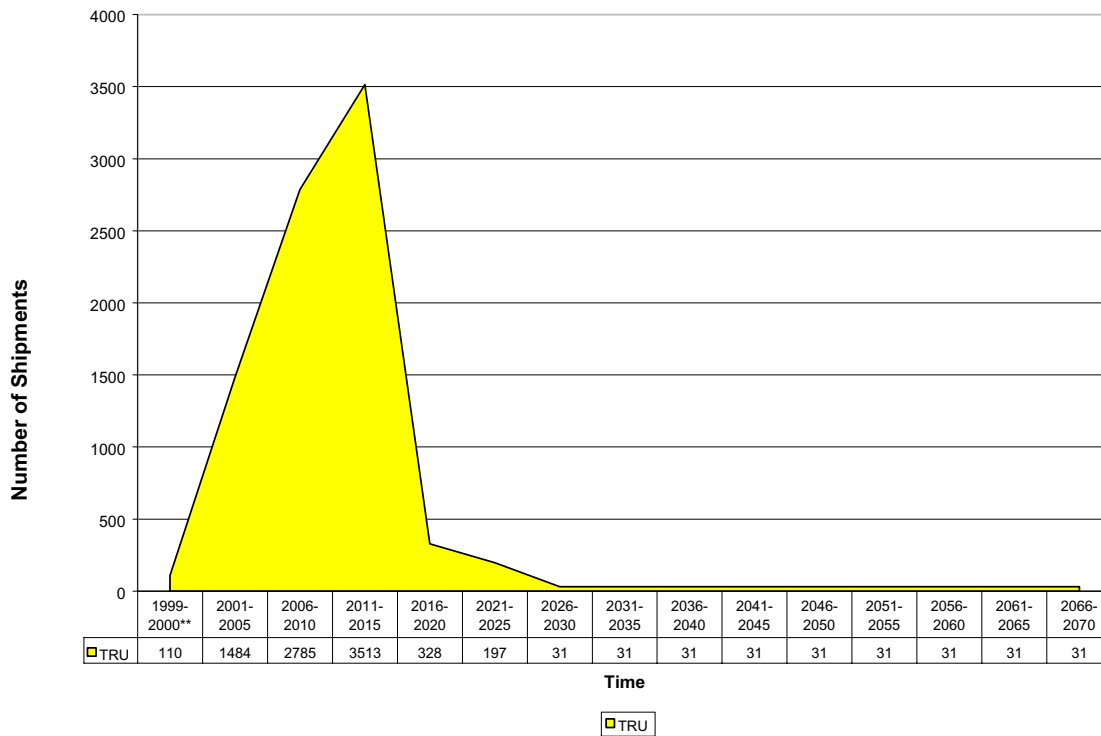
Total life-cycle values per 7/30/99 Stream Disposition Data (SDD) (<http://id.inel.gov/avs/>) (and/or 1999 Integrated Repository Receipts Workshop for GRD data).  
Printed: March 30, 2000  
\*\* Represents data for a two year period.



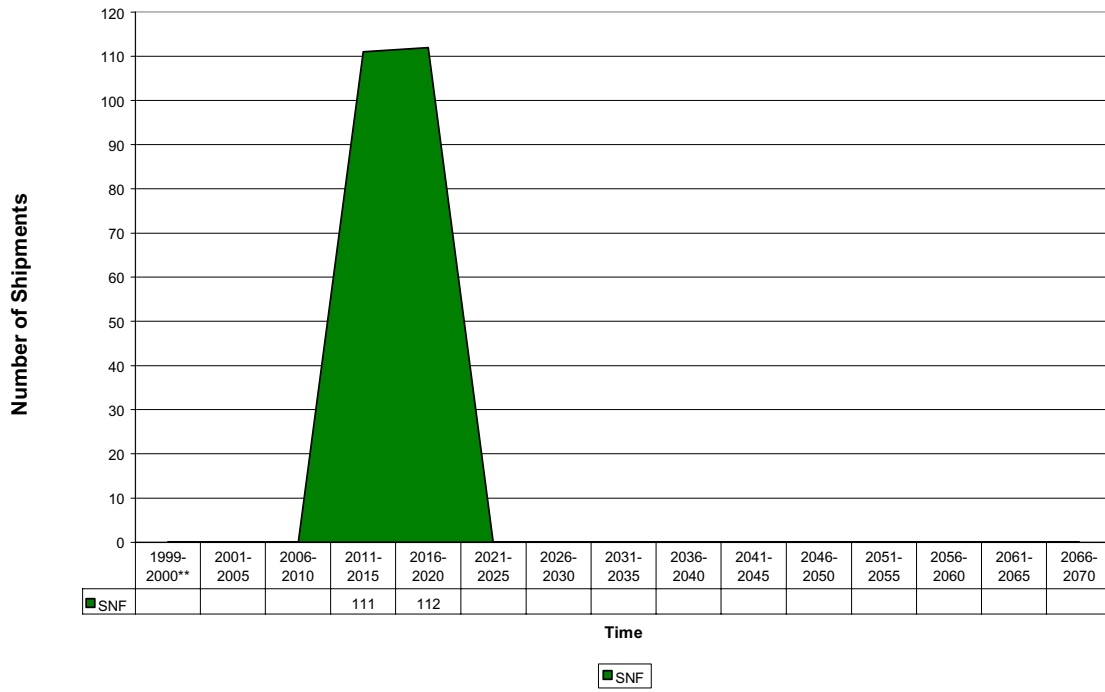
**INEEL**  
Outgoing M/LLW Shipments to Commercial TSD  
(Tentatively Envirocare)



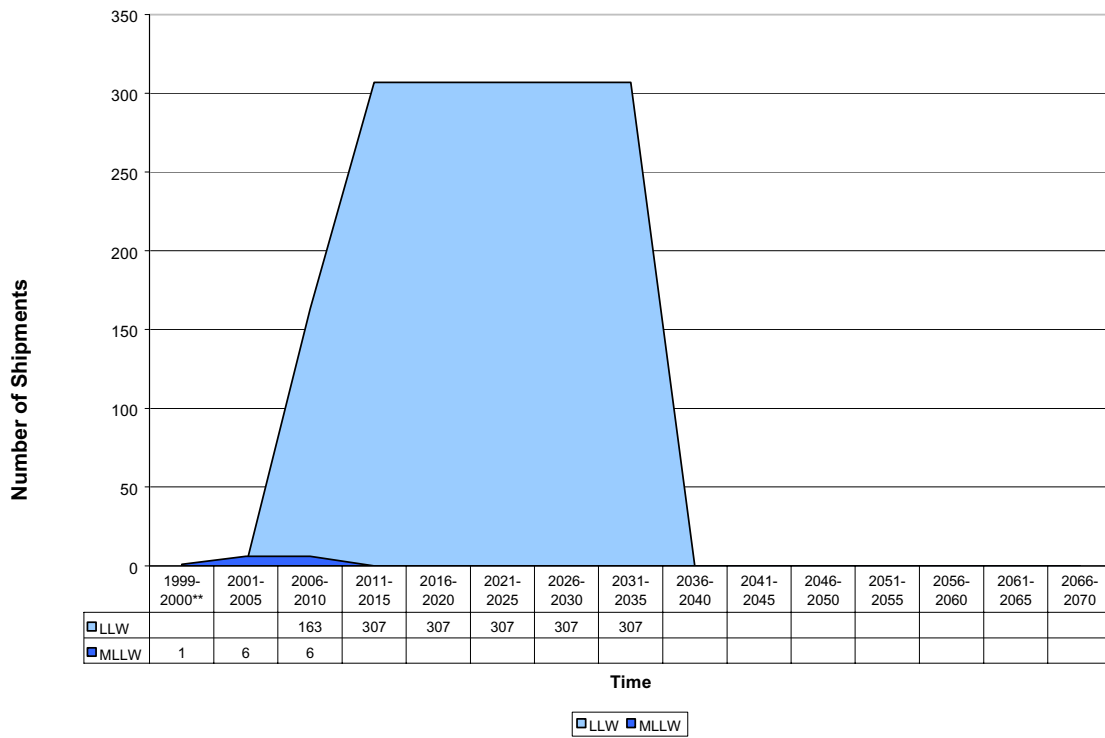
**INEEL**  
Outgoing TRU Shipments to WIPP



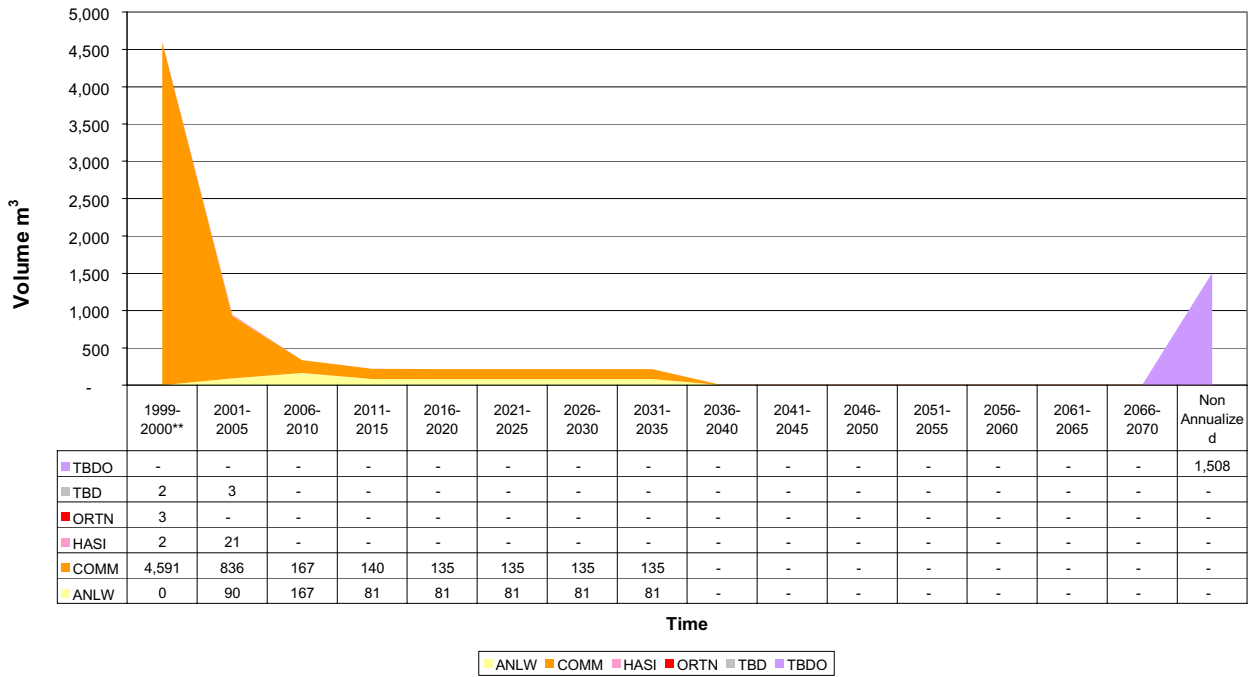
**INEEL**  
Outgoing SNF Shipments to  
Savannah River Site



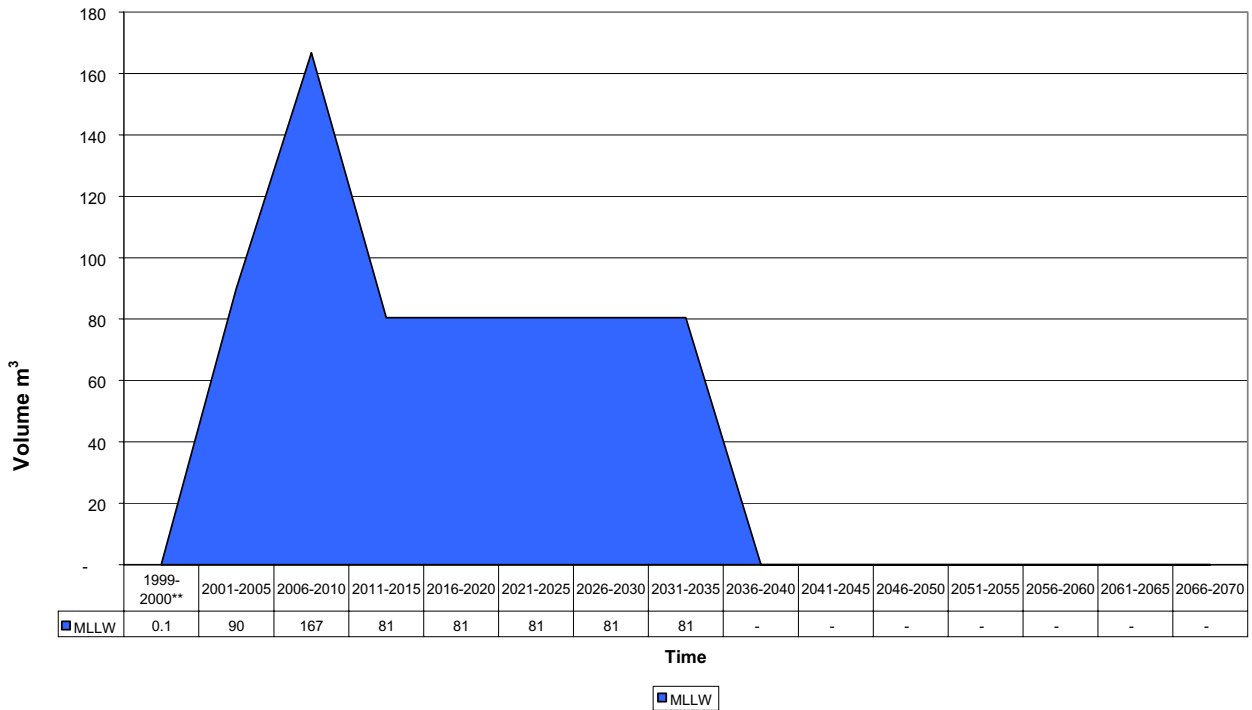
**INEEL**  
Outgoing M/LLW Shipments to "TBDO"



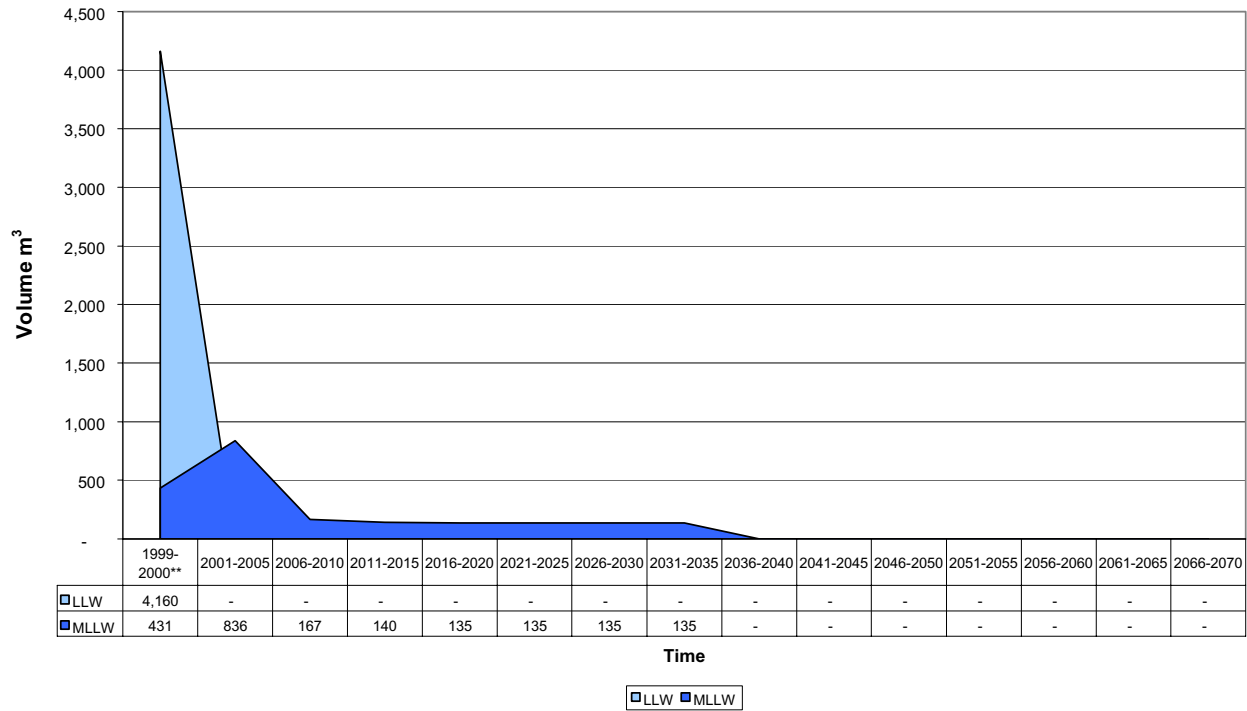
**INEEL  
Waste Stream Disposition  
Life-cycle Outgoing Volume**



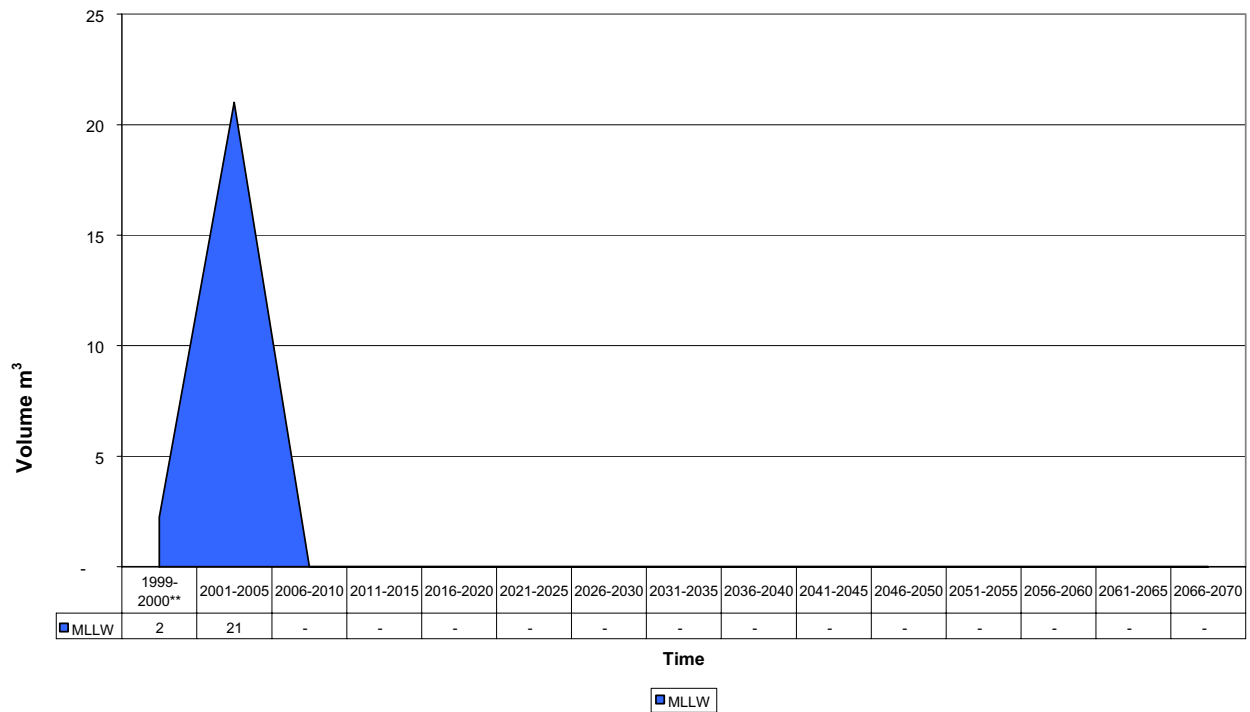
**INEEL  
Outgoing MLLW Volume to Argonne National Laboratory West**



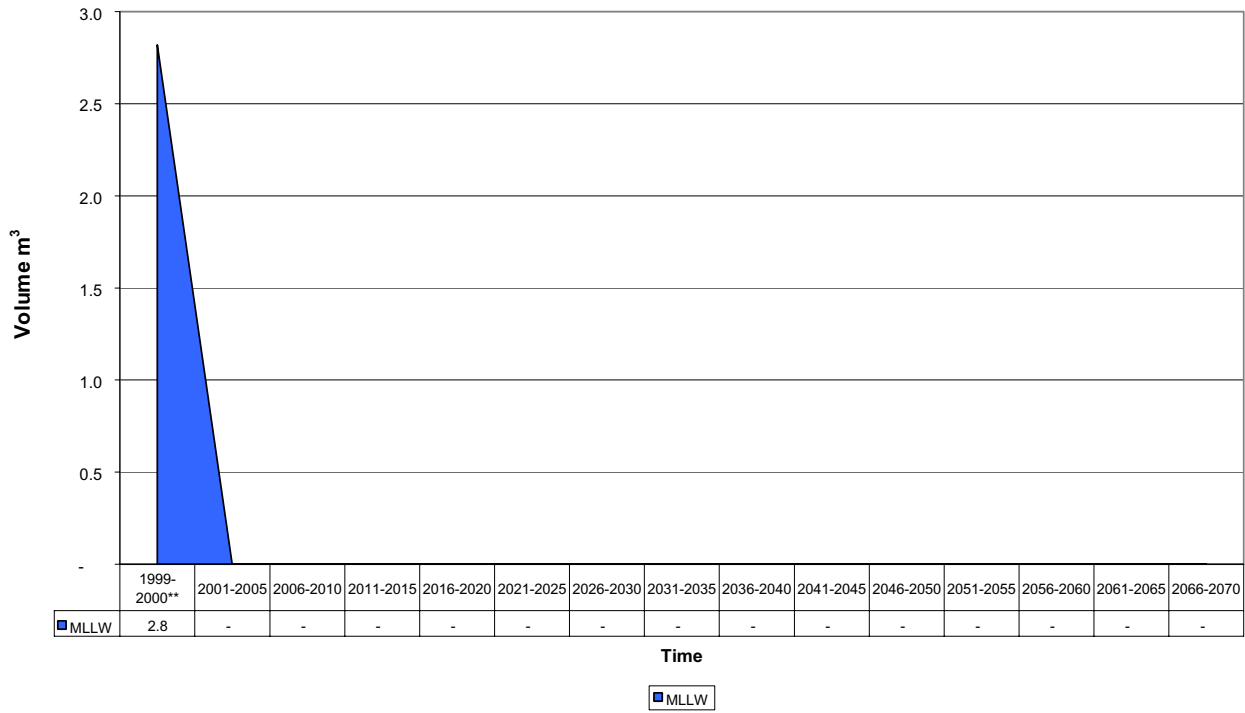
**INEEL**  
Outgoing M/LLW Volume to "Commercial"



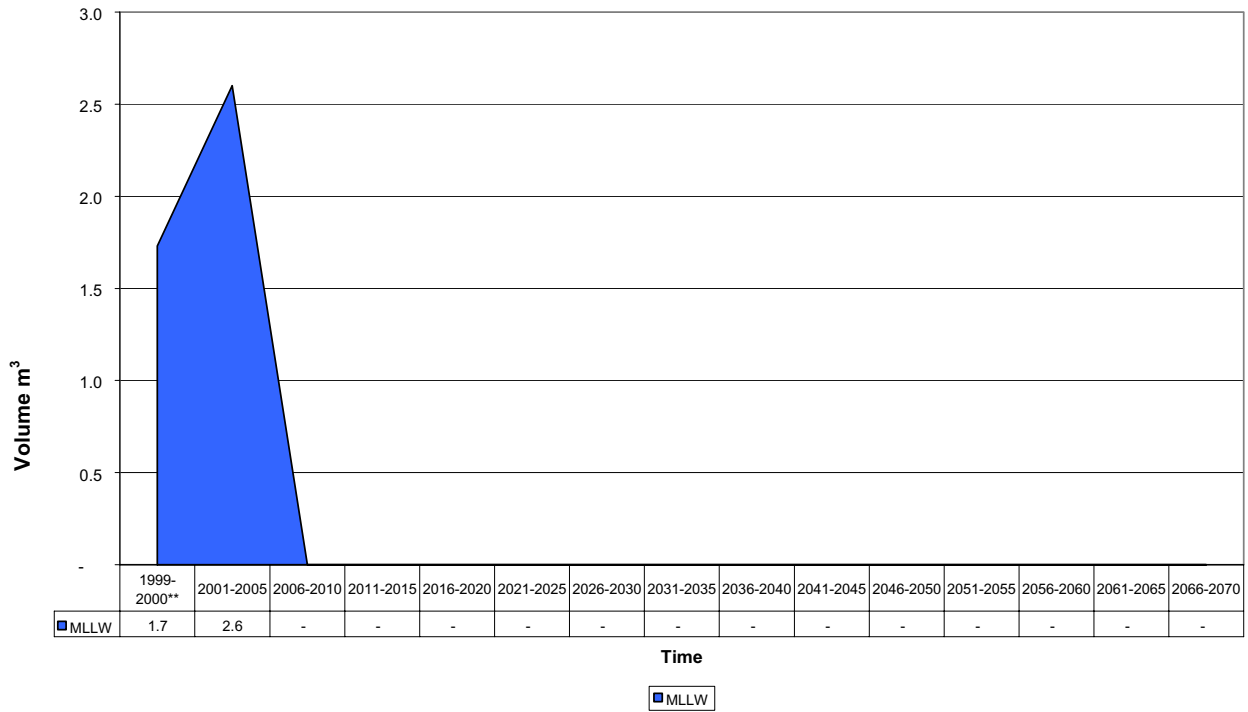
**INEEL**  
Outgoing MLLW Volume to Hanford



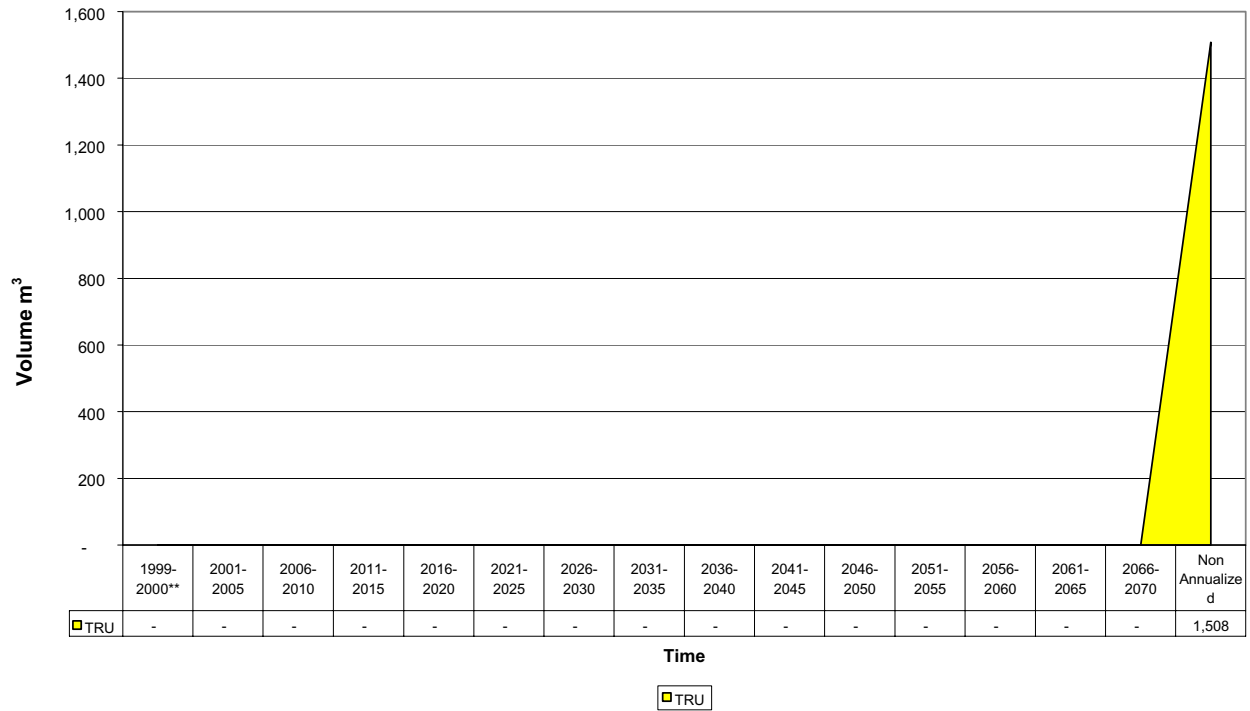
**INEEL**  
Outgoing MLLW Volume to Oak Ridge



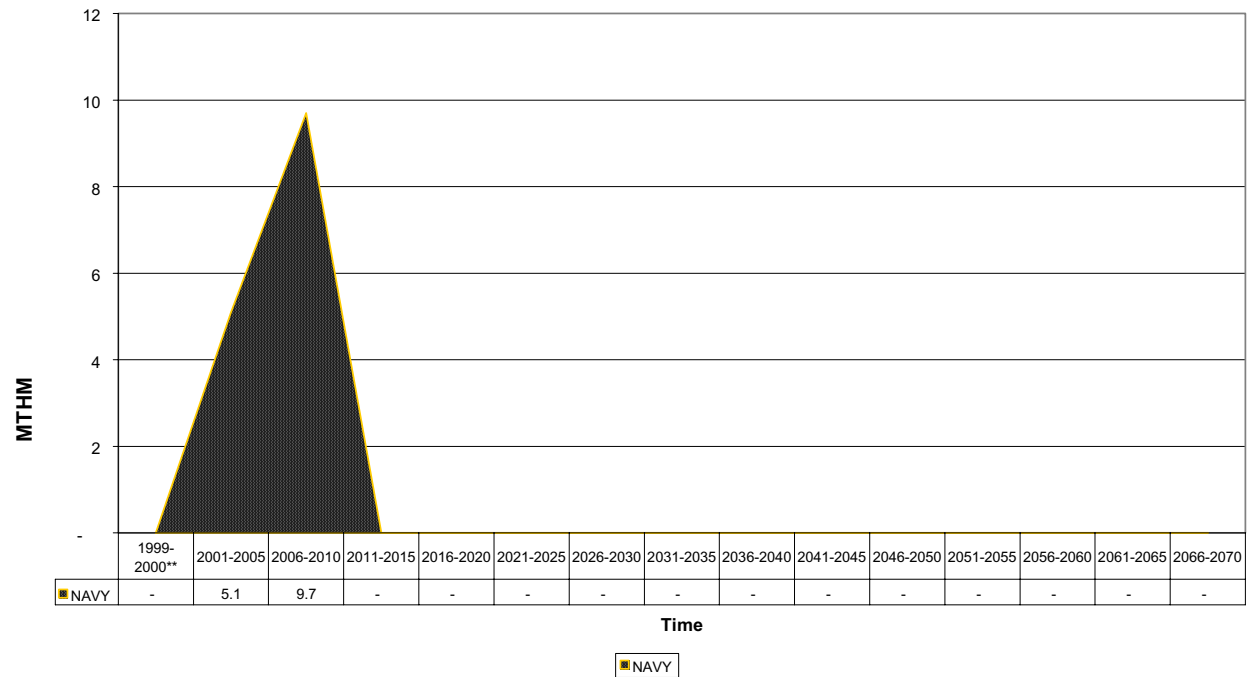
**INEEL**  
Outgoing MLLW Volume to "TBD"



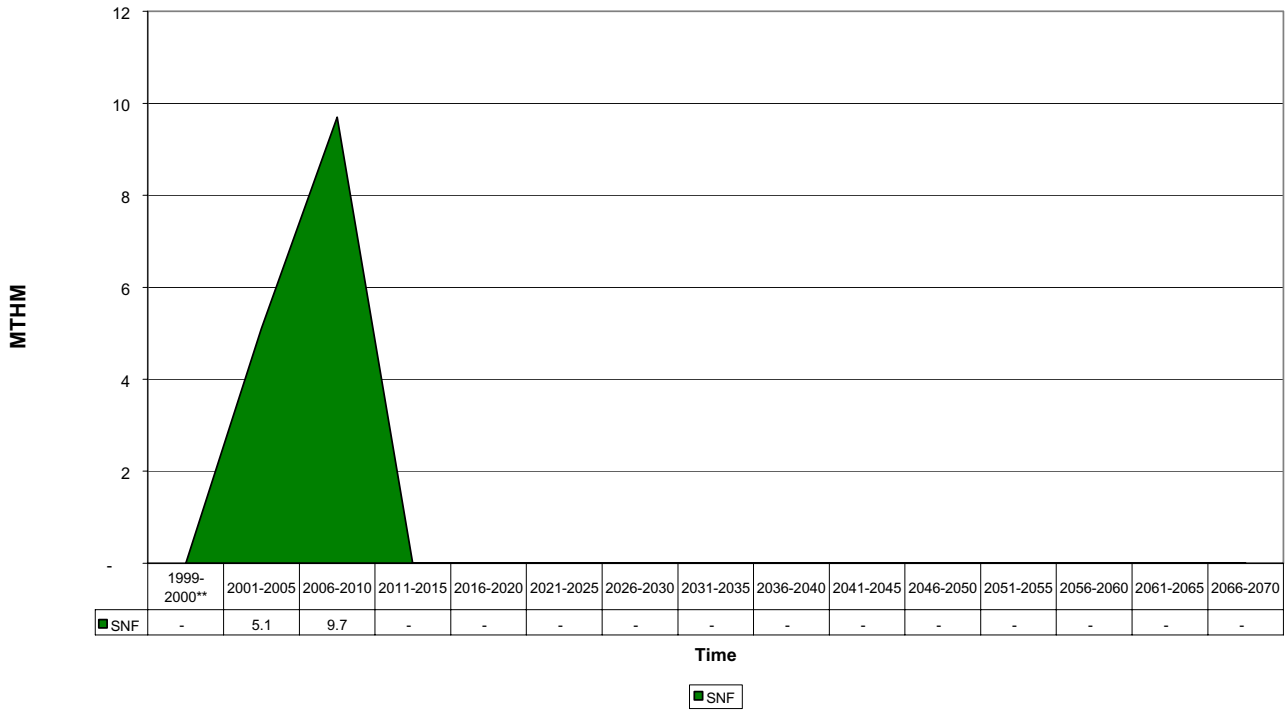
**INEEL**  
Outgoing TRU Volume to "TBDO"



**INEEL**  
Waste Stream Disposition  
Life-cycle Outgoing SNF



**INEEL**  
Outgoing SNF to NAVY

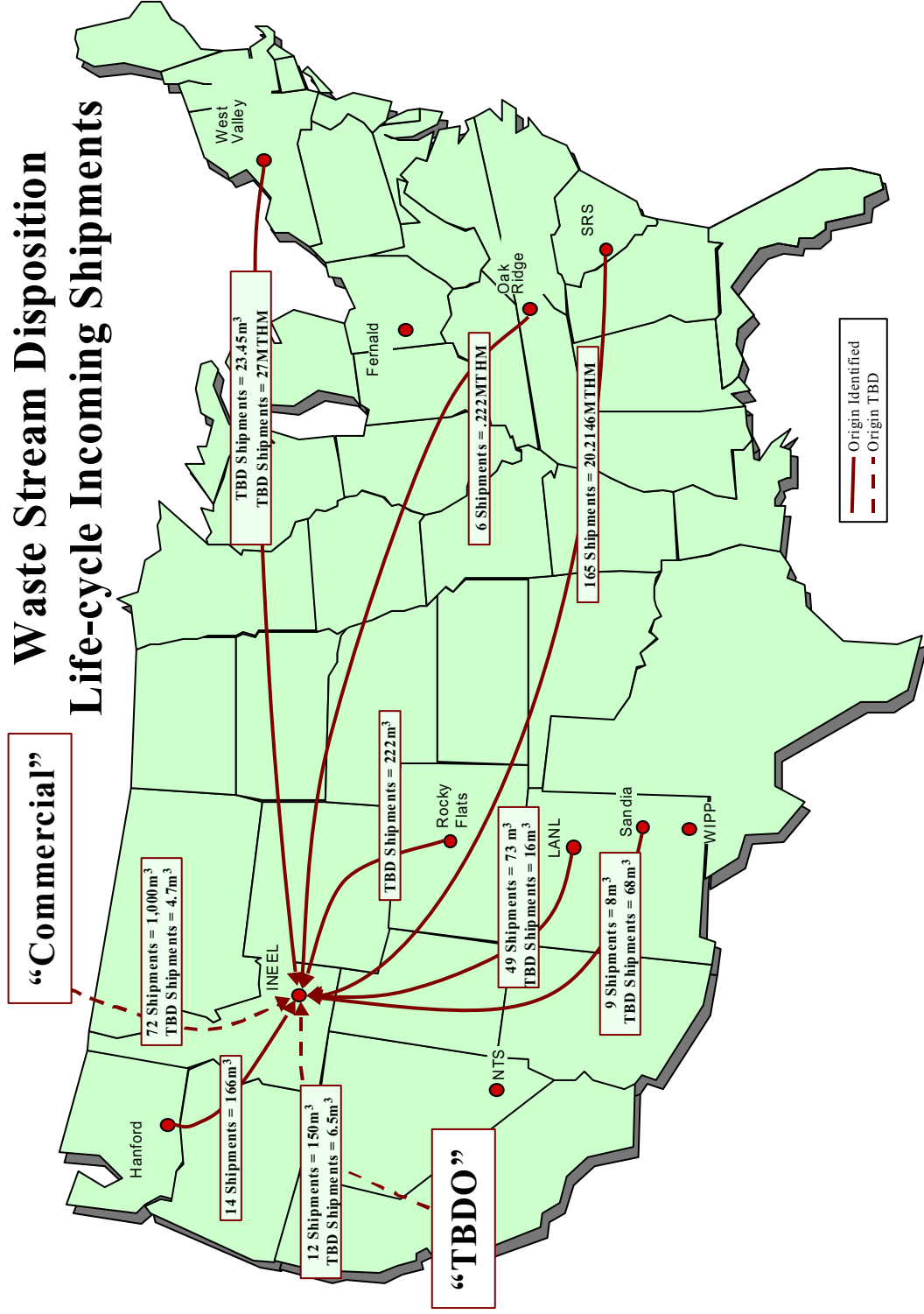




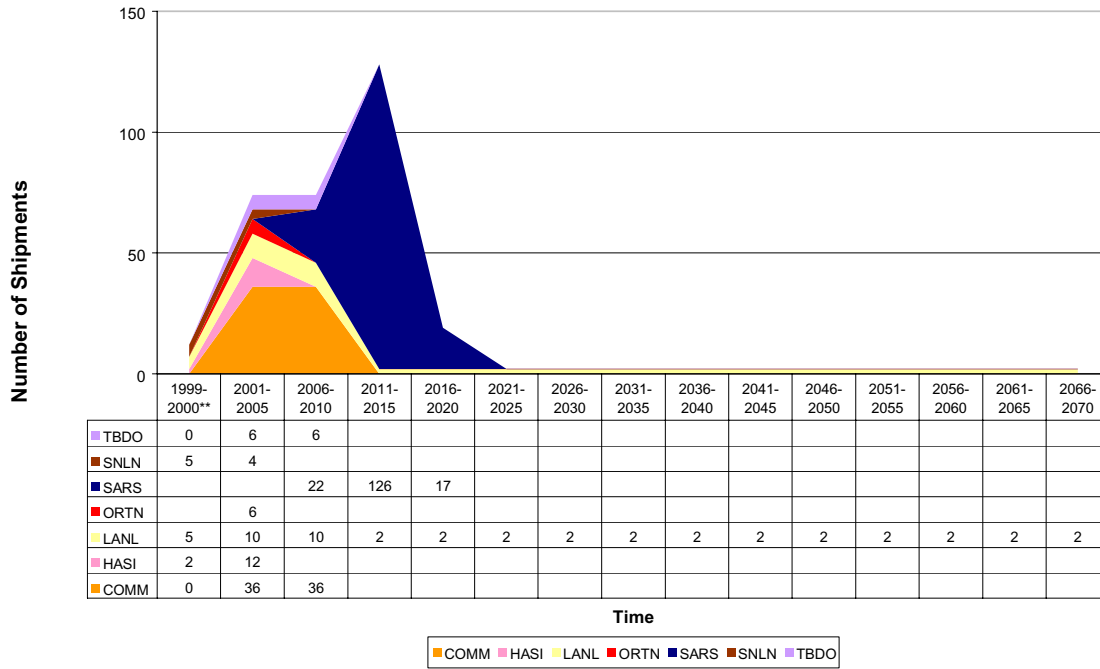


# INEEL

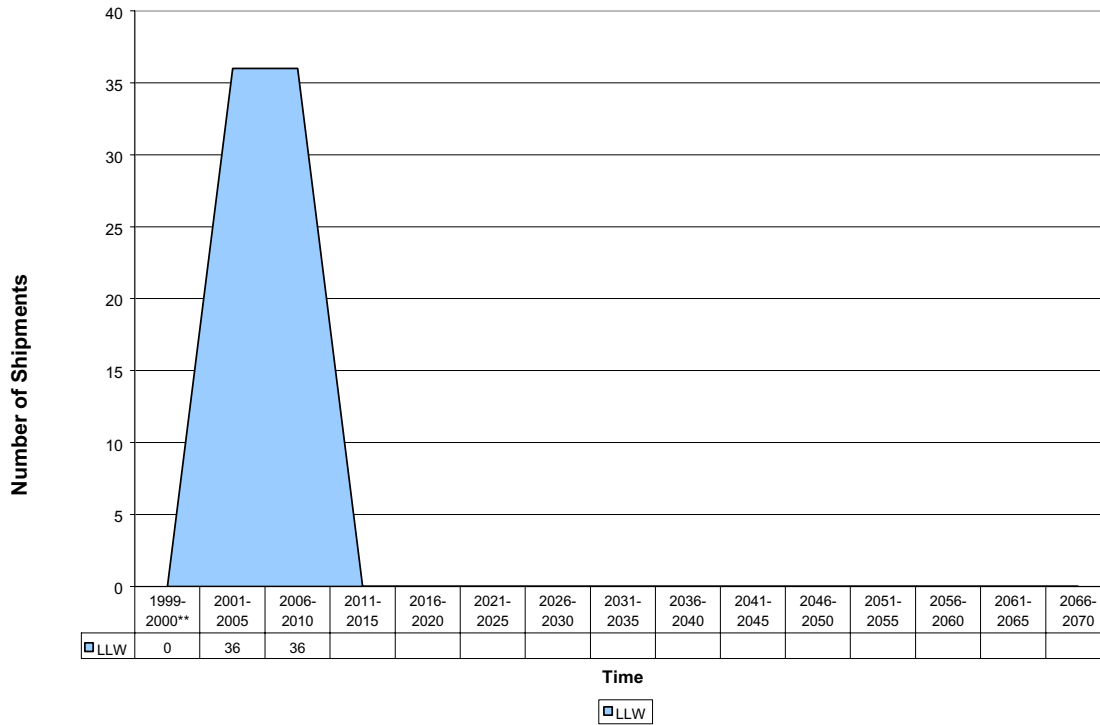
## Waste Stream Disposition Life-cycle Incoming Shipments



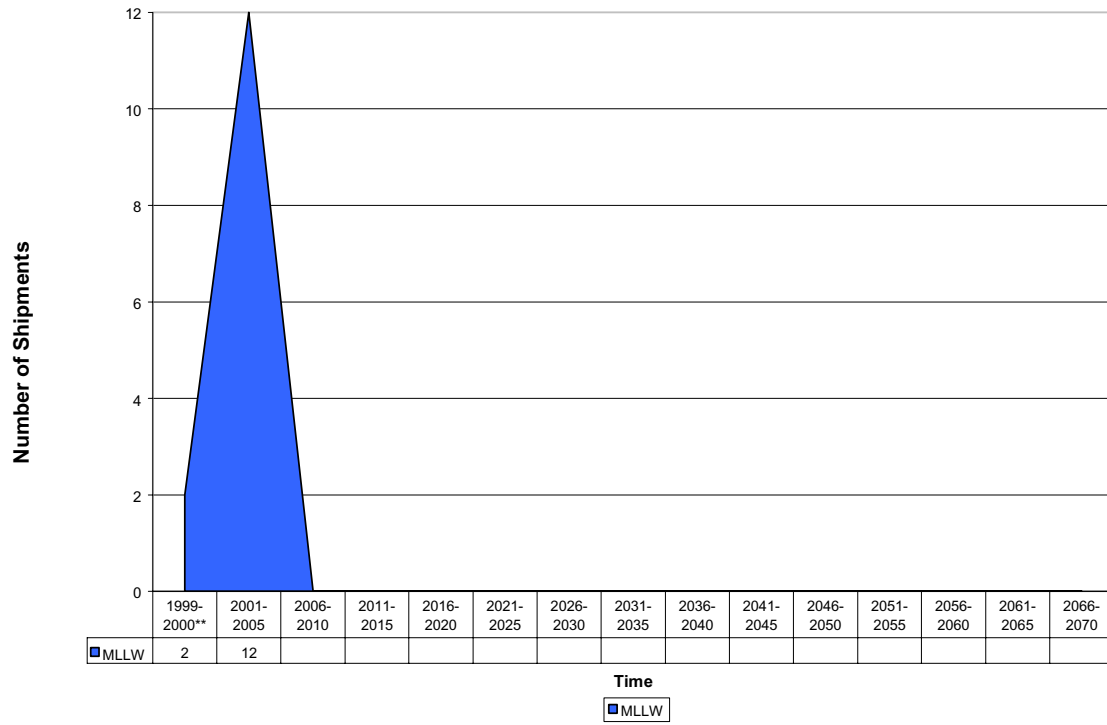
**INEEL  
Waste Stream Disposition  
Life-cycle Incoming Shipments**



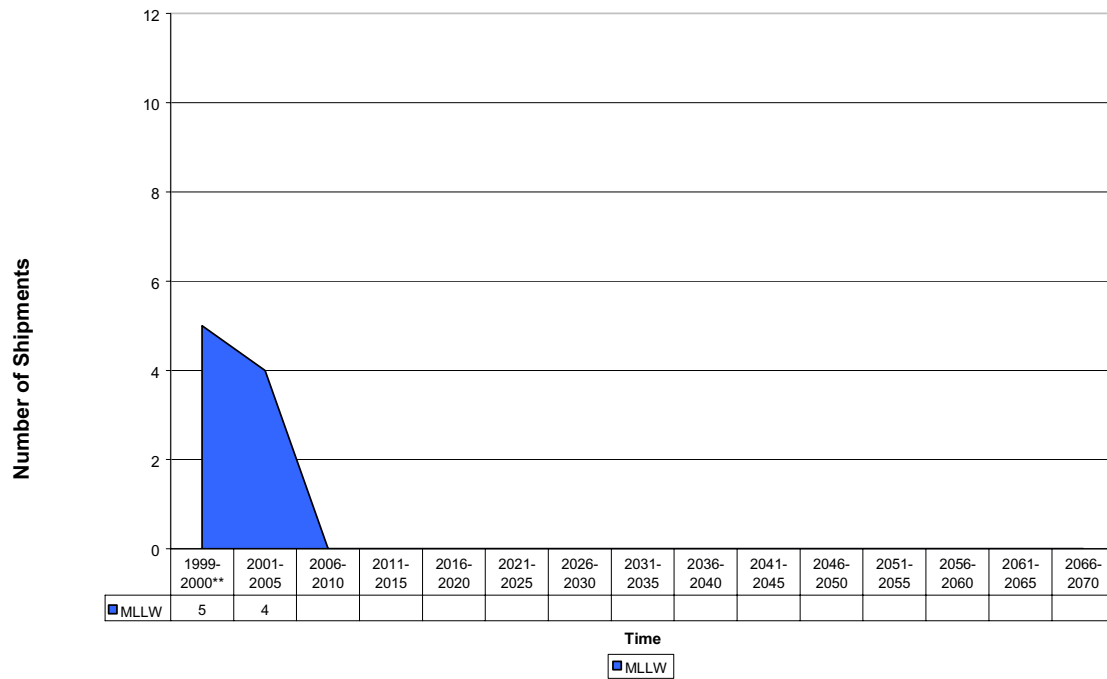
**INEEL  
Incoming LLW Shipments from "Commercial"**



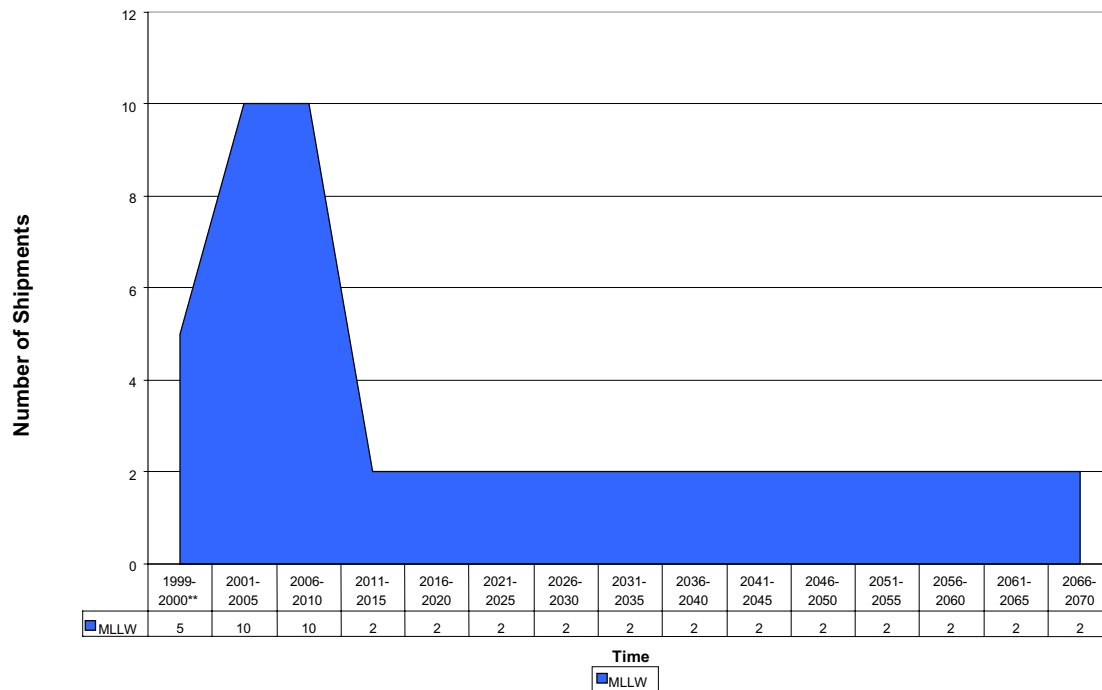
**INEEL**  
Incoming MLLW Shipments from Hanford



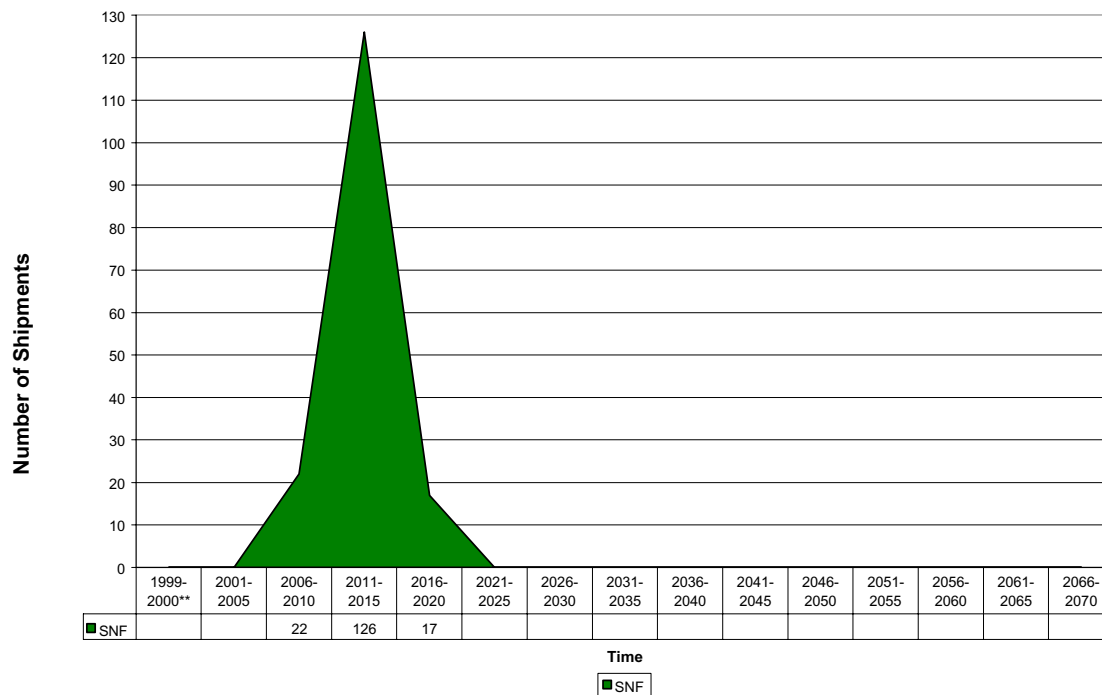
**INEEL**  
Incoming MLLW Shipments from Sandia National Laboratory



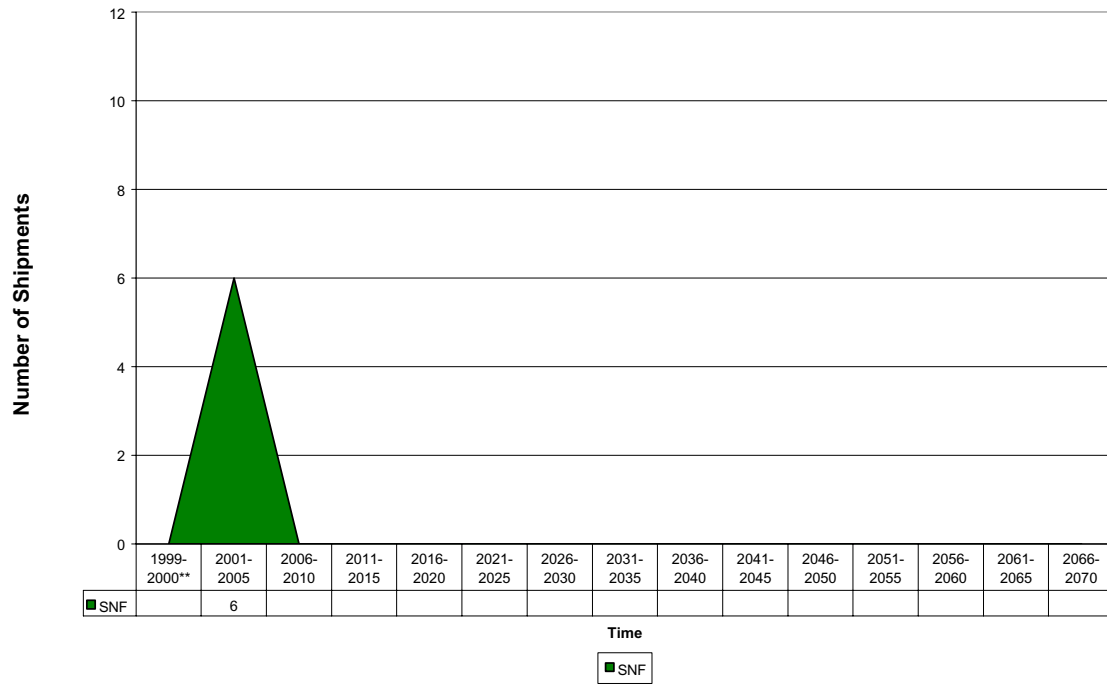
**INEEL**  
Incoming MLLW Shipments from  
Los Alamos National Laboratory



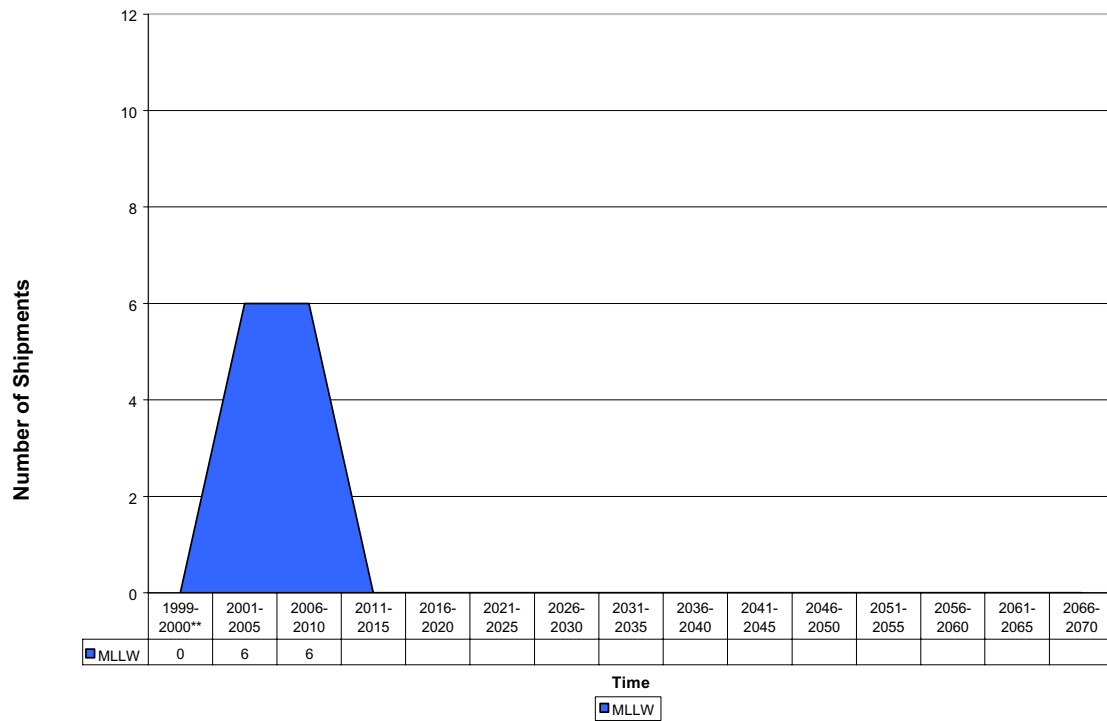
**INEEL**  
Incoming SNF Shipments from  
Savannah River Site



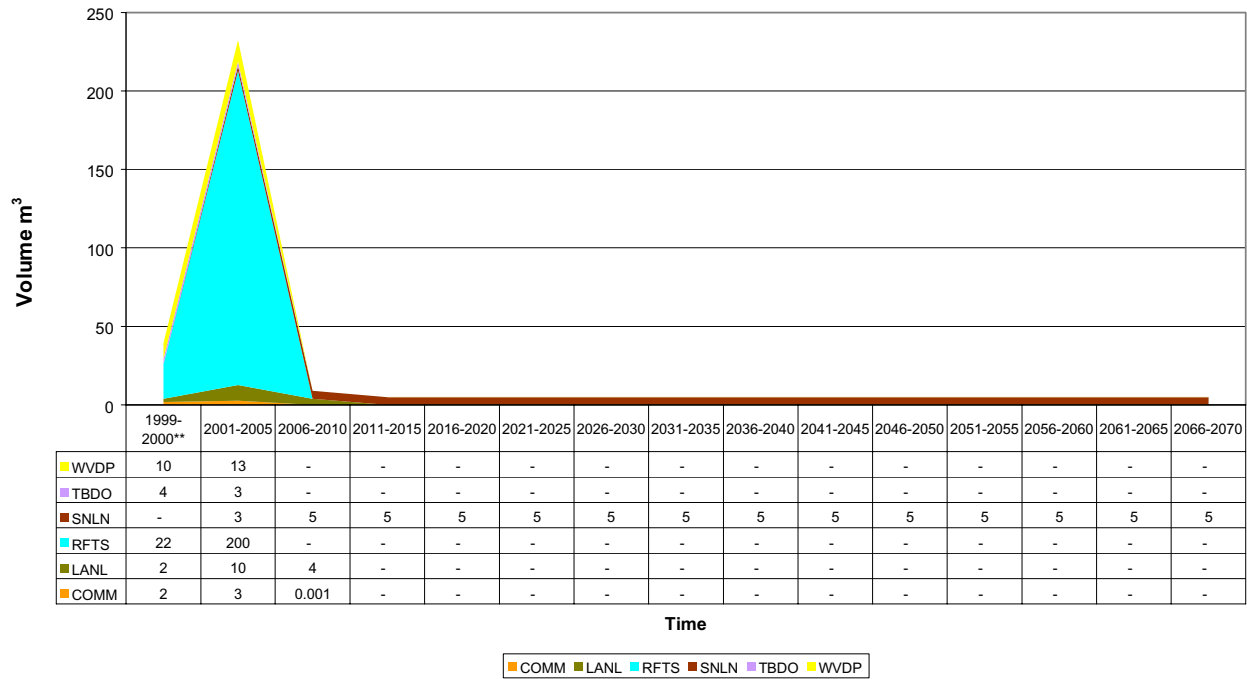
**INEEL**  
Incoming SNF Shipments from  
Oak Ridge



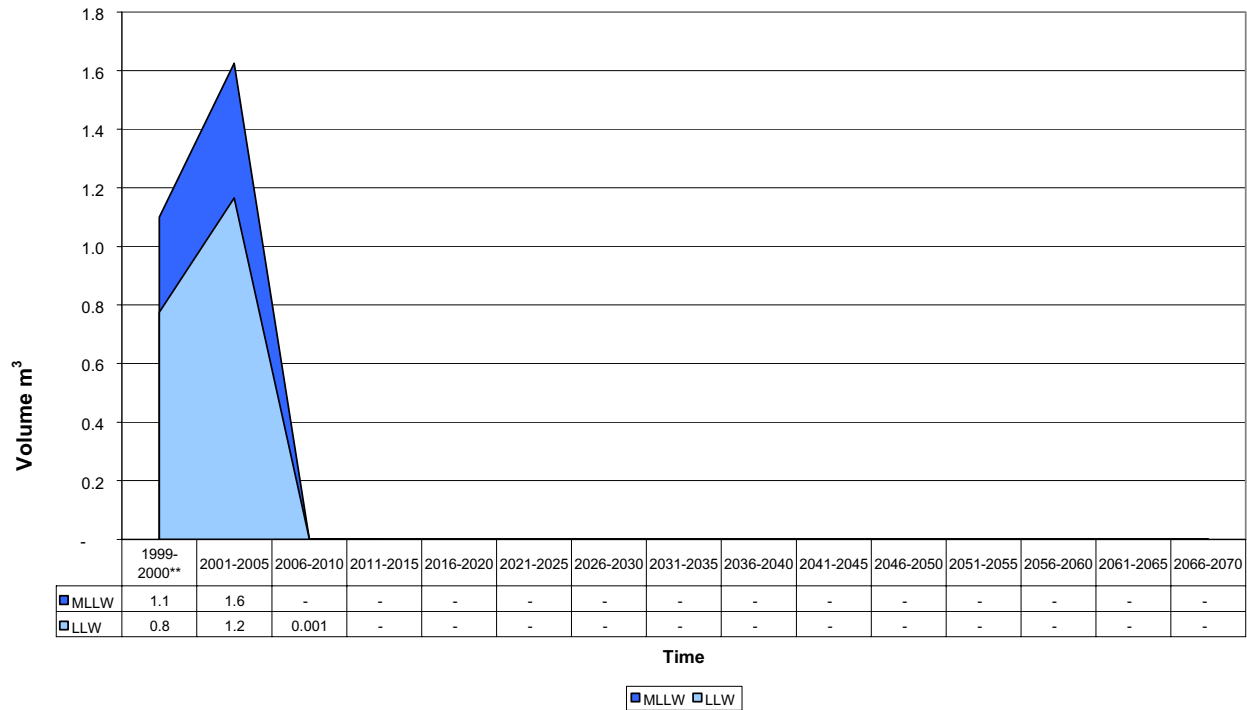
**INEEL**  
Incoming MLLW Shipments from "TBDO"



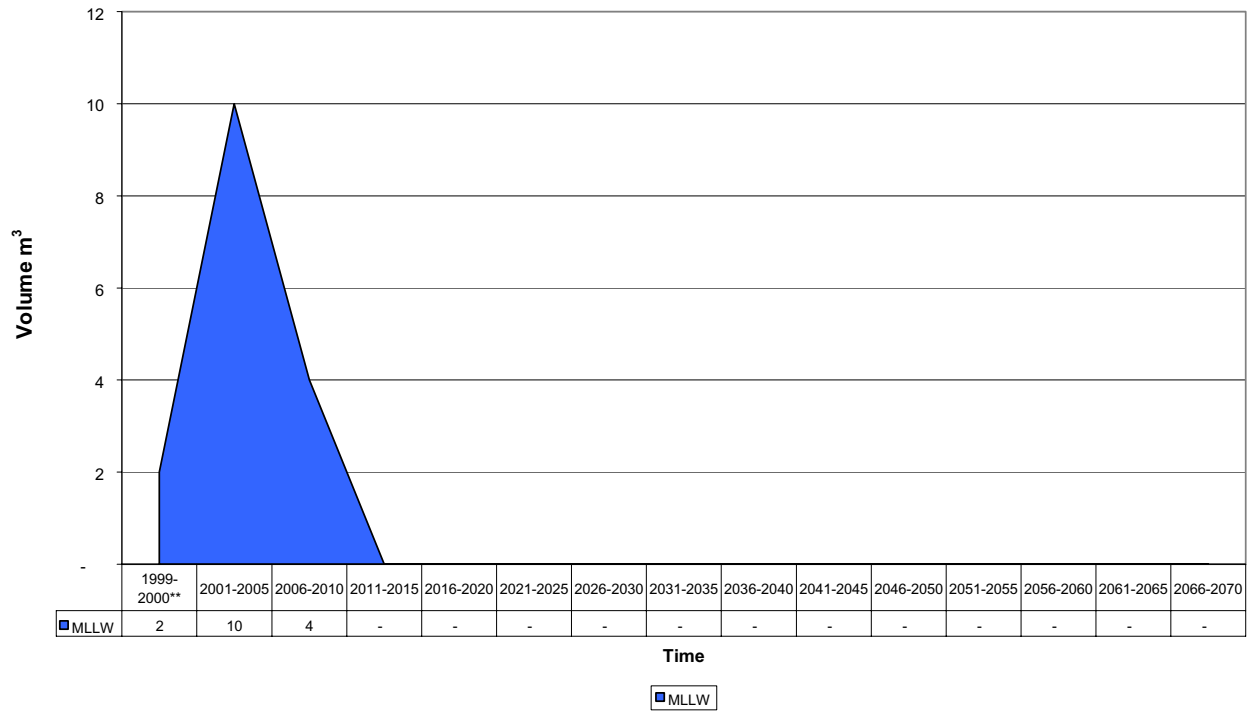
**INEEL  
Waste Stream Disposition  
Life-cycle Incoming Volume**



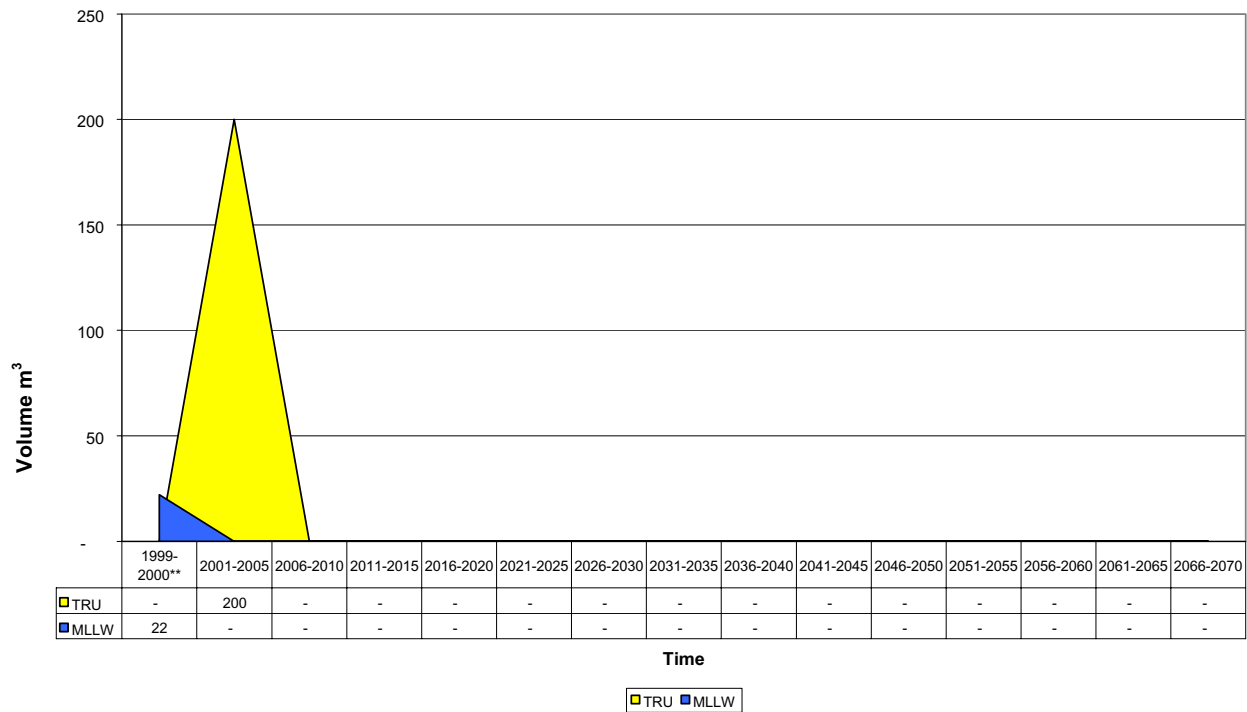
**INEEL  
Incoming M/LLW Volume from "Commercial"**



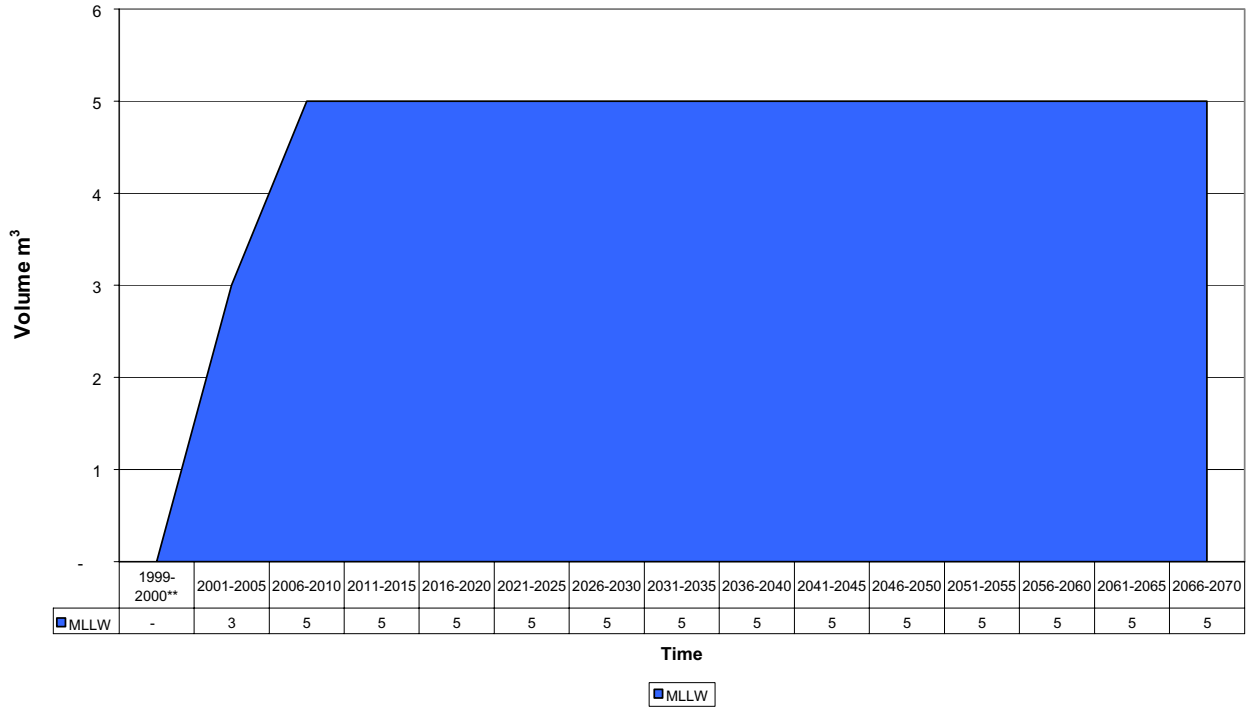
**INEEL**  
Incoming MLLW Volume from Los Alamos National Laboratory



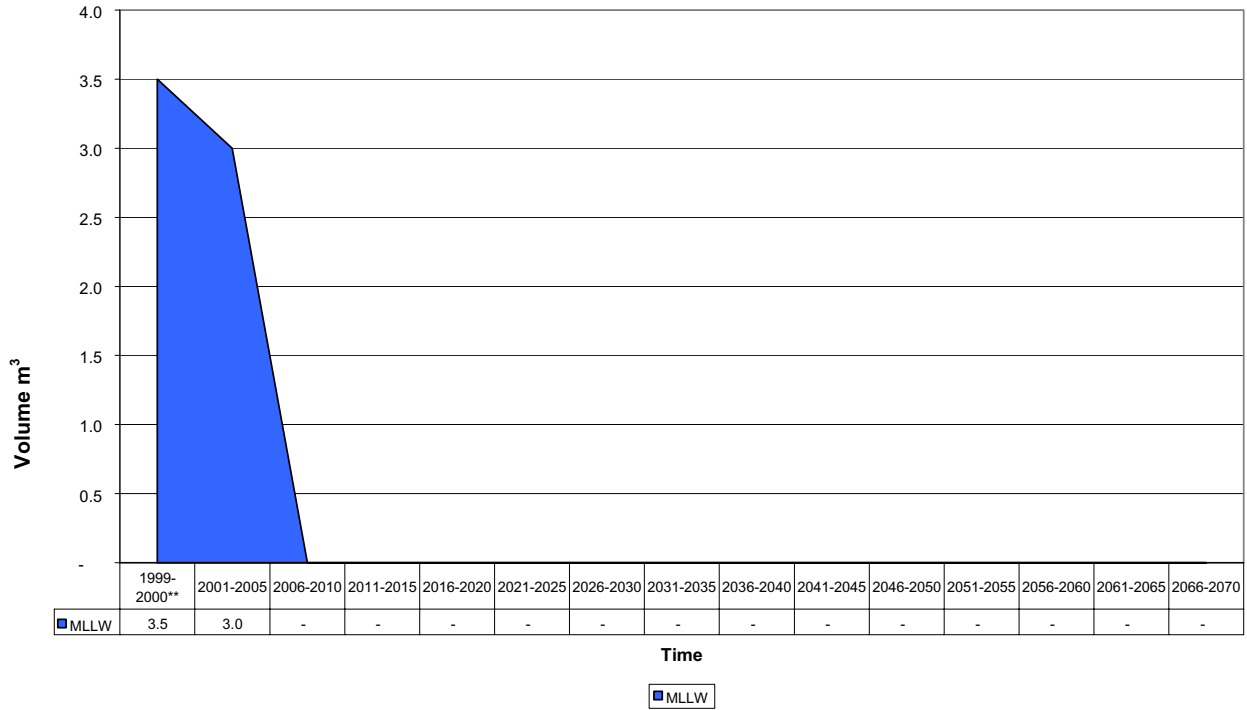
**INEEL**  
Incoming MLLW & TRU Volume from Rocky Flats



**INEEL**  
Incoming MLLW Volume from Sandia National Laboratory

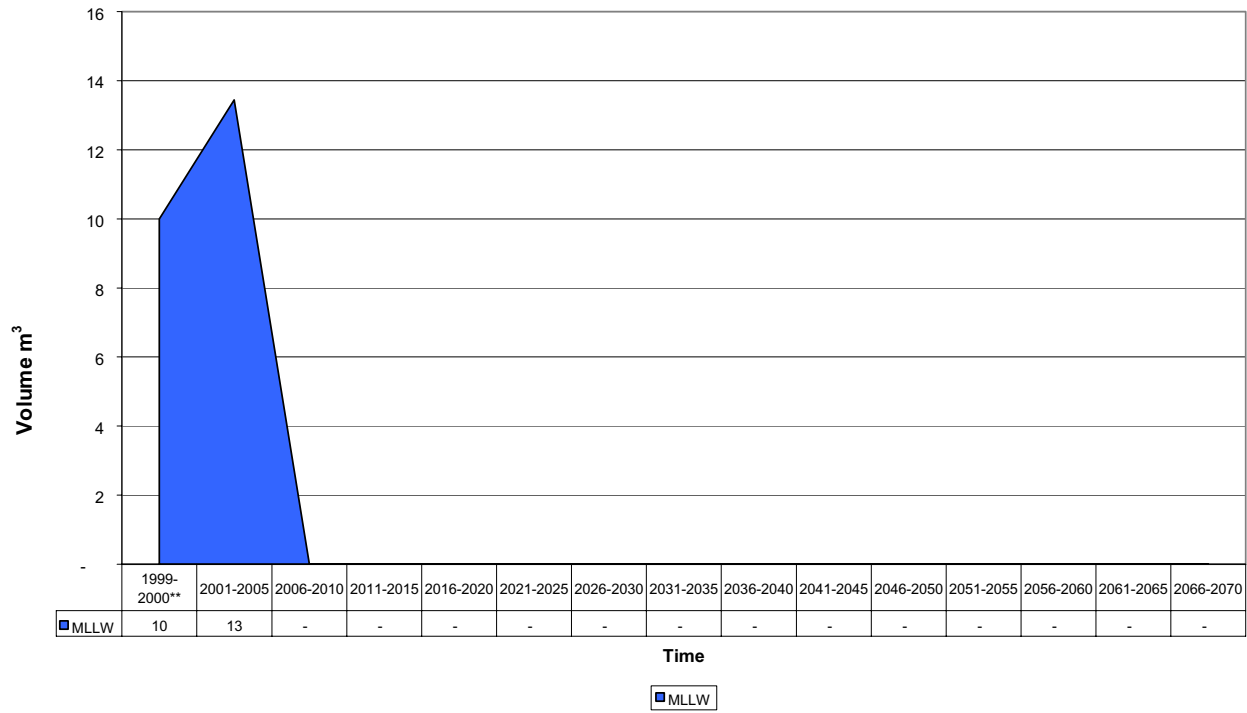


**INEEL**  
Incoming MLLW Volume from "TBDO"

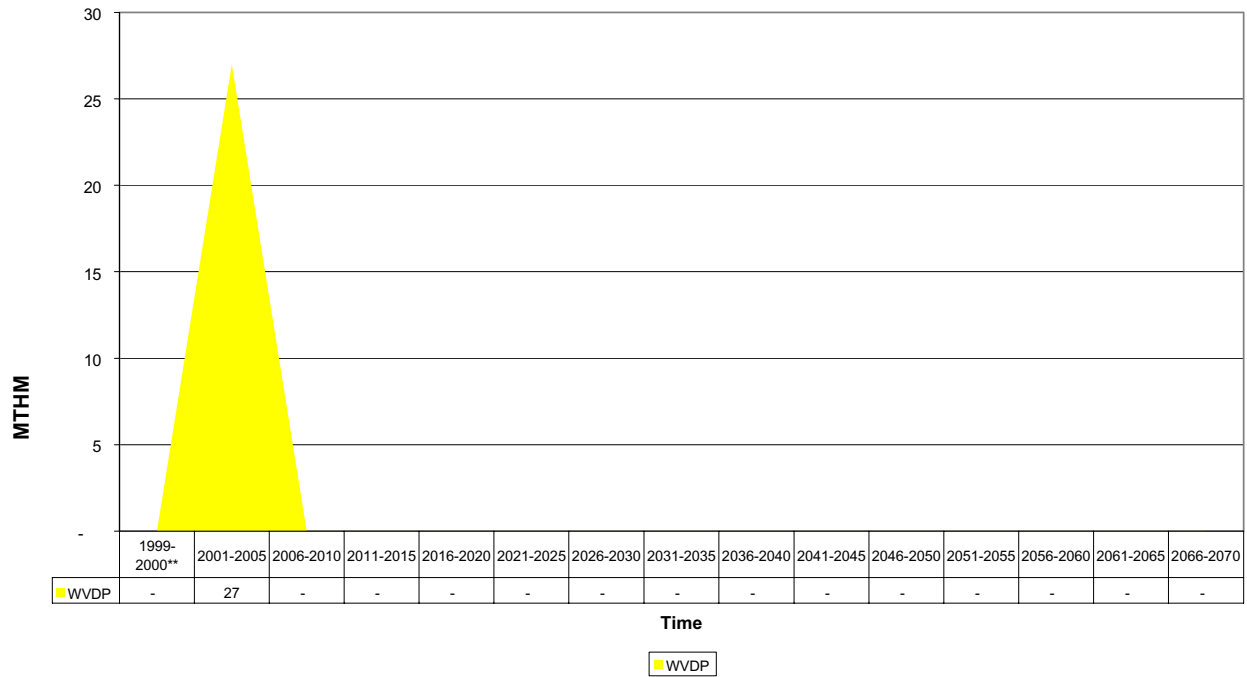




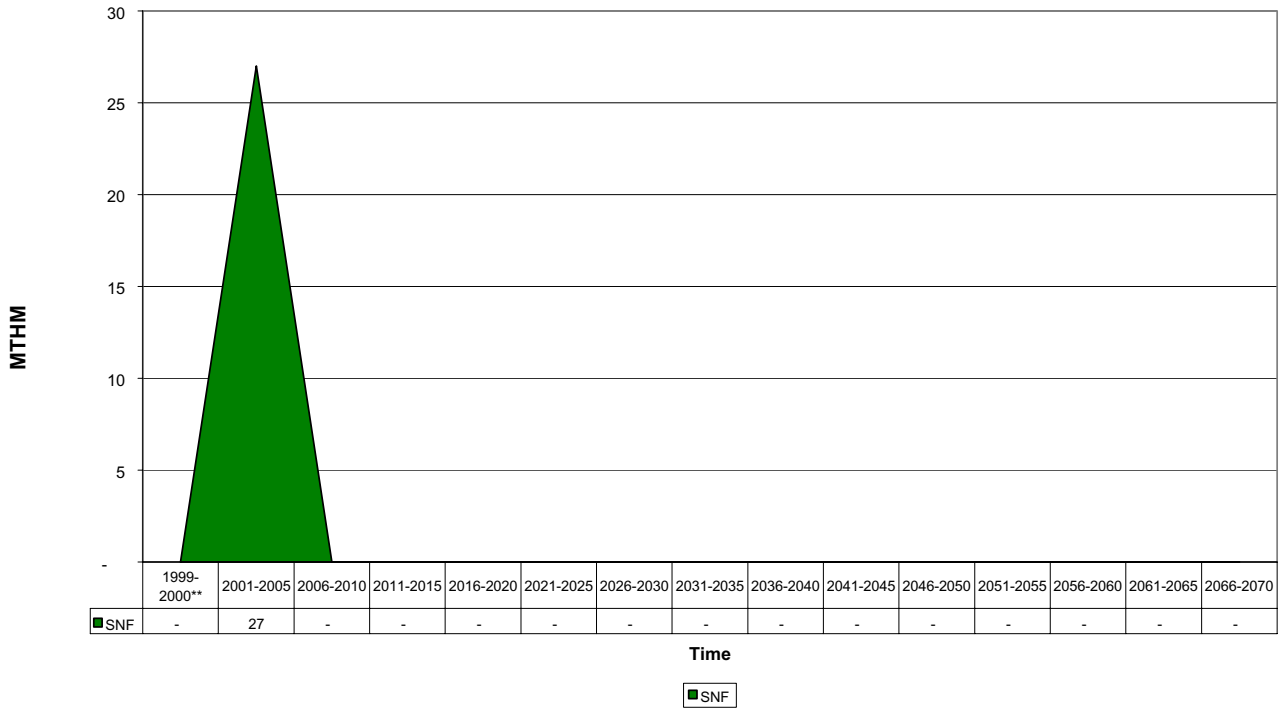
**INEEL**  
Incoming MLLW Volume from West Valley



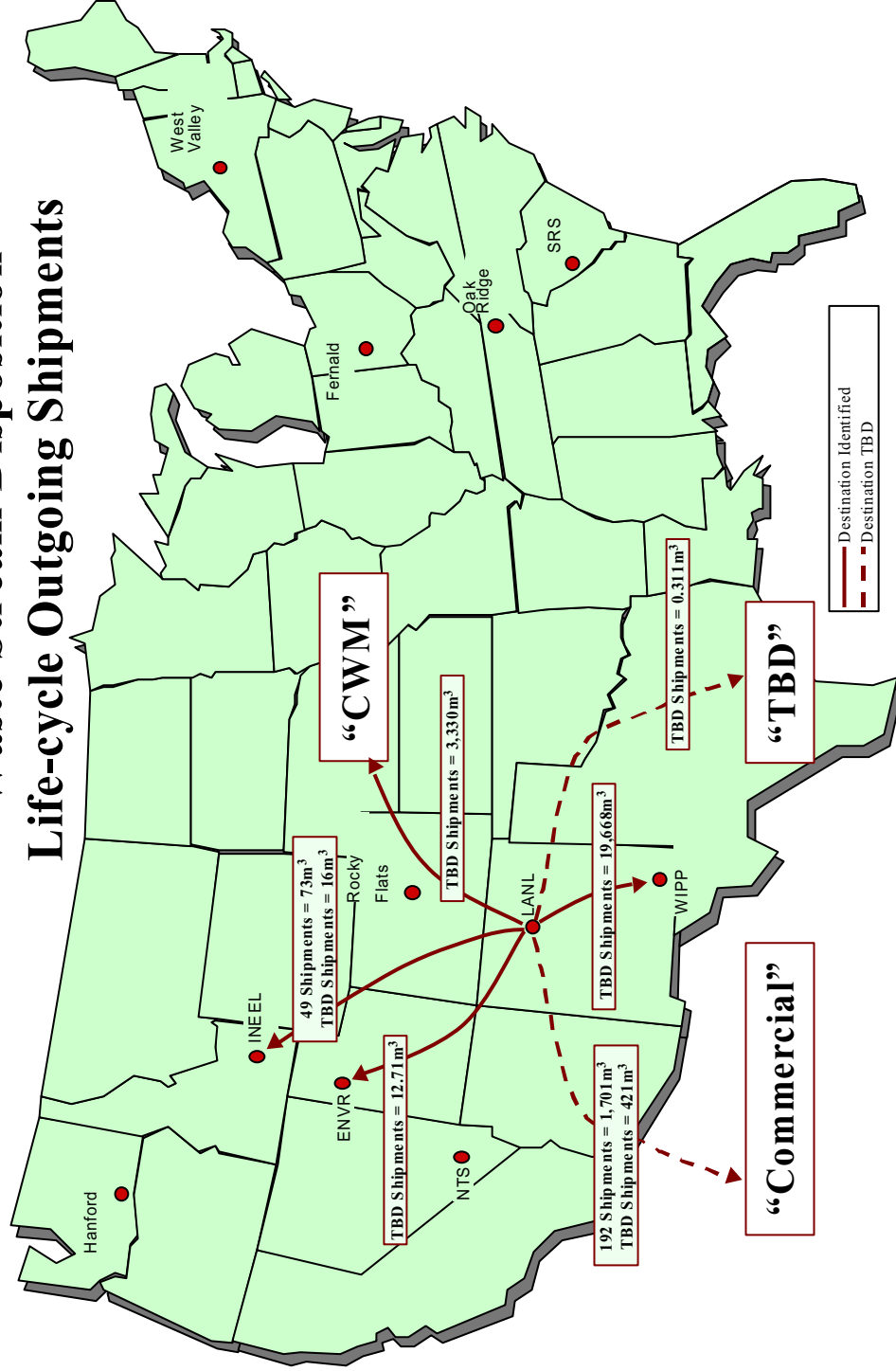
**INEEL**  
Waste Stream Disposition  
Life-cycle Incoming SNF



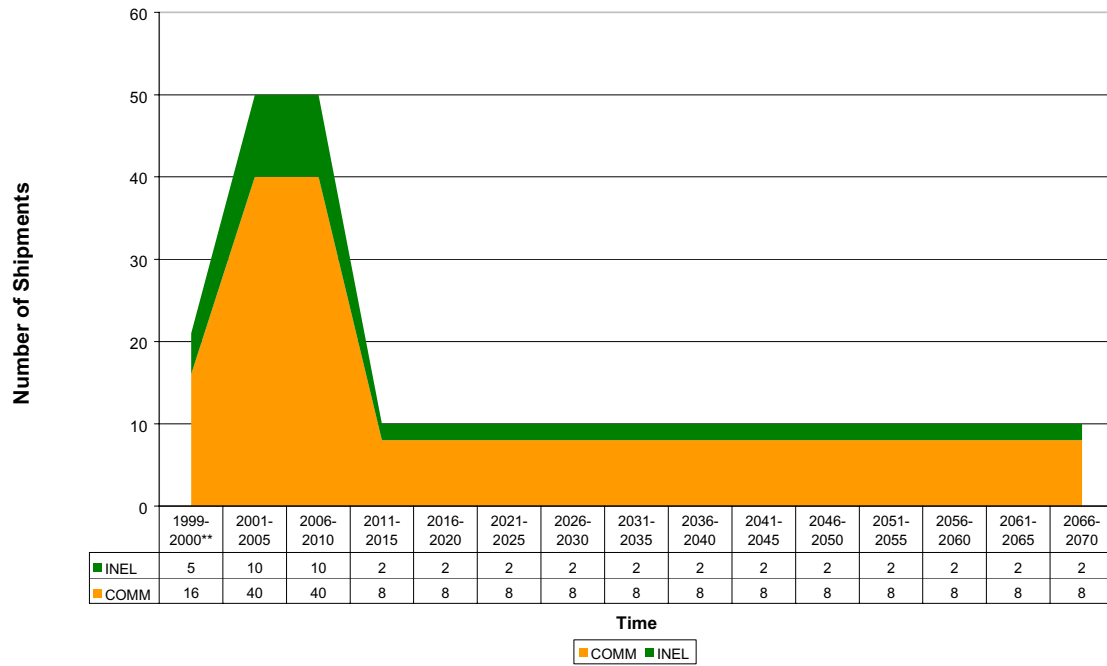
**INEEL**  
Incoming SNF from West Valley



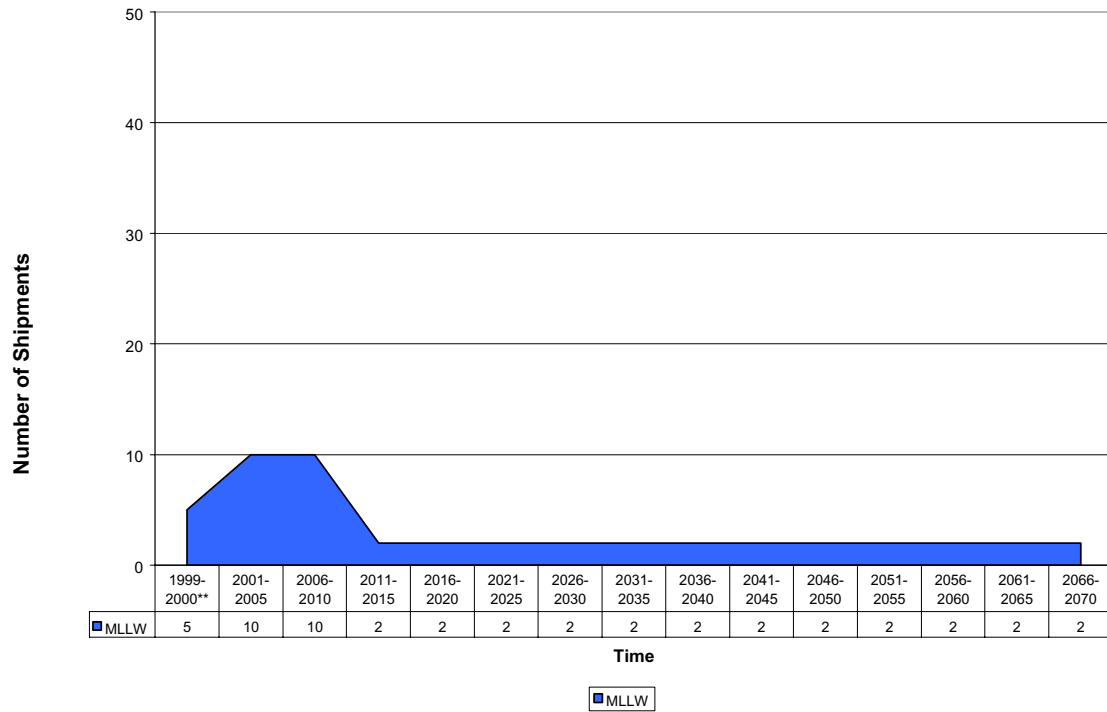
# Los Alamos National Laboratory Waste Stream Disposition Life-cycle Outgoing Shipments



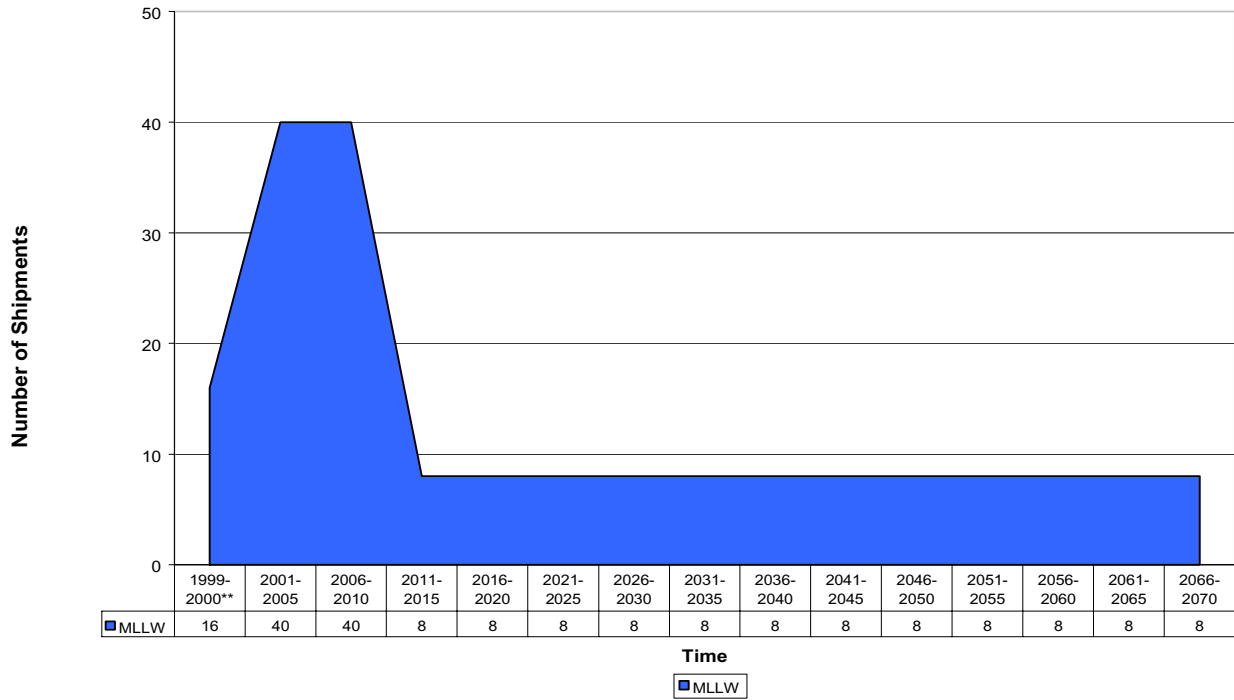
**Los Alamos National Laboratory  
Waste Stream Disposition  
Life-cycle Outgoing Shipments**



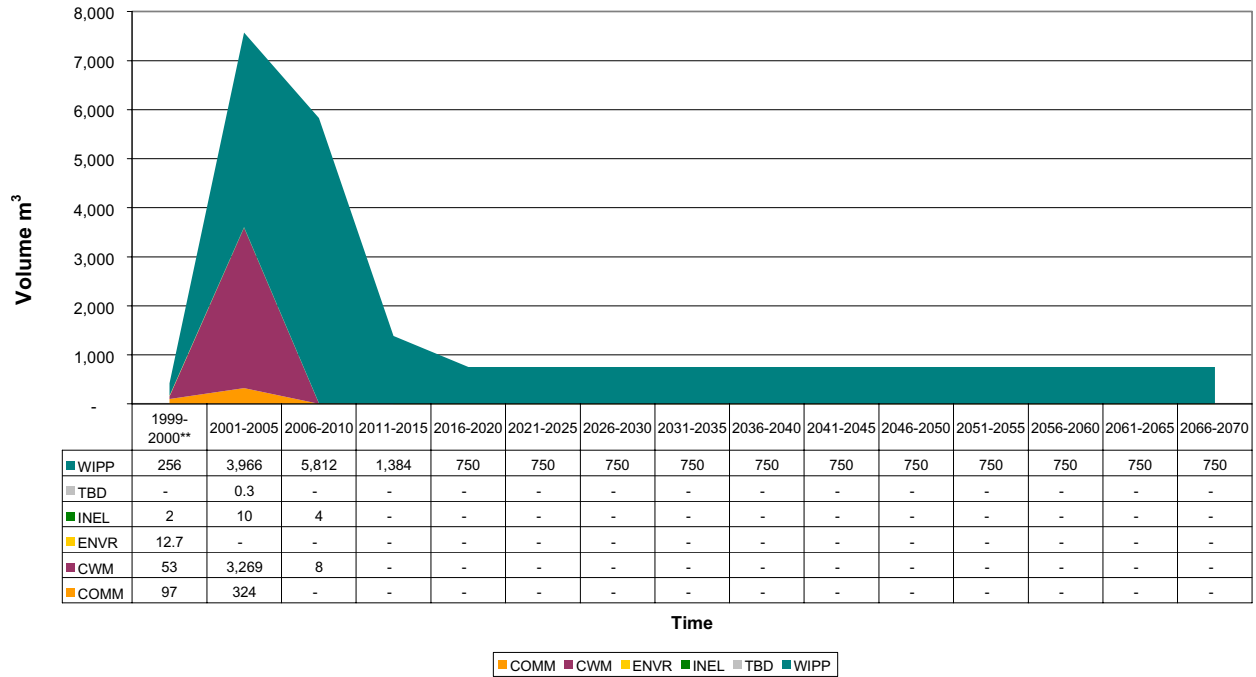
**Los Alamos National Laboratory  
Outgoing MLLW Shipments to INEEL**



**Los Alamos National Laboratory**  
Outgoing MLLW Shipments to "Commercial"

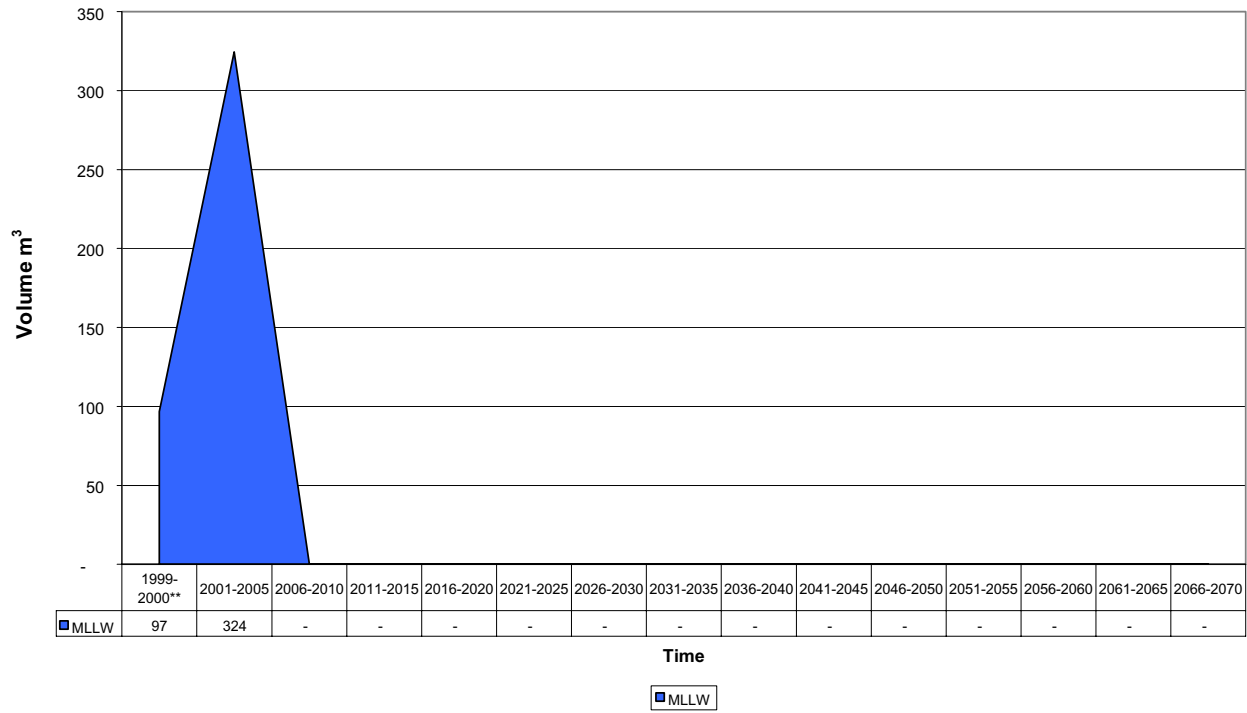


**Los Alamos National Laboratory**  
Waste Stream Disposition  
Life-cycle Outgoing Volume

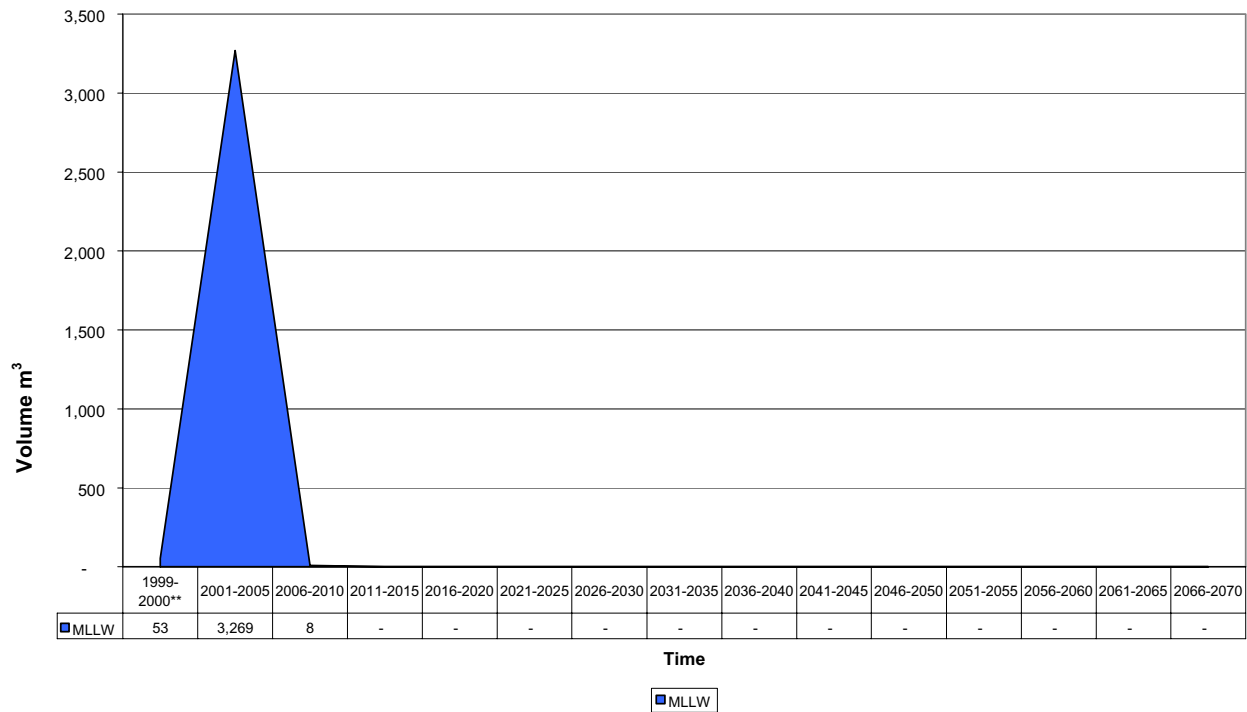


Total life-cycle values per 7/30/99 Stream Disposition Data (SDD) (<http://id.inel.gov/avs/>).  
Printed: March 30, 2000  
\*\* Represents data for a two year period.

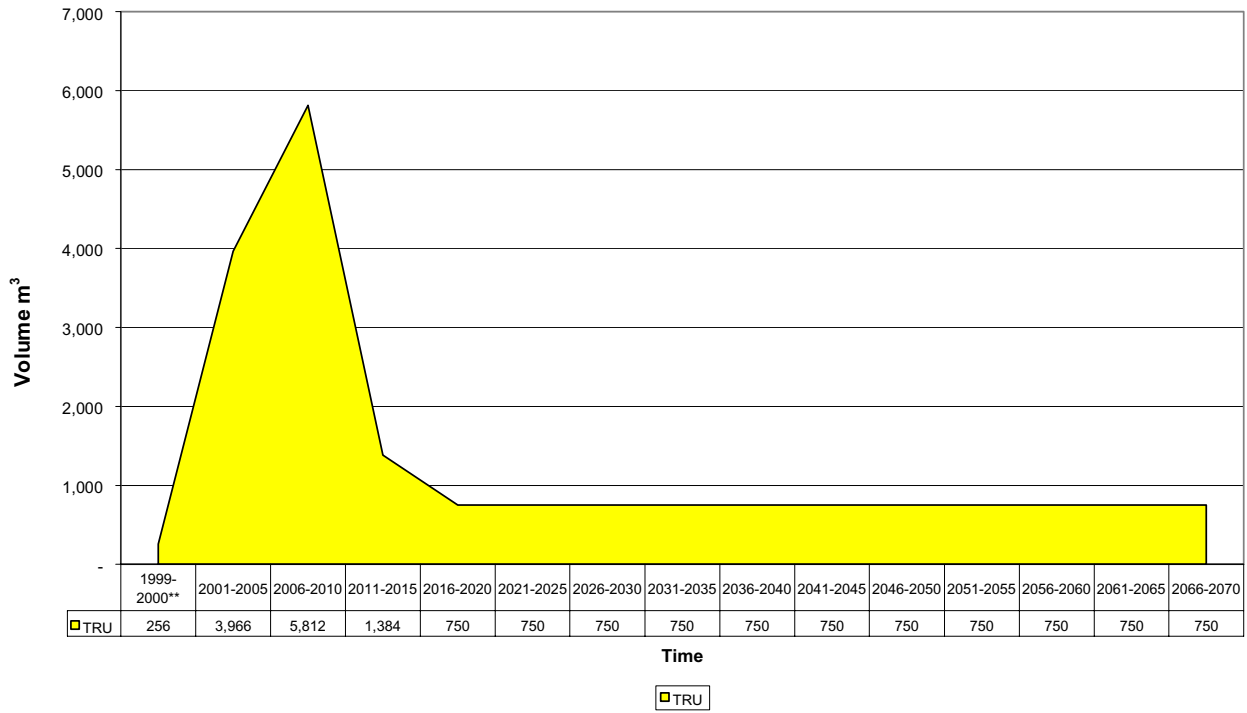
**Los Alamos National Laboratory**  
Outgoing MLLW Volume to "Commercial"



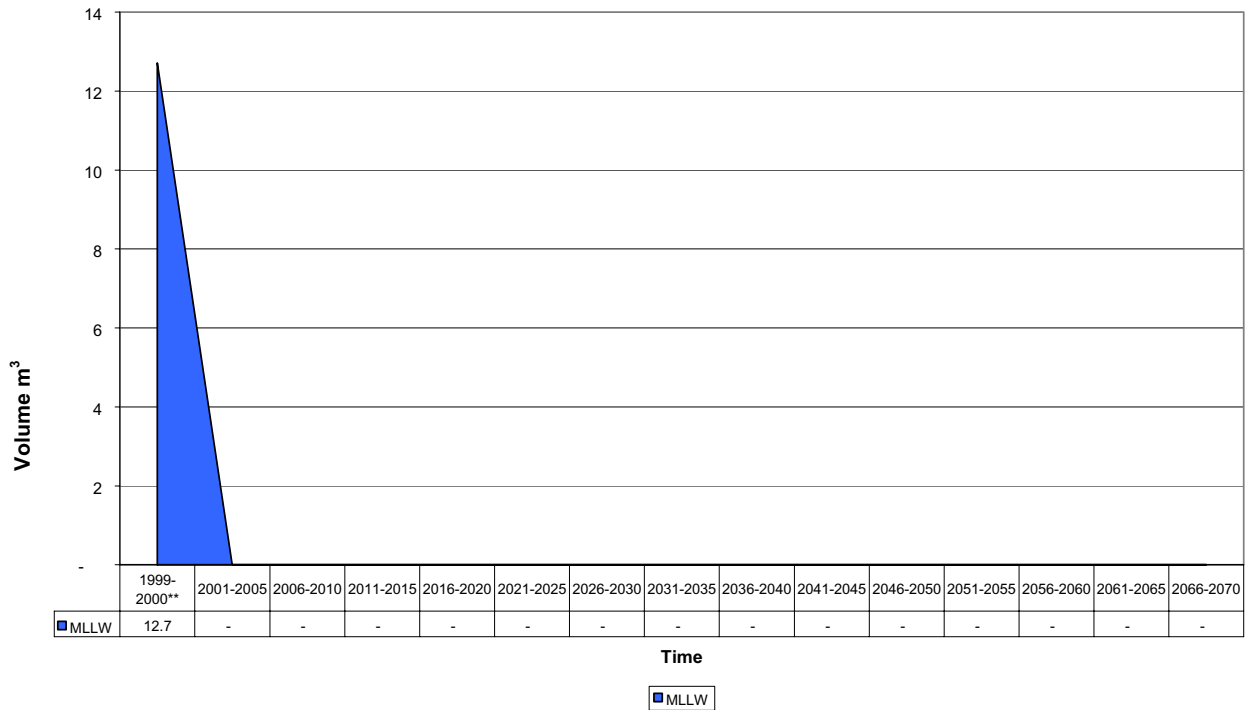
**Los Alamos National Laboratory**  
Outgoing MLLW Volume to Chemical Waste Management



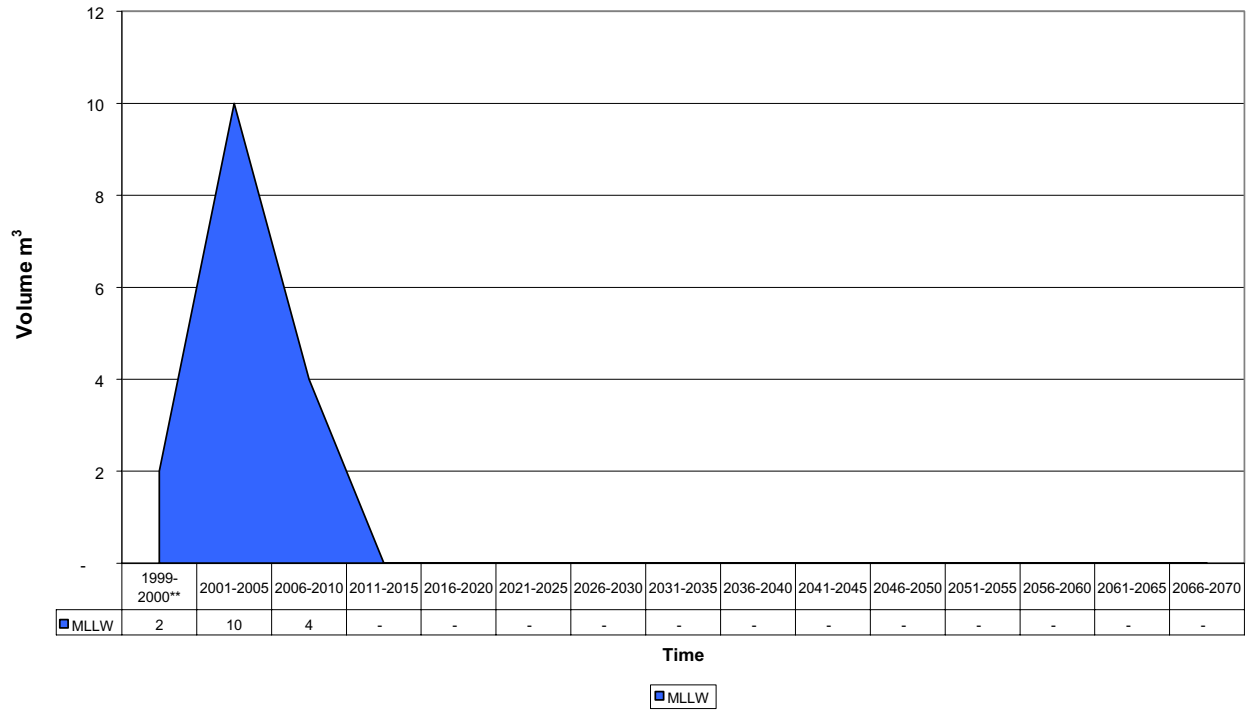
**Los Alamos National Laboratory**  
Outgoing TRU Volume to WIPP



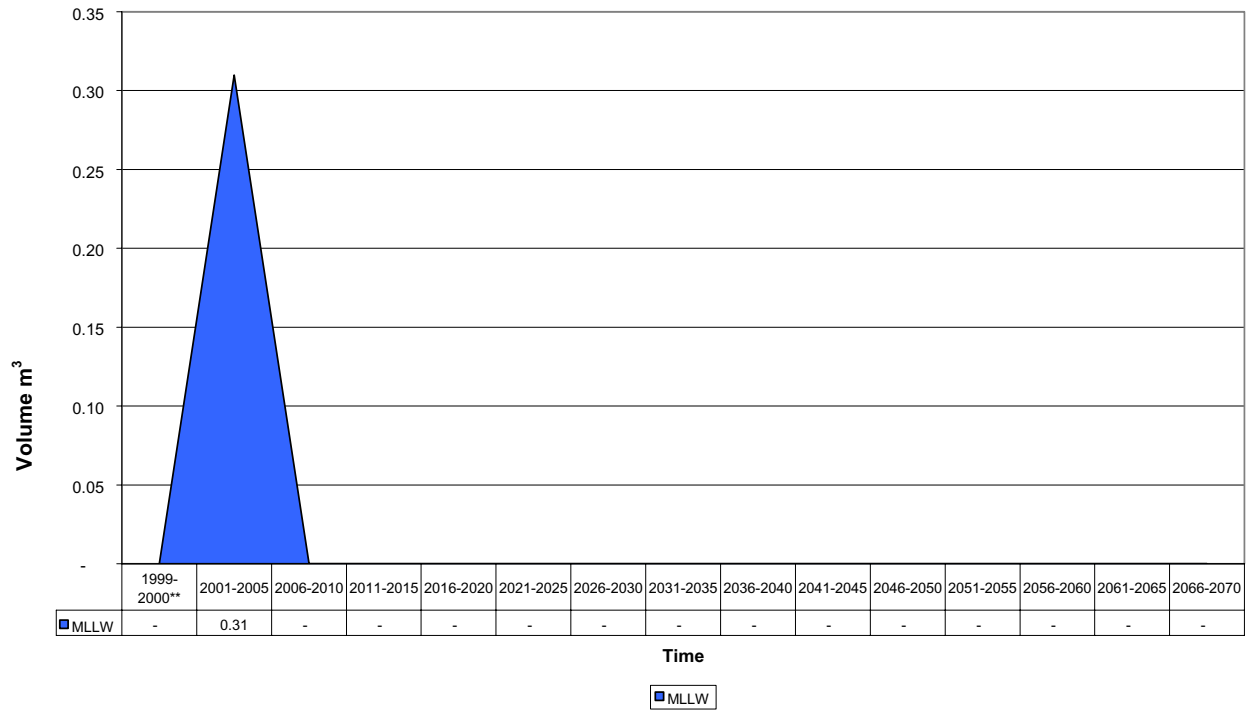
**Los Alamos National Laboratory**  
Outgoing MLLW Volume to Envirocare



**Los Alamos National Laboratory**  
Outgoing MLLW Volume to INEEL

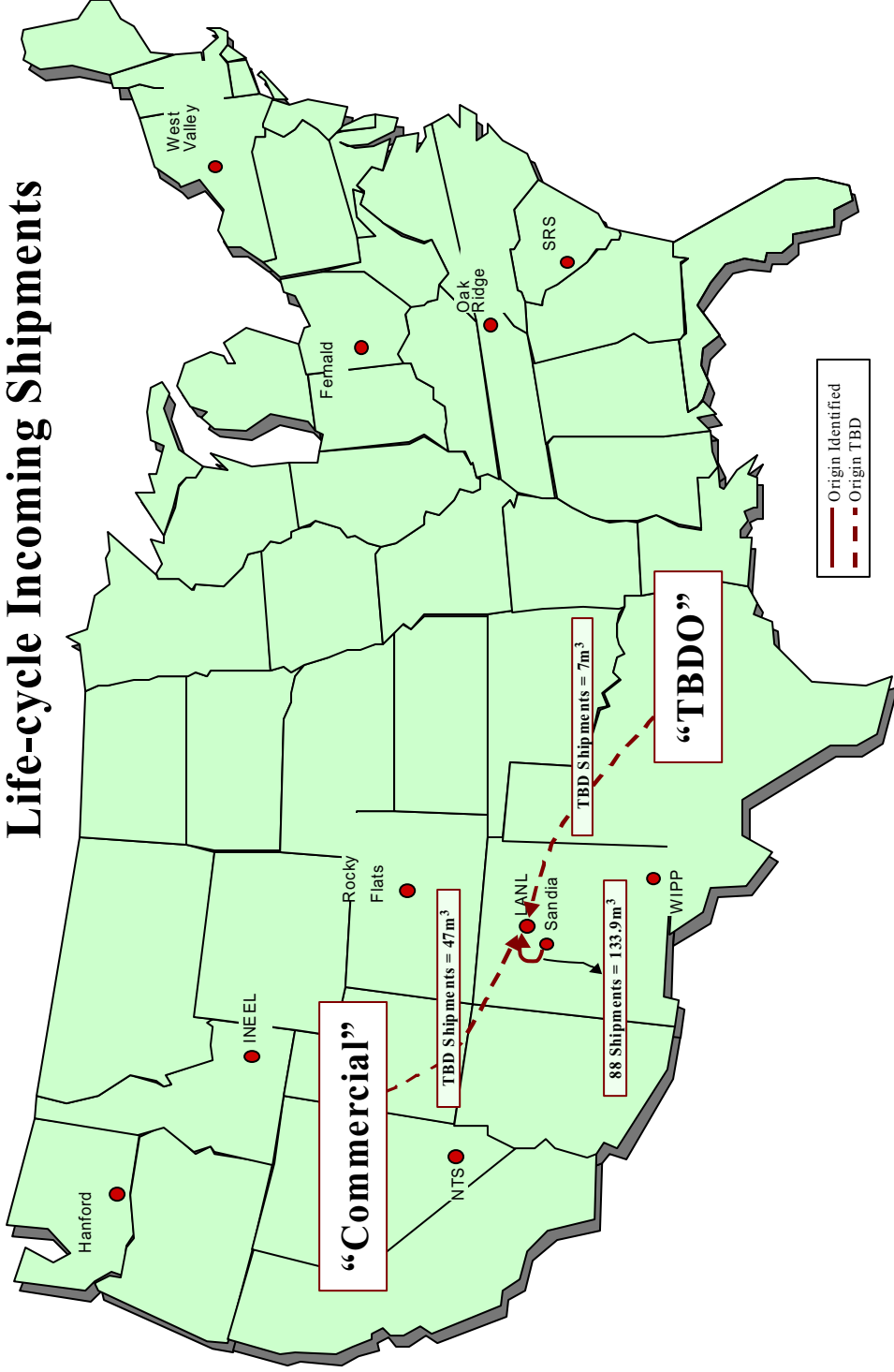


**Los Alamos National Laboratory**  
Outgoing MLLW Volume to "TBD"

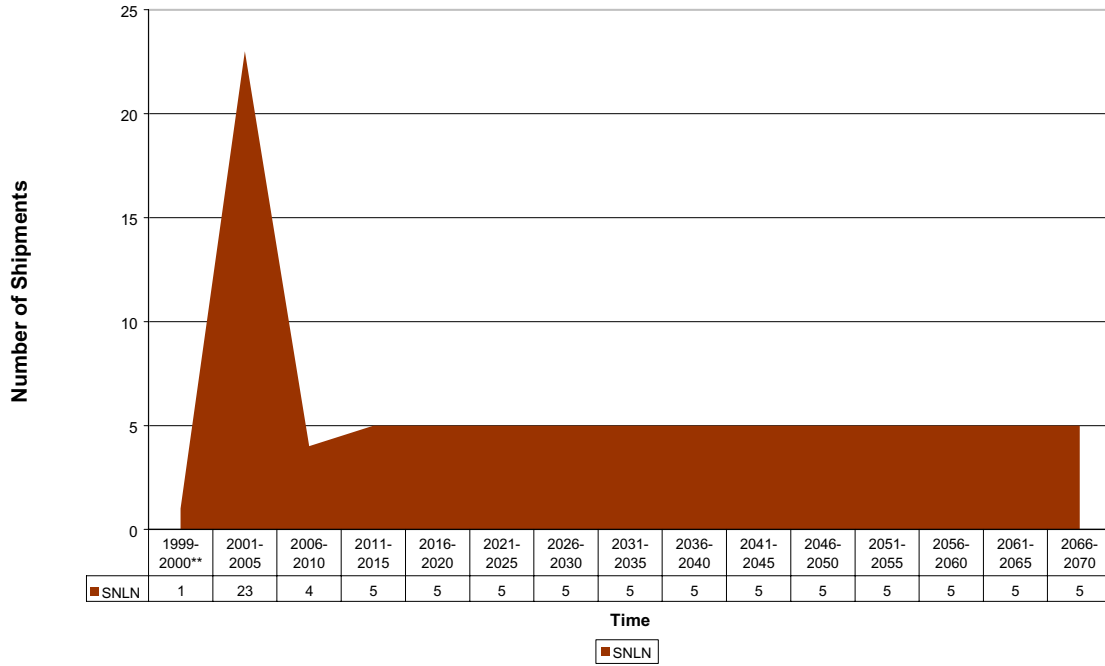




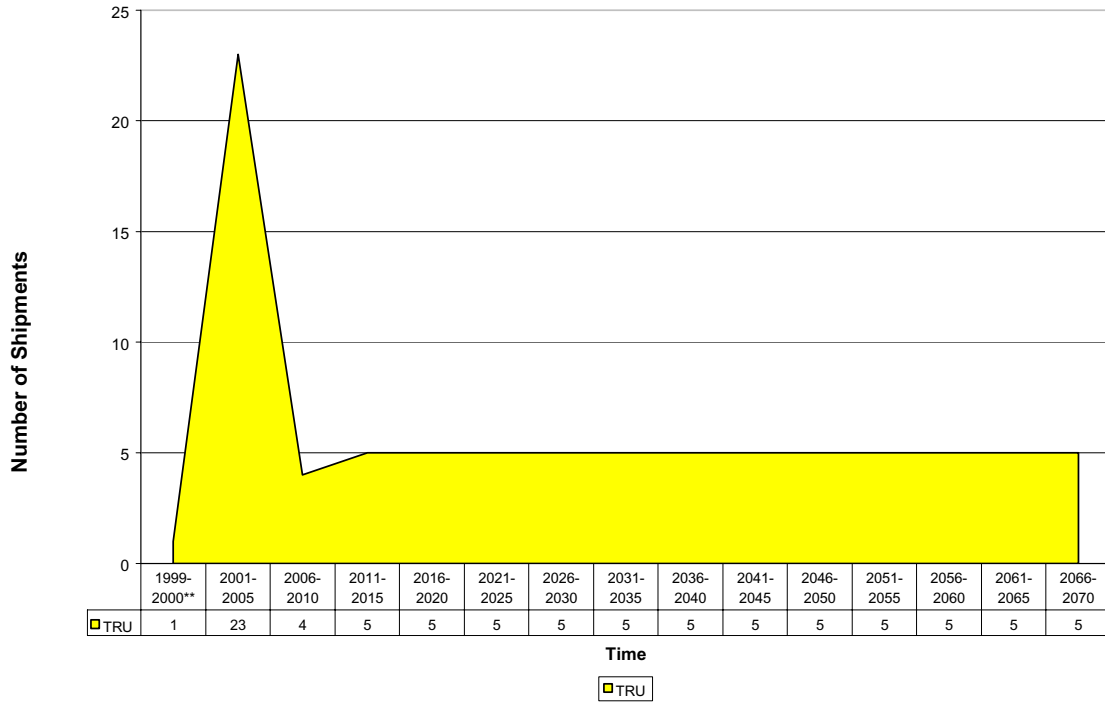
# Los Alamos National Laboratory Waste Stream Disposition Life-cycle Incoming Shipments



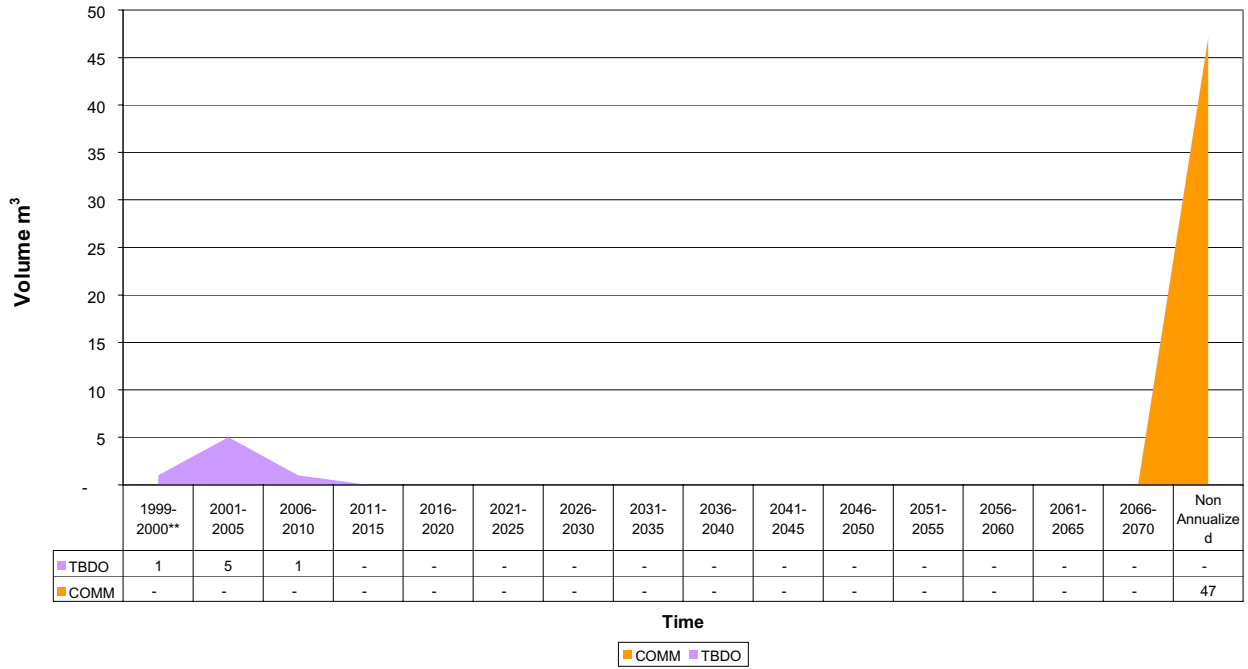
**Los Alamos National Laboratory  
Waste Stream Disposition  
Life-cycle Incoming Shipments**



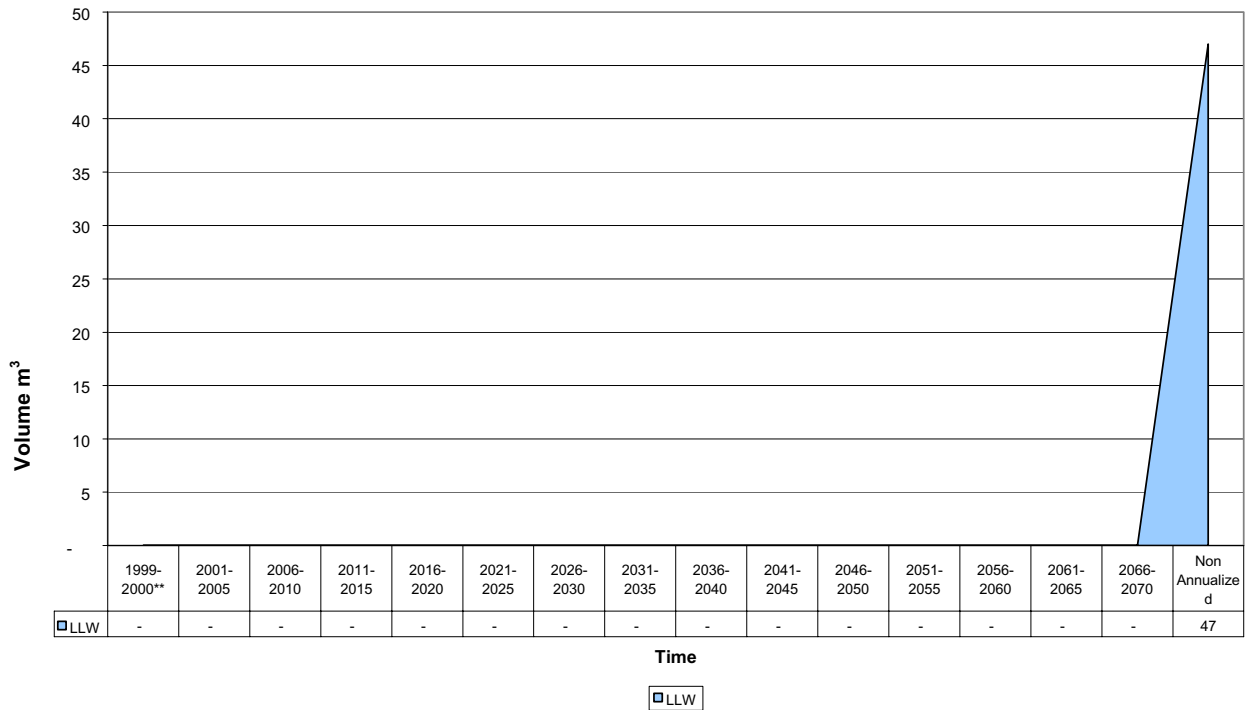
**Los Alamos National Laboratory  
Incoming TRU Shipments from Sandia**



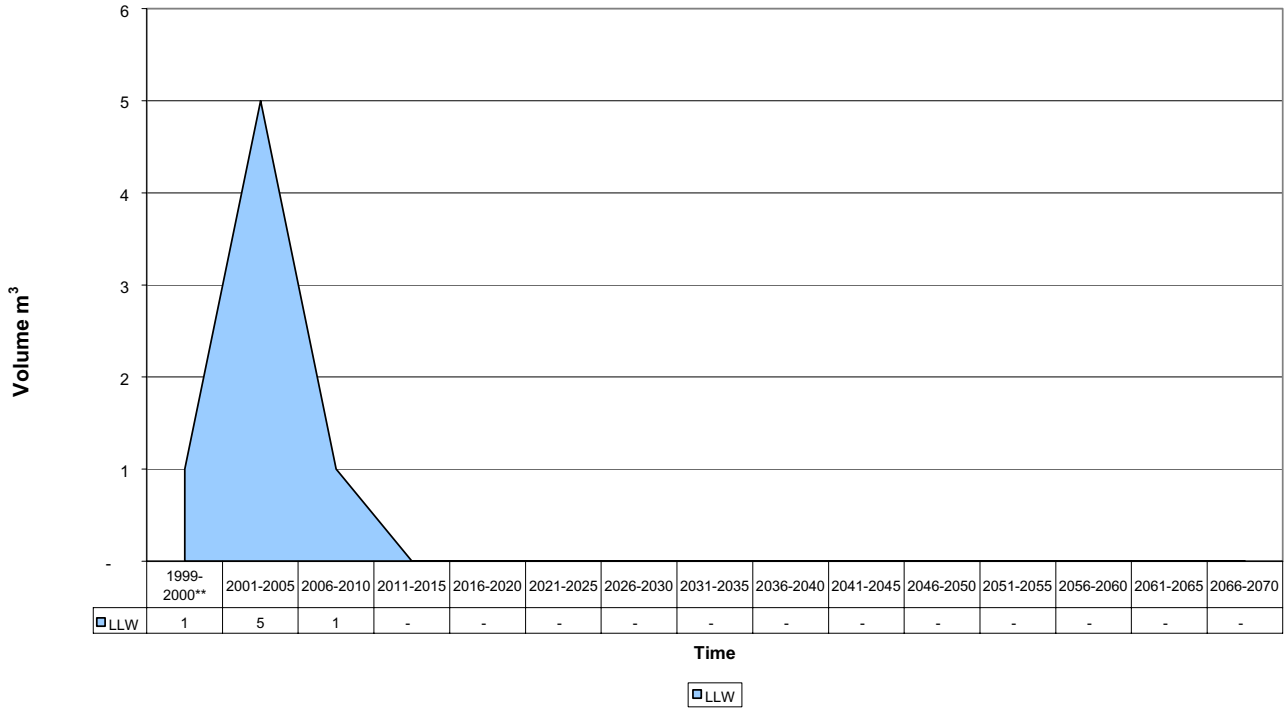
**Los Alamos National Laboratory  
Waste Stream Disposition  
Life-cycle Incoming Volume**



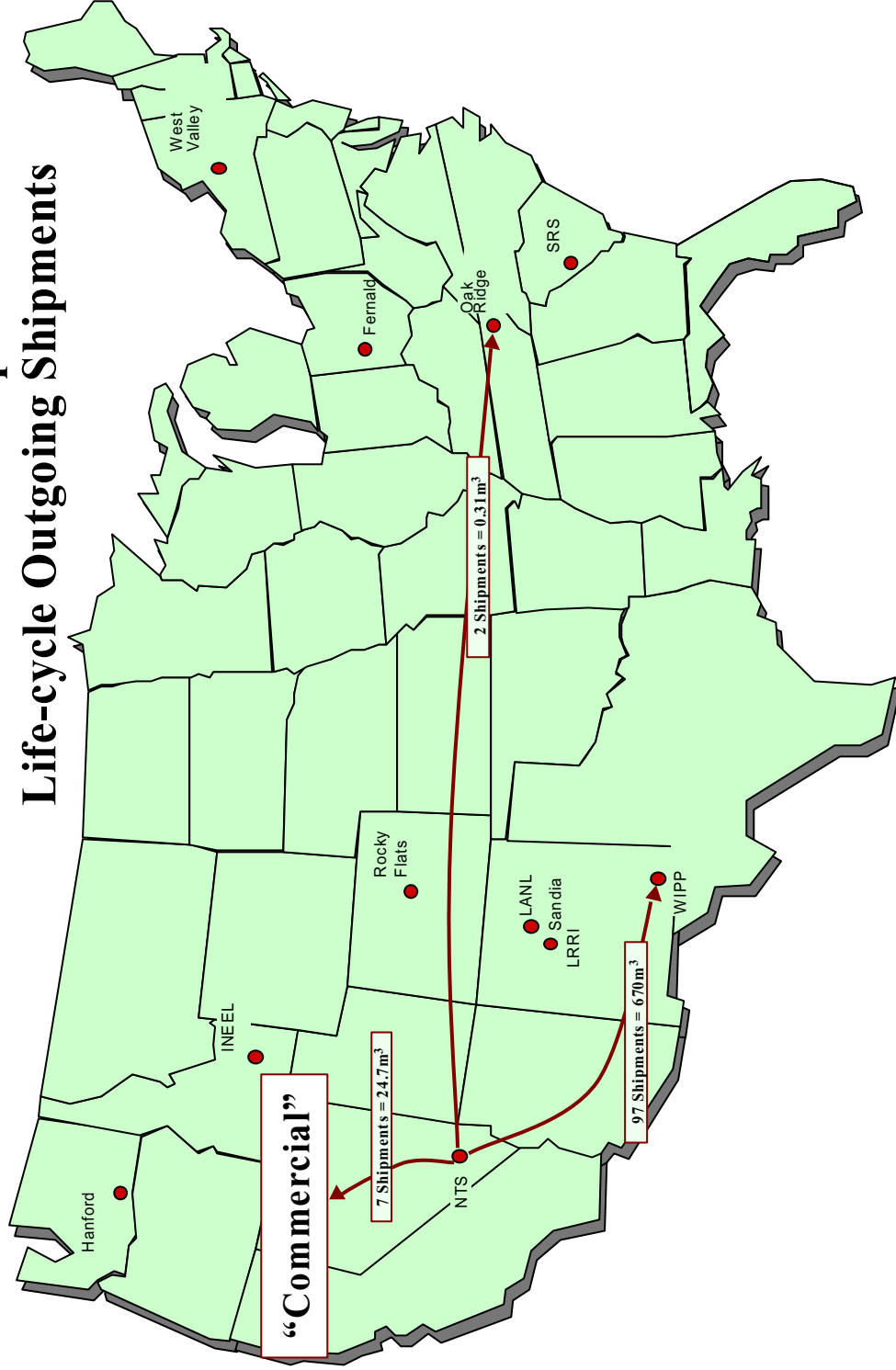
**Los Alamos National Laboratory  
Incoming LLW Volume from "Commercial"**



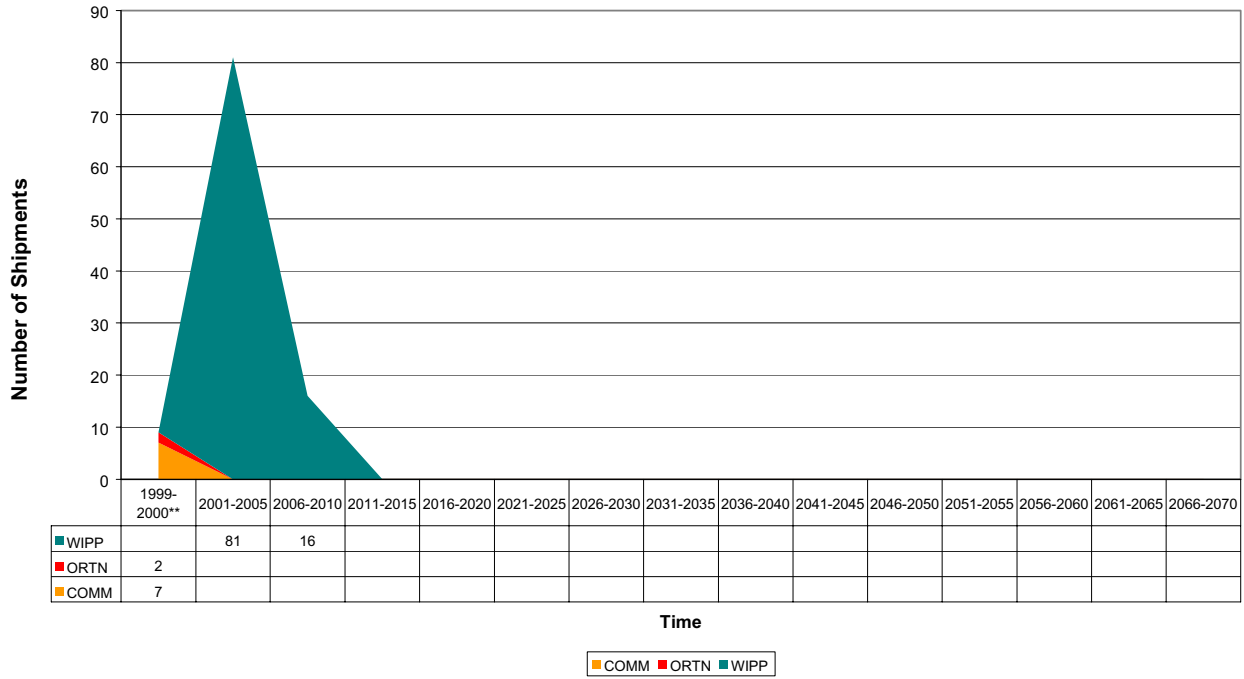
**Los Alamos National Laboratory**  
Incoming LLW Volume from "TBDO"



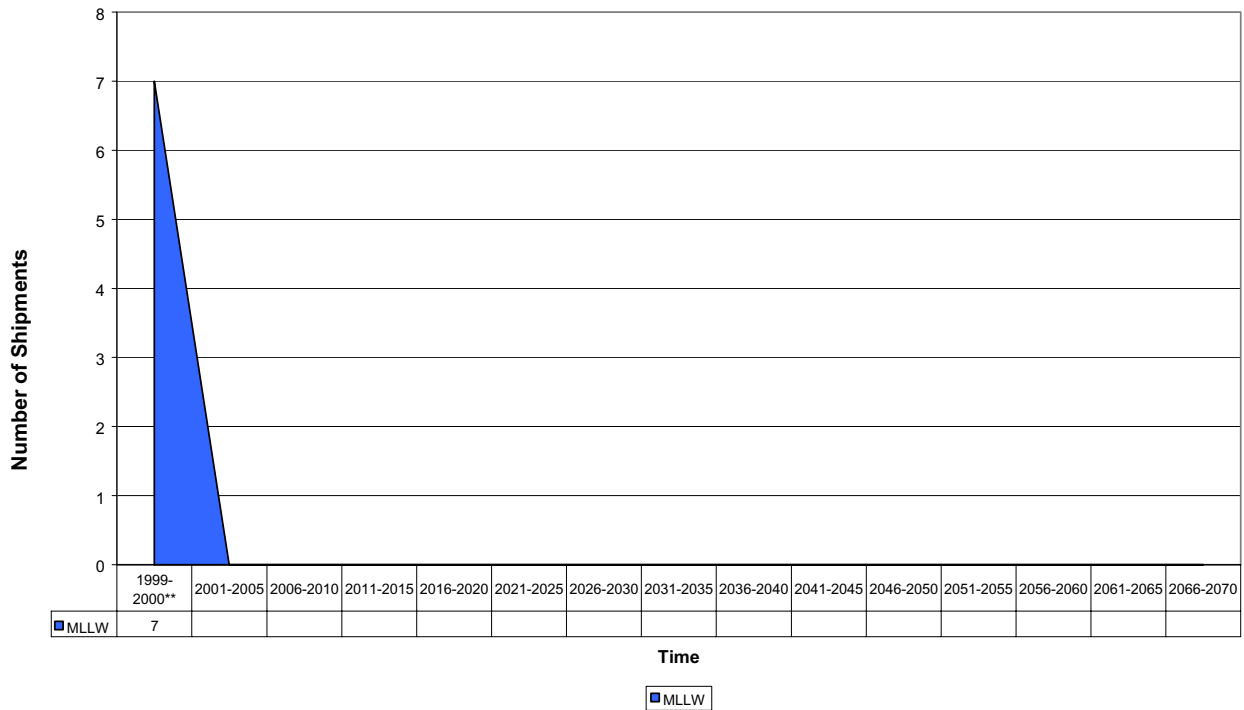
# Nevada Test Site Waste Stream Disposition Life-cycle Outgoing Shipments



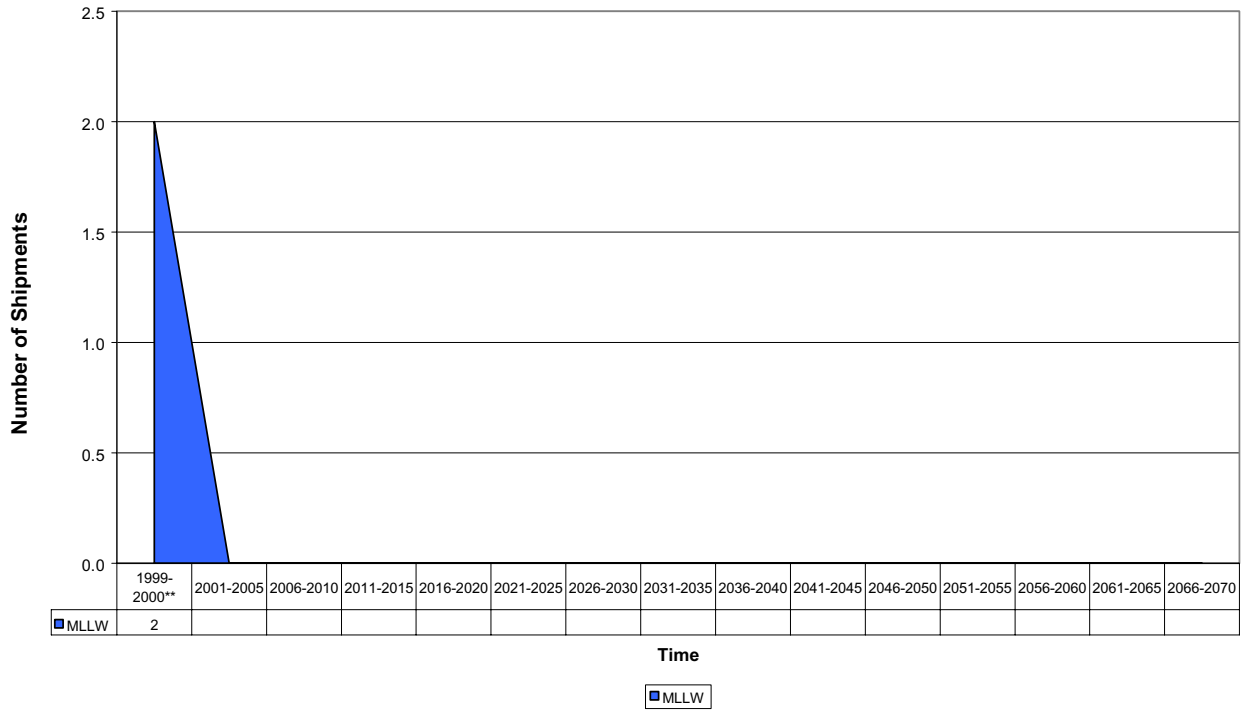
**Nevada Test Site  
Waste Stream Disposition  
Life-cycle Outgoing Shipments**



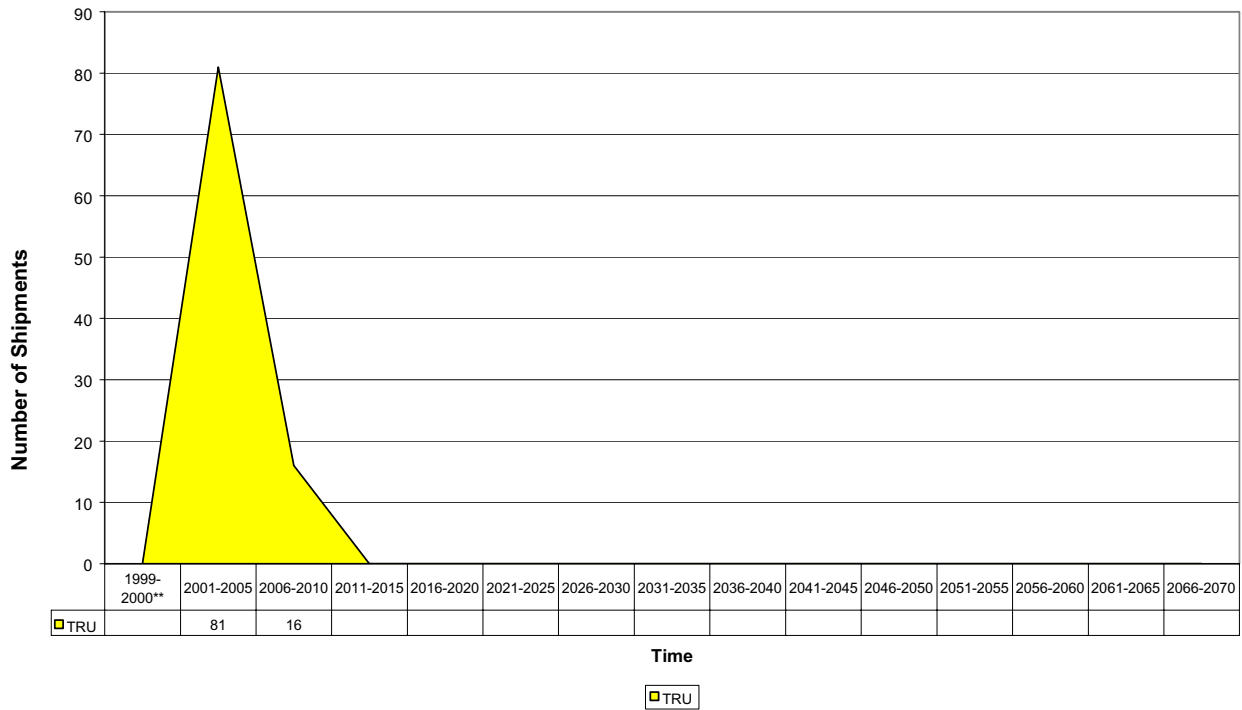
**Nevada Test Site  
Outgoing MLLW Shipments to "Commercial"**



**Nevada Test Site**  
Outgoing MLLW Shipments to Oak Ridge



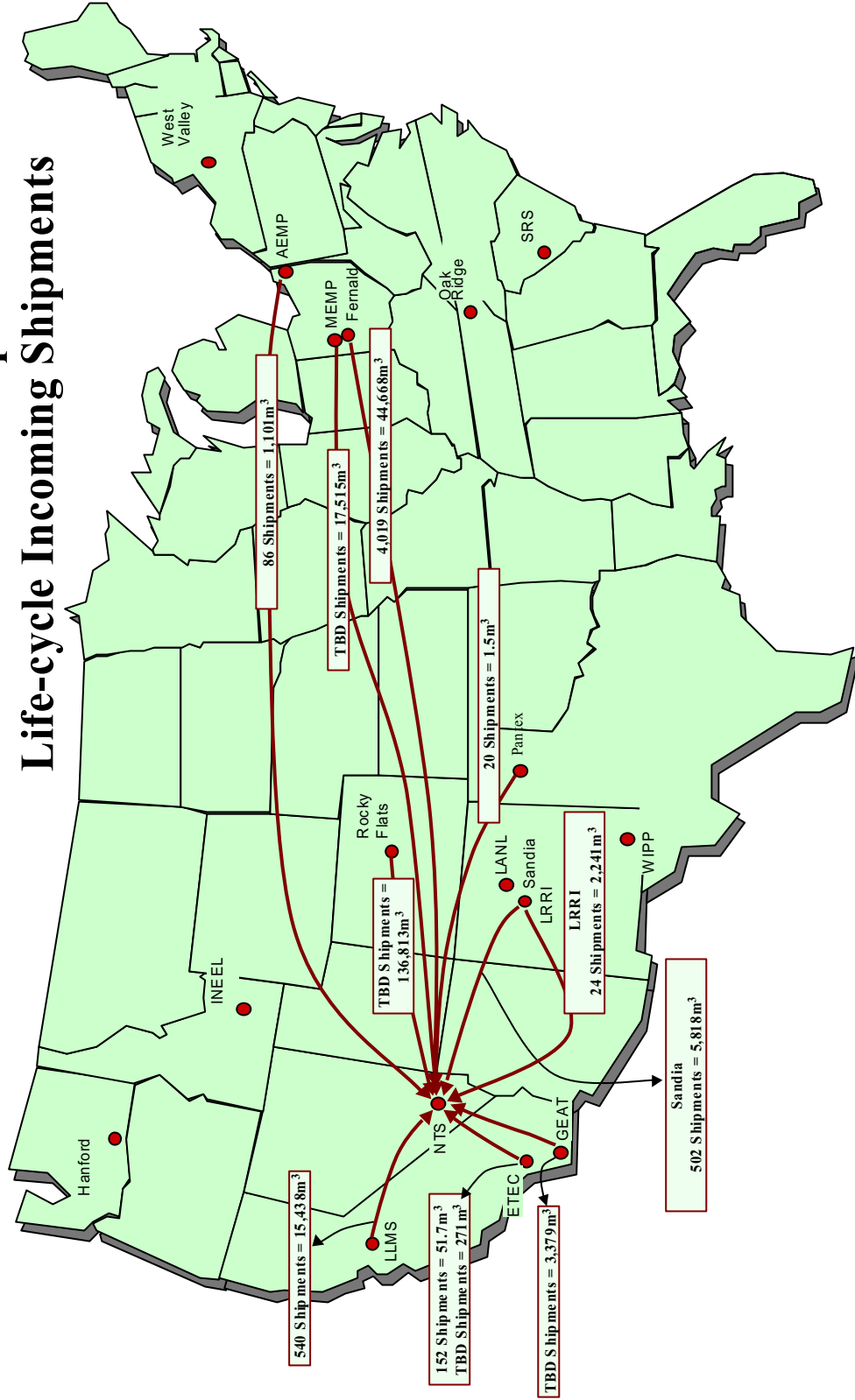
**Nevada Test Site**  
Outgoing TRU Shipments to WIPP



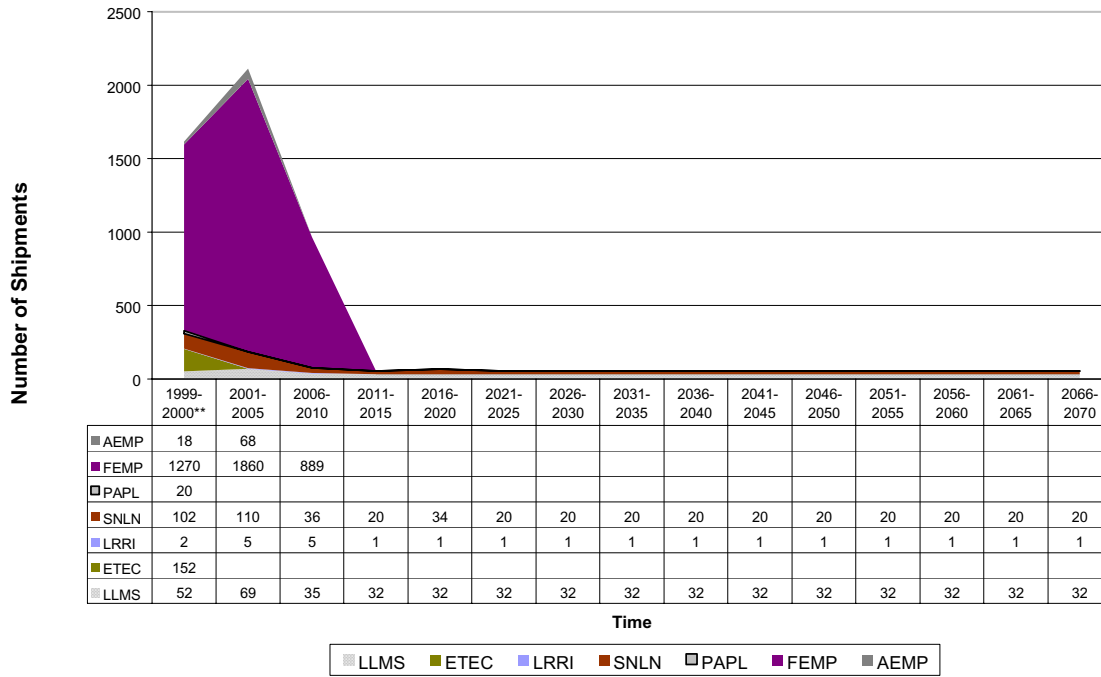




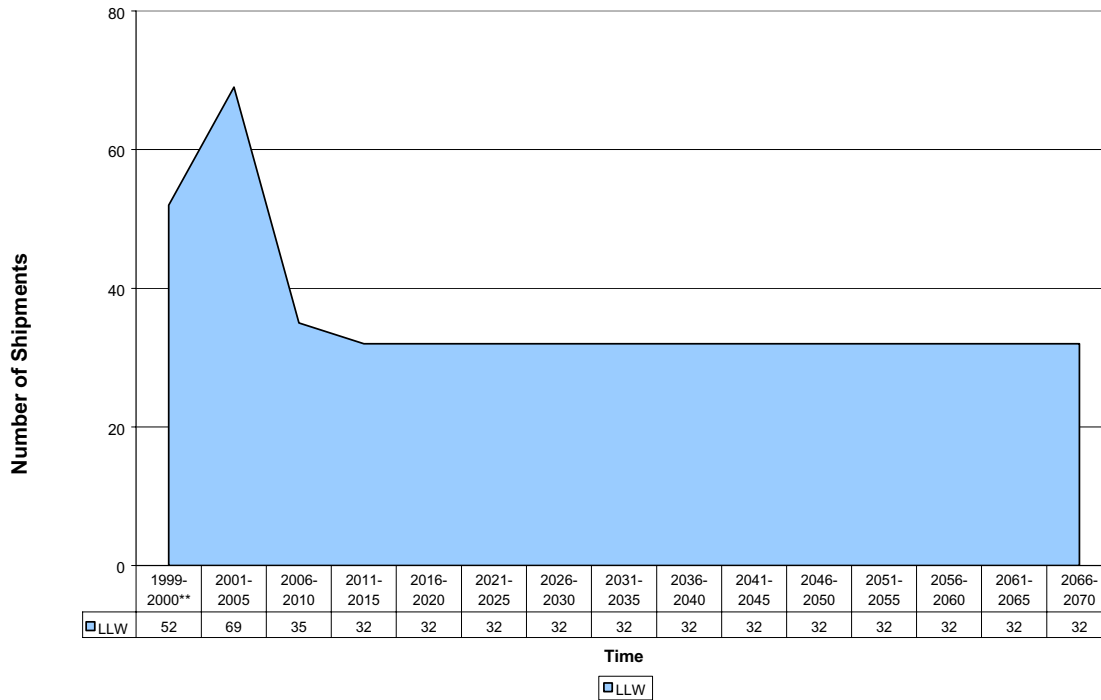
# Nevada Test Site Waste Stream Disposition Life-cycle Incoming Shipments



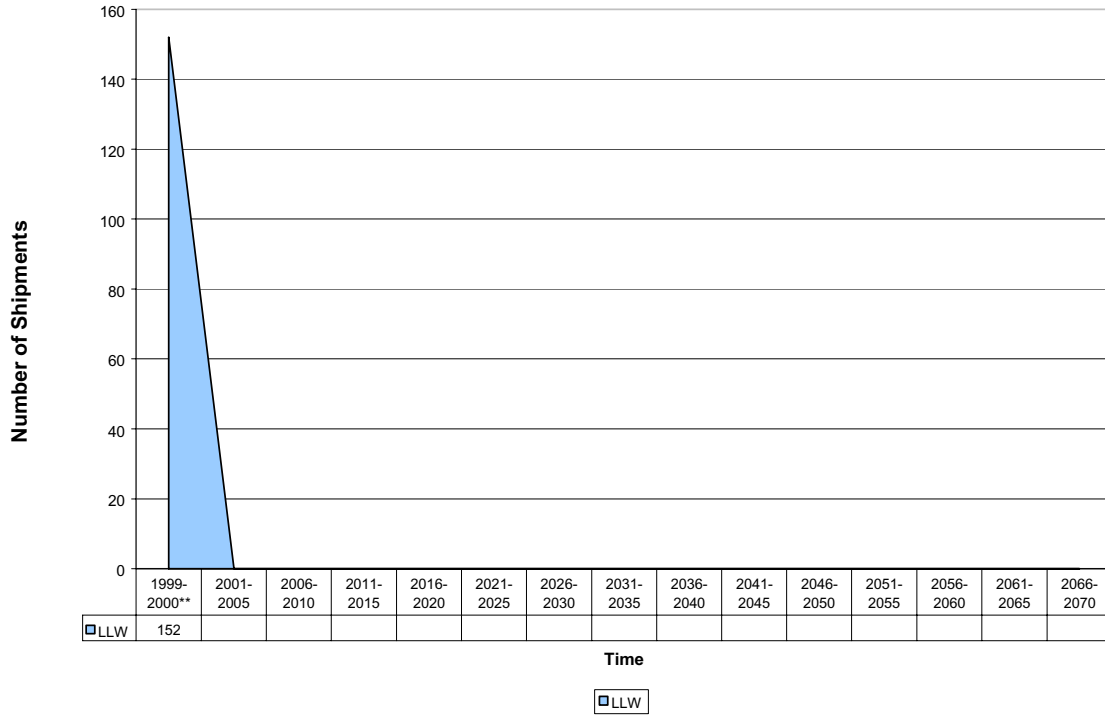
**Nevada Test Site  
Waste Stream Disposition  
Life-cycle Incoming Shipments**



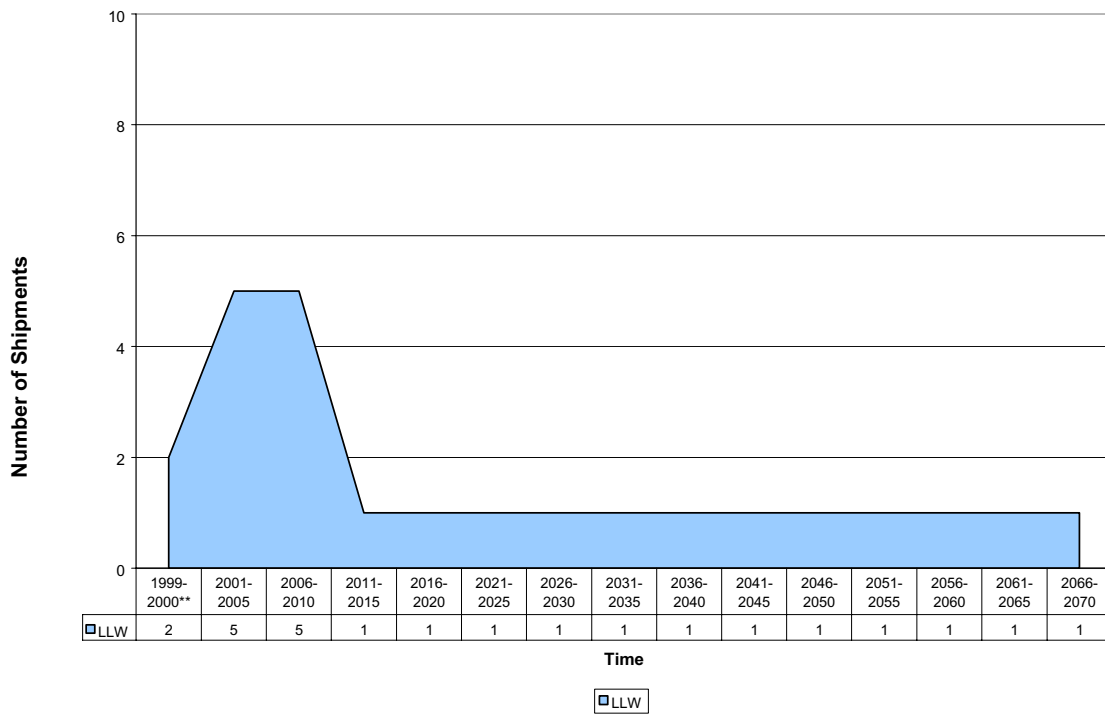
**Nevada Test Site  
Incoming LLW Shipments from  
Lawrence Livermore National Laboratory - Main Site**



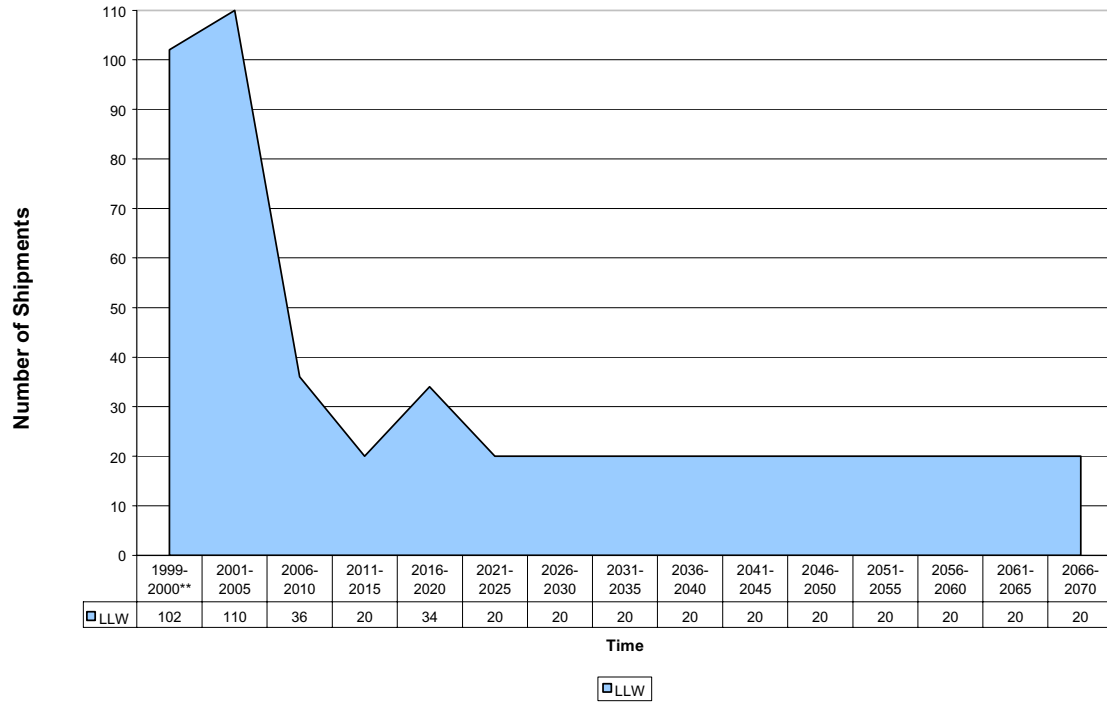
**Nevada Test Site**  
Incoming LLW Shipments from  
Energy Technology Engineering Center



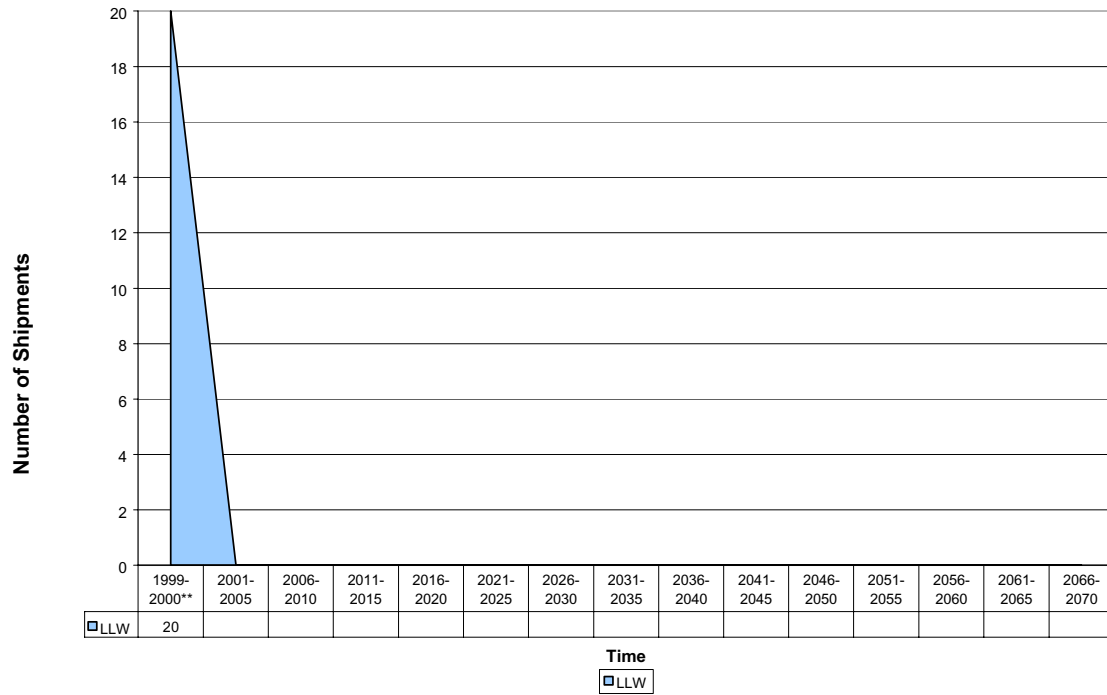
**Nevada Test Site**  
Incoming LLW Shipments from  
Lovelace Respiratory Research Institute



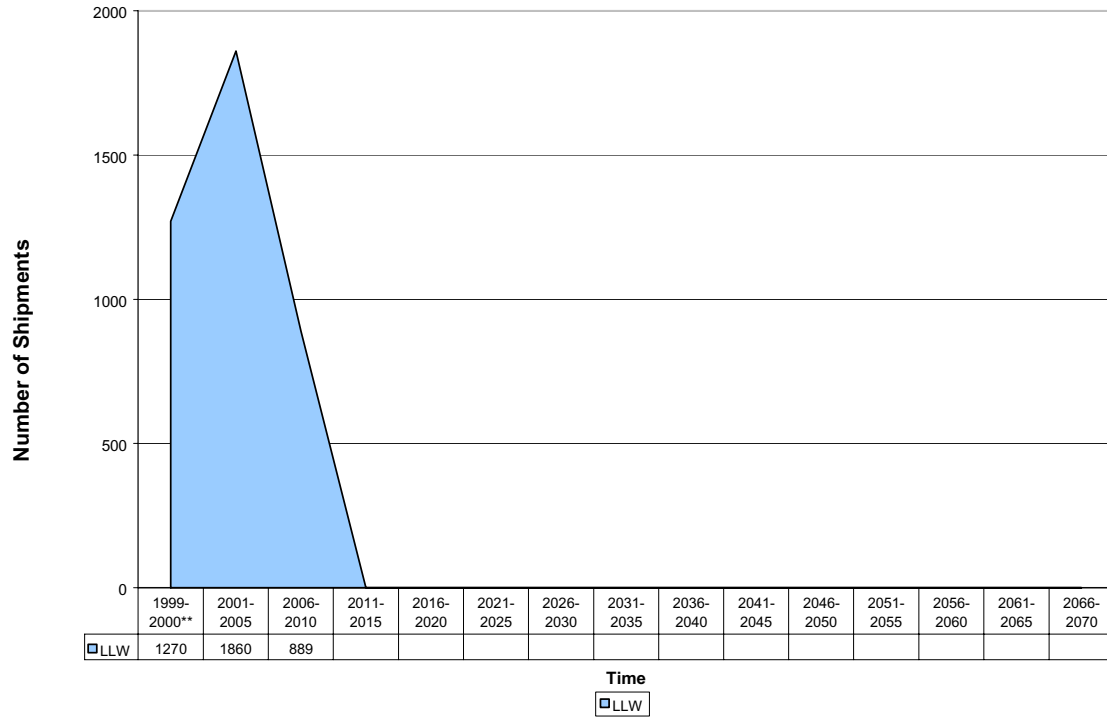
**Nevada Test Site**  
Incoming LLW Shipments from  
Sandia National Laboratory



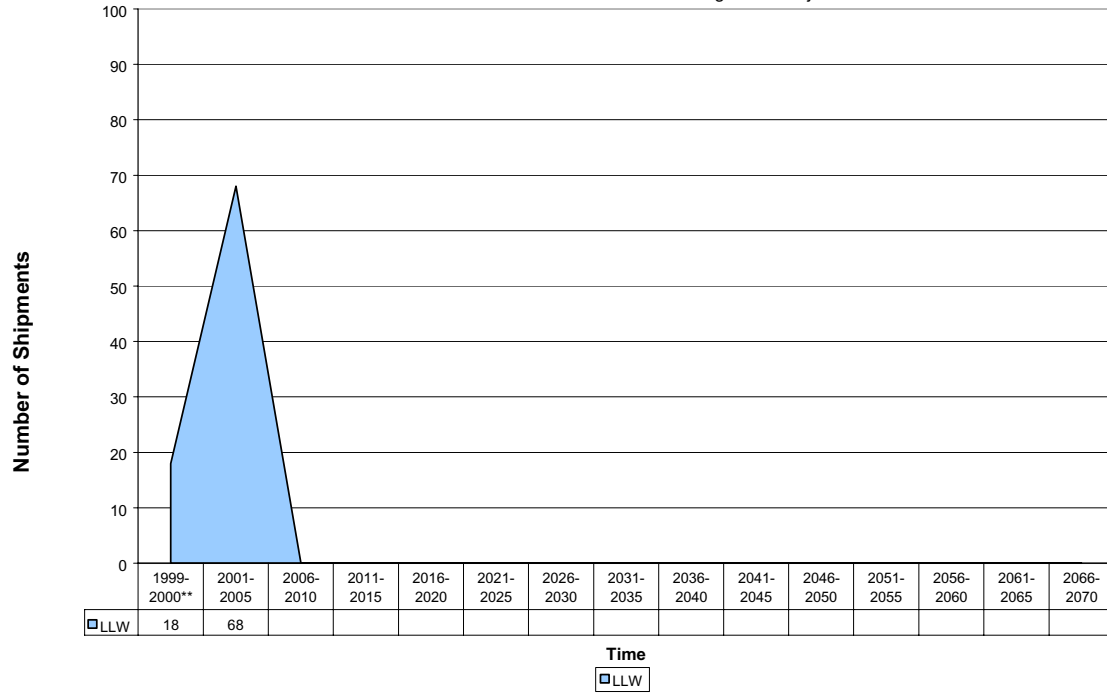
**Nevada Test Site**  
Incoming LLW Shipments from Pantex Plant



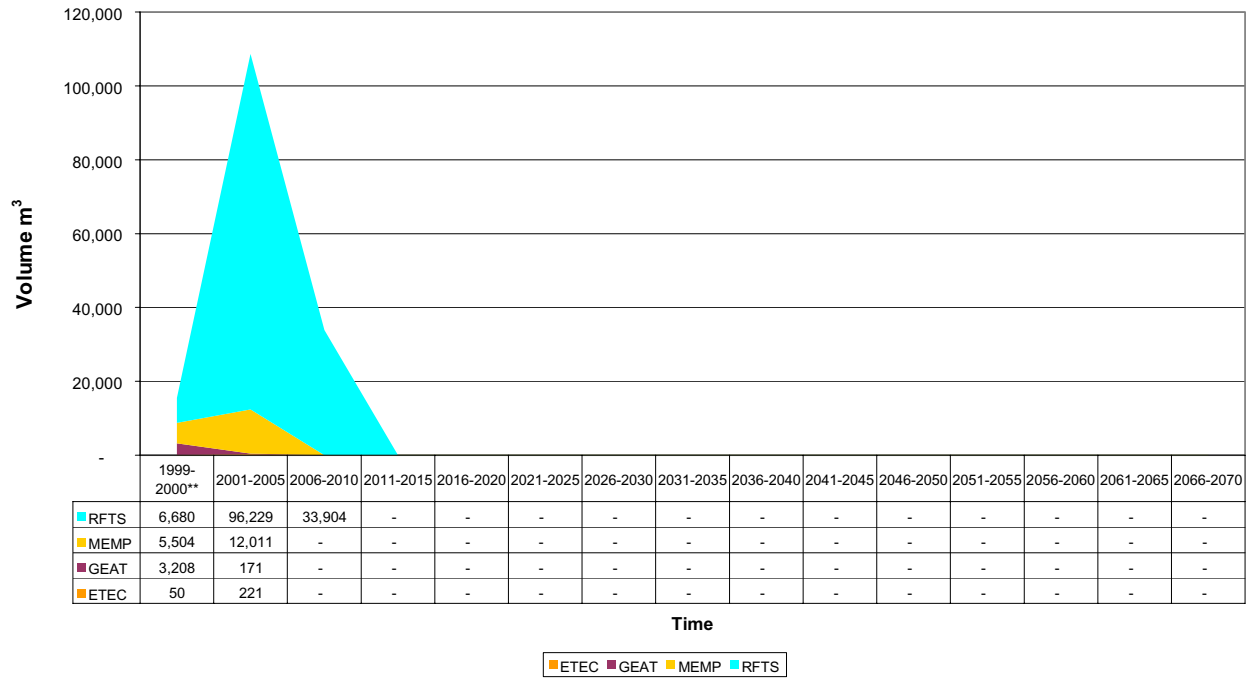
**Nevada Test Site**  
Incoming LLW Shipments from Fernald



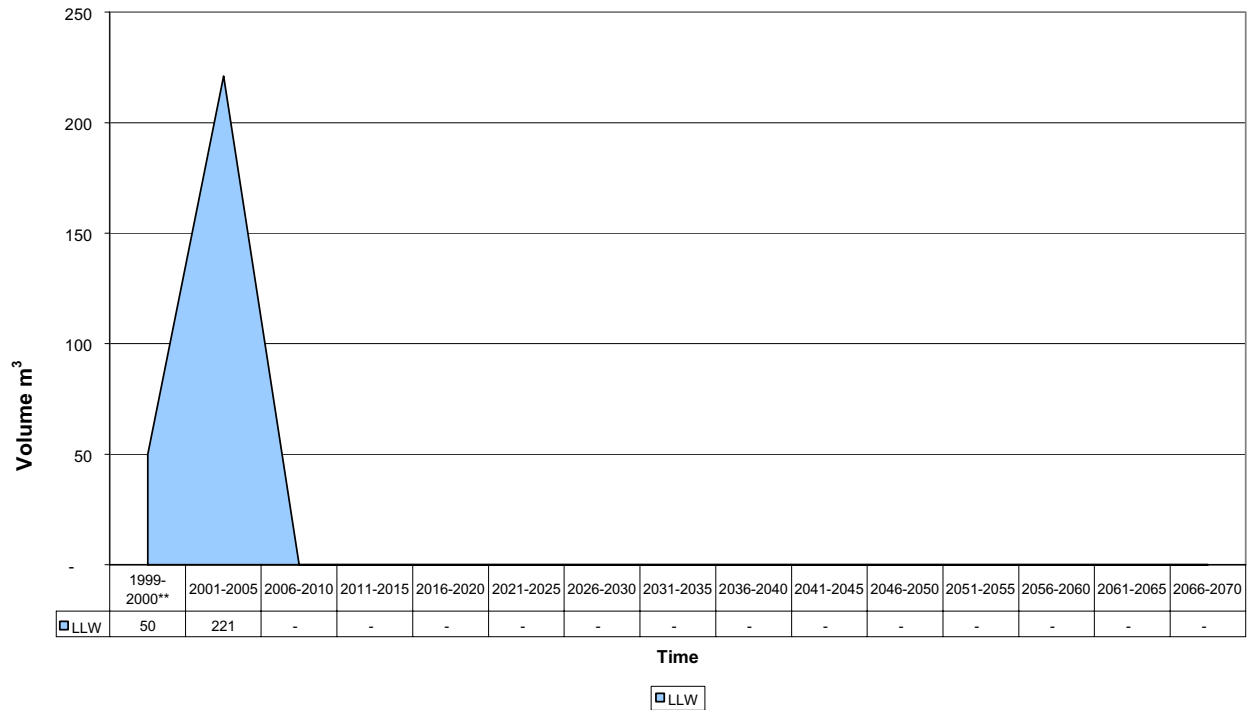
**Nevada Test Site**  
Incoming LLW Shipments from  
Ashtabula Environmental Management Project



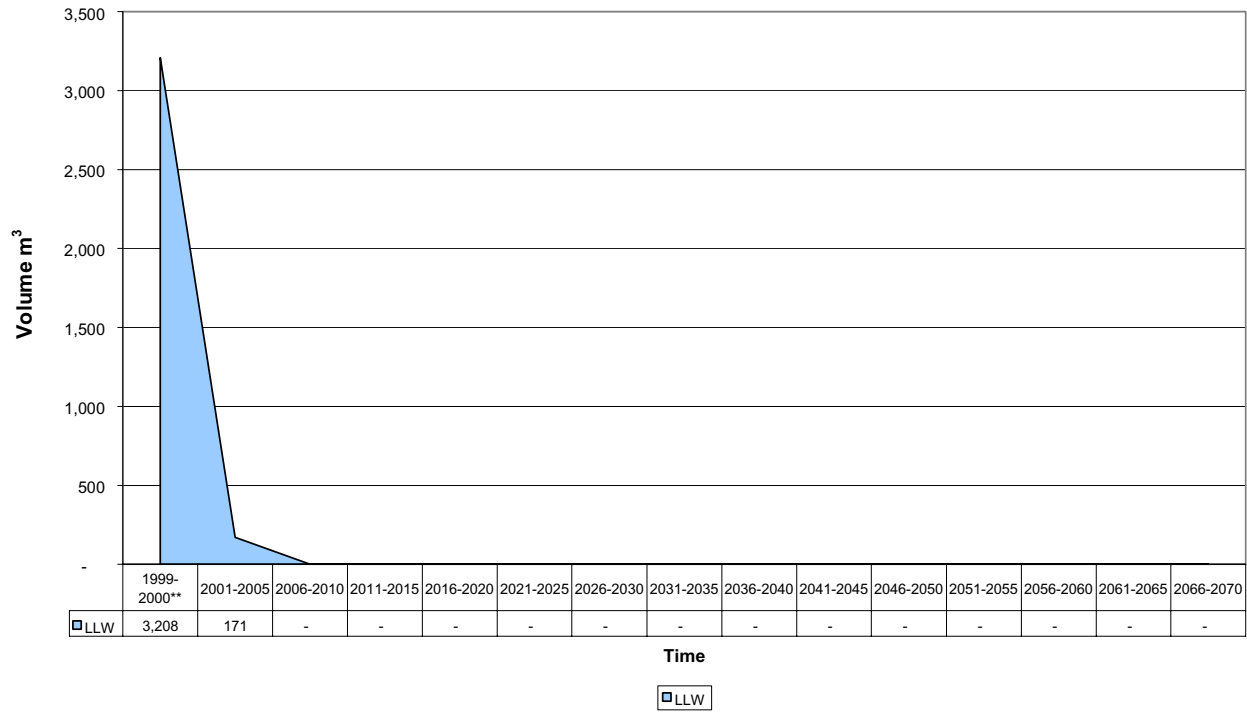
**Nevada Test Site  
Waste Stream Disposition  
Life-cycle Incoming Volume**



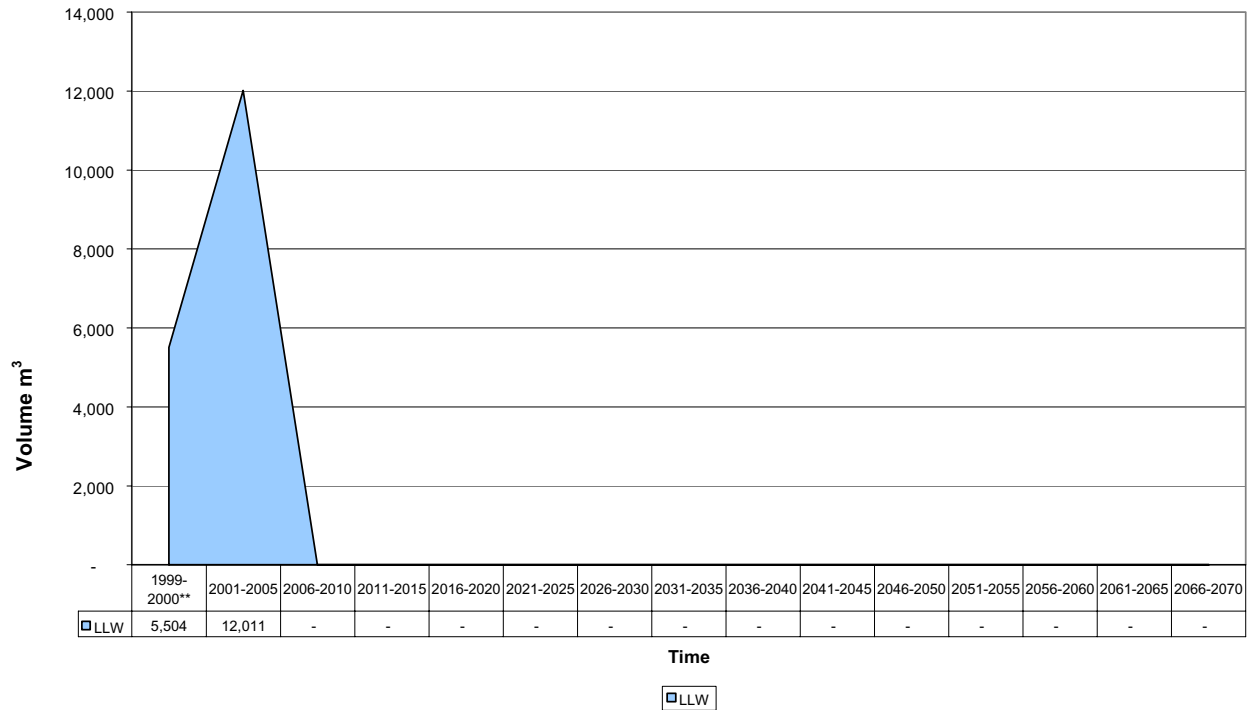
**Nevada Test Site  
Incoming LLW Volume from Energy Technology Engineering Center**



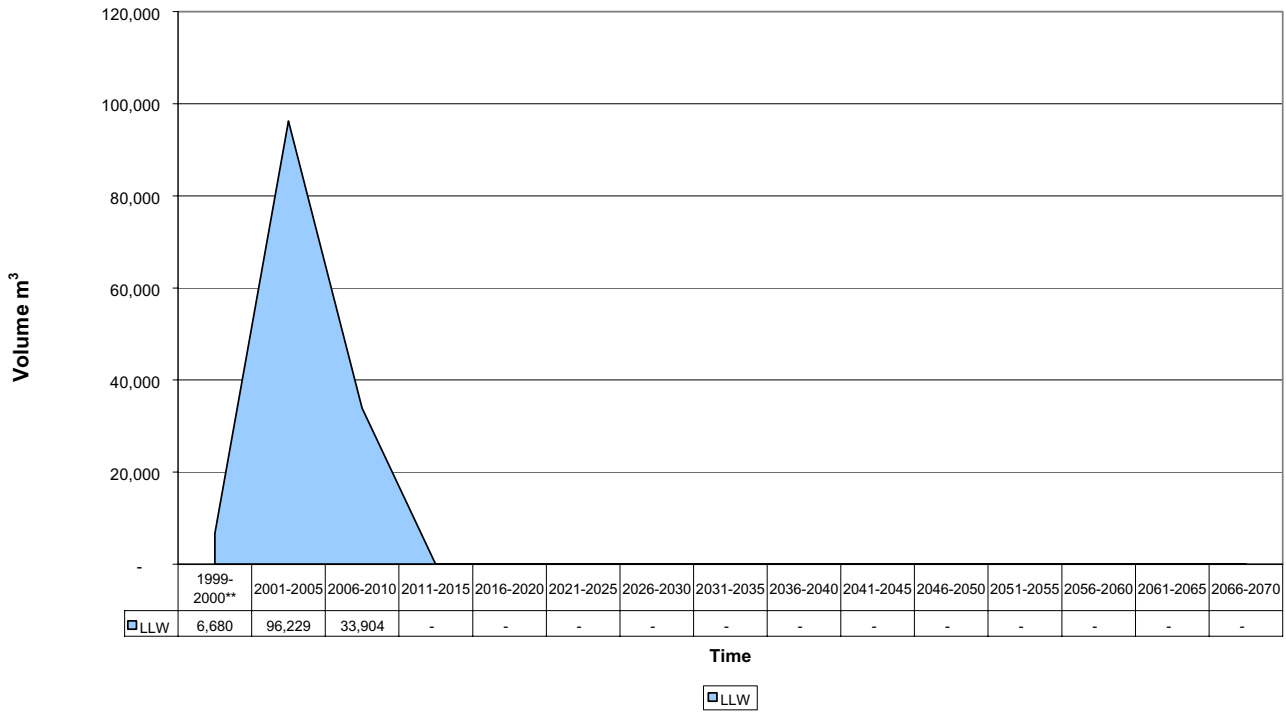
**Nevada Test Site**  
Incoming LLW Volume from General Atomics



**Nevada Test Site**  
Incoming LLW Volume from Miamisburg Environmental Management Project

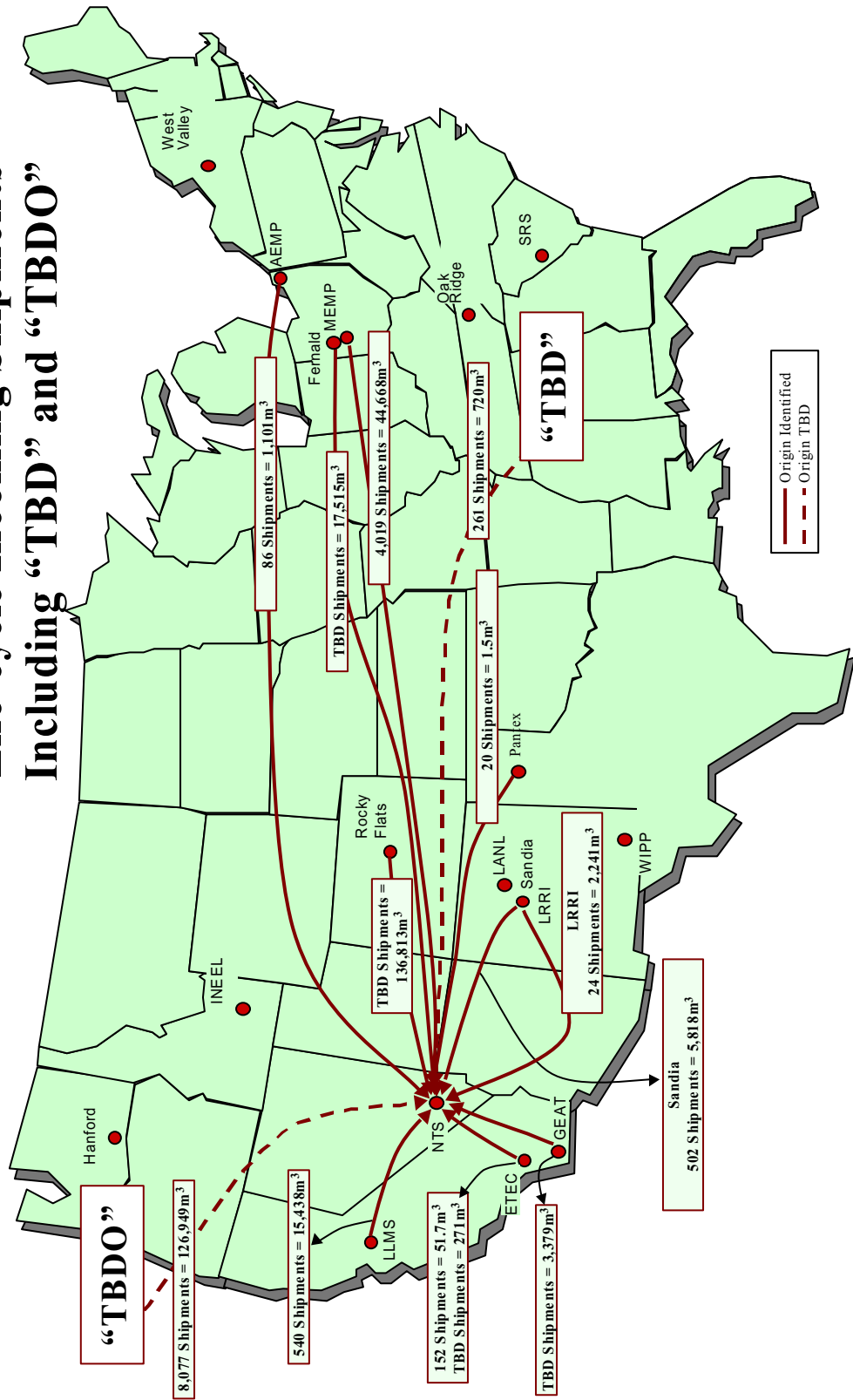


**Nevada Test Site**  
Incoming LLW Volume from Rocky Flats

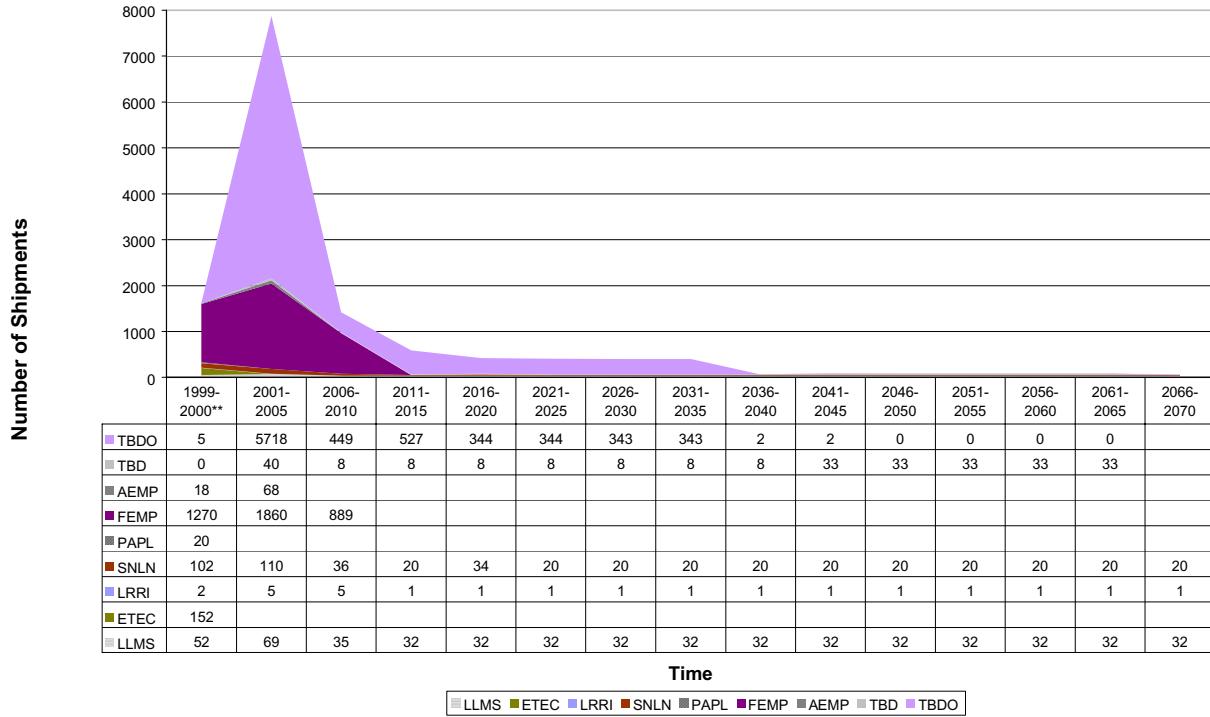




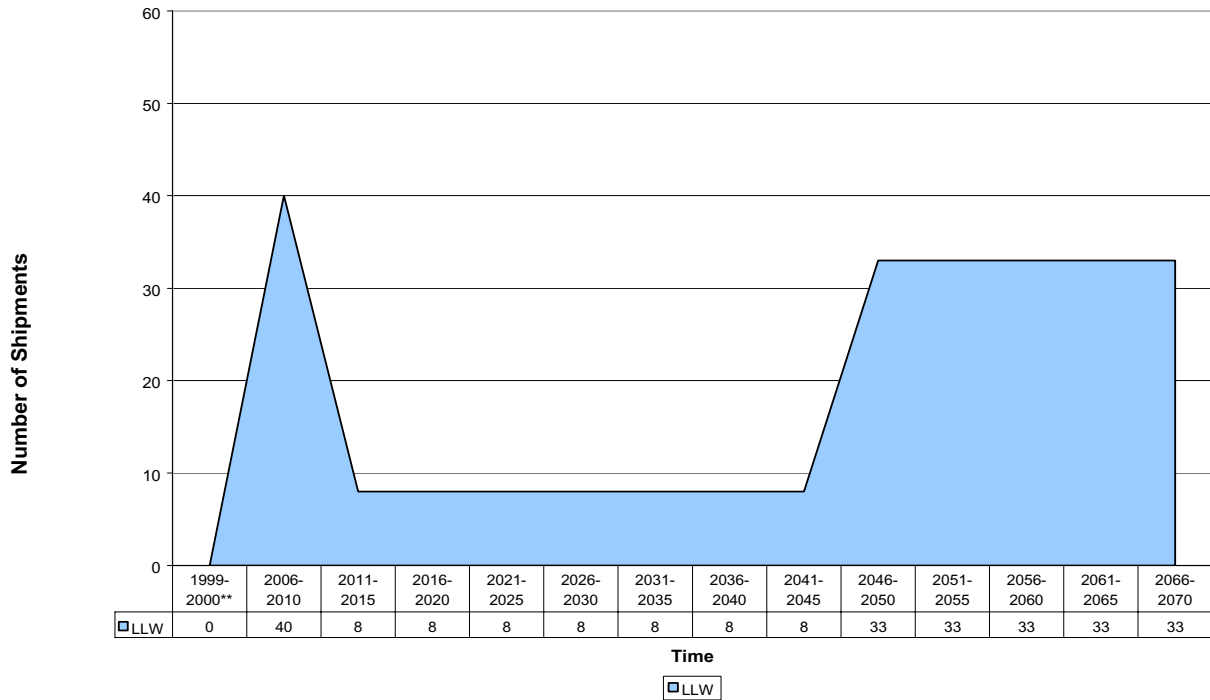
# Nevada Test Site Waste Stream Disposition Life-cycle Incoming Shipments Including "TBD" and "TBDO"



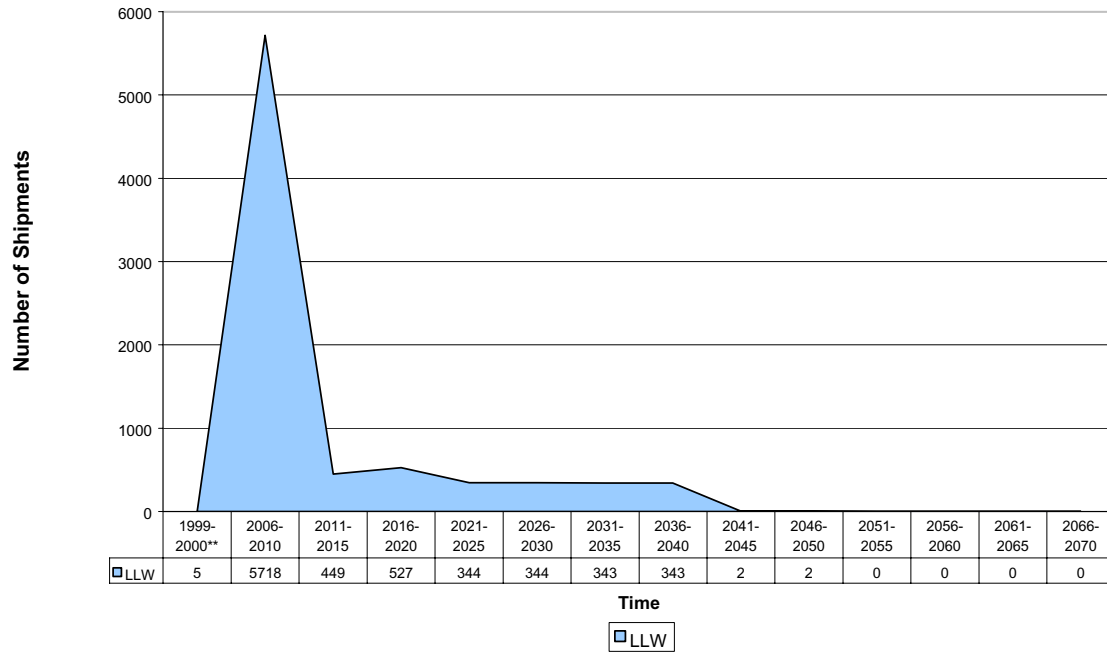
**Nevada Test Site  
Waste Stream Disposition  
Life-cycle Incoming Shipments Including "TBD" and "TBDO"**



**Nevada Test Site  
Incoming LLW Shipments from "TBD"**

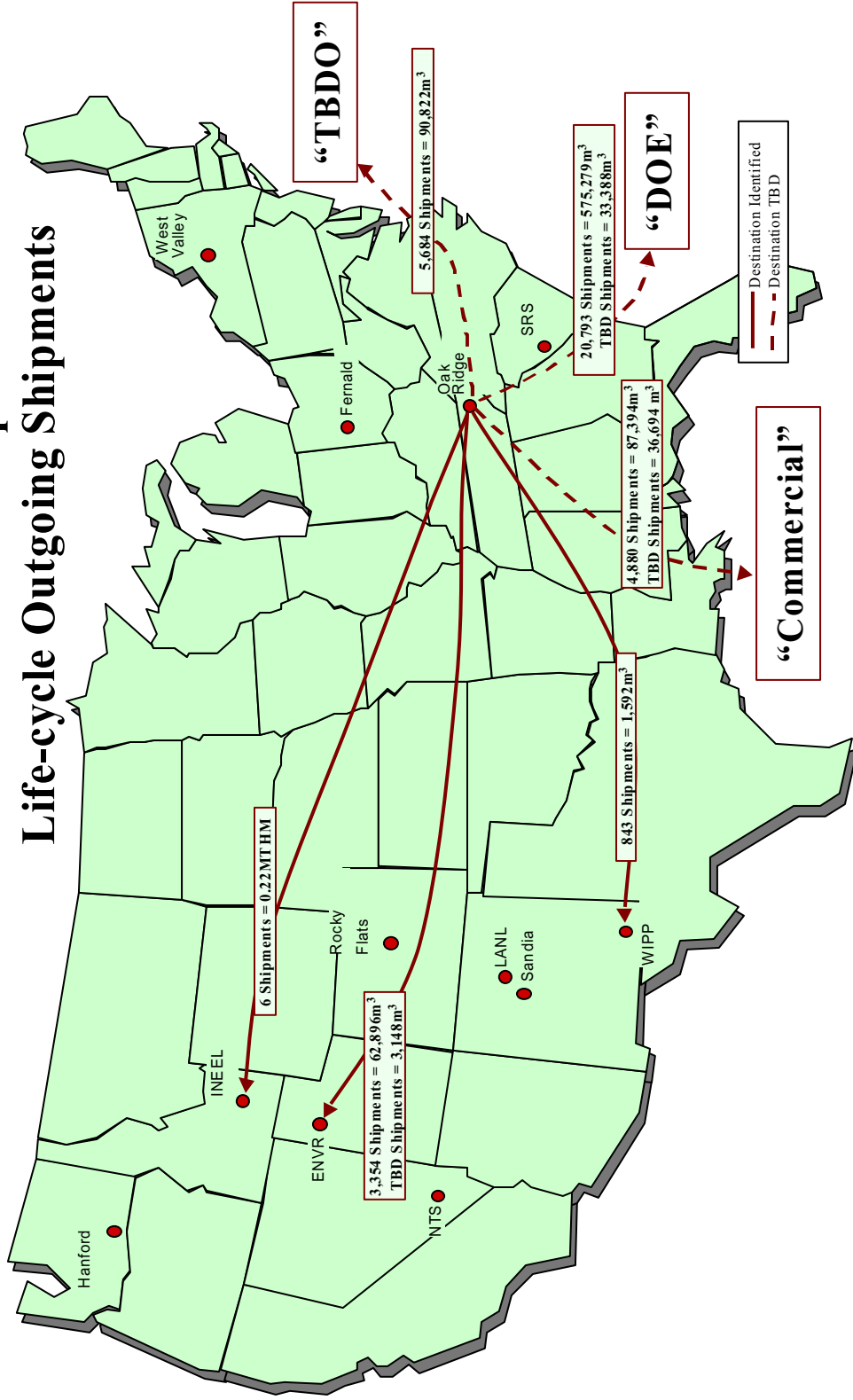


**Nevada Test Site**  
Incoming LLW Shipments from "TBDO"

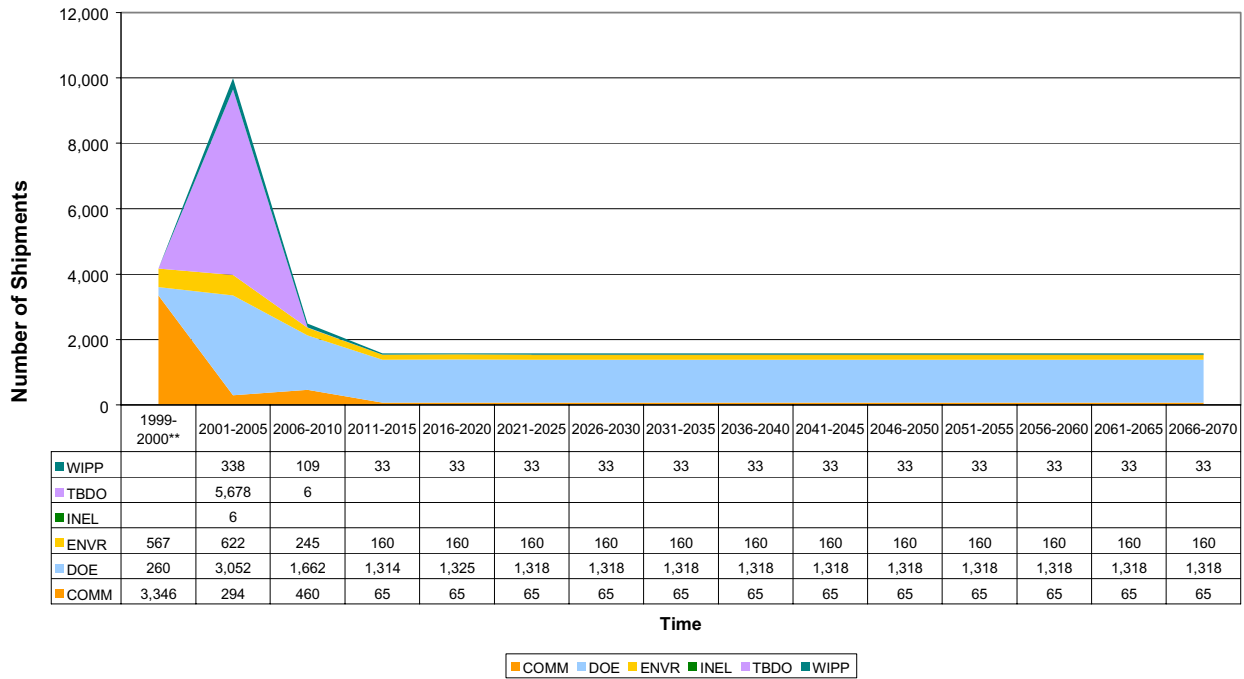




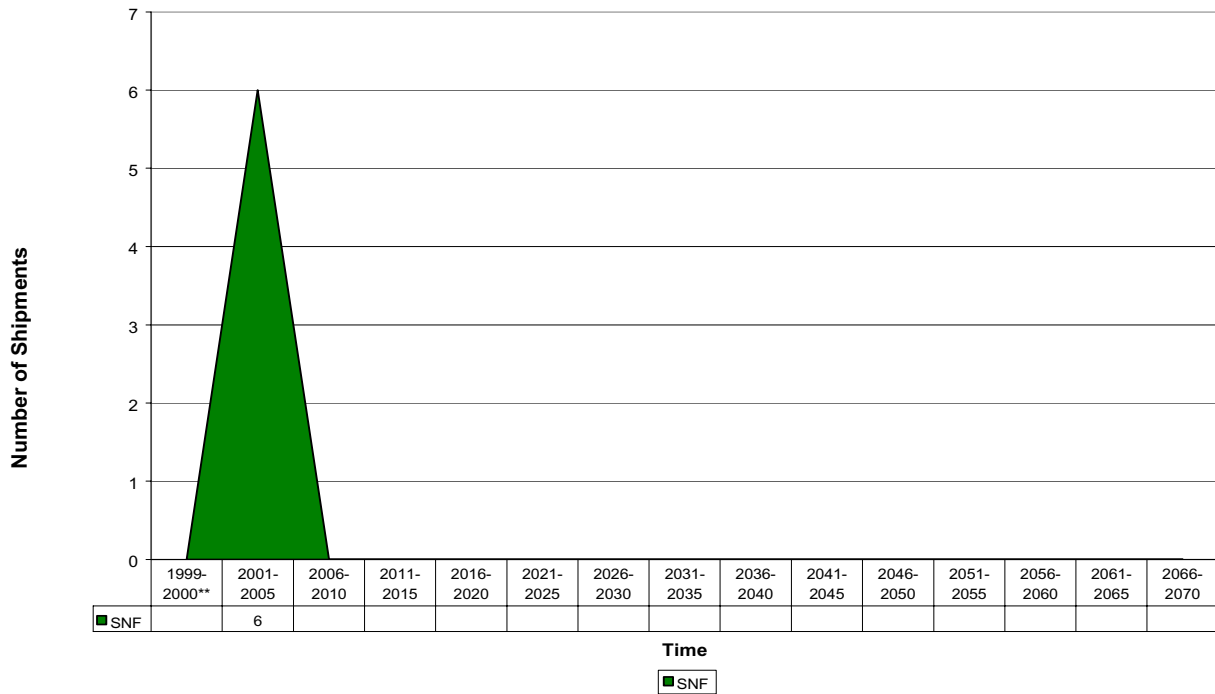
# Oak Ridge Waste Stream Disposition Life-cycle Outgoing Shipments



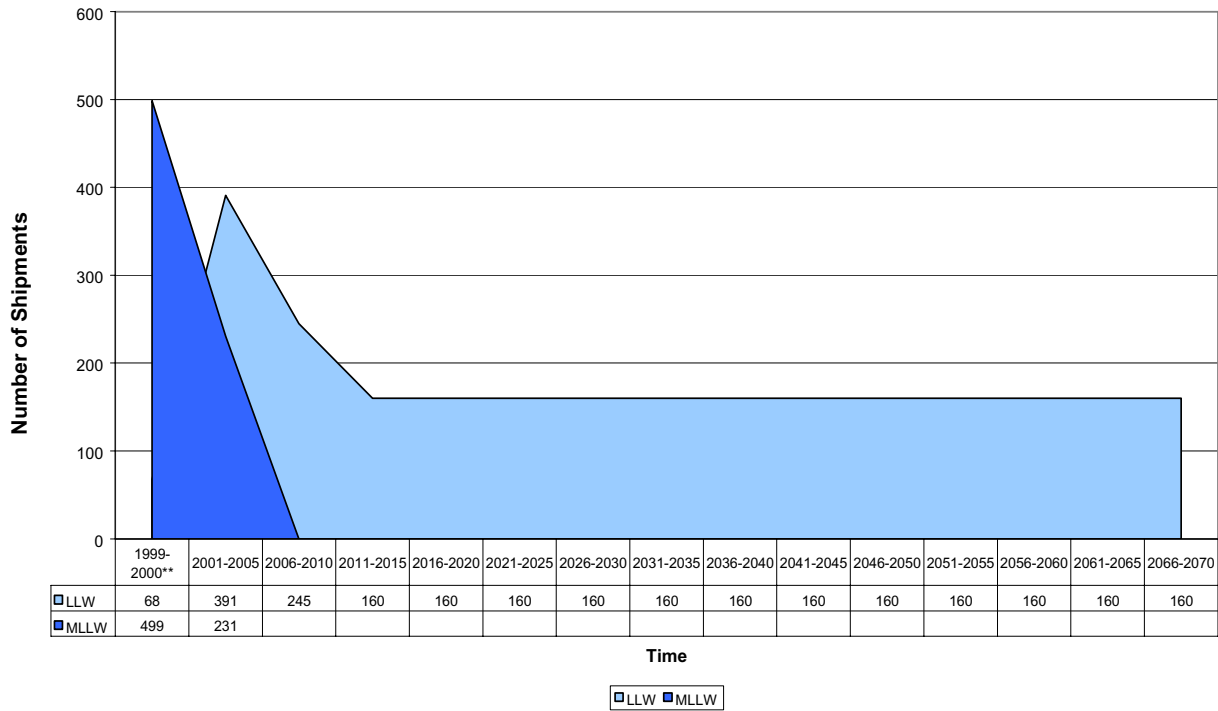
**Oak Ridge  
Waste Stream Disposition  
Life-cycle Outgoing Shipments**



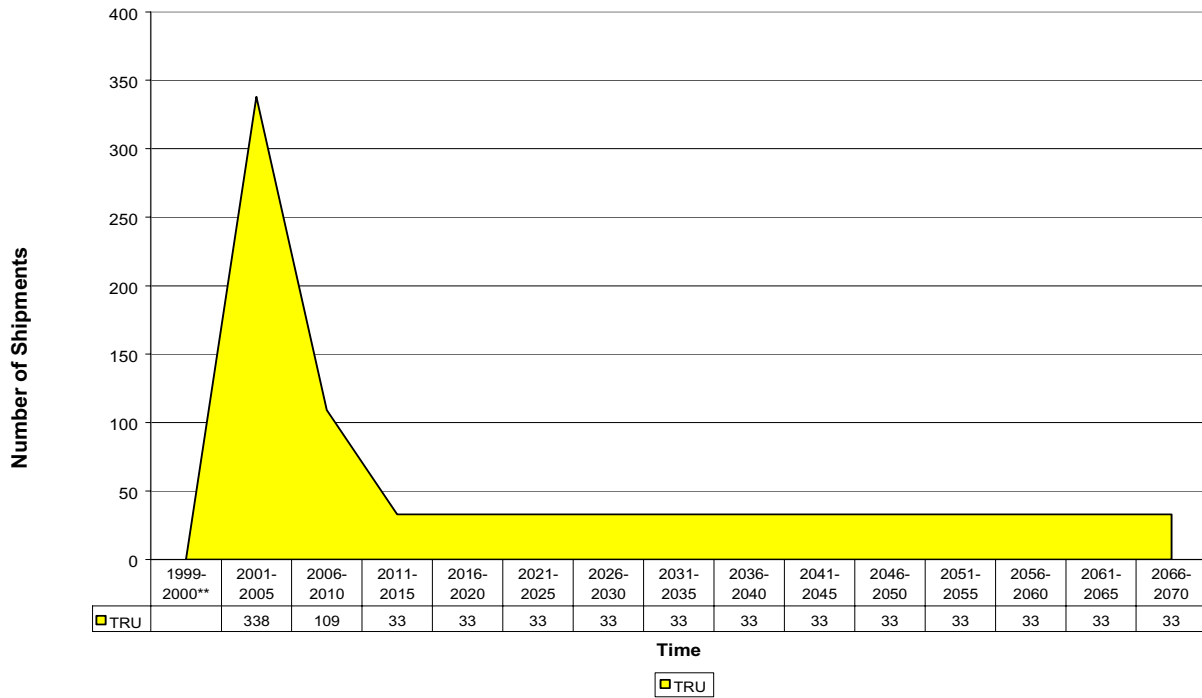
**Oak Ridge  
Outgoing SNF Shipments to INEEL**



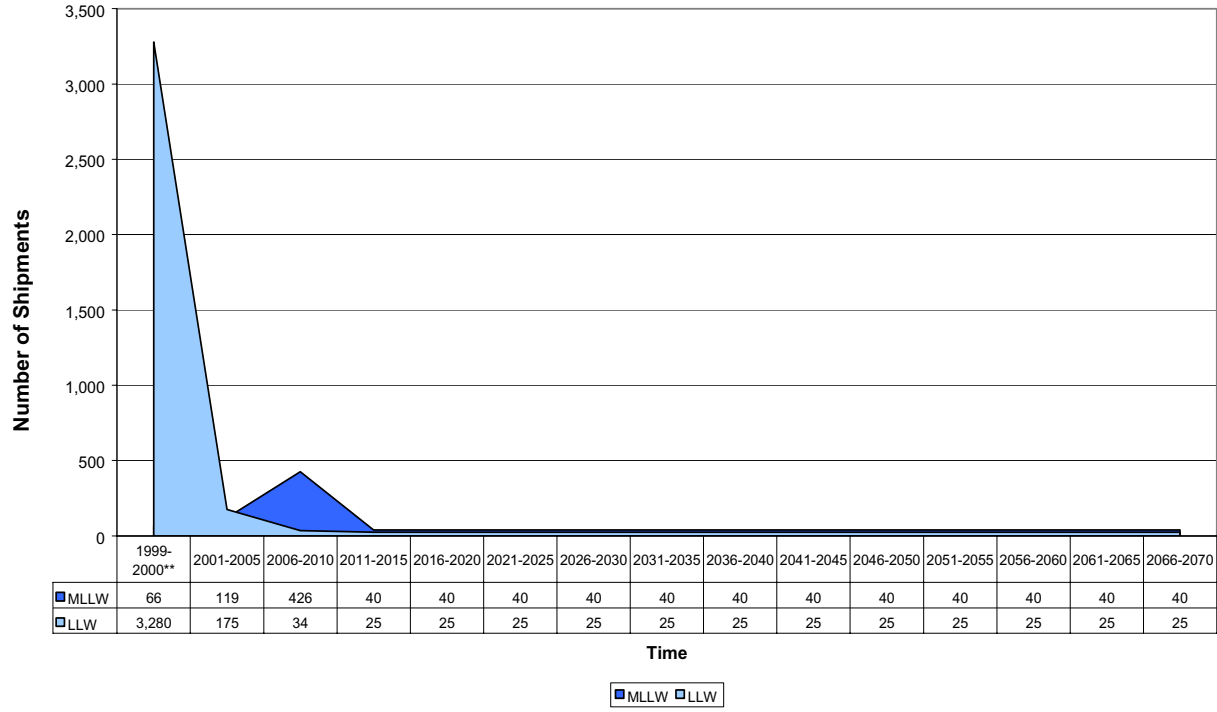
**Oak Ridge**  
Outgoing M/LLW Shipments to Envirocare



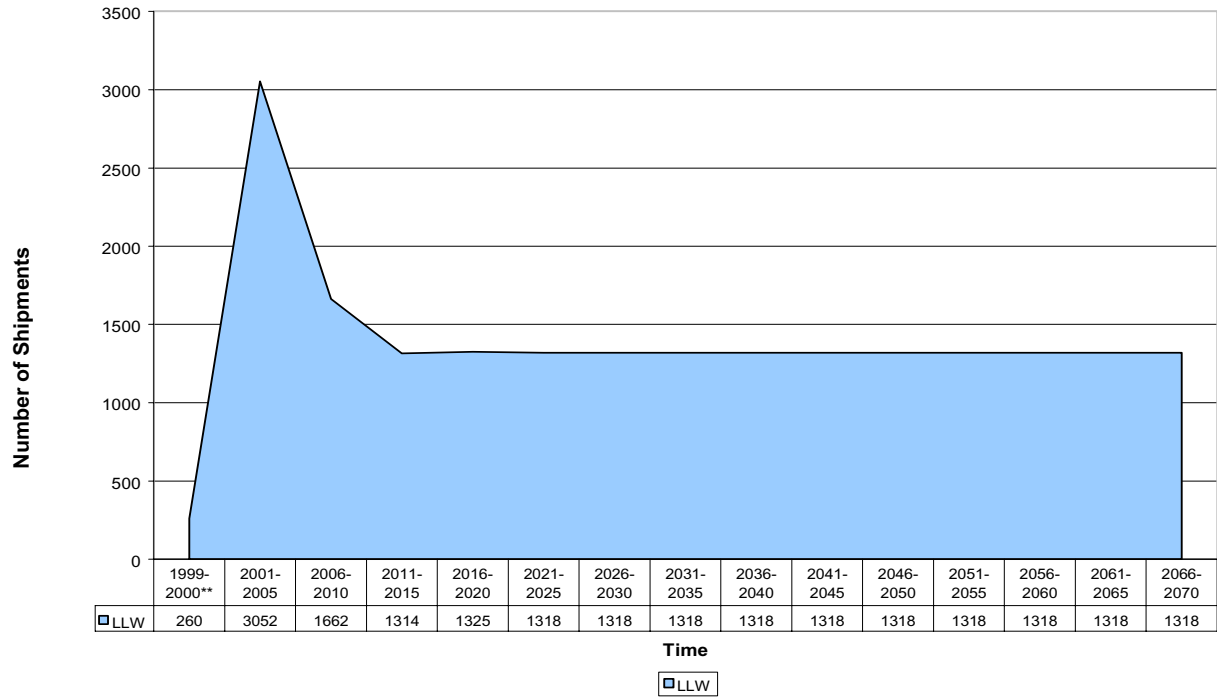
**Oak Ridge**  
Outgoing M/LLW Shipments to WIPP



**Oak Ridge**  
Outgoing M/LLW Shipments to "Commercial"

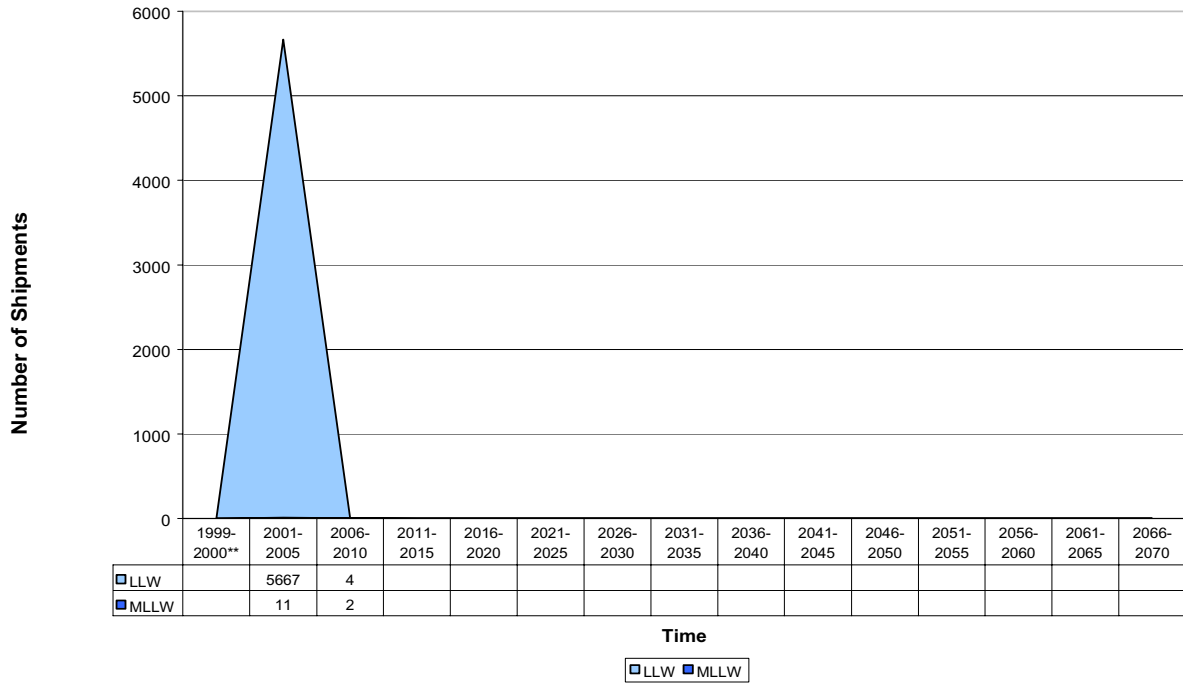


**Oak Ridge**  
Outgoing LLW Shipments to "DOE"

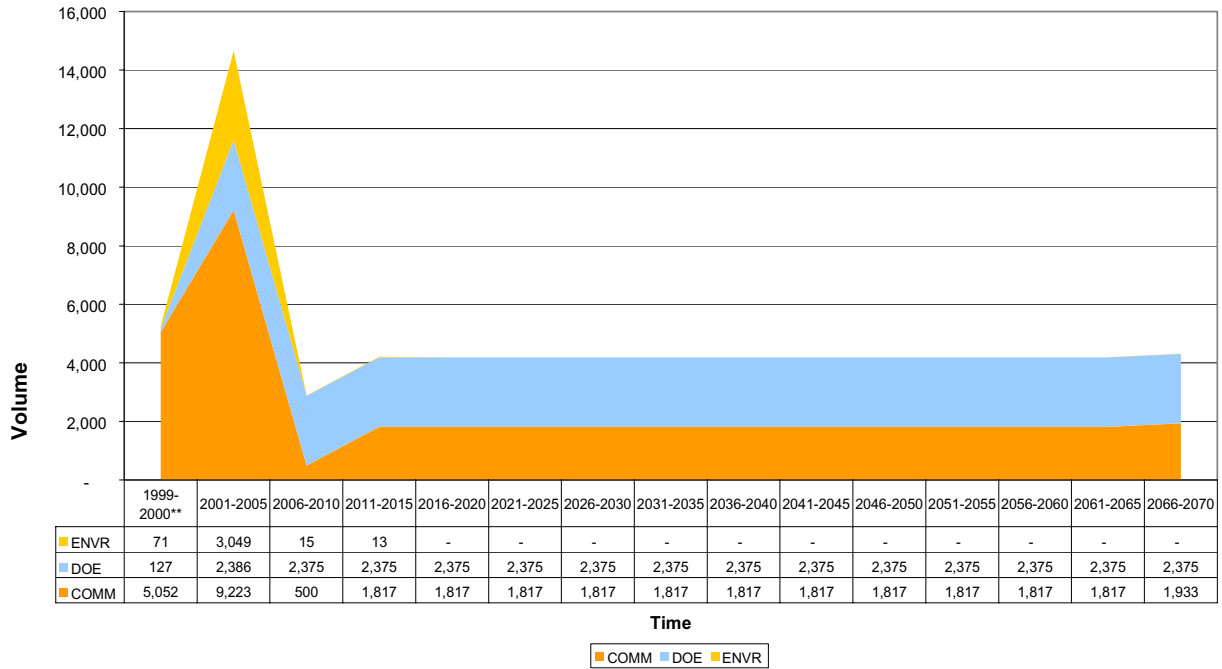




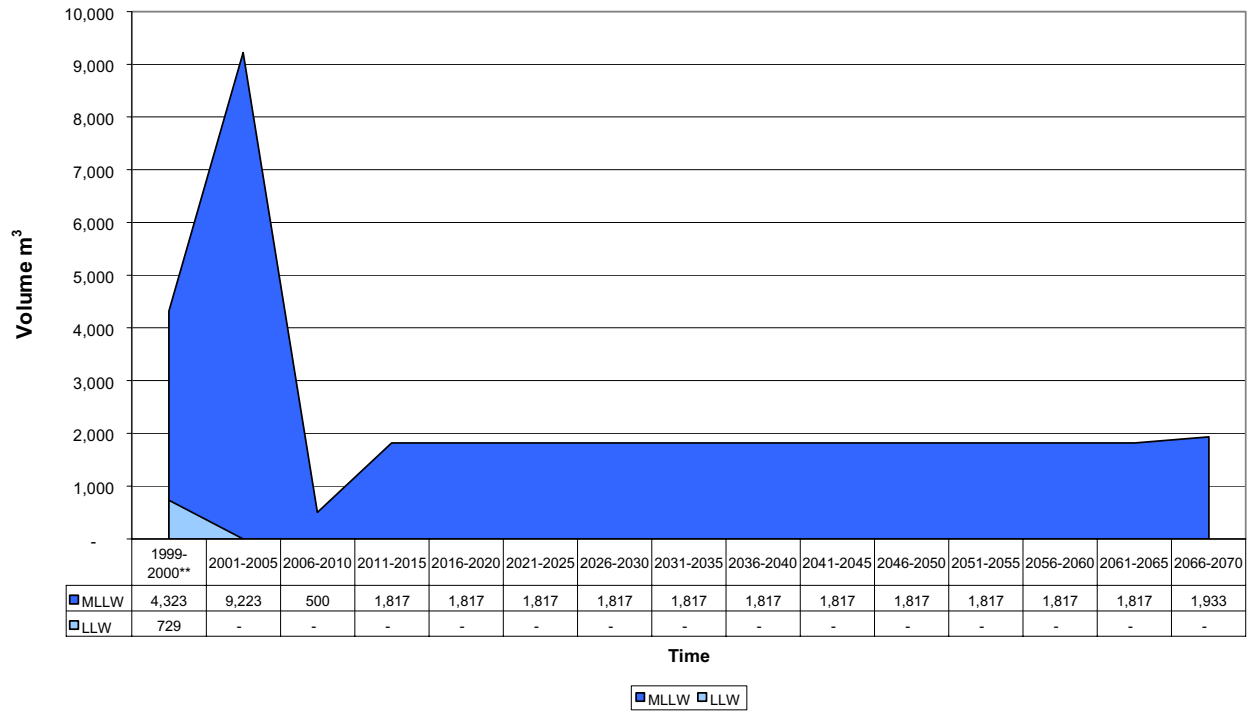
**Oak Ridge**  
Outgoing M/LLW Shipments to "TBDO"



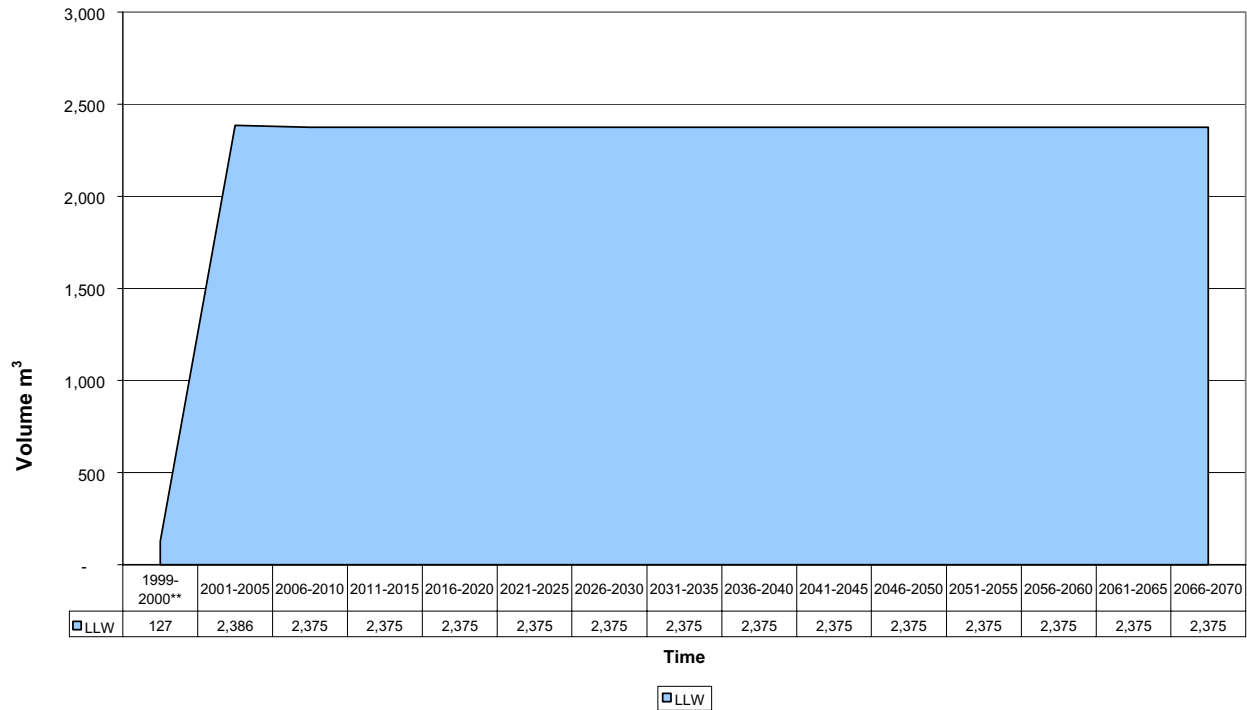
**Oak Ridge**  
Waste Stream Disposition  
Life-cycle Outgoing Volume



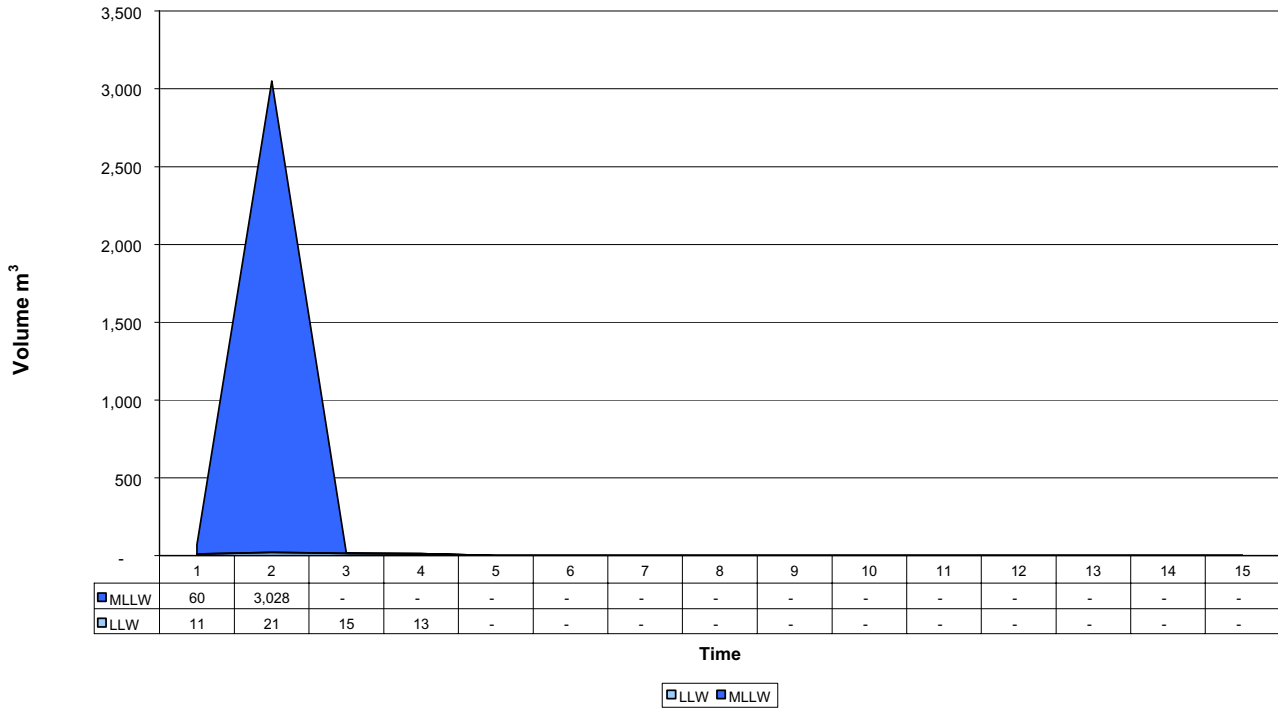
**Oak Ridge**  
Outgoing M/LLW Volume to "Commercial"



**Oak Ridge**  
Outgoing LLW Volume to DOE

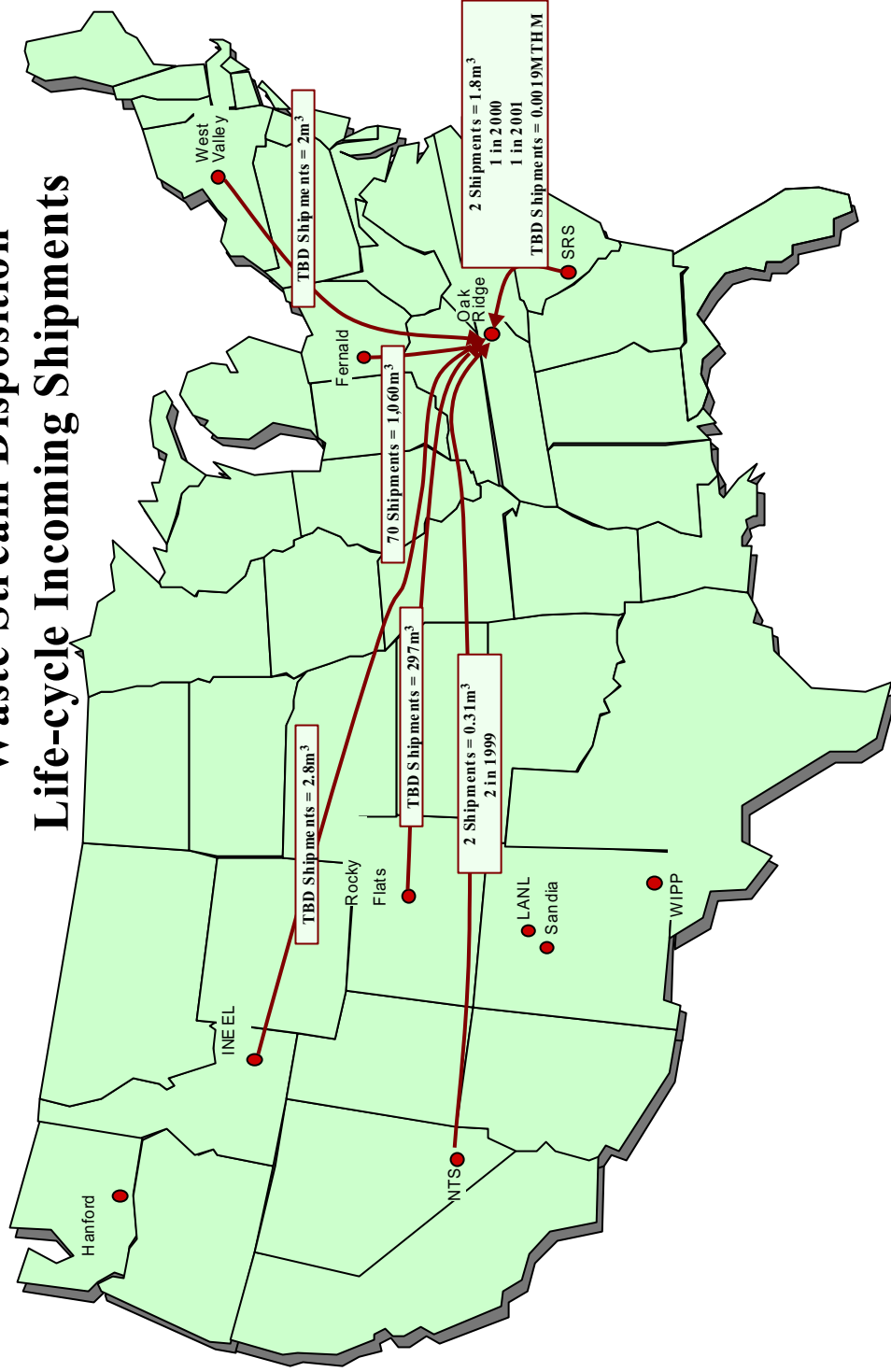


**Oak Ridge**  
Outgoing M/LLW Volume to Envirocare

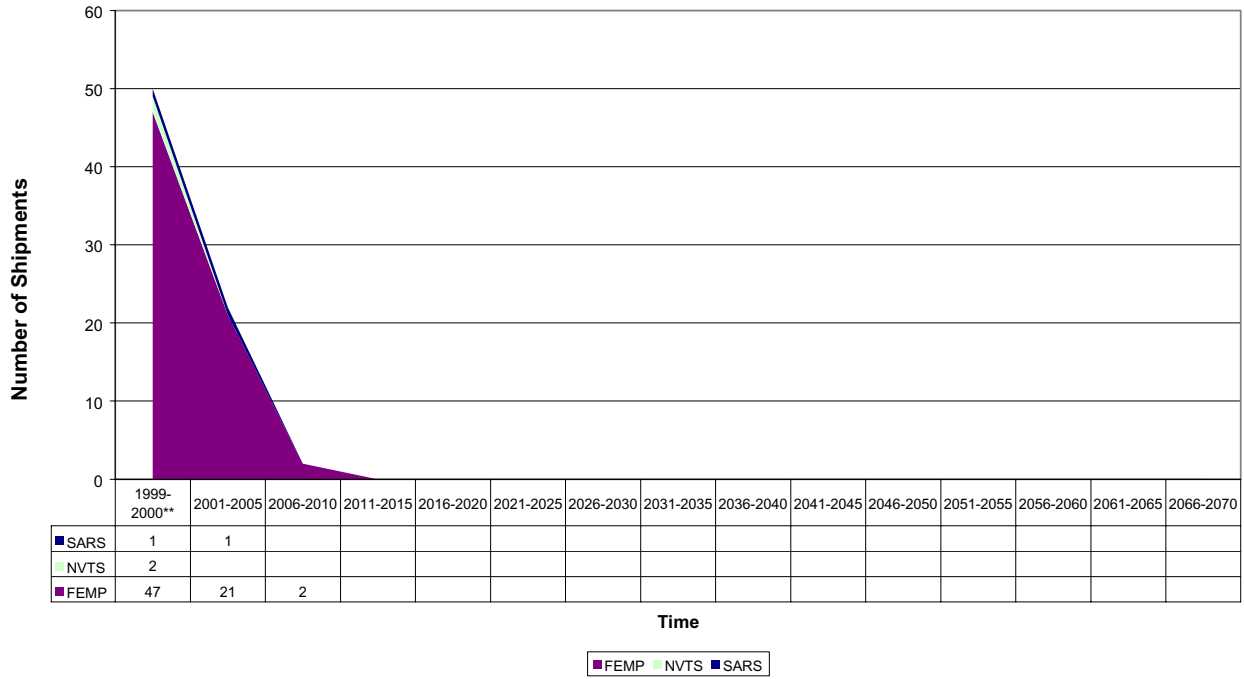




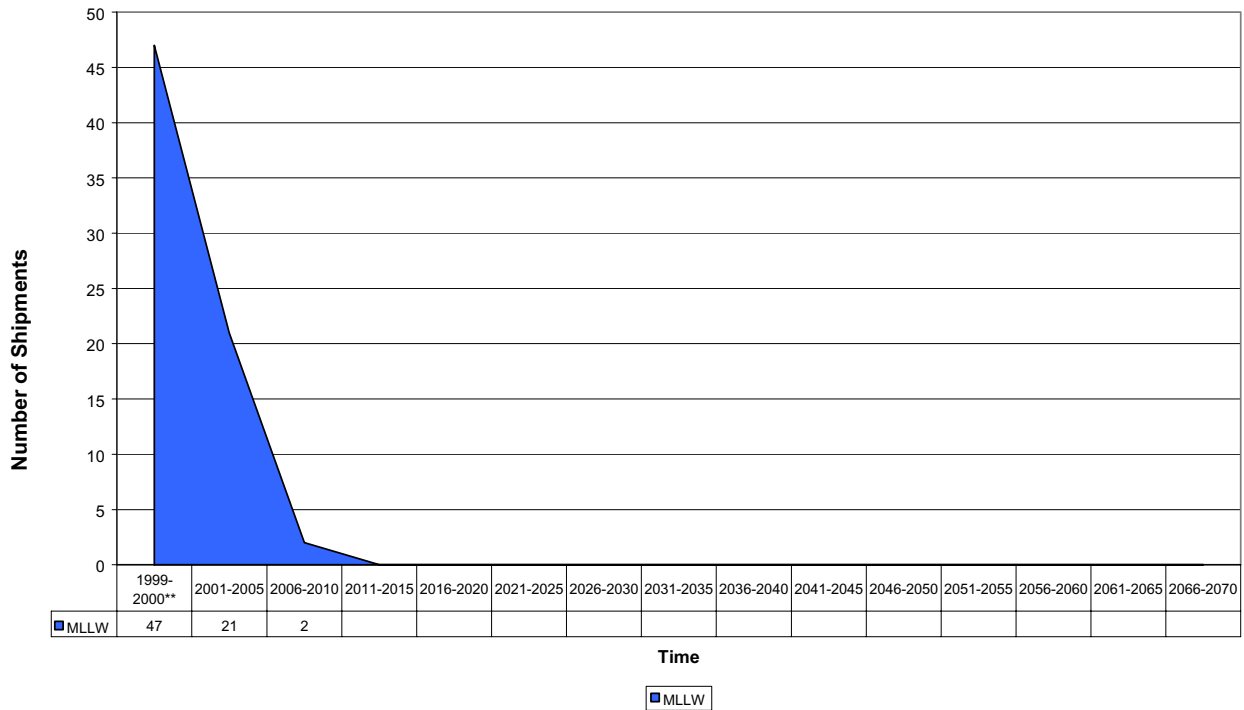
# Oak Ridge Waste Stream Disposition Life-cycle Incoming Shipments



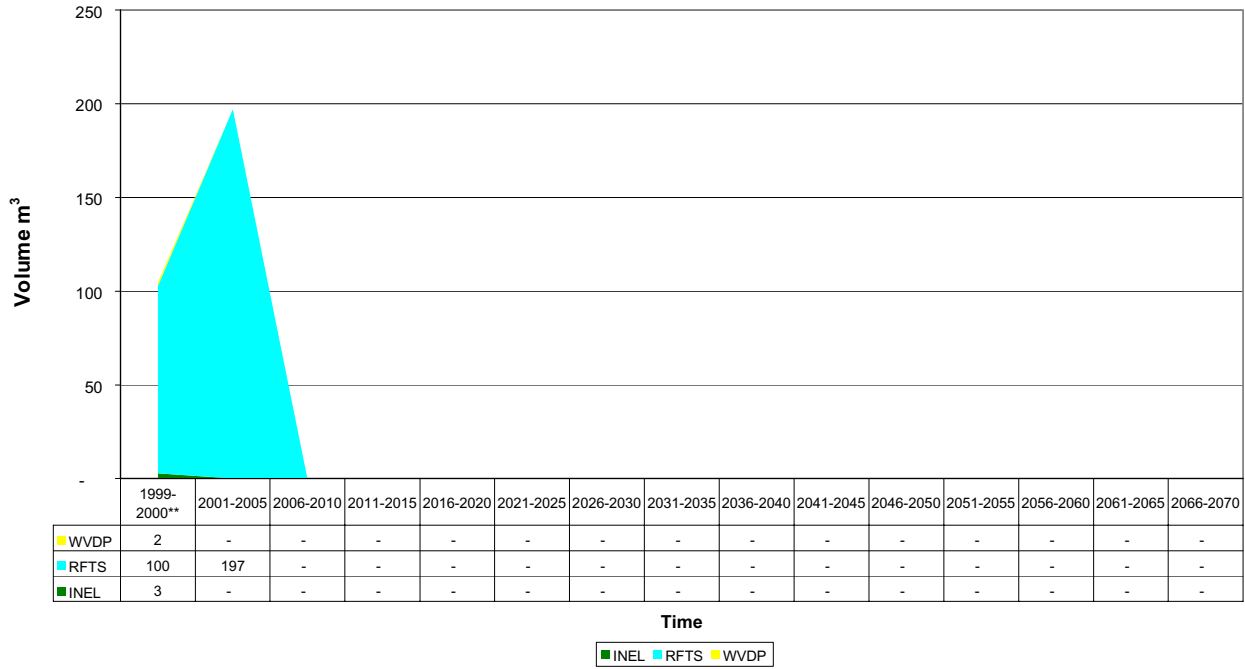
**Oak Ridge  
Waste Stream Disposition  
Life-cycle Incoming Shipments**



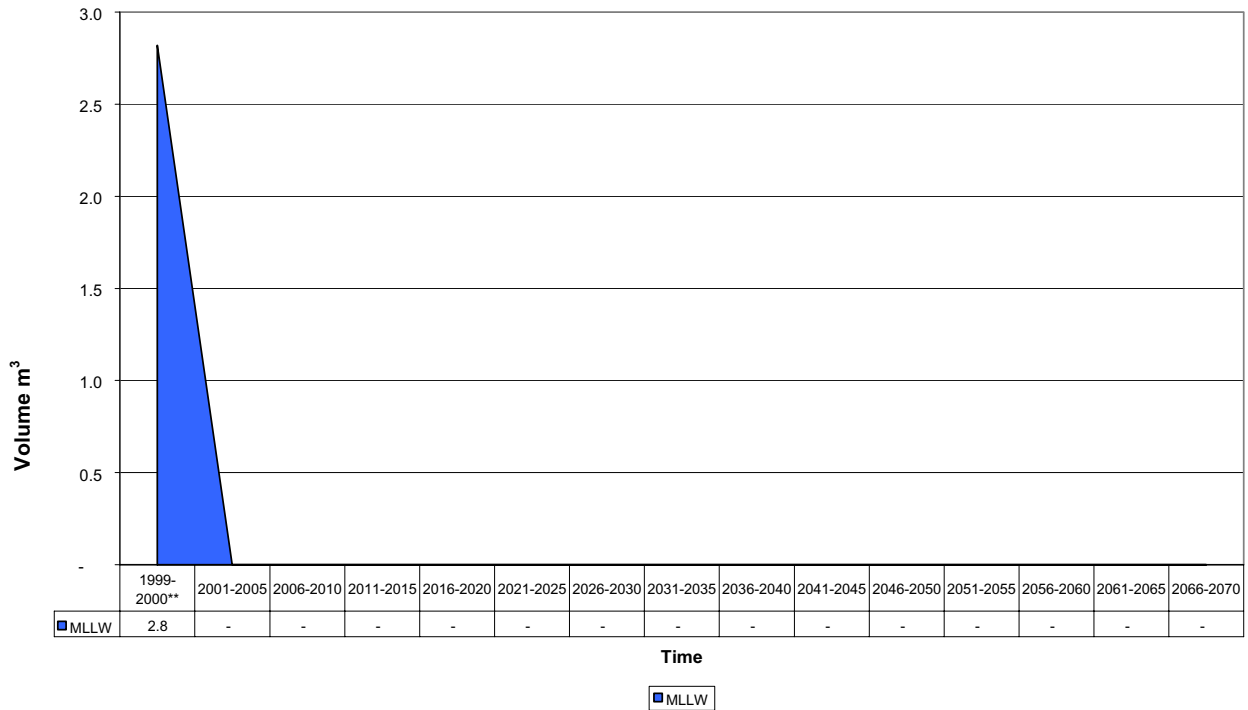
**Oak Ridge  
Incoming MLLW Shipments from Fernald**



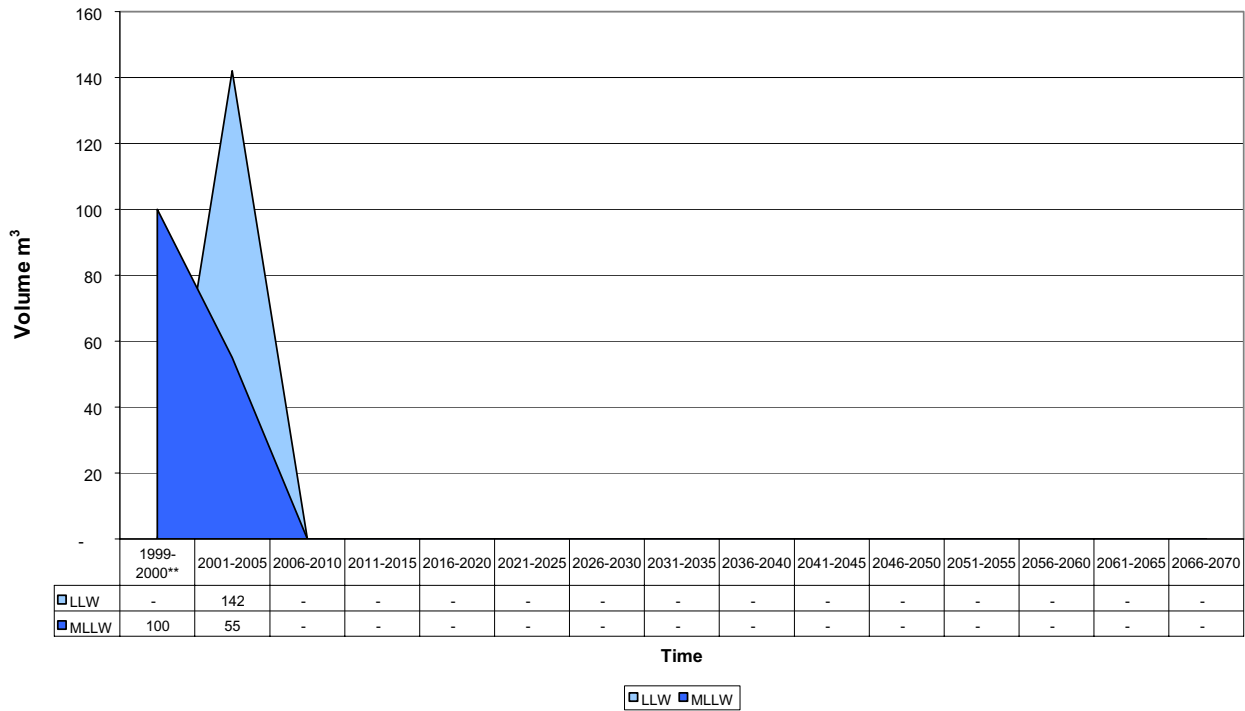
**Oak Ridge  
Waste Stream Disposition  
Life-cycle Incoming Volume**



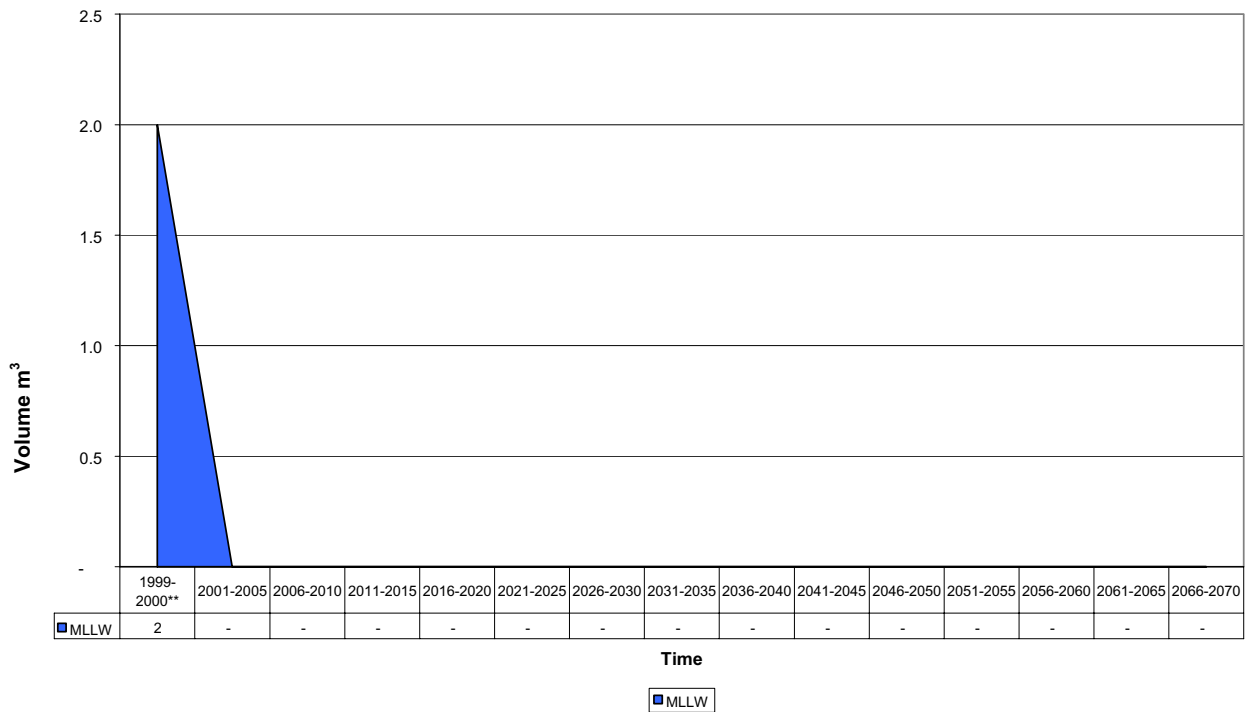
**Oak Ridge  
Incoming MLLW Volume from INEEL**



**Oak Ridge**  
Incoming M/LLW Volume from Rocky Flats

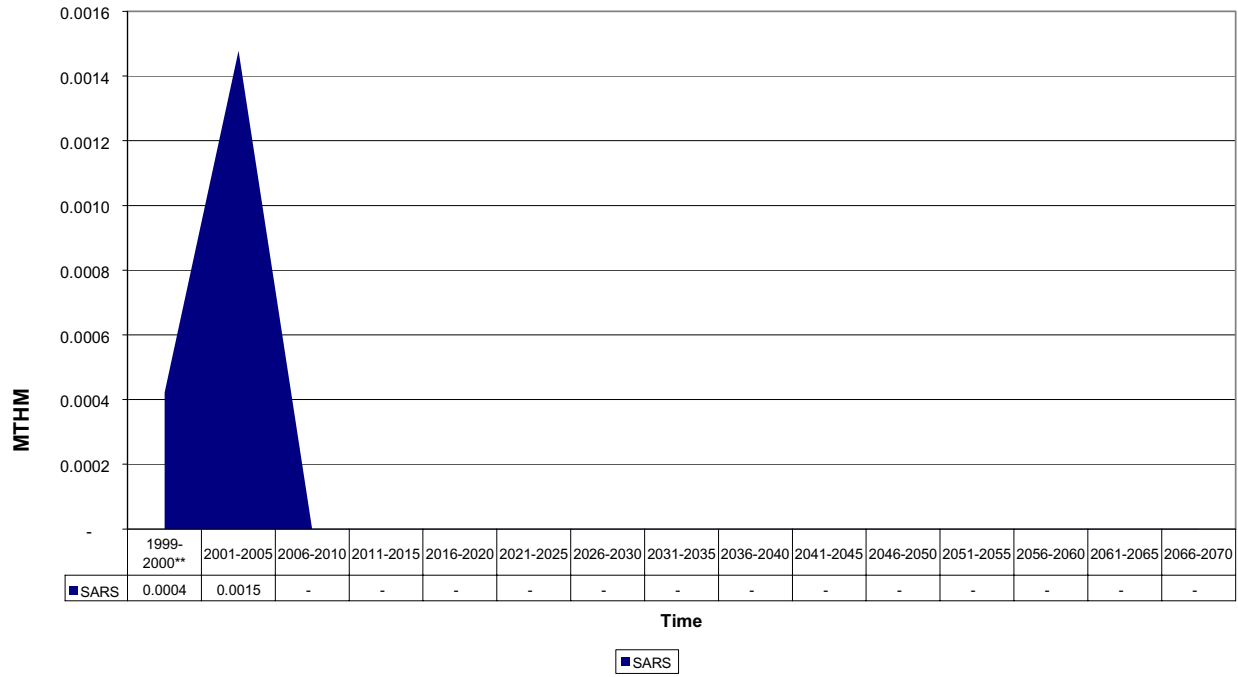


**Oak Ridge**  
Incoming MLLW Volume from West Valley

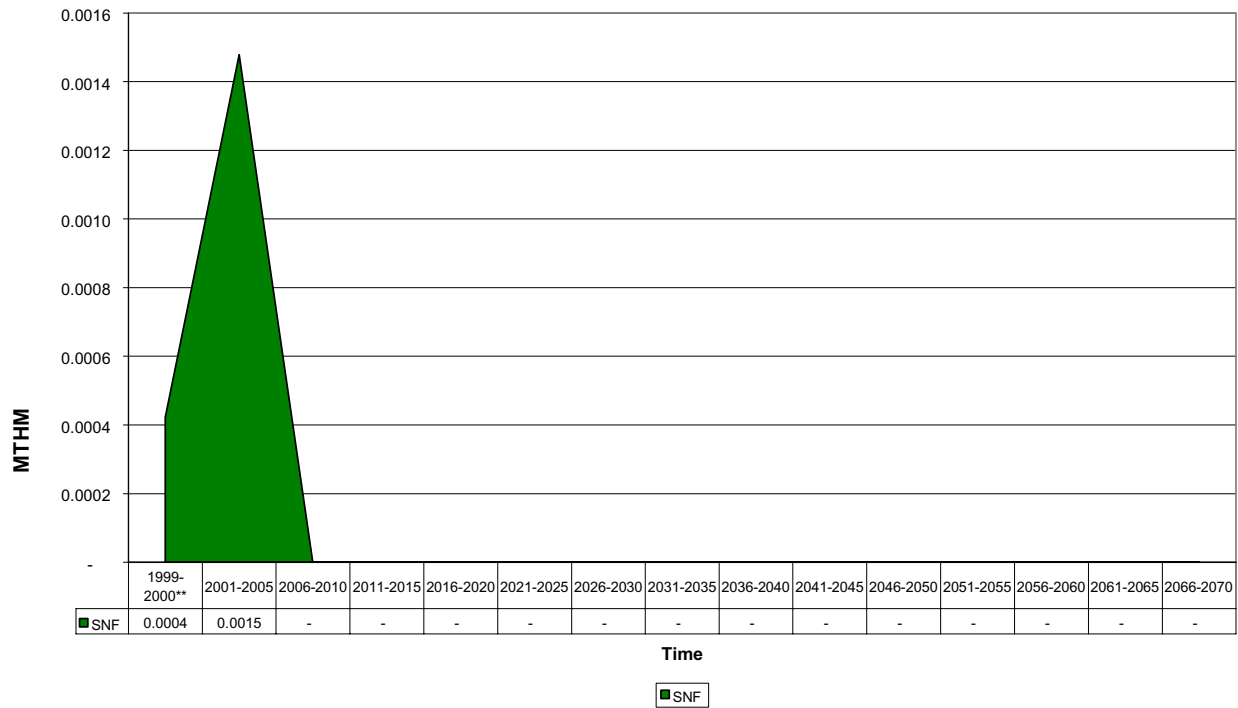




**Oak Ridge  
Waste Stream Disposition  
Life-cycle Incoming SNF**

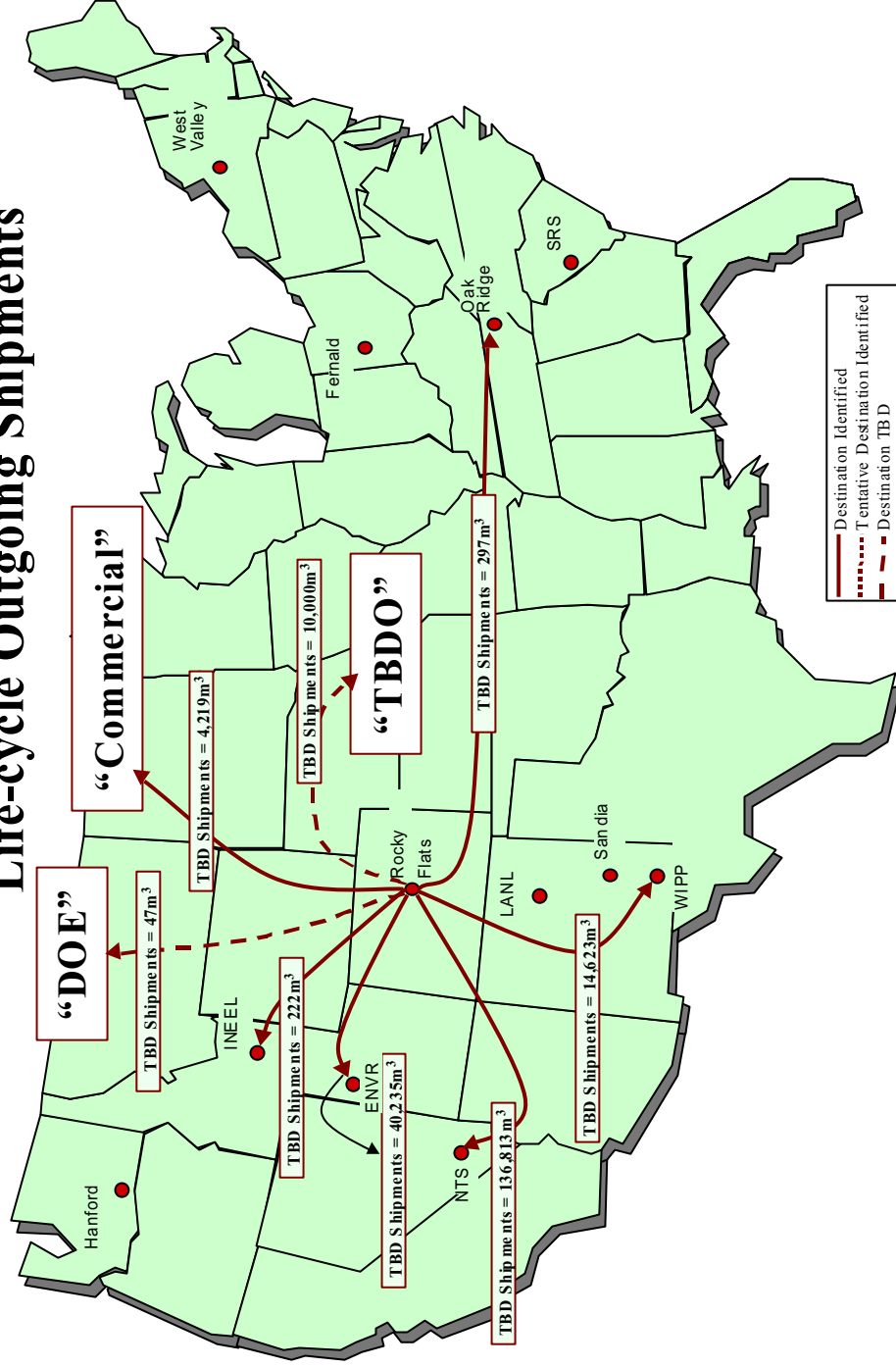


**Oak Ridge  
Incoming SNF from Savannah River Site**

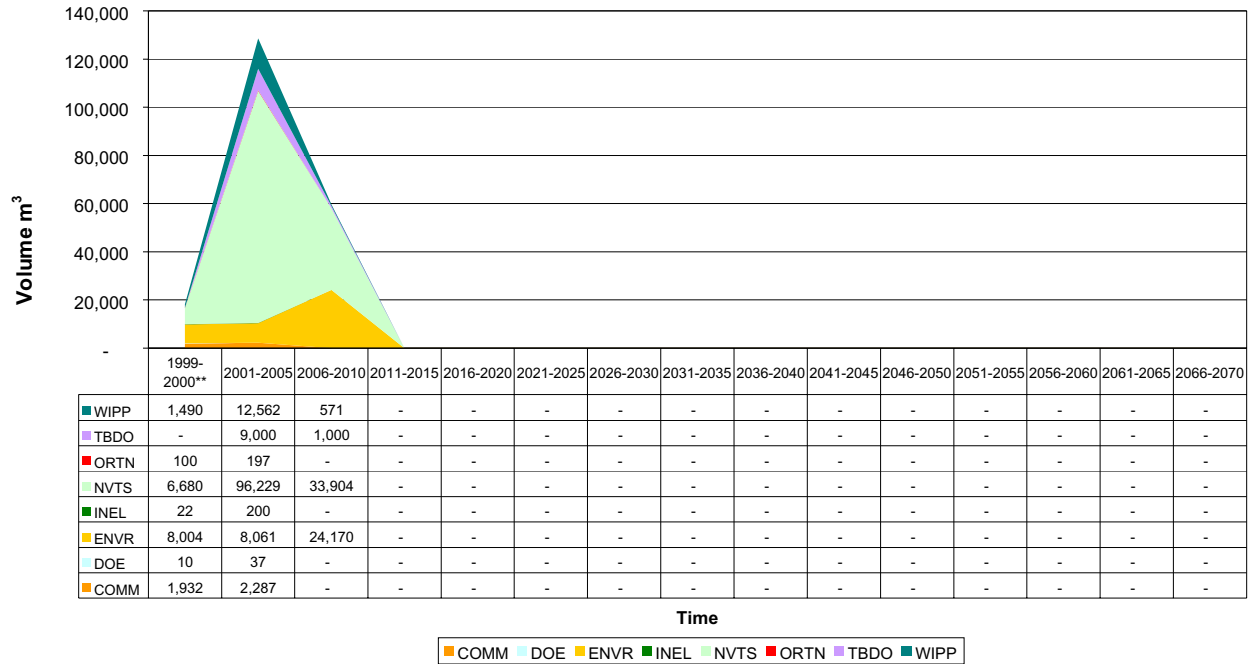




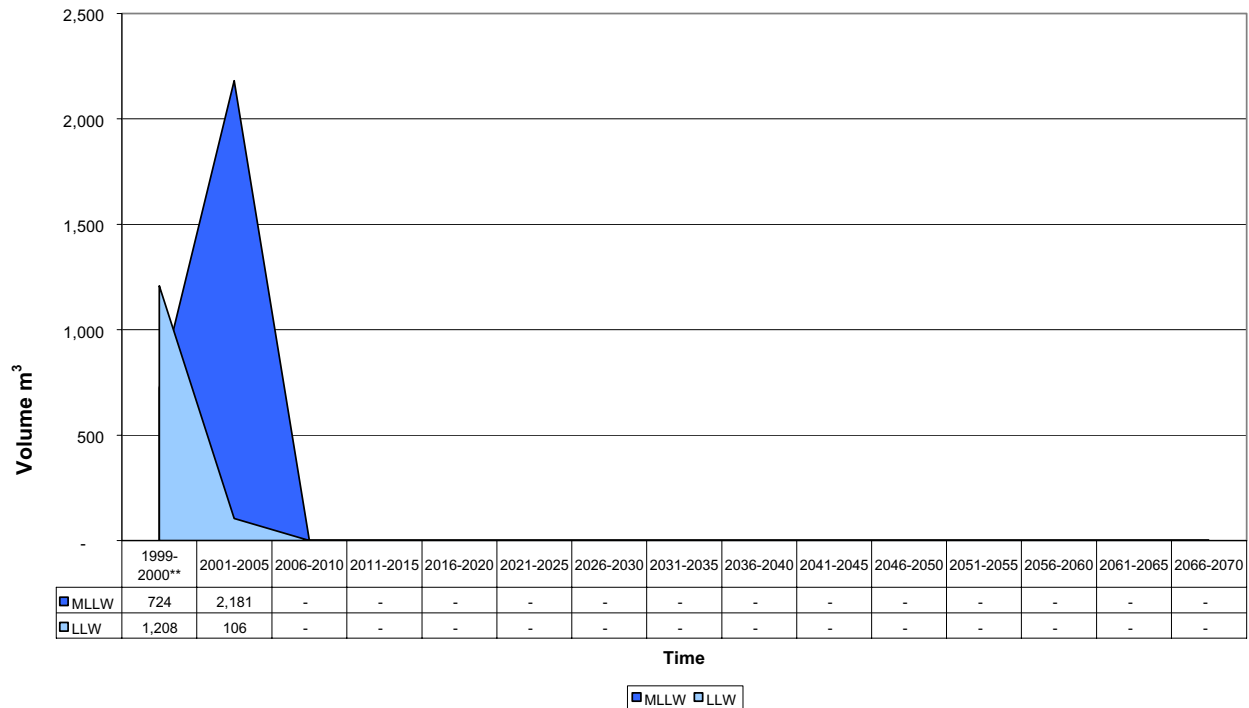
# Rocky Flats Waste Stream Disposition Life-cycle Outgoing Shipments



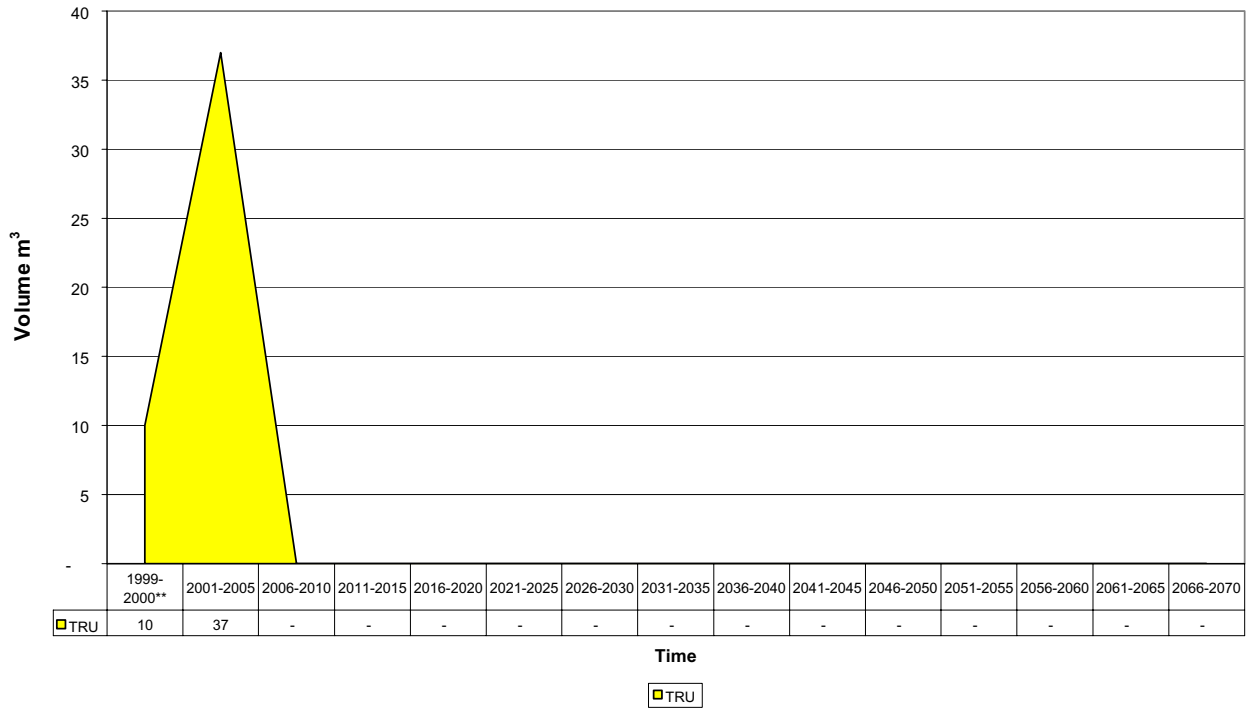
**Rocky Flats  
Waste Stream Disposition  
Life-cycle Outgoing Volume**



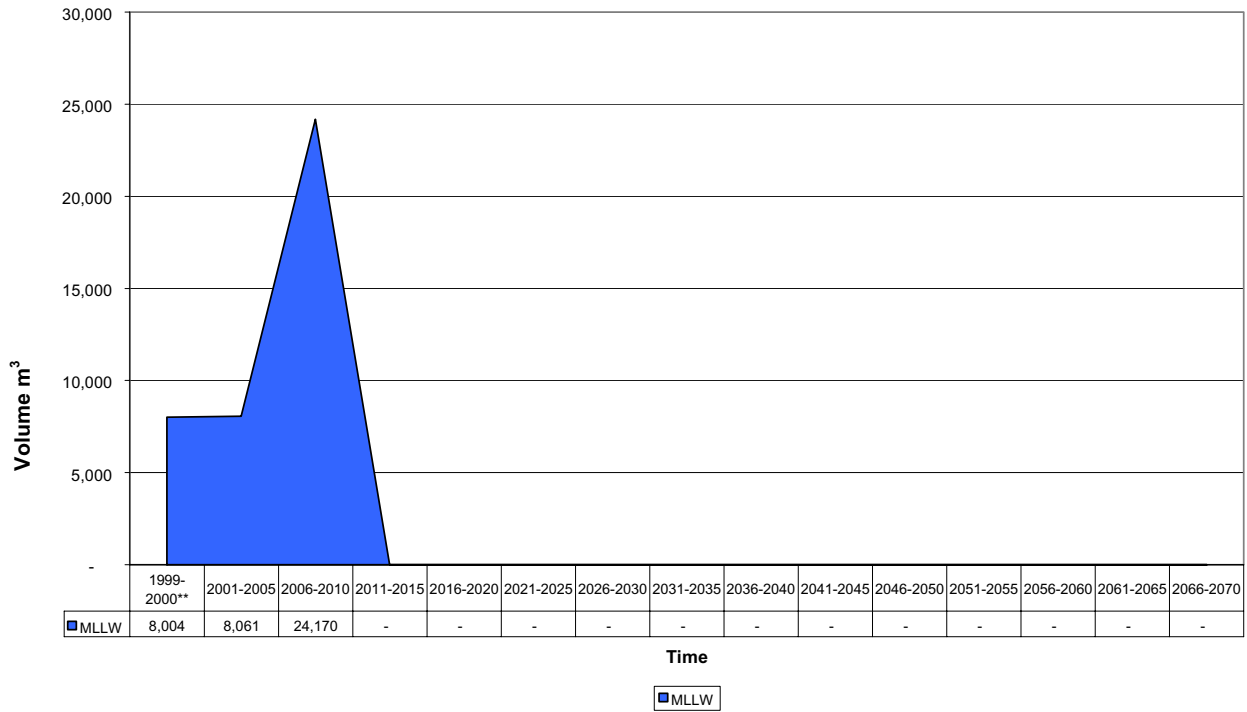
**Rocky Flats  
Outgoing M/LLW Volume to "Commercial"**



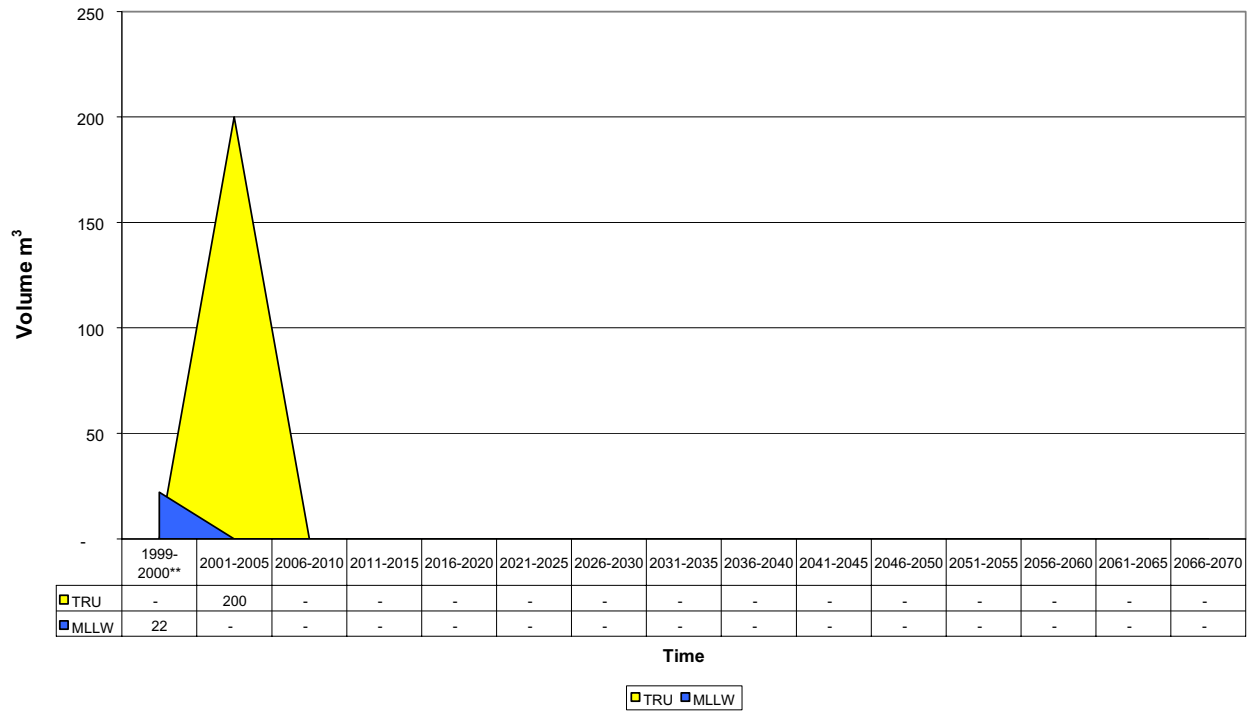
**Rocky Flats**  
Outgoing TRU Volume to "DOE"



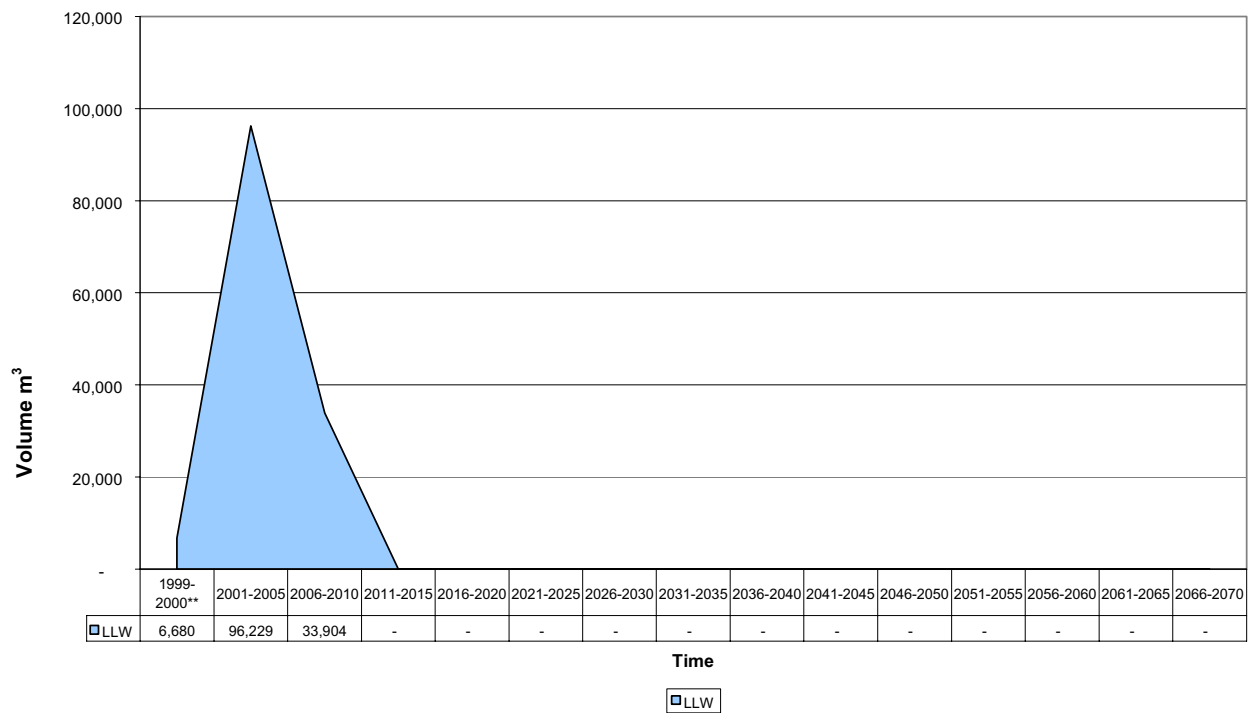
**Rocky Flats**  
Outgoing MLLW Volume to Envirocare



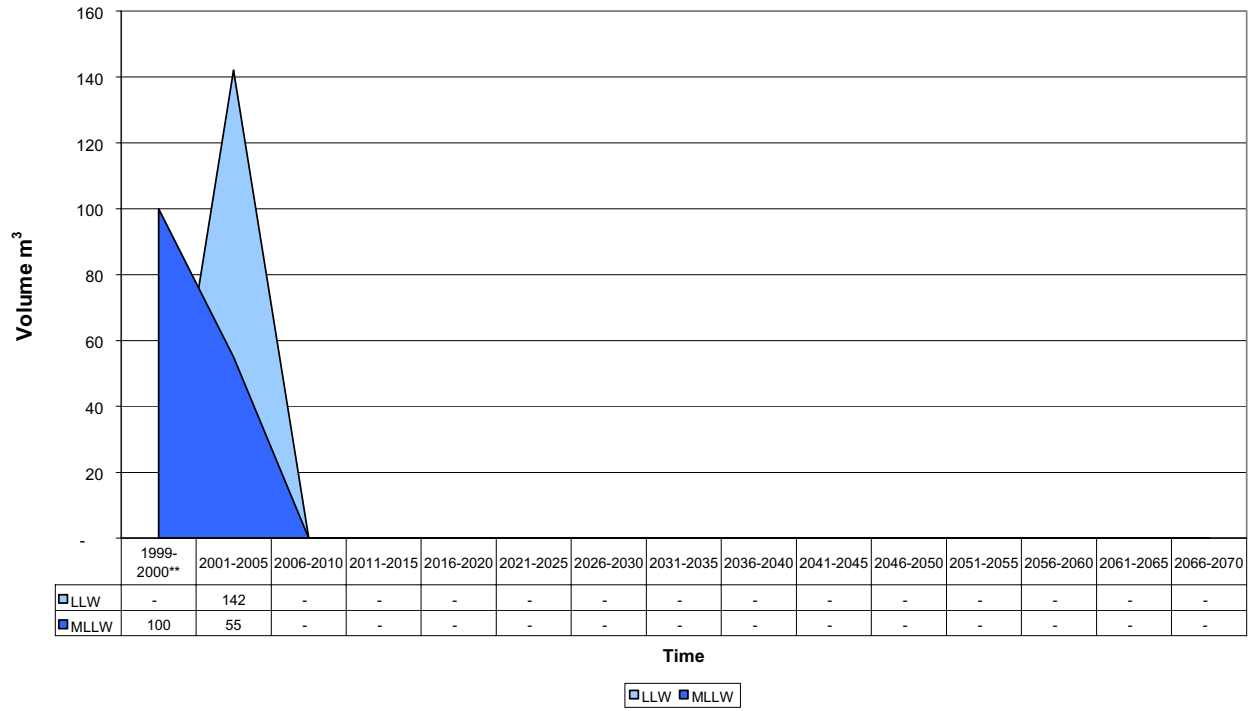
**Rocky Flats**  
Outgoing MLLW & TRU Volume to INEEL



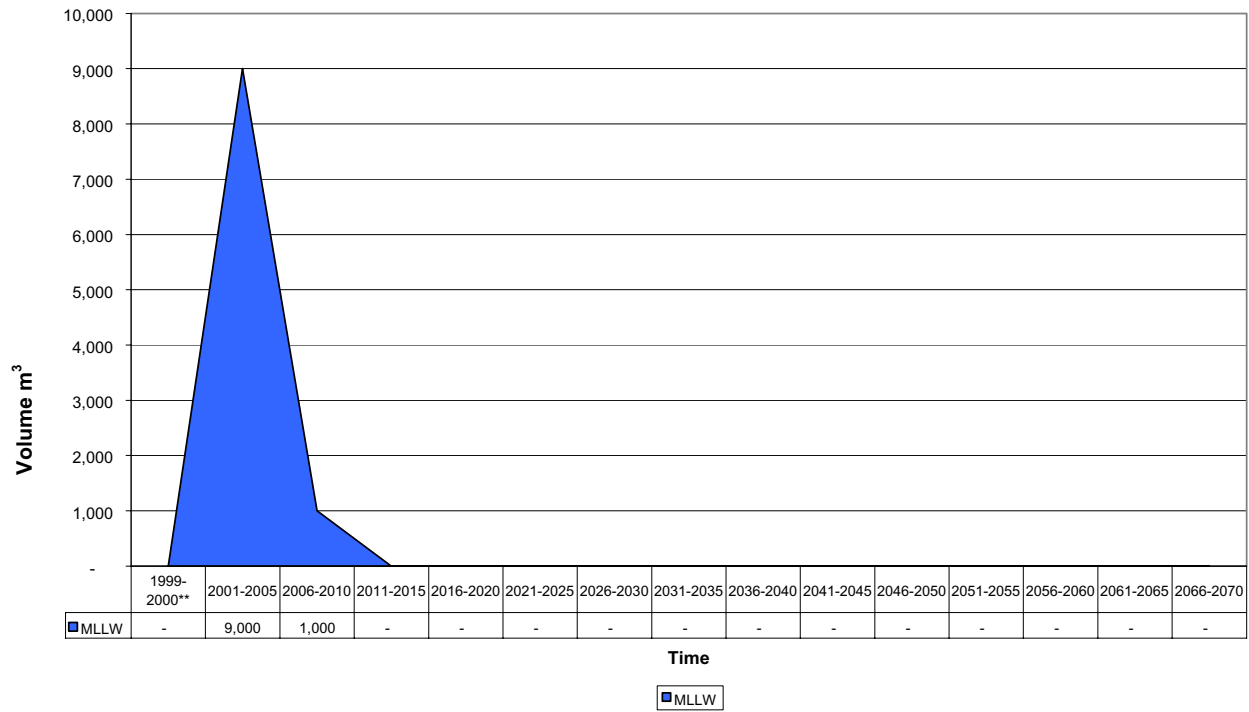
**Rocky Flats**  
Outgoing LLW Volume to Nevada Test Site



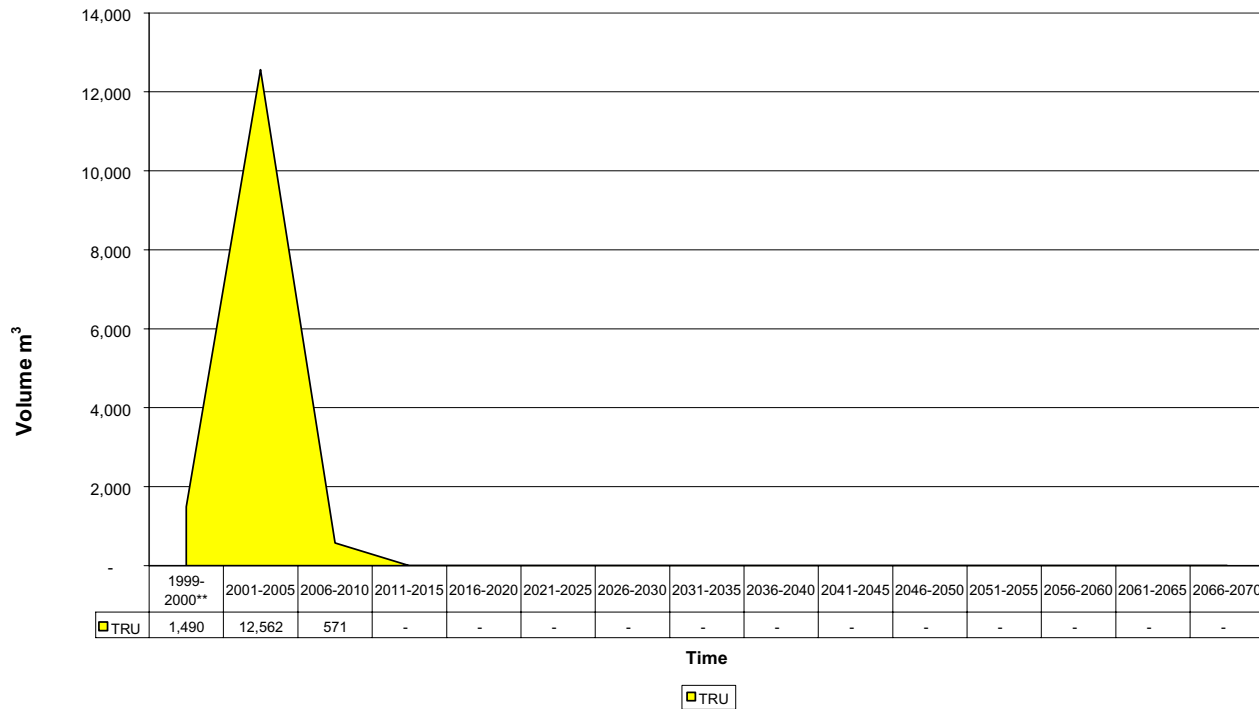
**Rocky Flats**  
Outgoing M/LLW Volume to Oak Ridge



**Rocky Flats**  
Outgoing MLLW Volume to "TBDO"

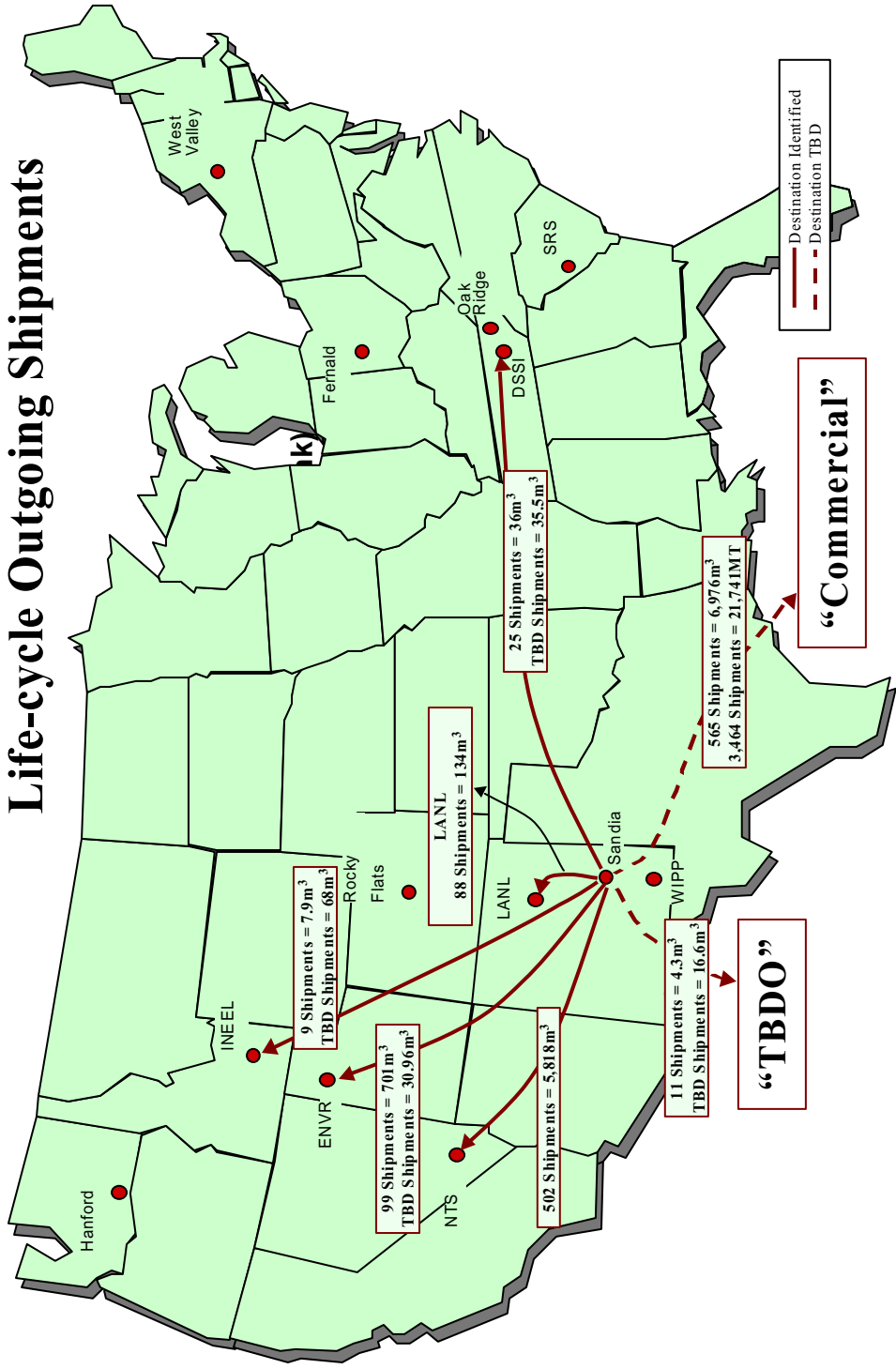


**Rocky Flats**  
Outgoing TRU Volume to WIPP

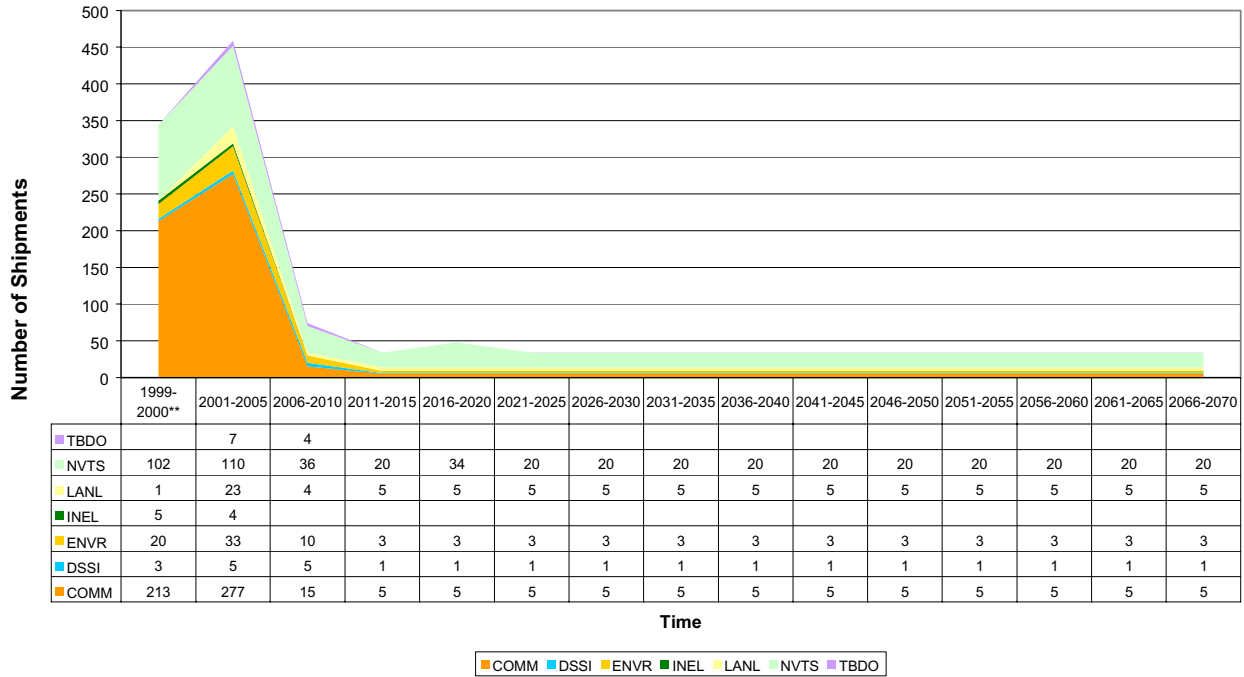




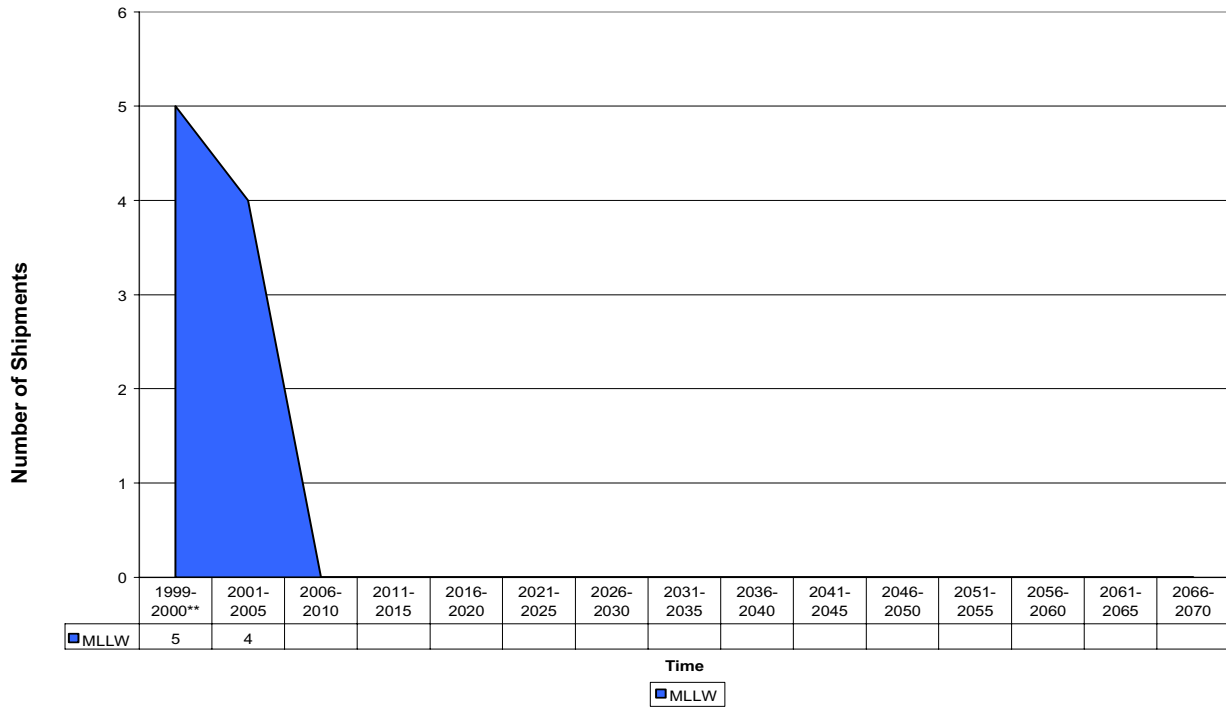
# Sandia National Laboratory Waste Stream Disposition Life-cycle Outgoing Shipments



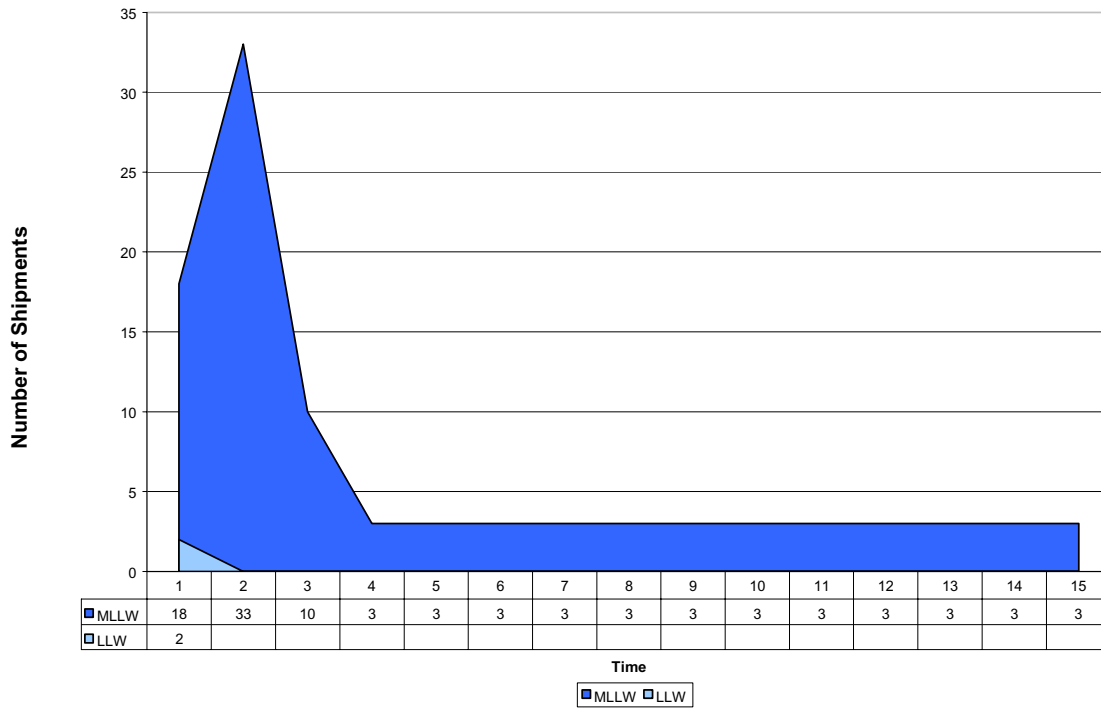
**Sandia National Laboratory  
Waste Stream Disposition  
Life-cycle Outgoing Shipments**



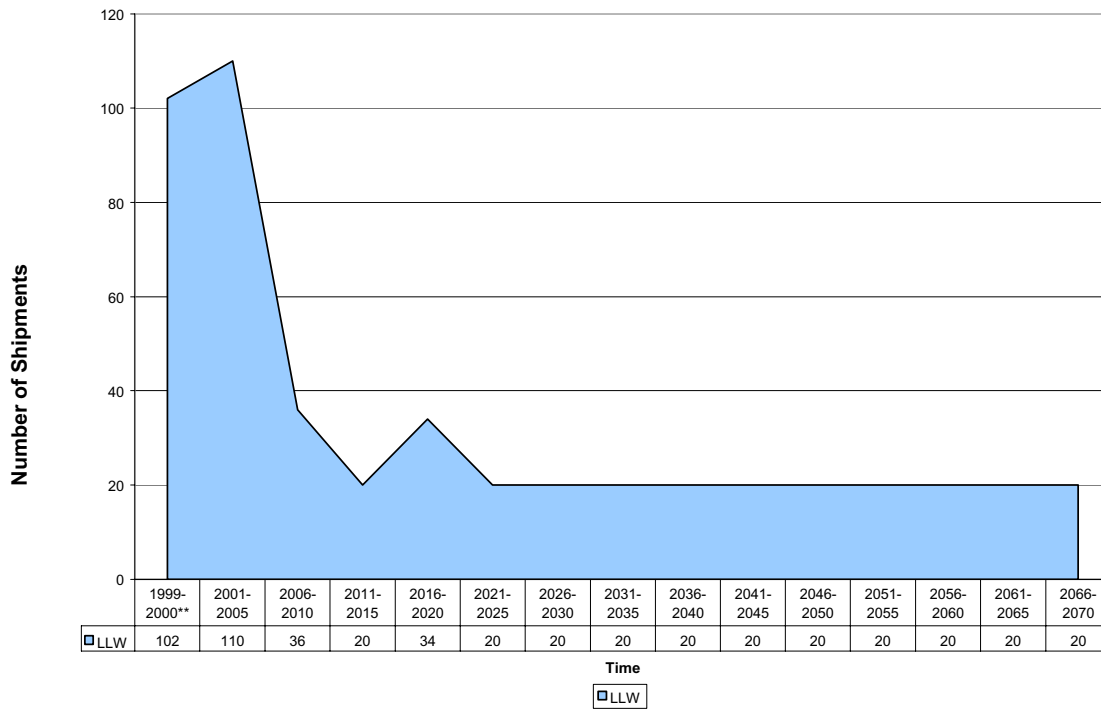
**Sandia National Laboratory  
Outgoing MLLW Shipments to INEEL**



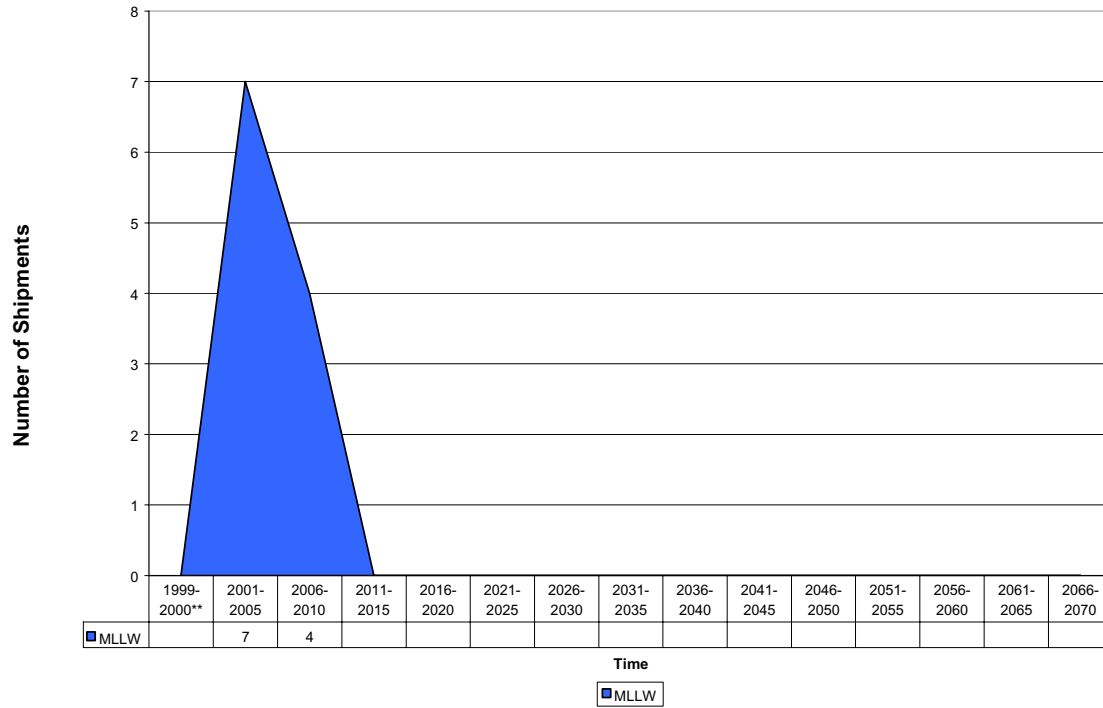
**Sandia National Laboratory**  
Outgoing M/LLW Shipments to Envirocare



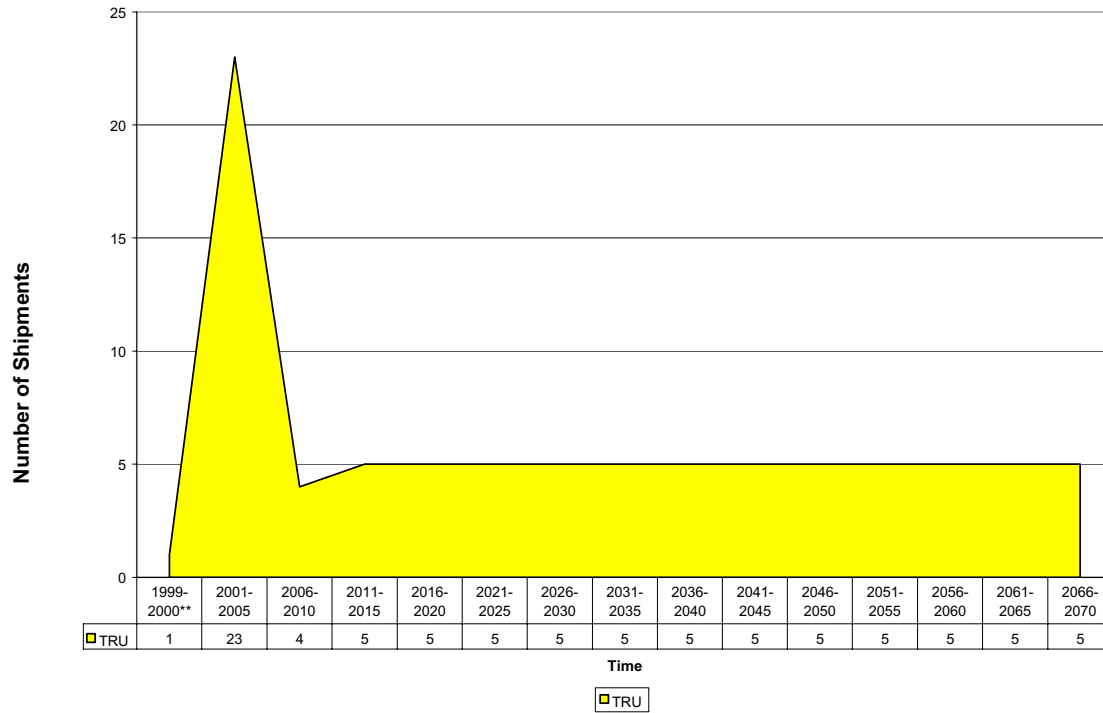
**Sandia National Laboratory**  
Outgoing LLW Shipments to Nevada Test Site



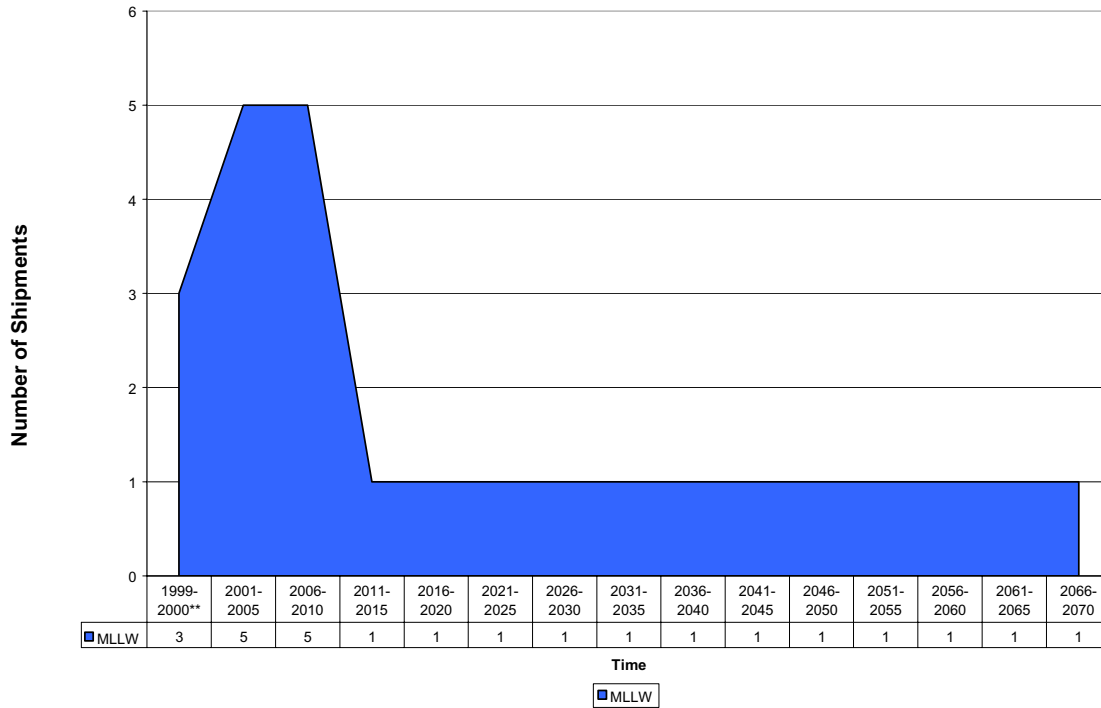
**Sandia National Laboratory**  
Outgoing MLLW Shipments to "TBDO"



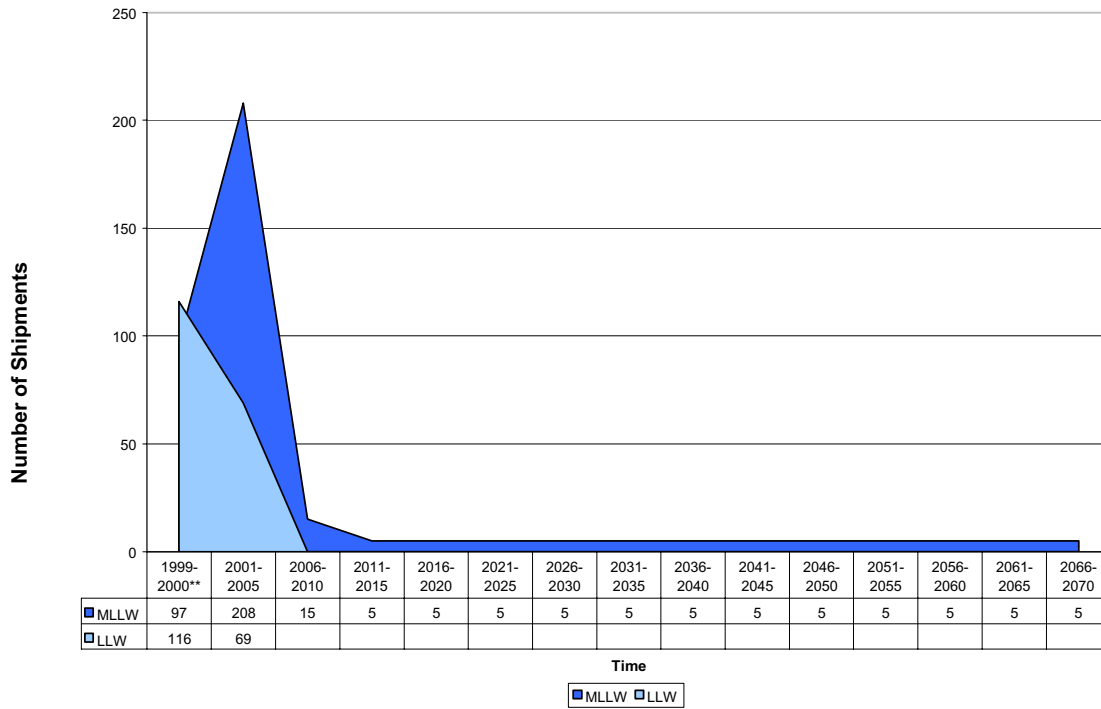
**Sandia National Laboratory**  
Outgoing TRU Shipments to Los Alamos National Laboratory



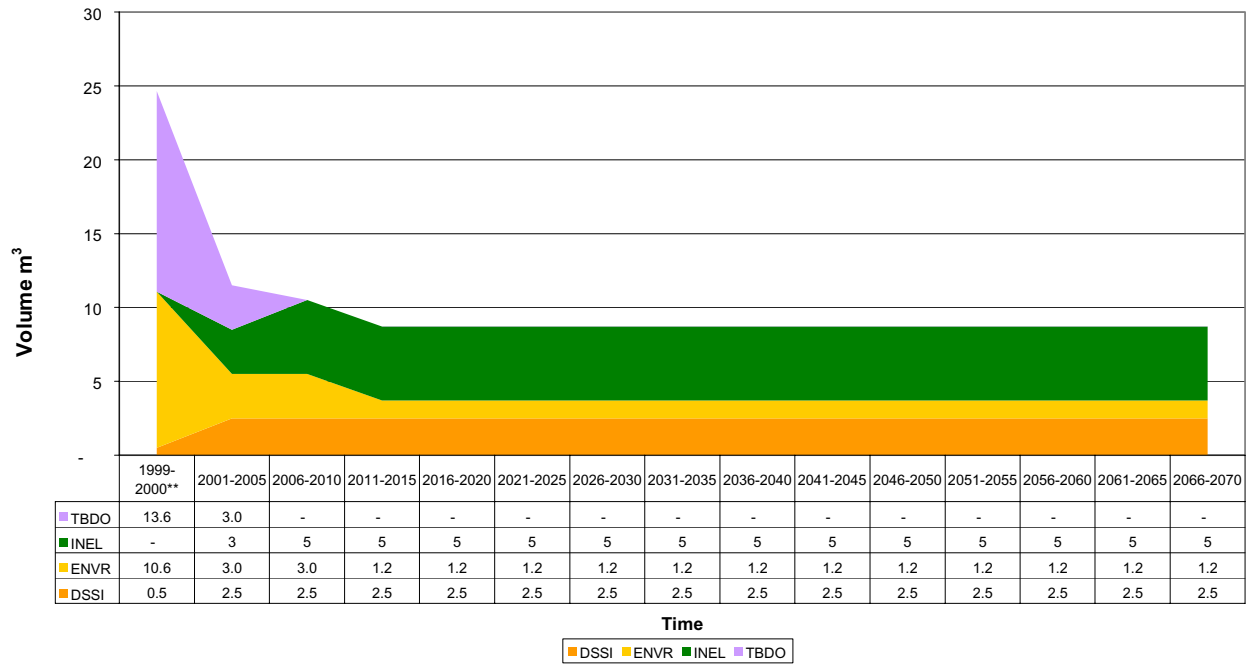
**Sandia National Laboratory**  
Outgoing MLLW Shipments to Diversified Scientific Services, Inc.



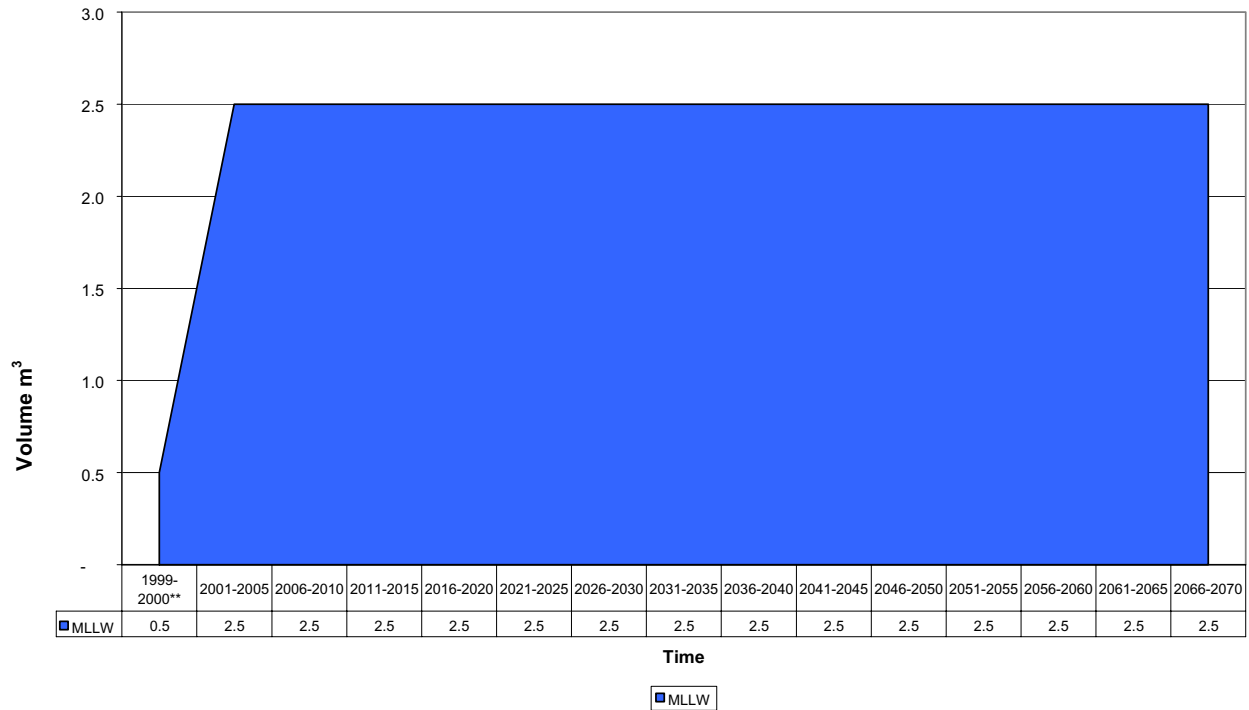
**Sandia National Laboratory**  
Outgoing M/LLW Shipments to "Commercial"



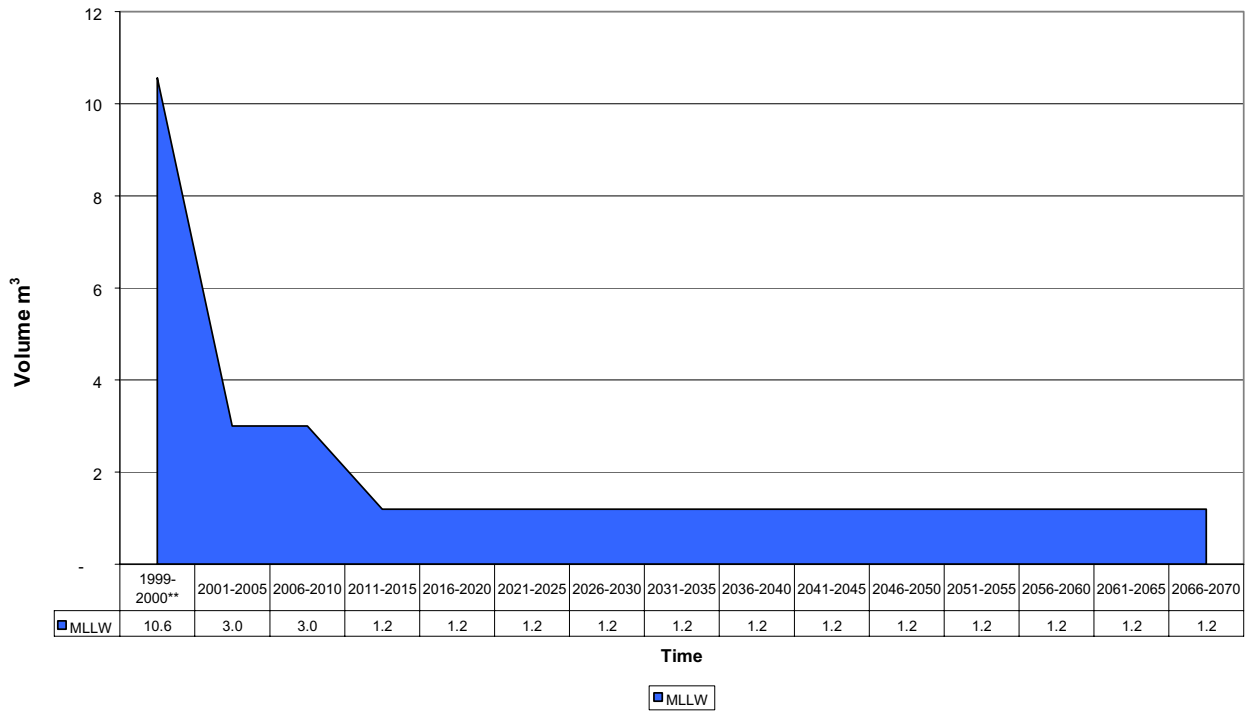
**Sandia National Laboratory  
Waste Stream Disposition  
Life-cycle Outgoing Volume**



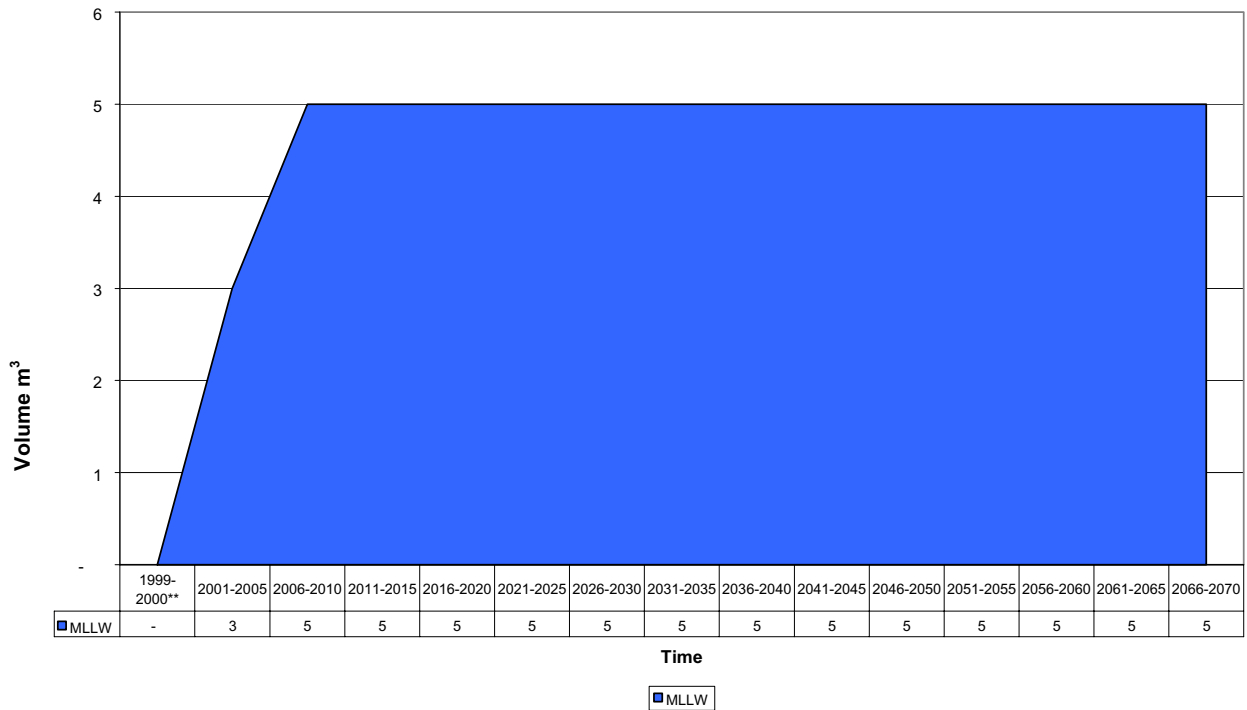
**Sandia National Laboratory  
Outgoing MLLW Volume to Diversified Scientific Services, Inc.**



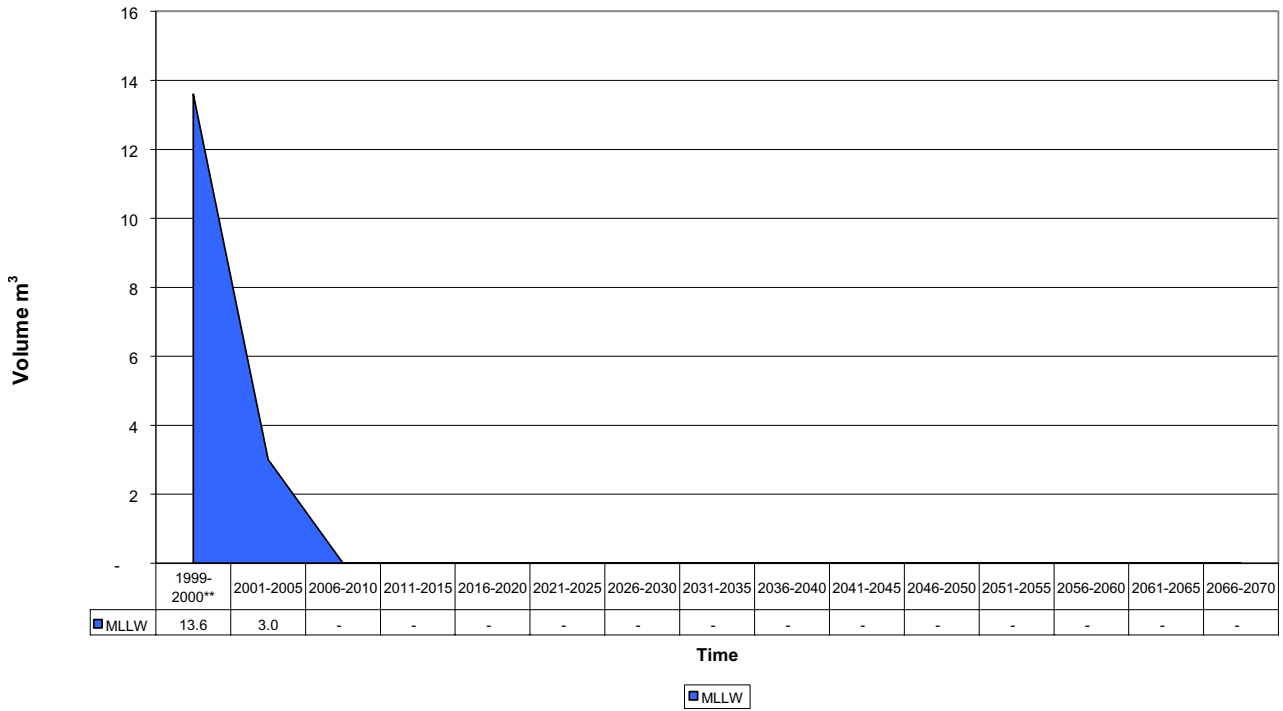
**Sandia National Laboratory**  
Outgoing MLLW Volume to Envirocare



**Sandia National Laboratory**  
Outgoing MLLW Volume to INEEL

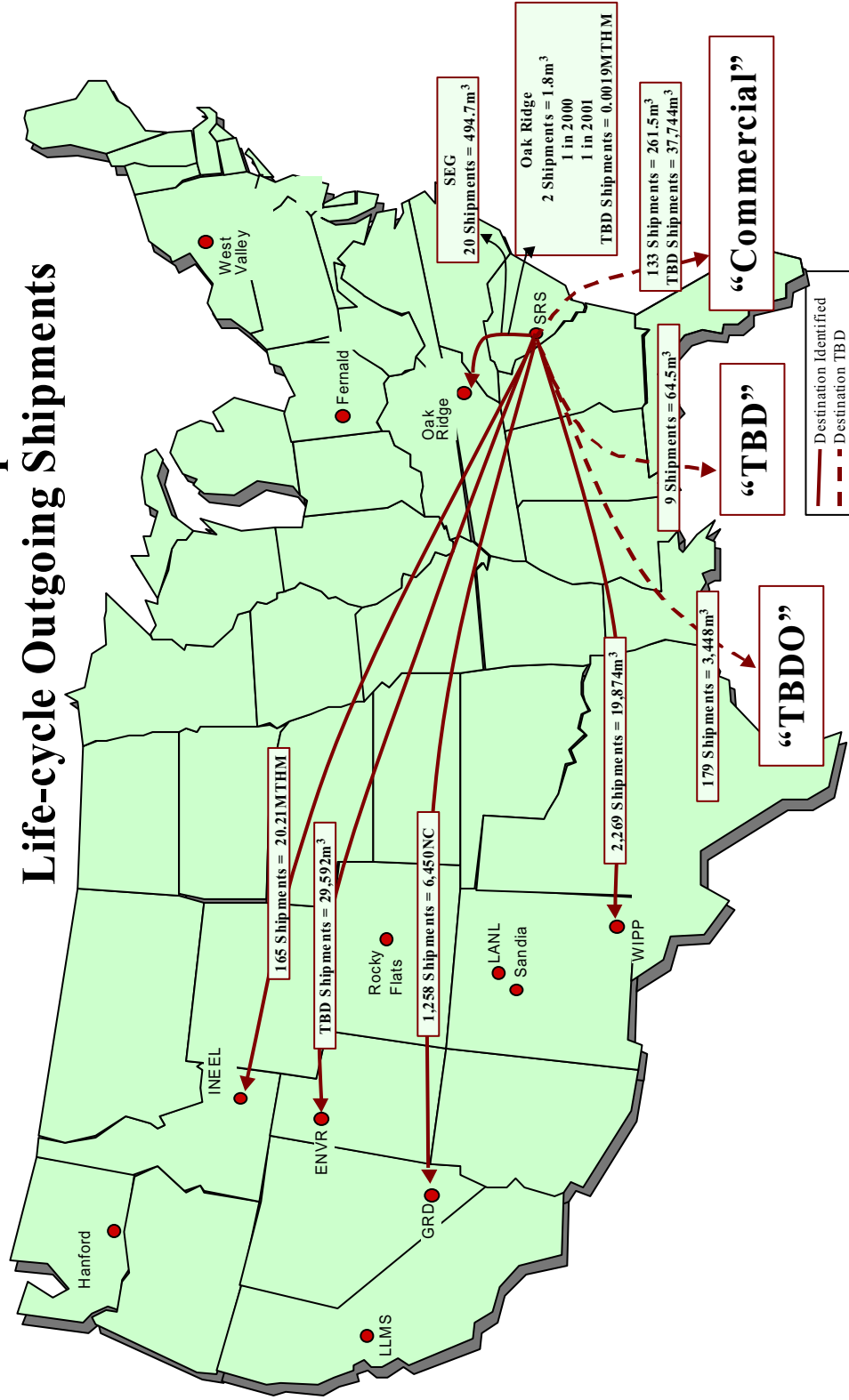


**Sandia National Laboratory**  
Outgoing MLLW Volume to "TBDO"

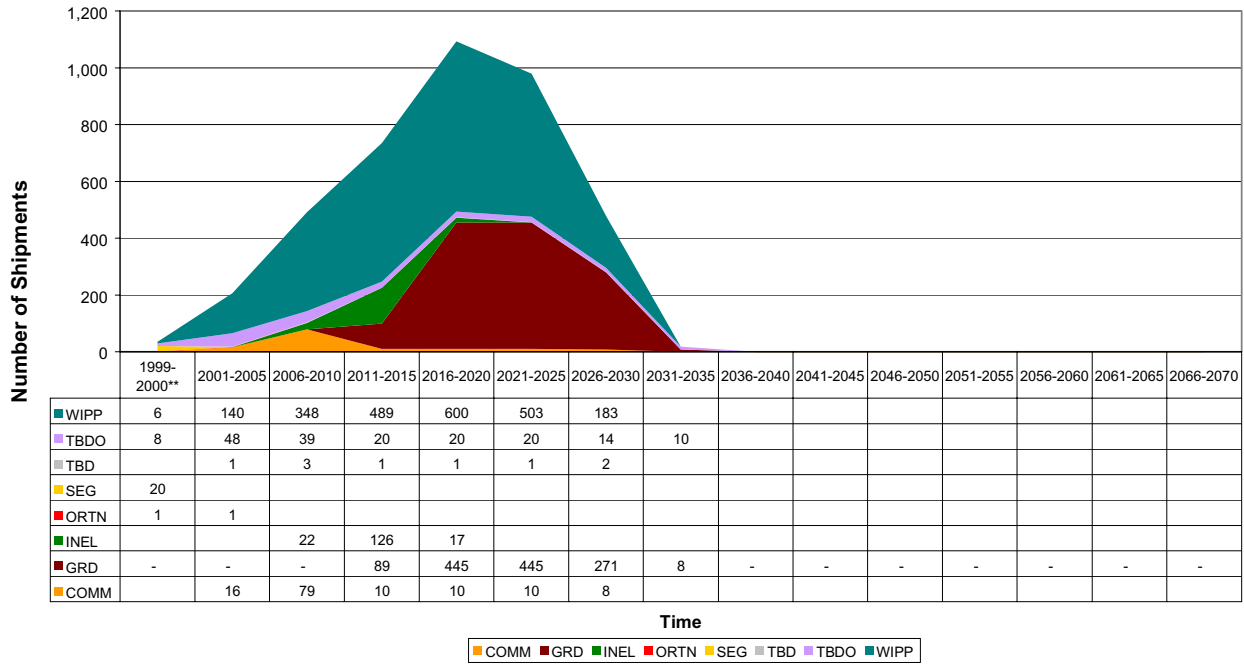




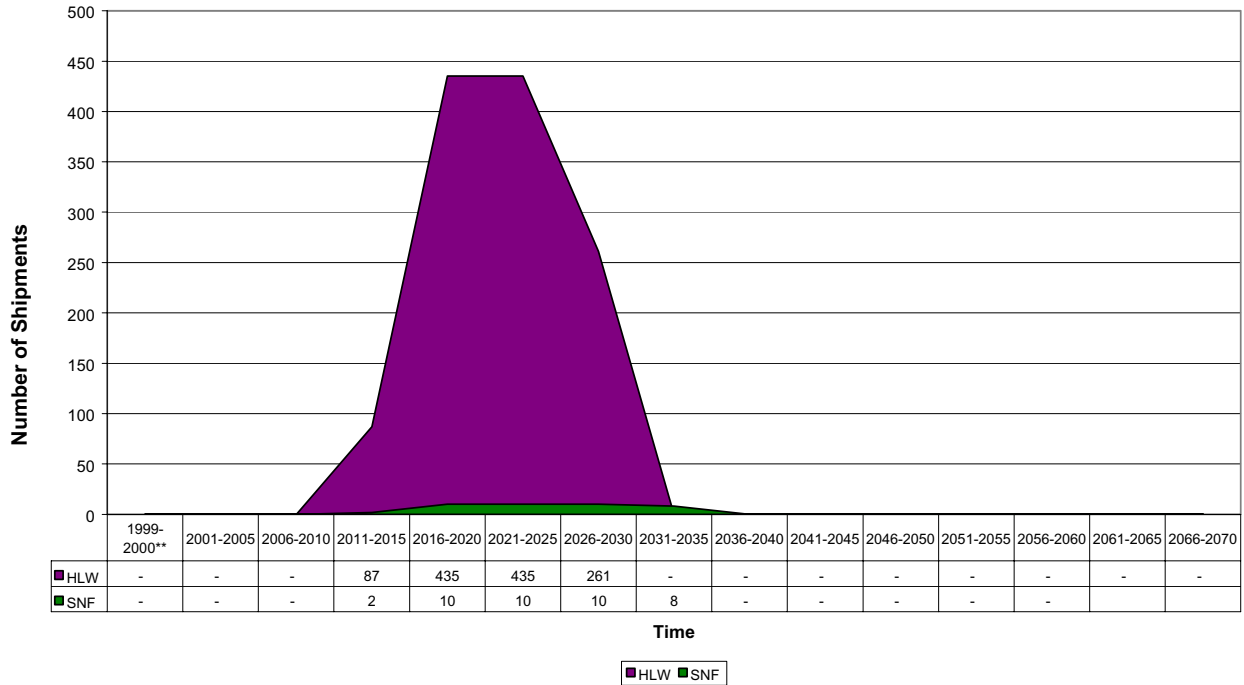
# Savannah River Site Waste Stream Disposition Life-cycle Outgoing Shipments



**Savannah River Site  
Waste Stream Disposition  
Life-cycle Outgoing Shipments**

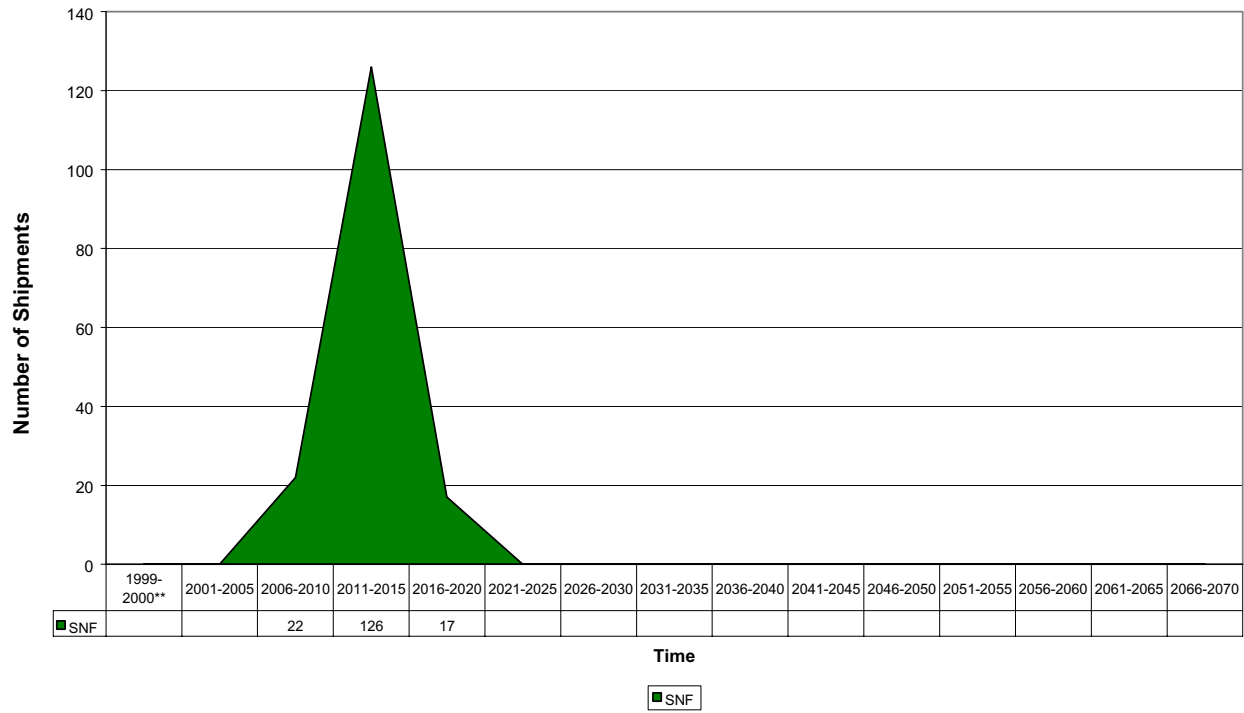


**Savannah River Site  
Outgoing HLW & SNF Shipments to Geologic Repository Disposal  
(Tentatively Yucca Mtn.)**

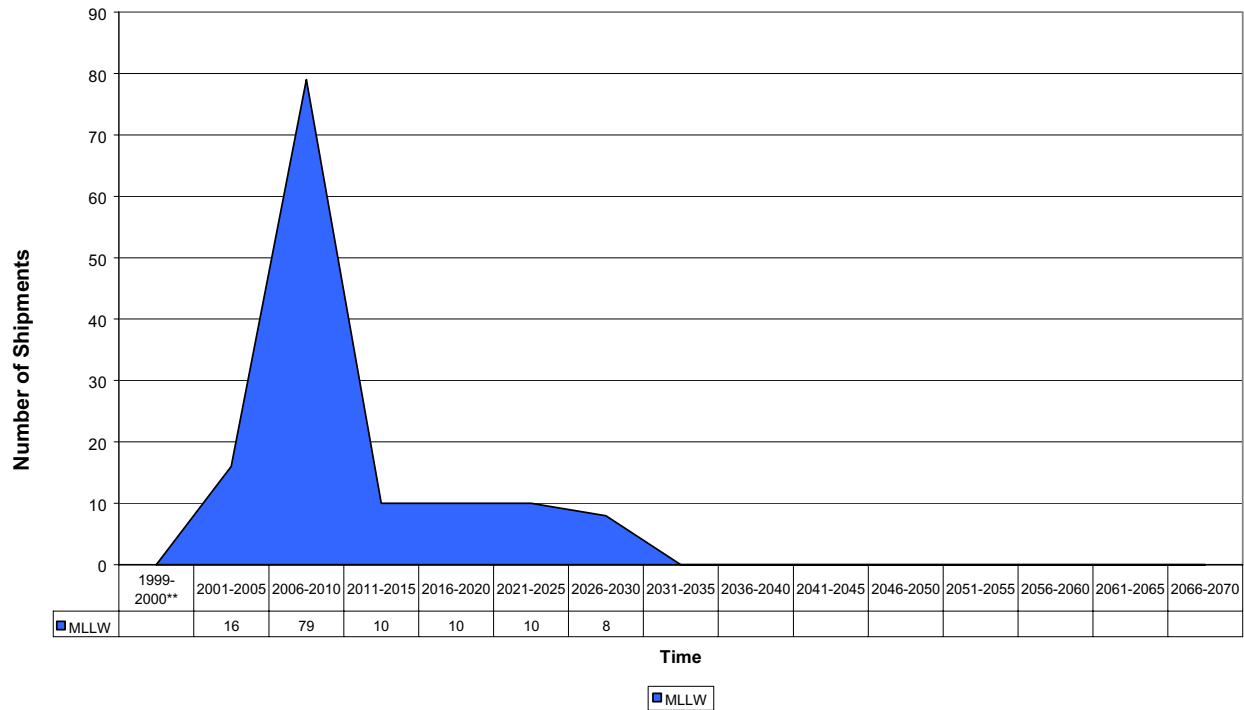


Total life-cycle values per 7/30/99 Stream Disposition Data (SDD) (<http://id.inel.gov/avs/>) (and/or 1999 Integrated Repository Receipts Workshop for GRD data). Printed: March 30, 2000  
 \*\* Represents data for a two year period.

**Savannah River Site**  
Outgoing SNF Shipments to INEEL

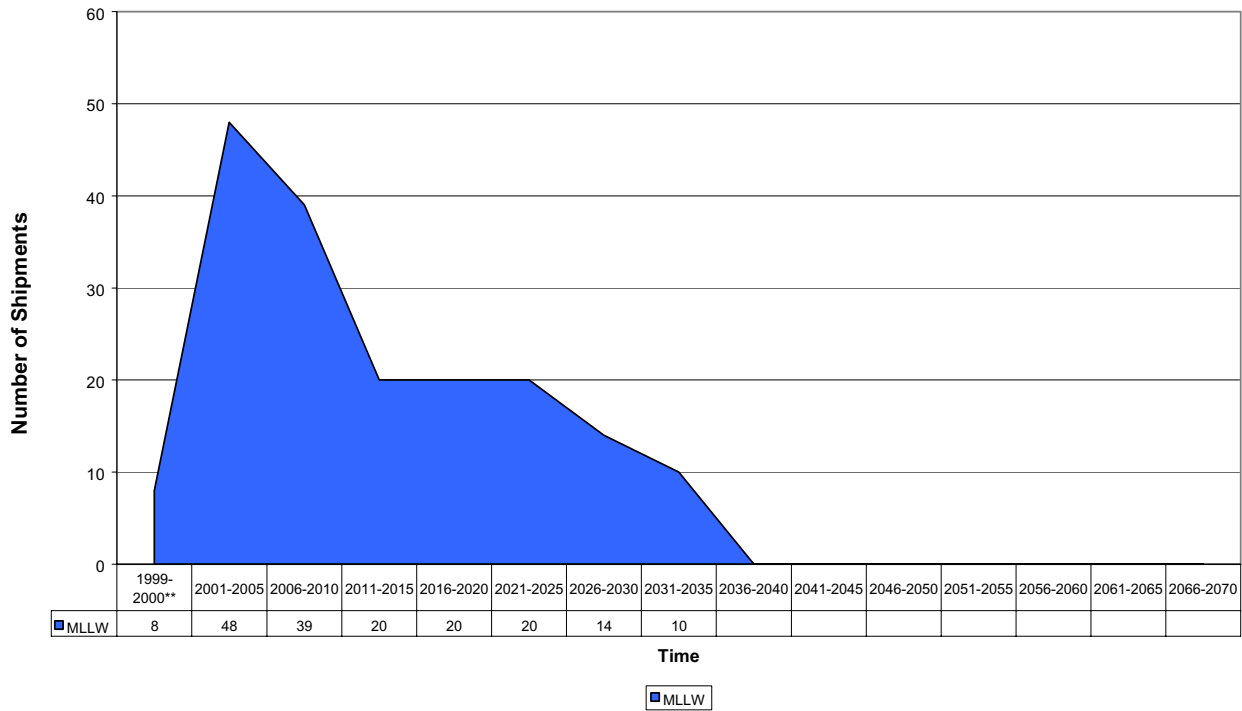


**Savannah River Site**  
Outgoing MLLW Shipments to "Commercial"



Total life-cycle values per 7/30/99 Stream Disposition Data (SDD) (<http://id.inel.gov/avs/>) (and/or 1999 Integrated Repository Receipts Workshop for GRD data). Printed: March 30, 2000  
\*\* Represents data for a two year period.

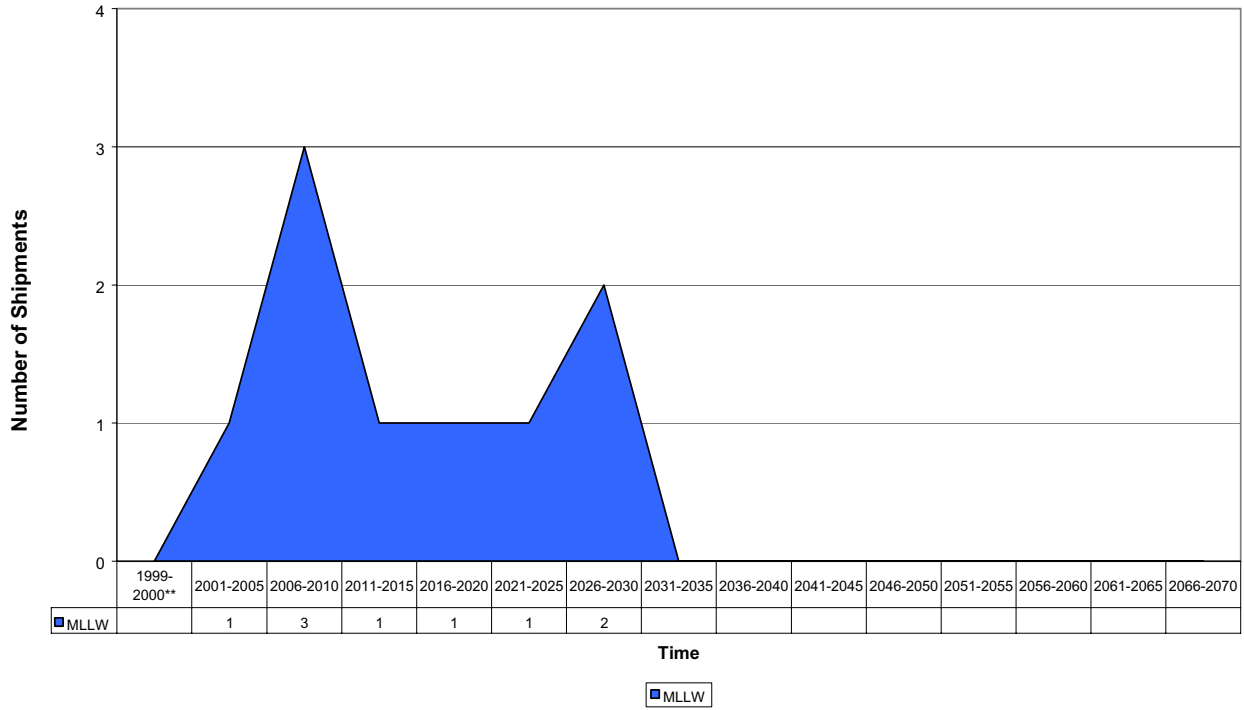
**Savannah River Site**  
Outgoing MLLW Shipments to "TBDO"



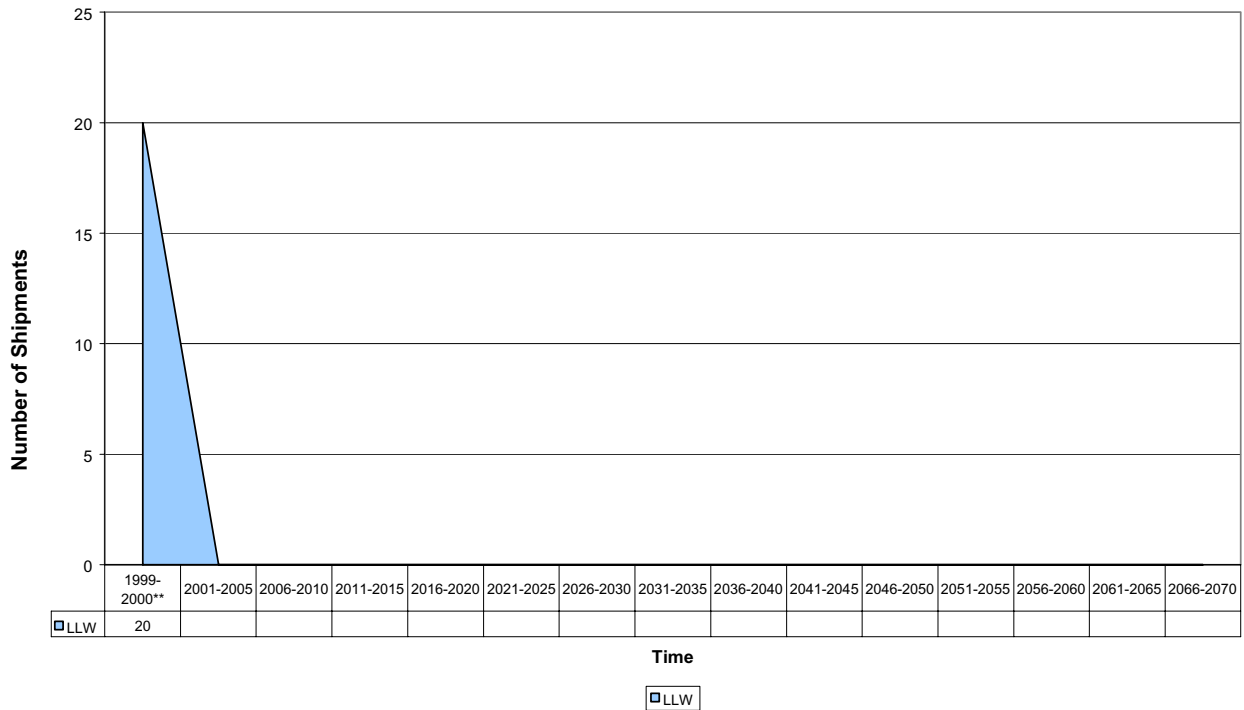
**Savannah River Site**  
Outgoing TRU Shipments to WIPP



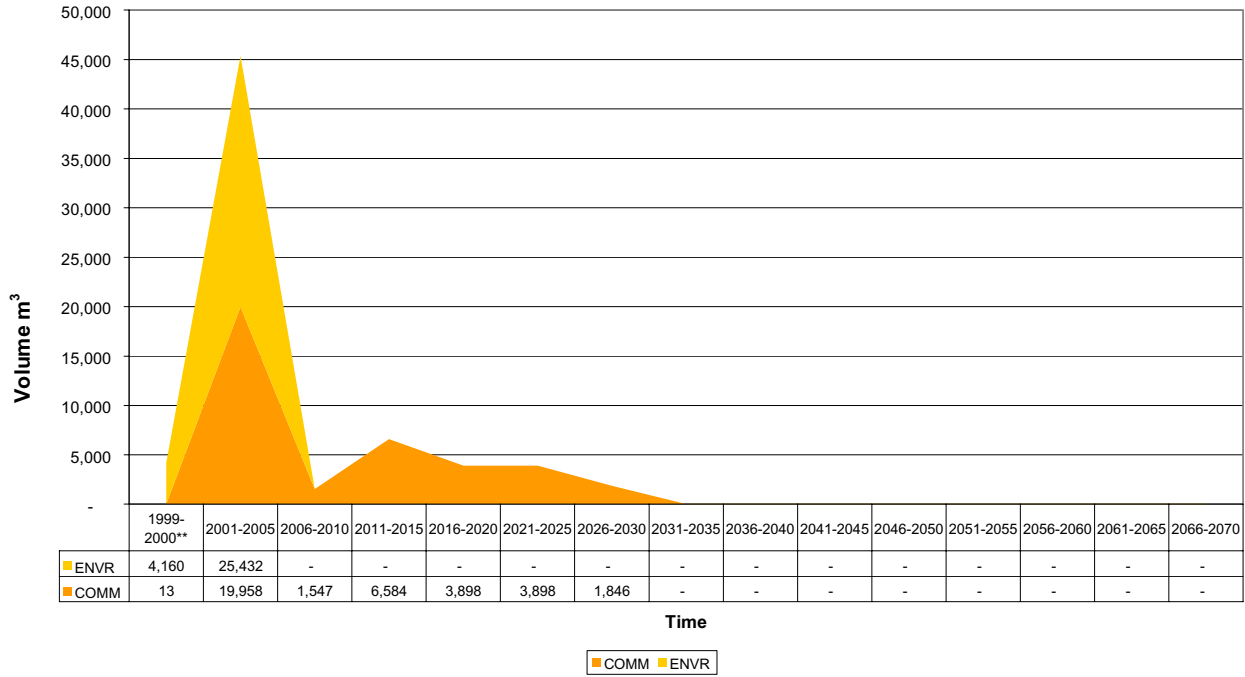
**Savannah River Site**  
Outgoing MLLW Shipments to "TBD"



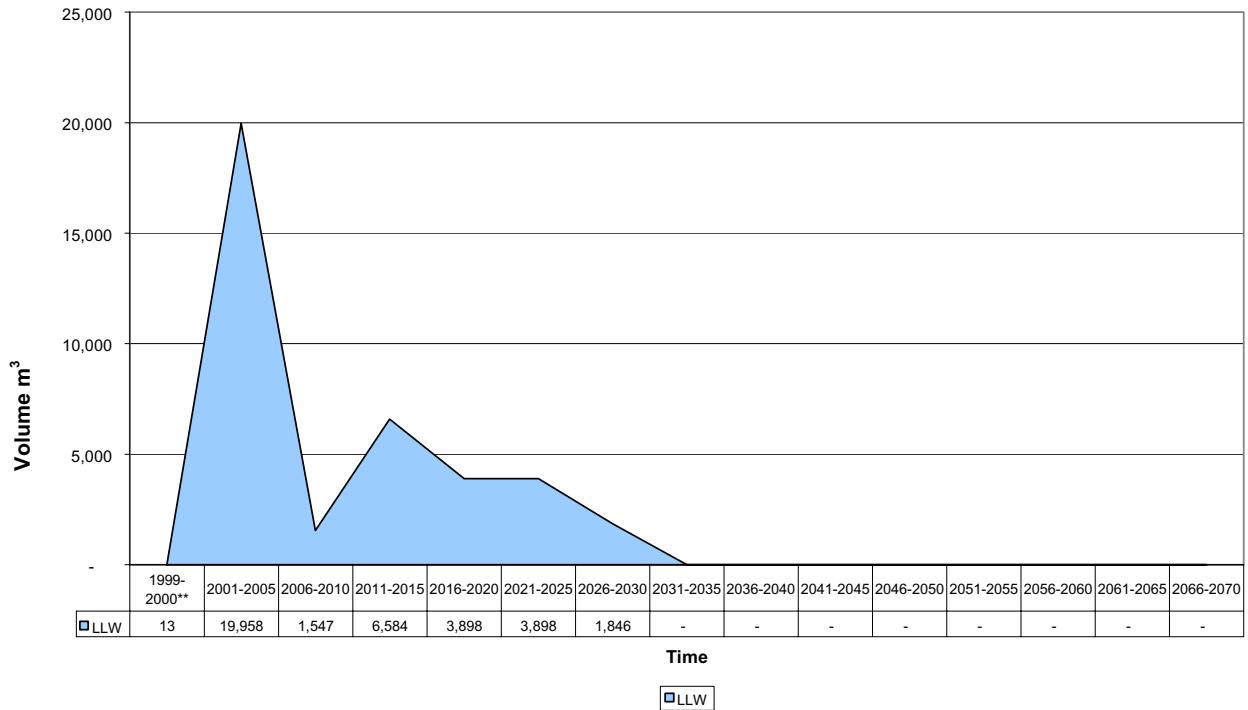
**Savannah River Site**  
Outgoing LLW Shipments to GTS Duratek (SEG)



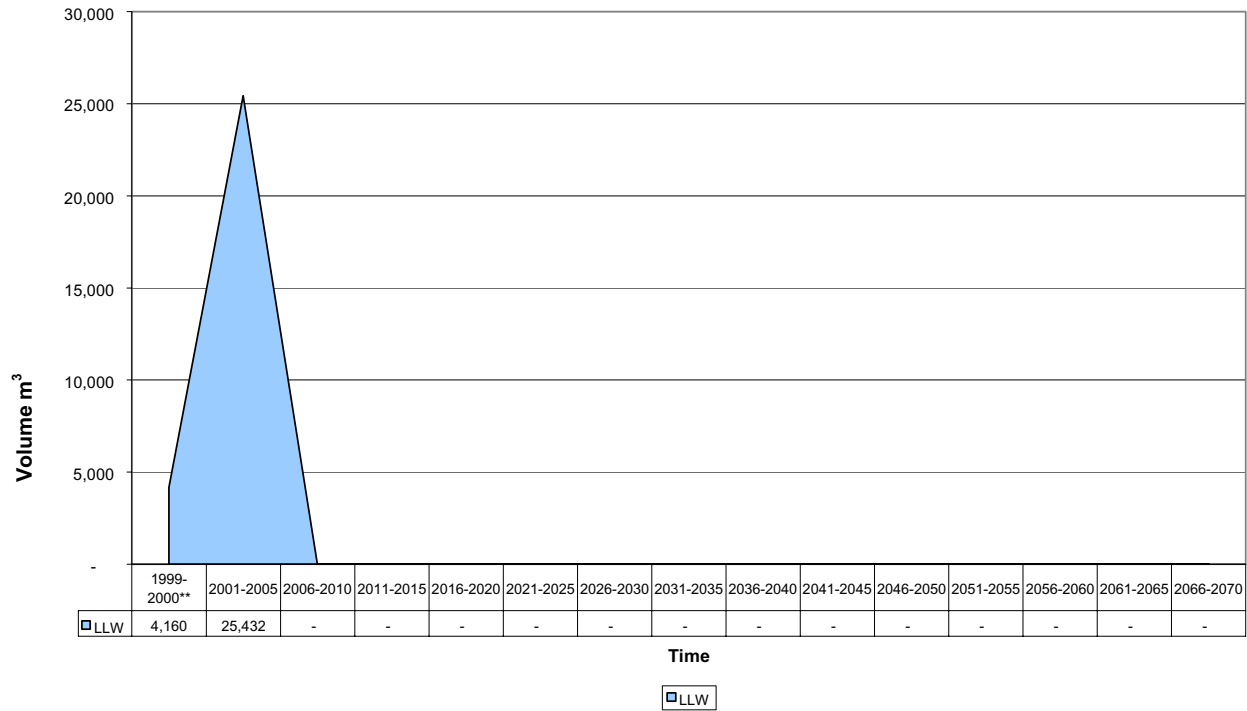
**Savannah River Site  
Waste Stream Disposition  
Life-cycle Outgoing Volume**



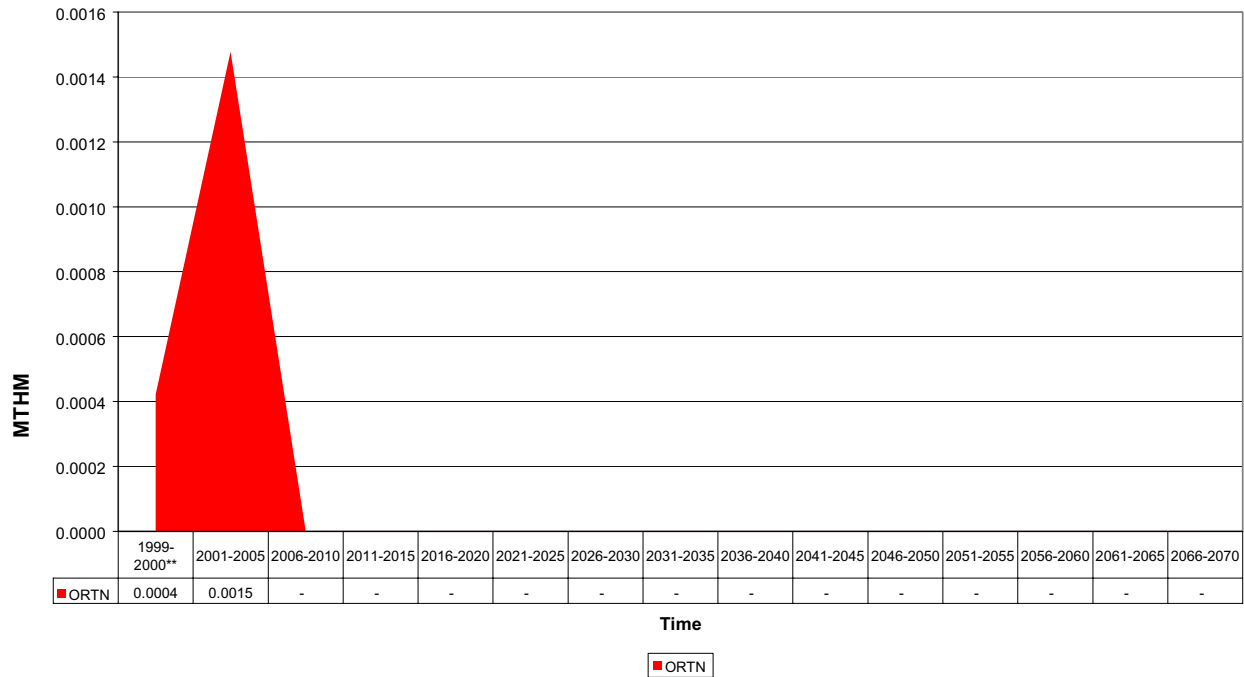
**Savannah River Site  
Outgoing LLW Volume to "Commercial"**



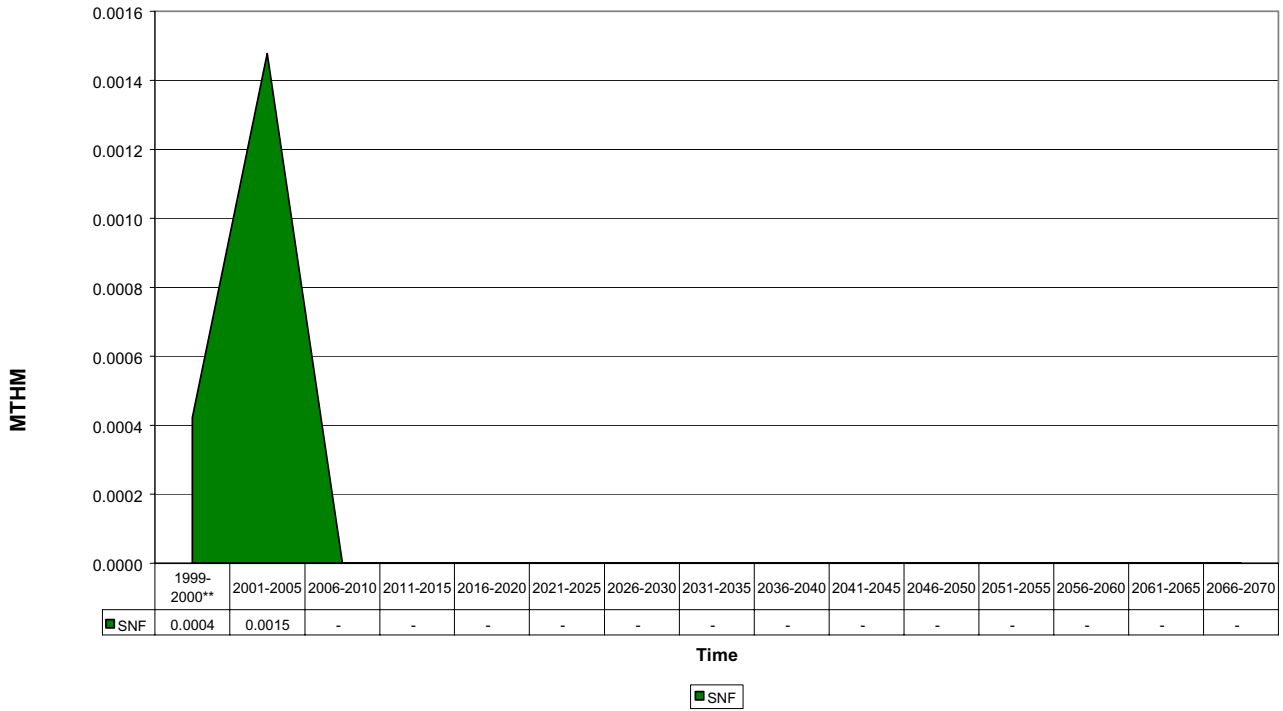
**Savannah River Site**  
Outgoing LLW Volume to Envirocare



**Savannah River Site**  
Waste Stream Disposition  
Life-cycle Outgoing SNF

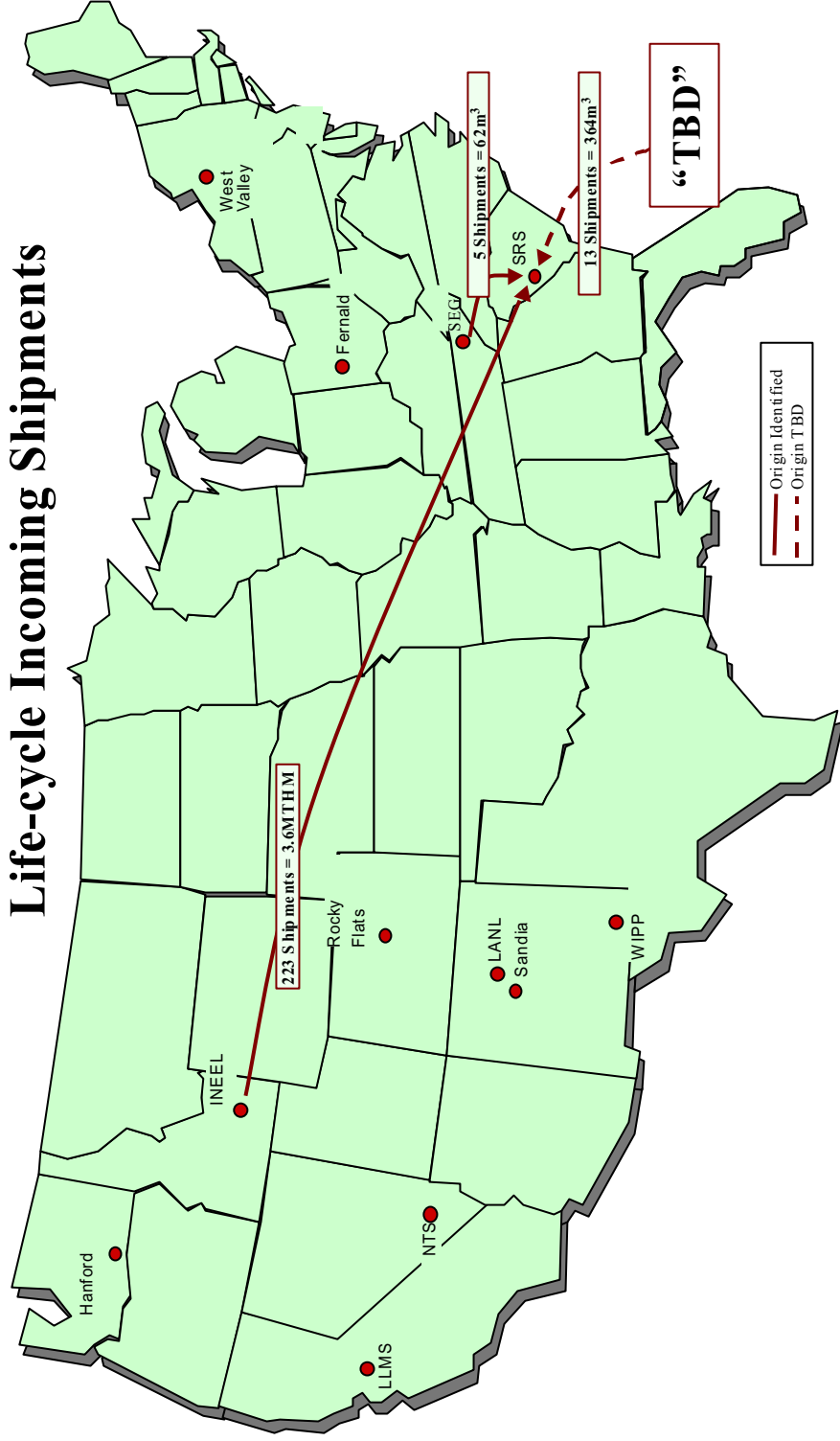


**Savannah River Site**  
Outgoing SNF Shipments to Oak Ridge

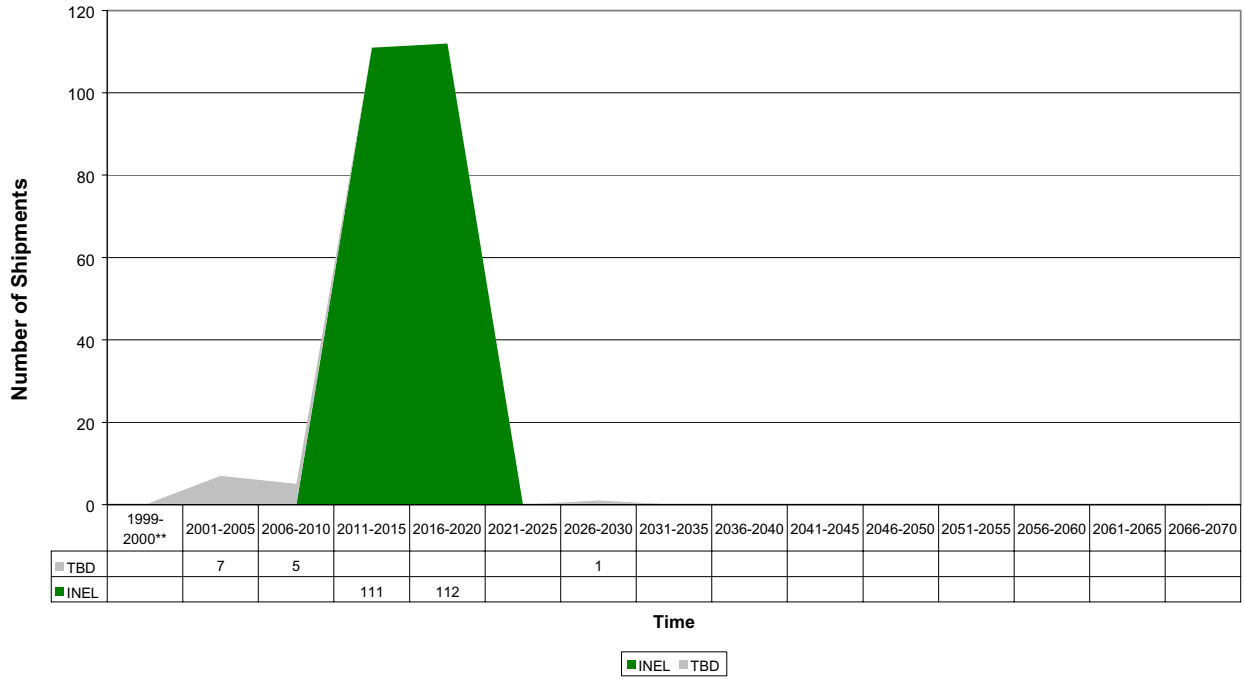




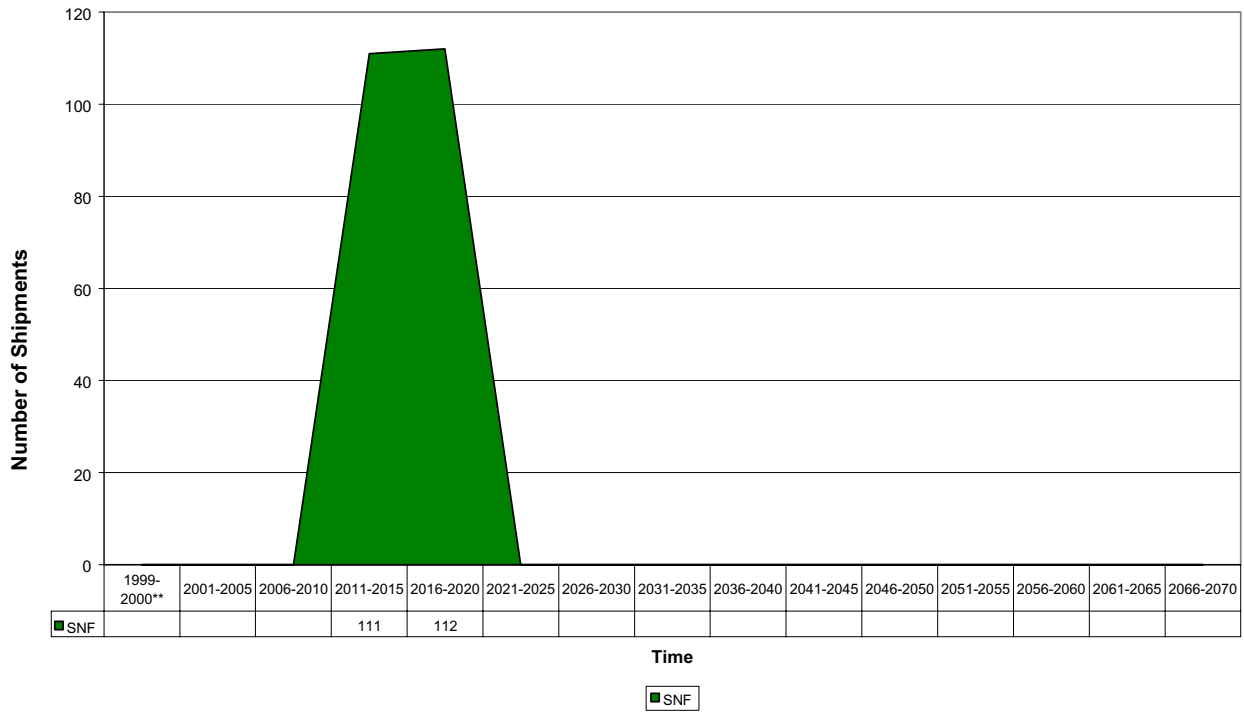
# Savannah River Site Waste Stream Disposition Life-cycle Incoming Shipments



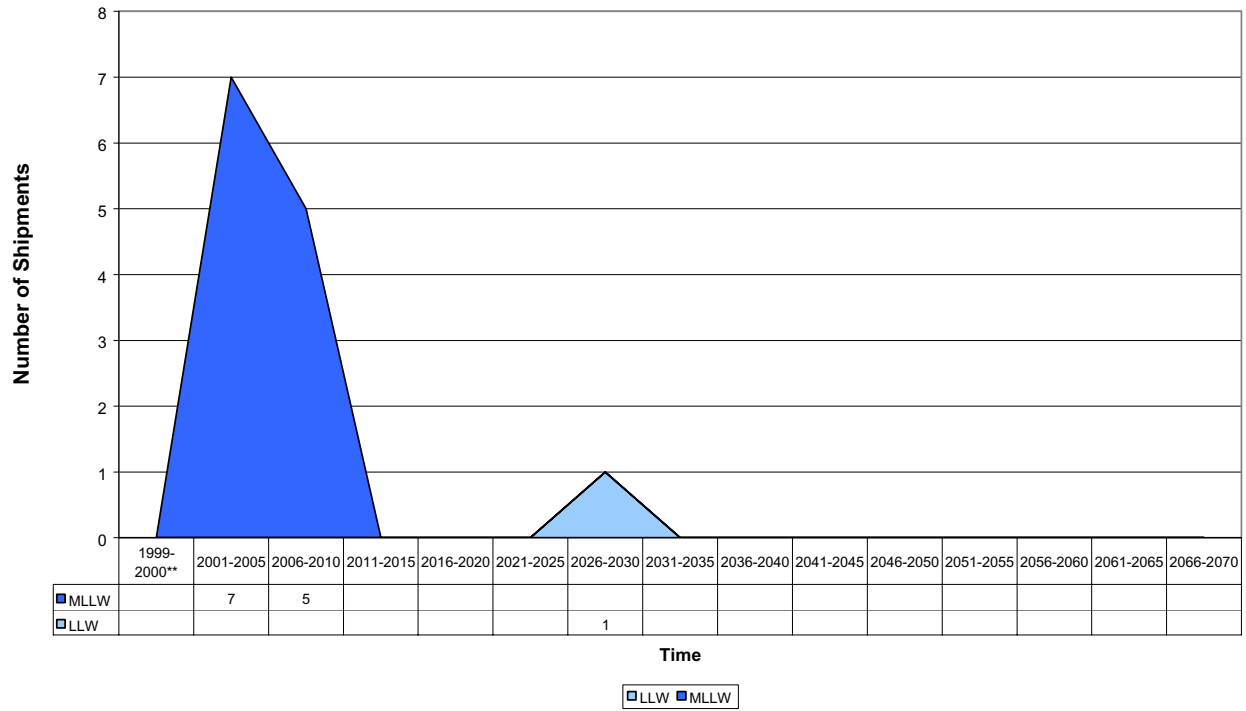
**Savannah River Site  
Waste Stream Disposition  
Life-cycle Incoming Shipments**



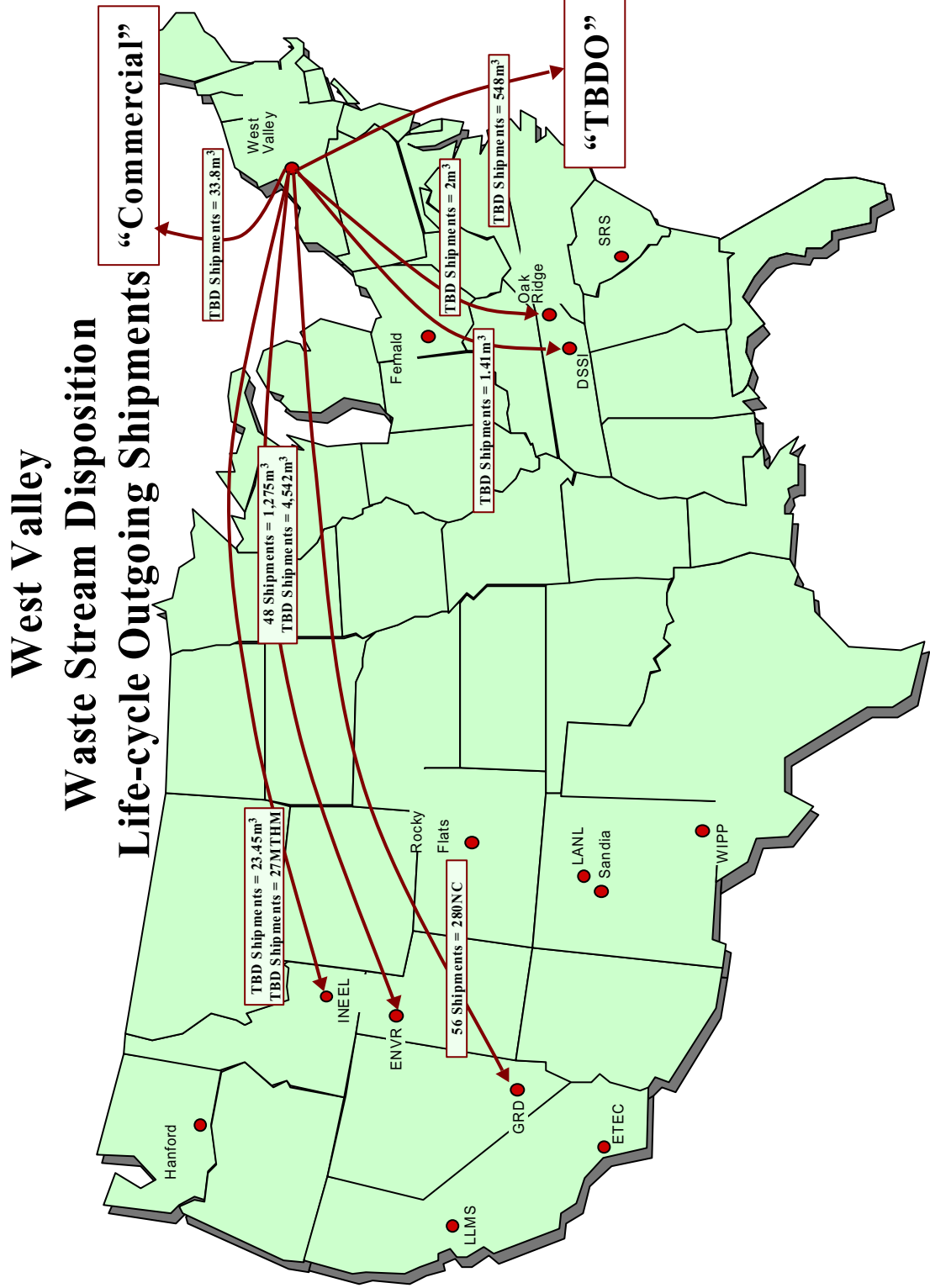
**Savannah River Site  
Incoming SNF Shipments from INEEL**



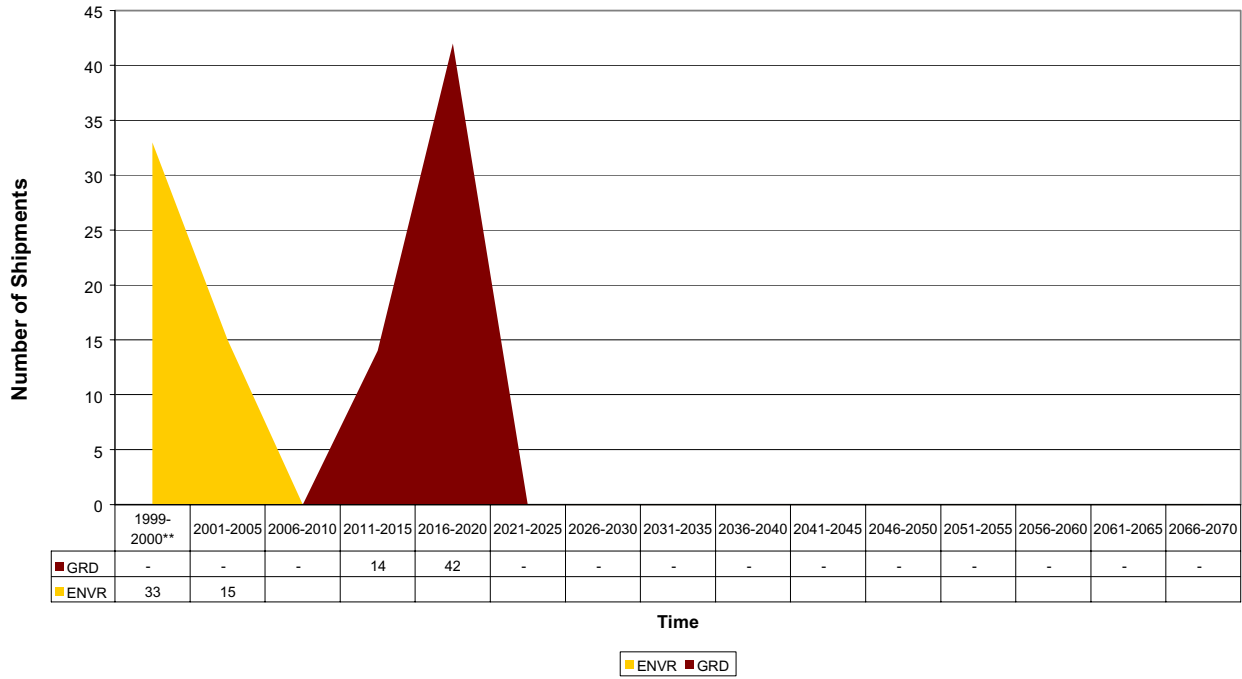
**Savannah River Site**  
Incoming M/LLW Shipments from "TBD"



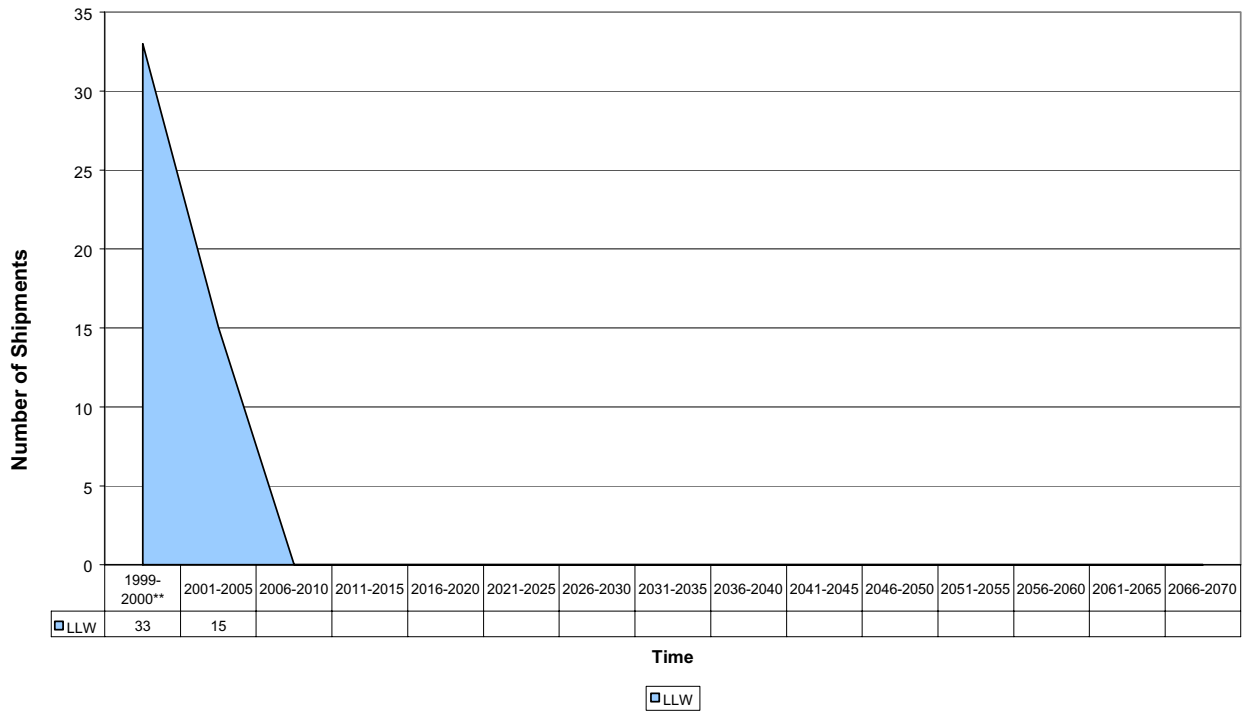




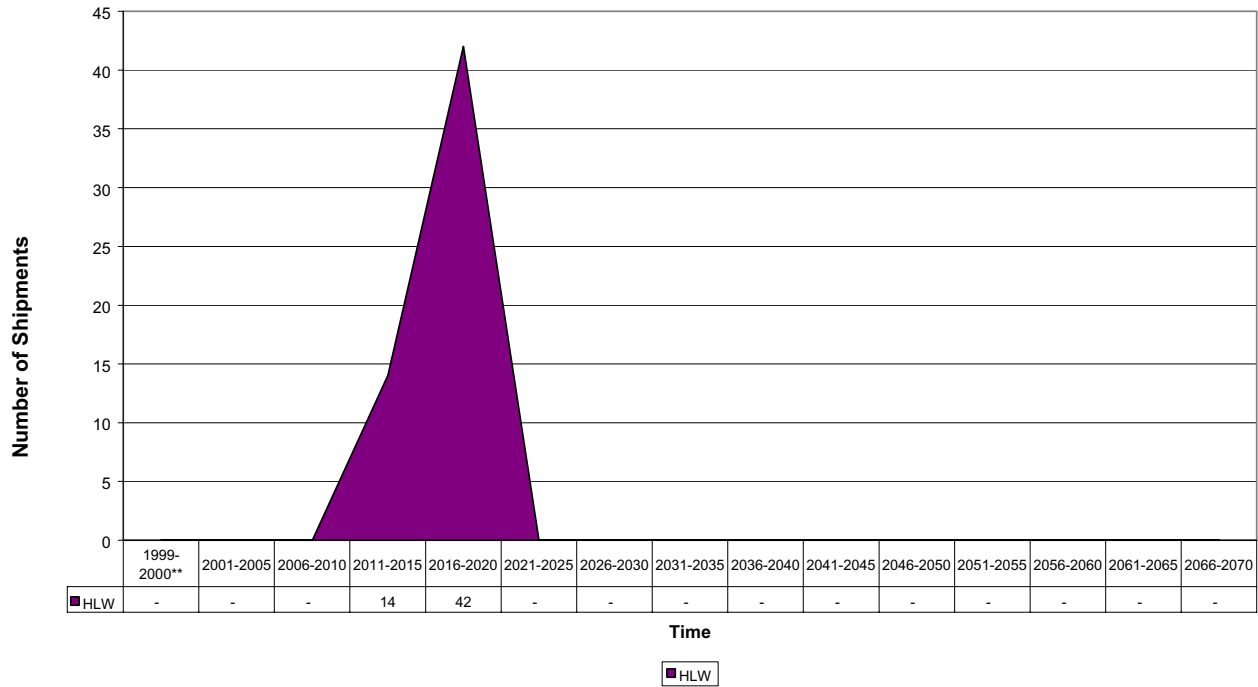
**West Valley  
Waste Stream Disposition  
Life-cycle Outgoing Shipments**



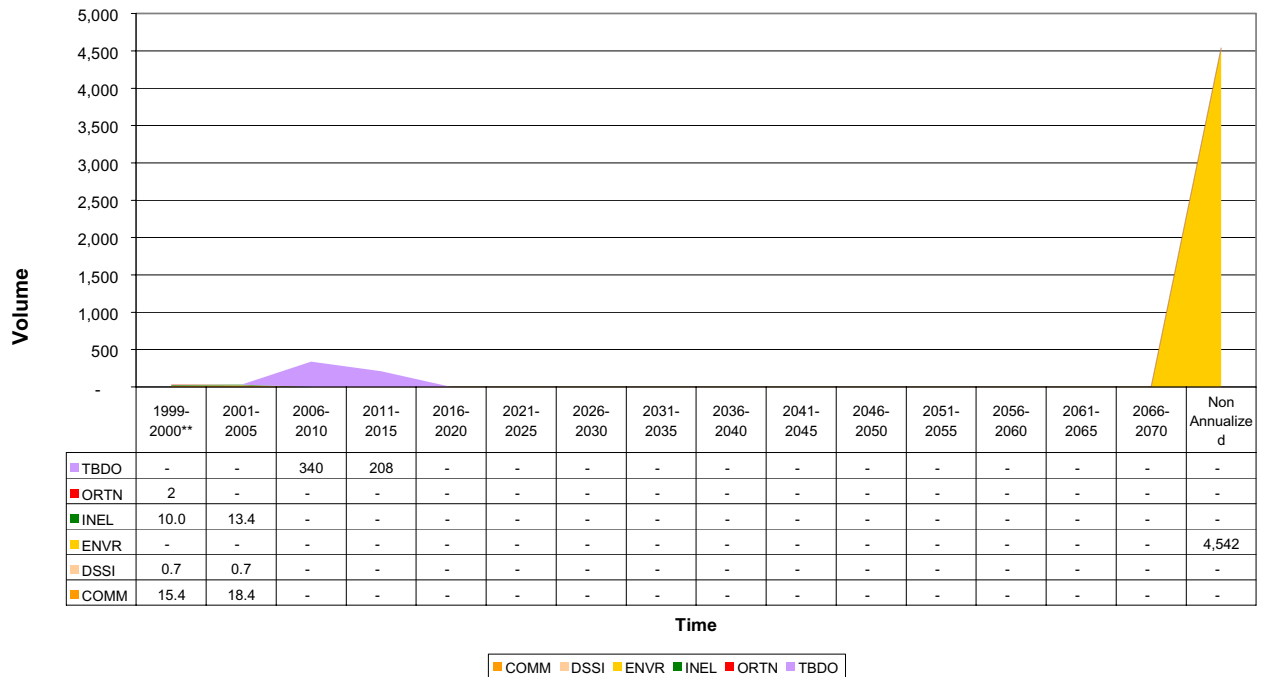
**West Valley  
Outgoing LLW Shipments to Envirocare**



**West Valley**  
Outgoing HLW Shipments to Geologic Repository Disposal  
(Tentatively Yucca Mtn.)

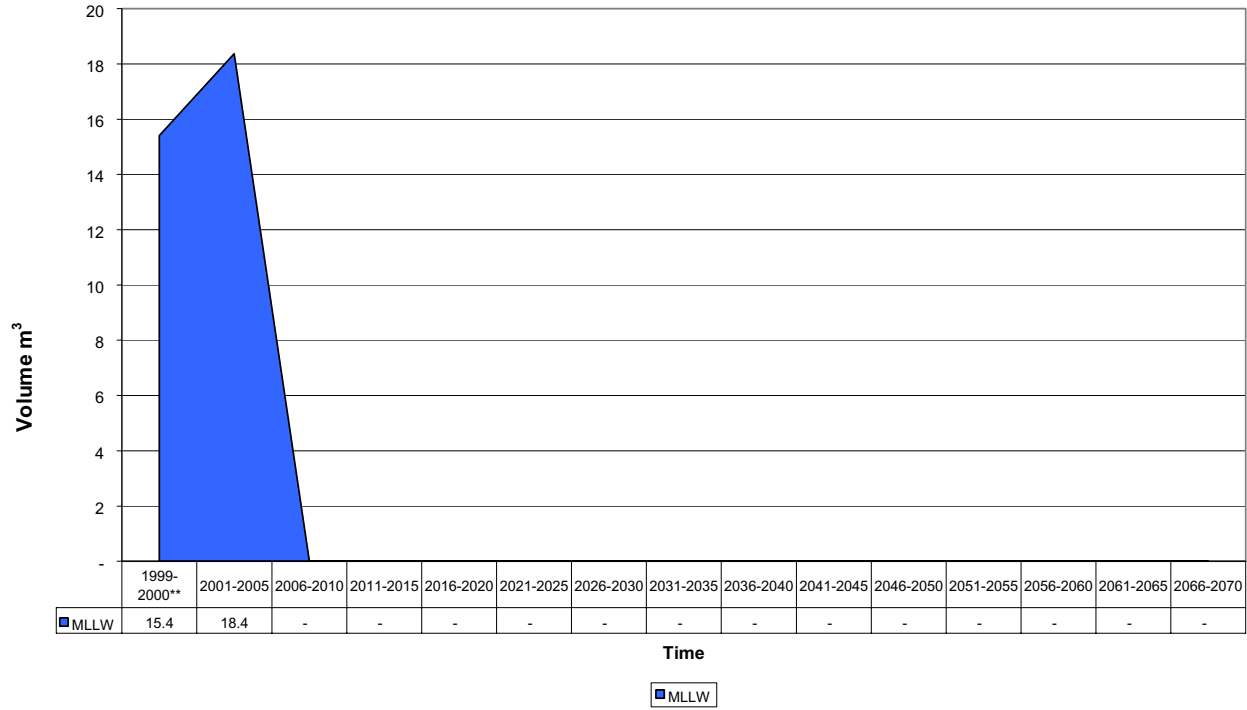


**West Valley**  
Waste Stream Disposition  
Life-cycle Outgoing Volume

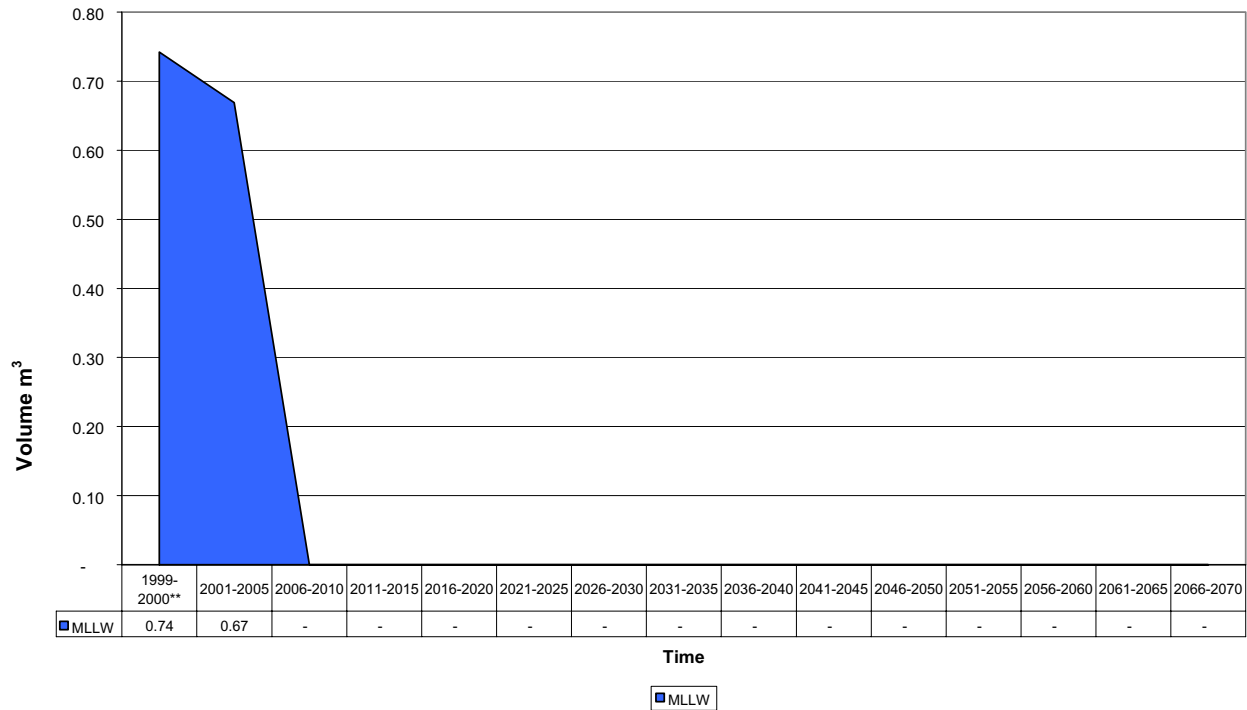


Total life-cycle values per 7/30/99 Stream Disposition Data (SDD) (<http://id.inel.gov/avs/>) (and/or 1999 Integrated Repository Receipts Workshop for GRD data). Printed: March 30, 2000  
\*\* Represents data for a two year period.

**West Valley**  
Outgoing MLLW Volume to "Commercial"

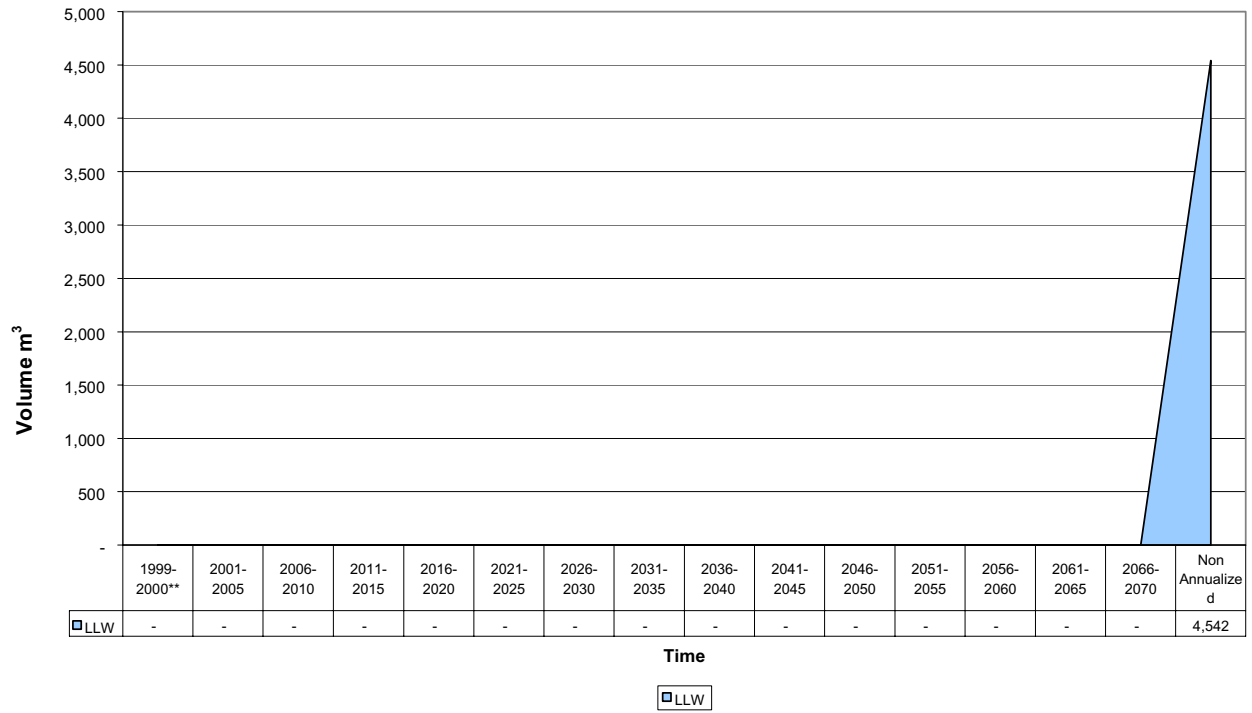


**West Valley**  
Outgoing MLLW Volume to Diversified Scientific Services, Inc.

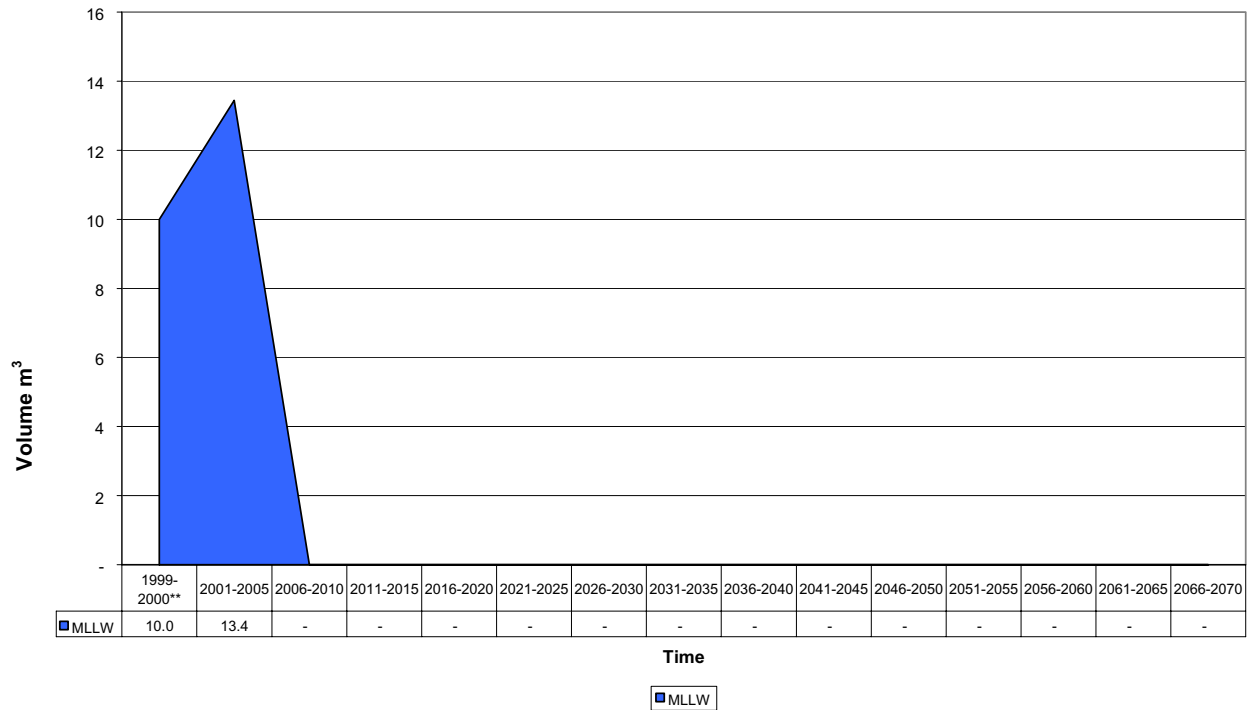




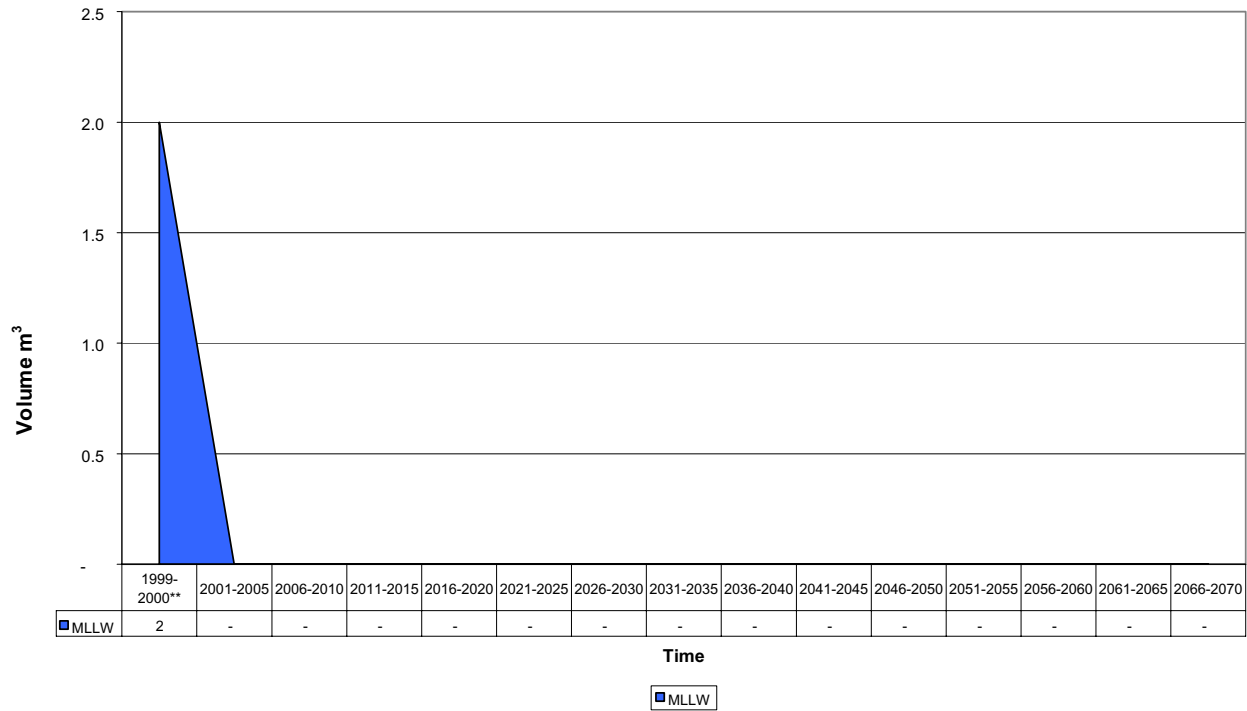
**West Valley**  
Outgoing LLW Volume to Envirocare



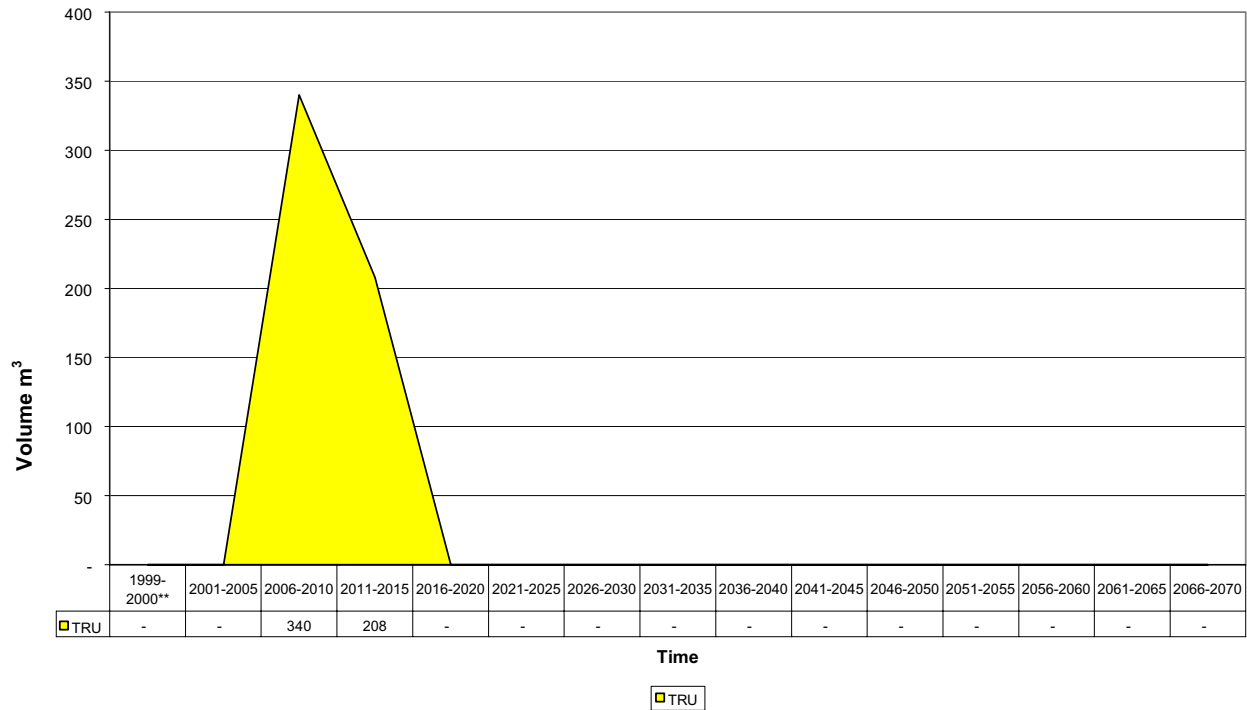
**West Valley**  
Outgoing MLLW Volume to INEEL



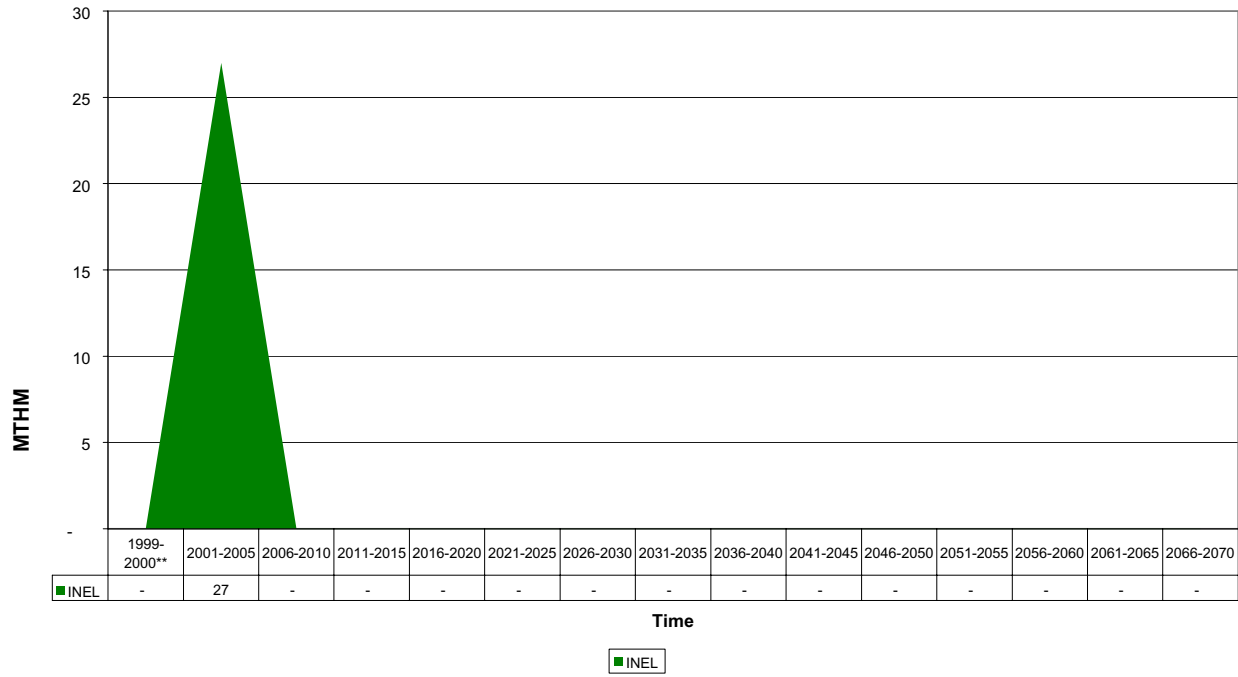
**West Valley**  
Outgoing MLLW Volume to Oak Ridge



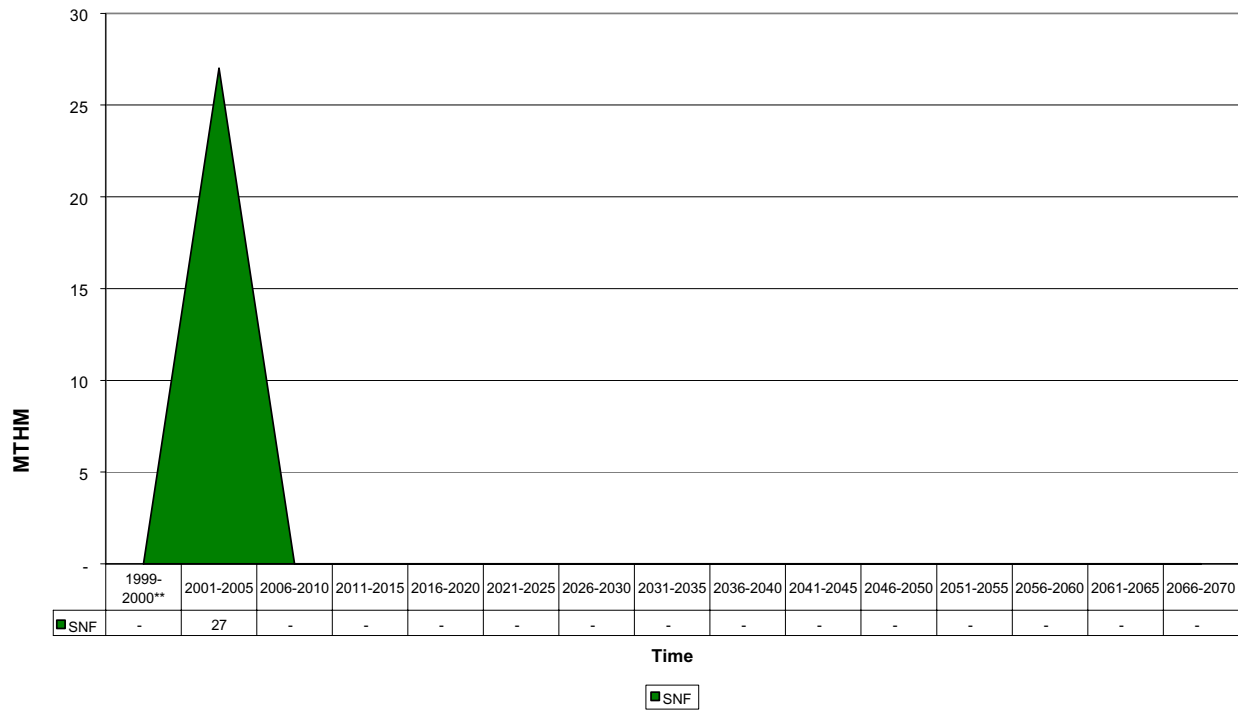
**West Valley**  
Outgoing TRU Volume to "TBDO"



**West Valley  
Waste Stream Disposition  
Life-cycle Outgoing SNF**

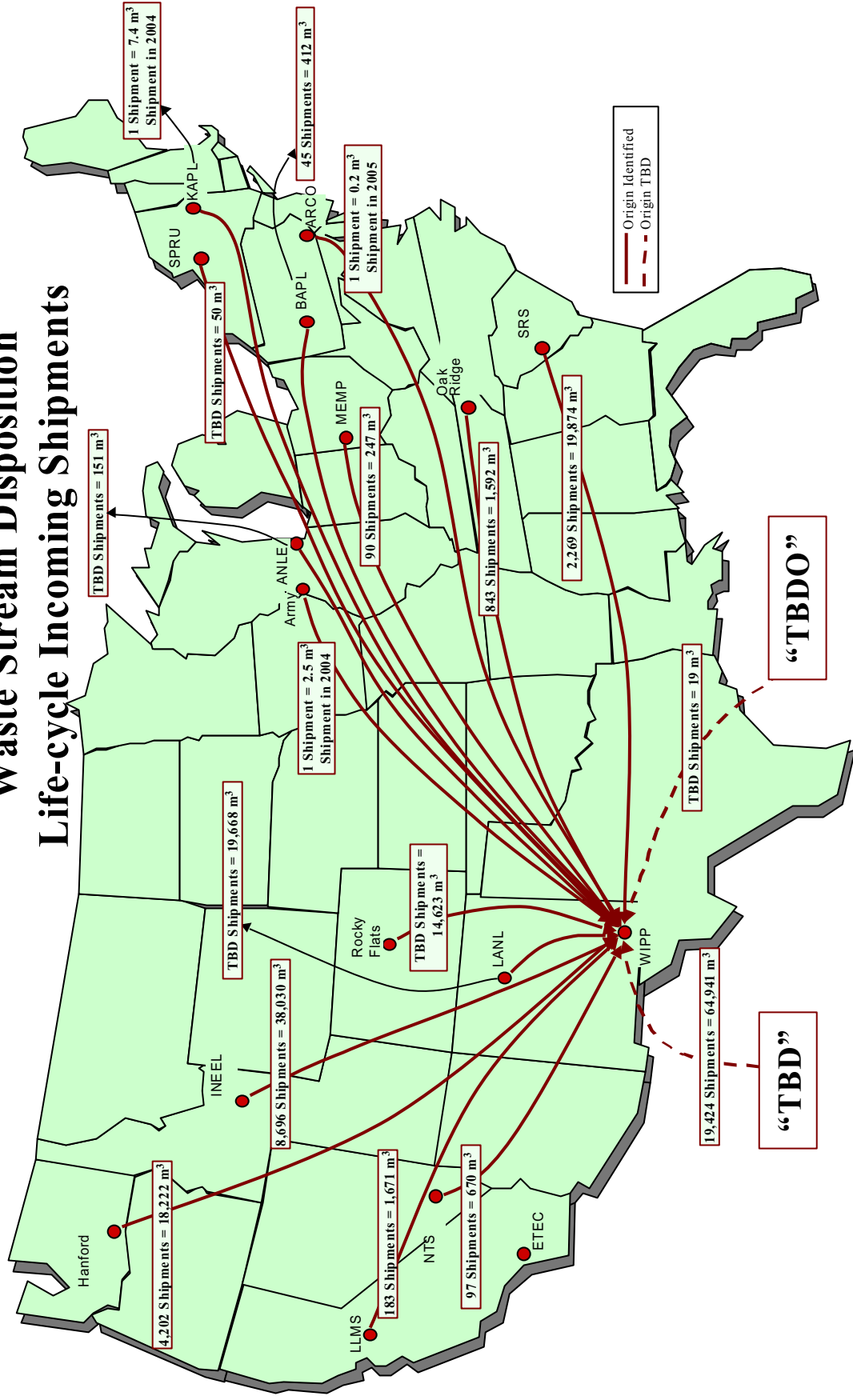


**West Valley  
Outgoing SNF to INEEL**

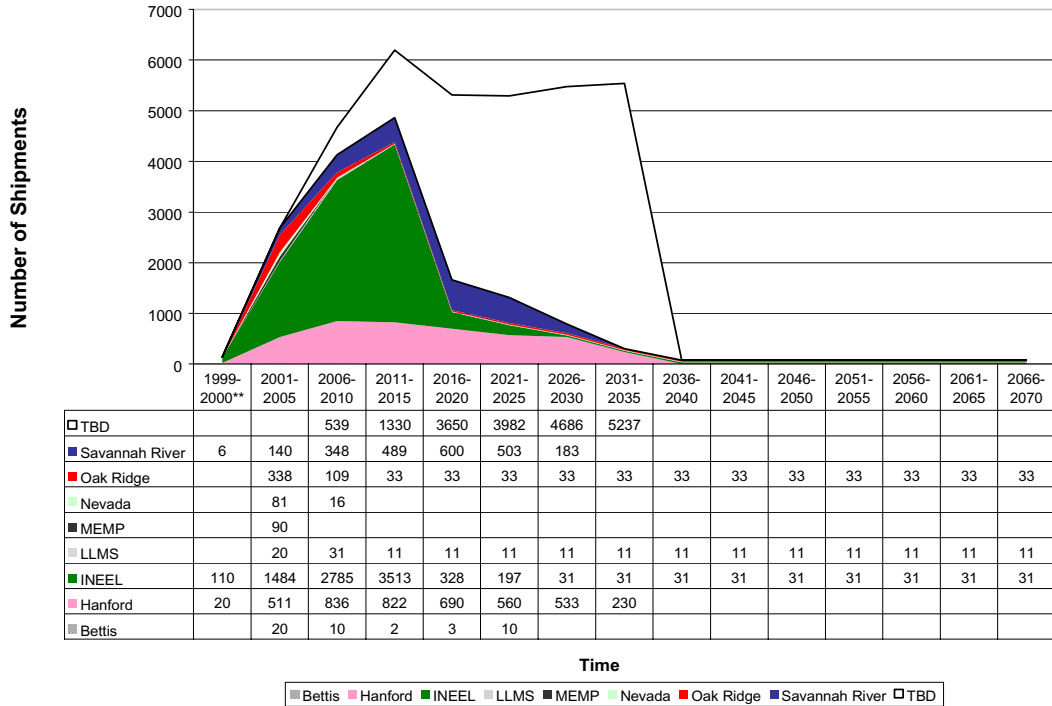




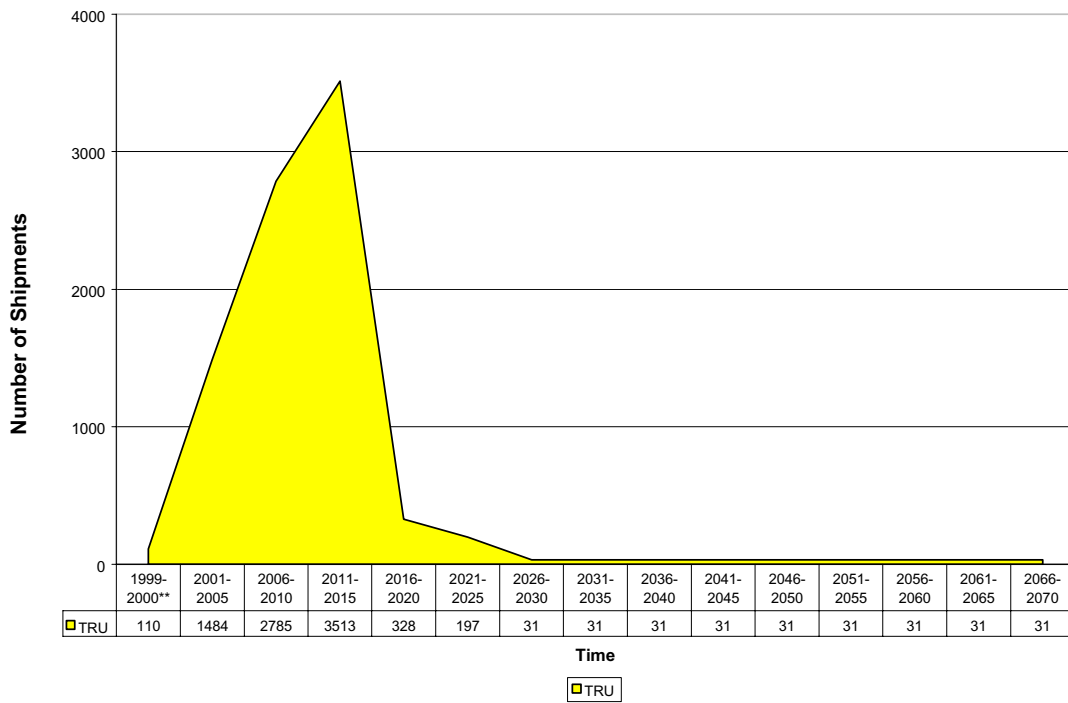
# WIPP Waste Stream Disposition Life-cycle Incoming Shipments

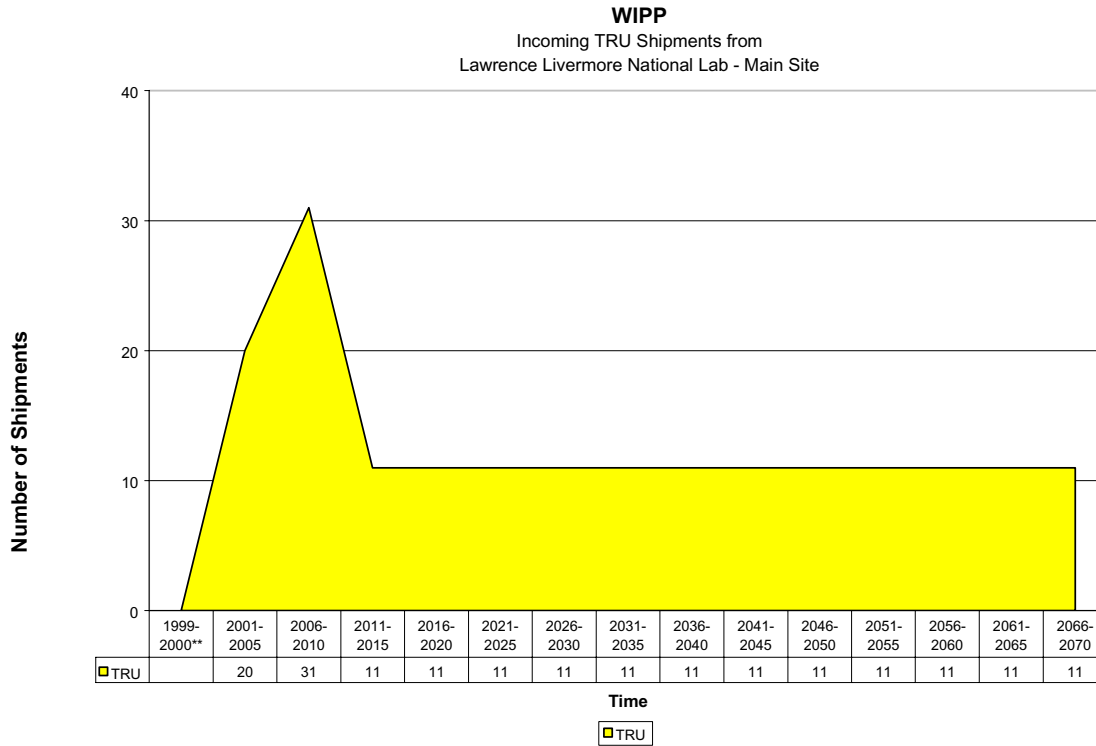
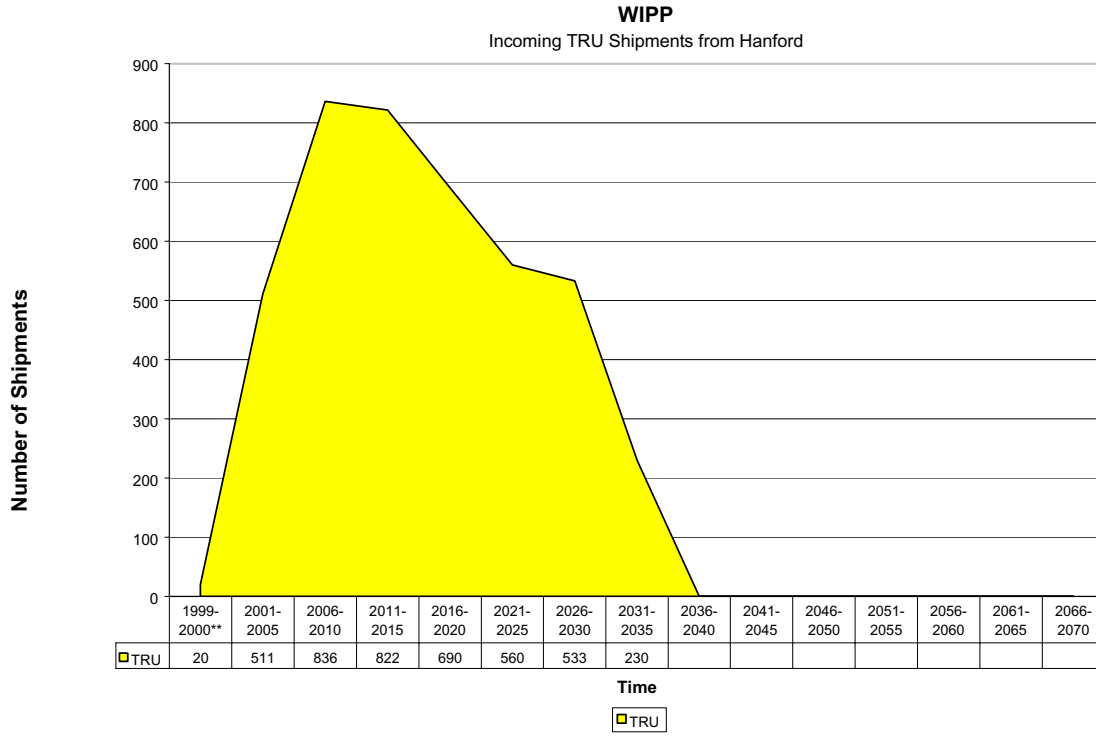


**WIPP  
Waste Stream Disposition  
Life-cycle Incoming Shipments**

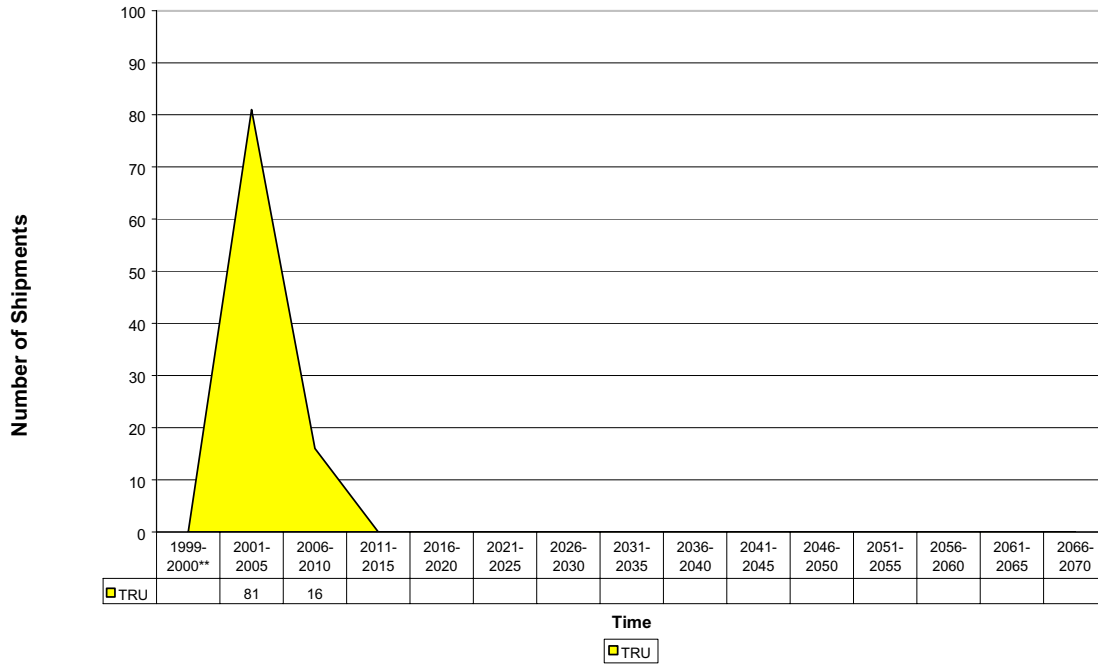


**WIPP  
Incoming TRU Shipments from INEEL**

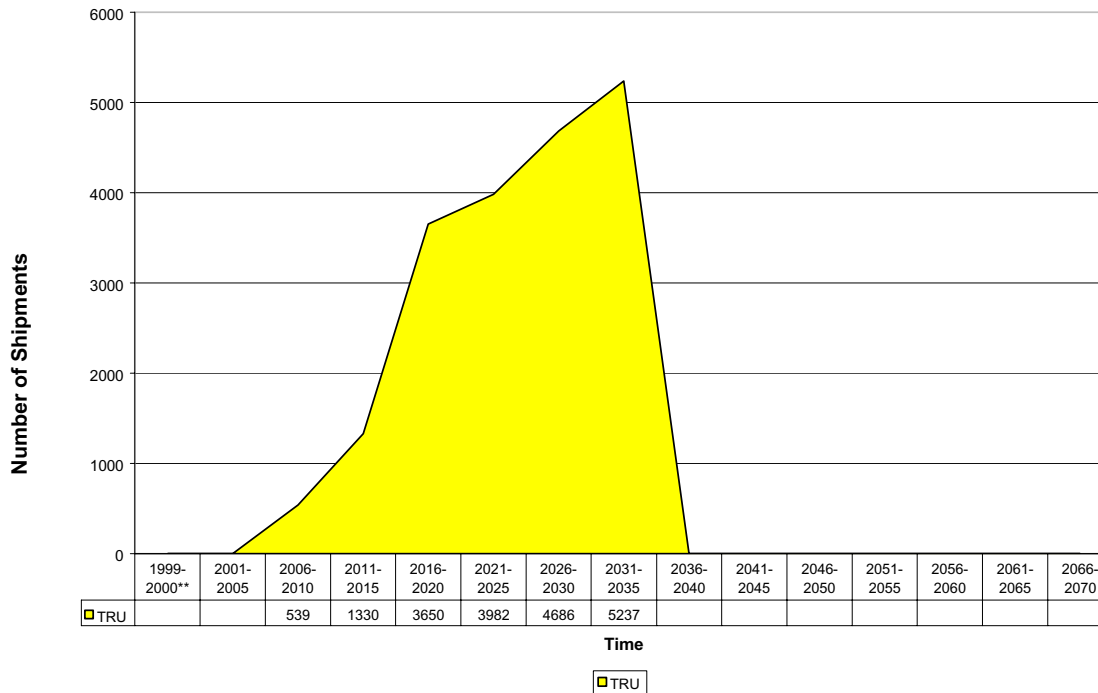




**WIPP**  
Incoming TRU Shipments from  
Nevada Test Site

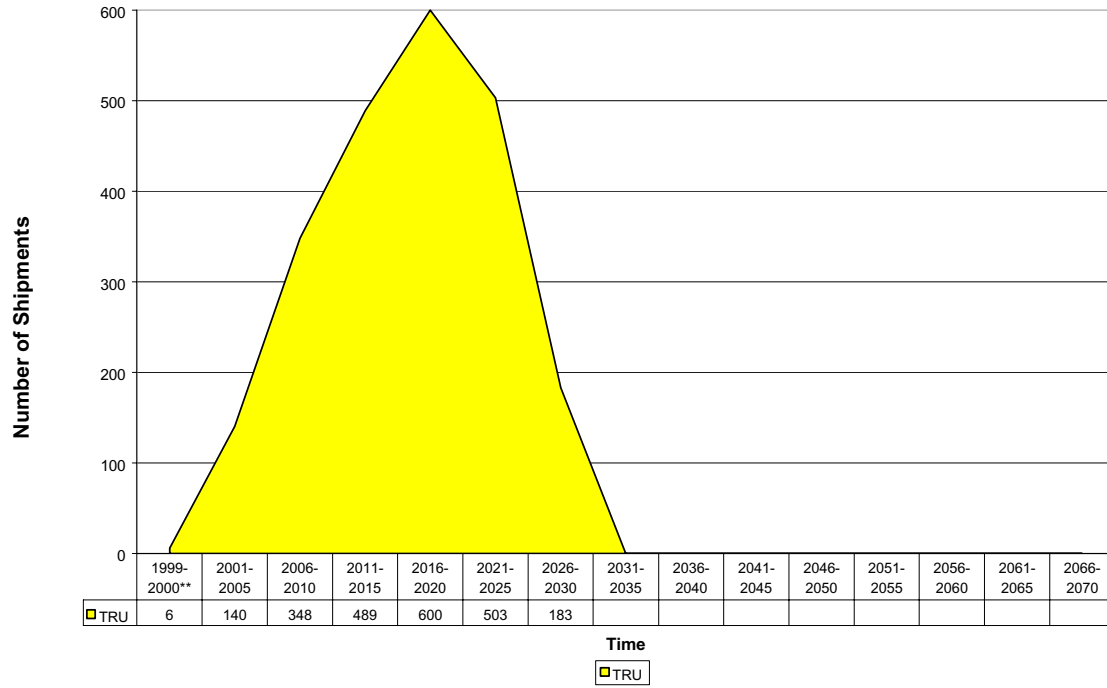


**WIPP**  
Incoming TRU Shipments from "TBD"

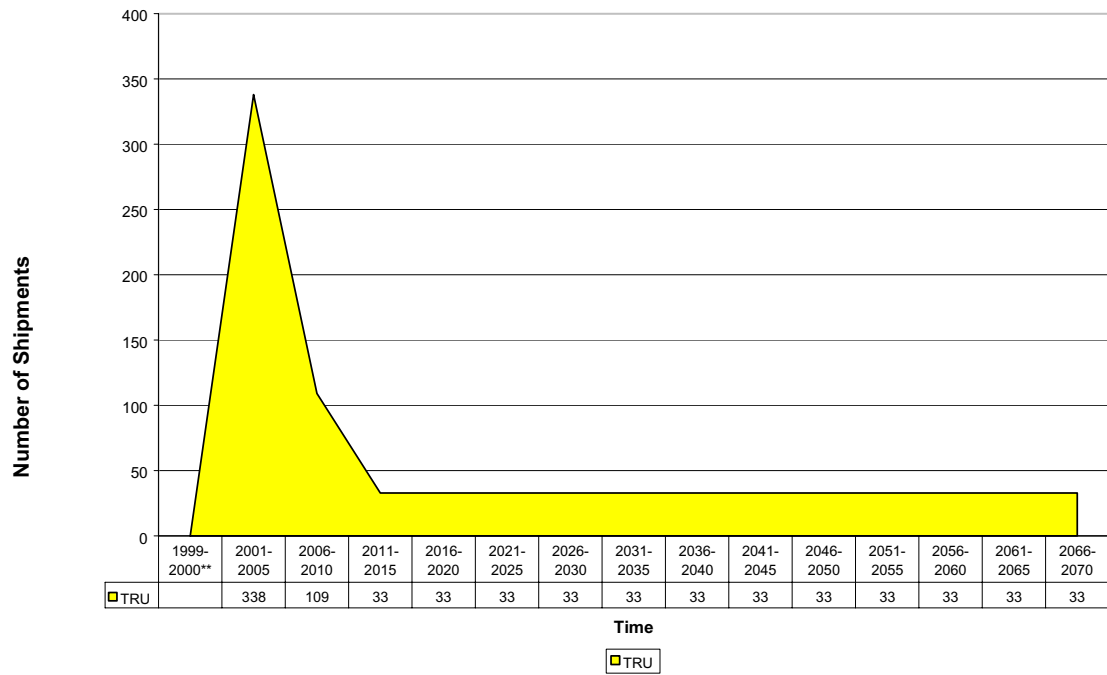




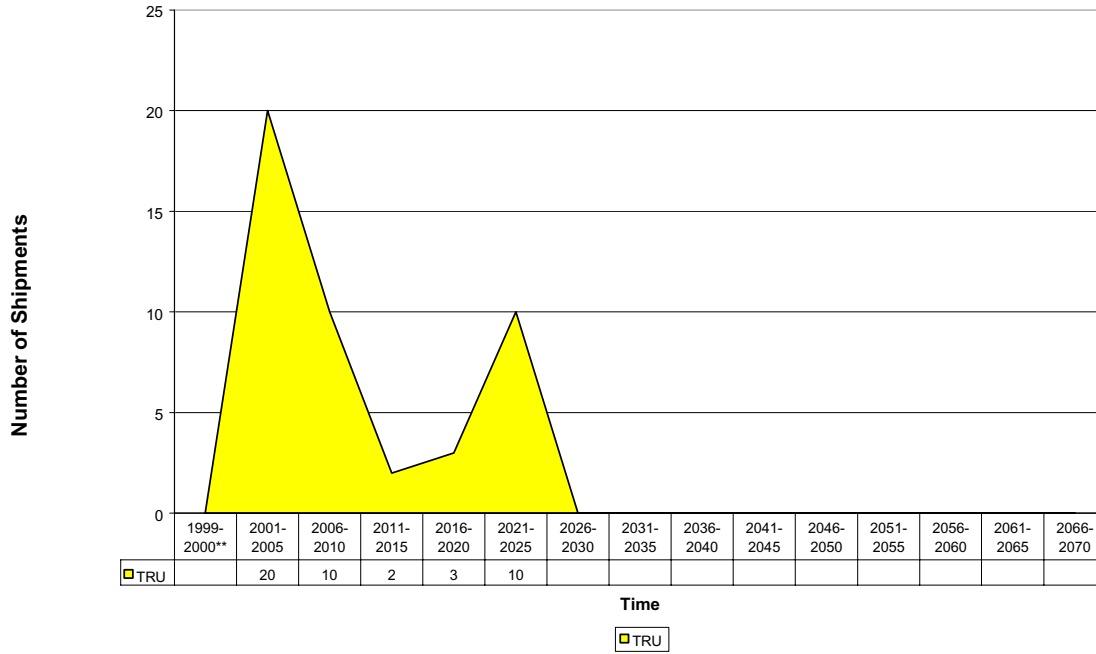
**WIPP**  
Incoming TRU Shipments from  
Savannah River Site



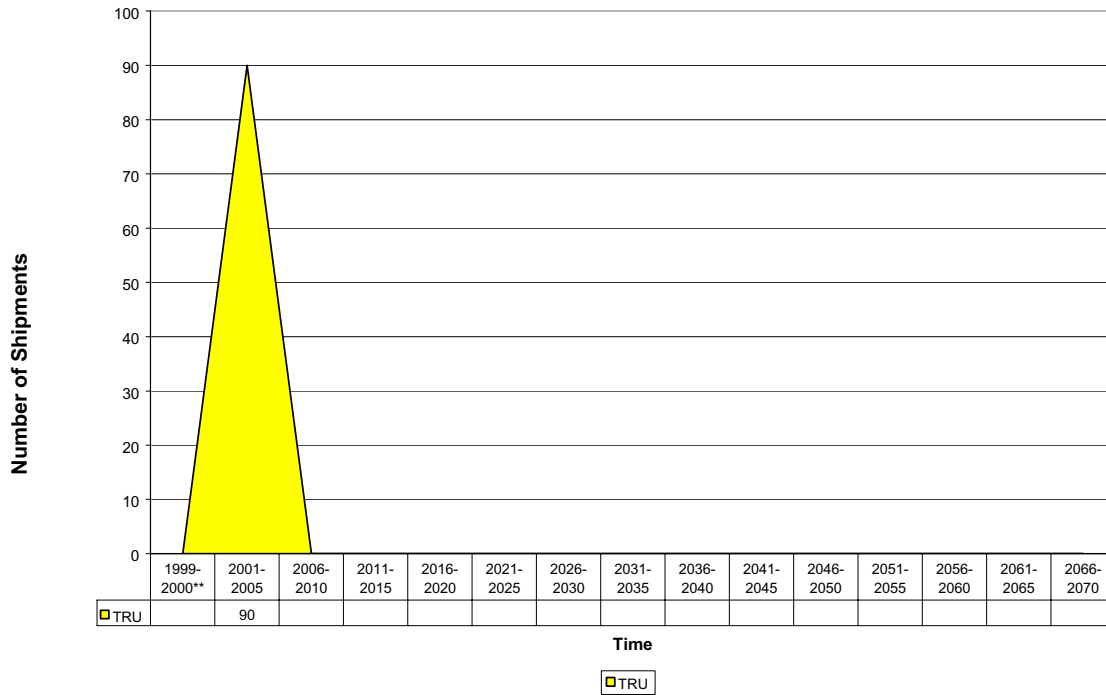
**WIPP**  
Incoming TRU Shipments from Oak Ridge



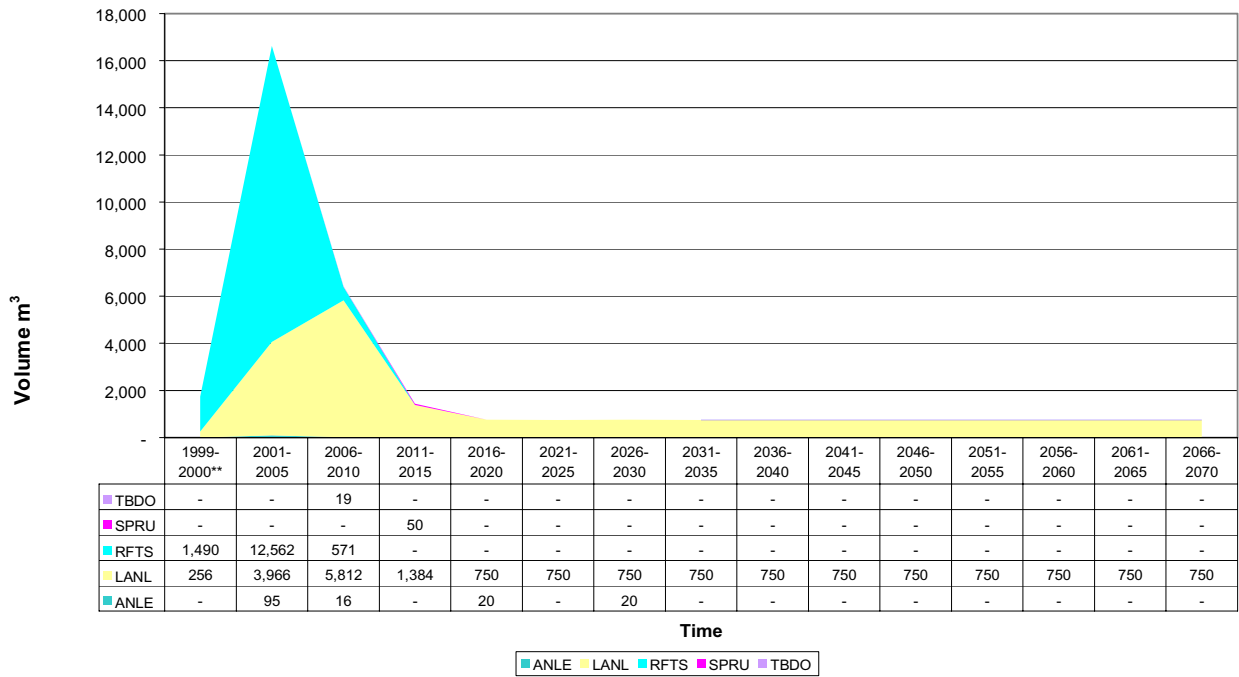
**WIPP**  
Incoming TRU Shipments from  
Bettis Atomic Power Lab



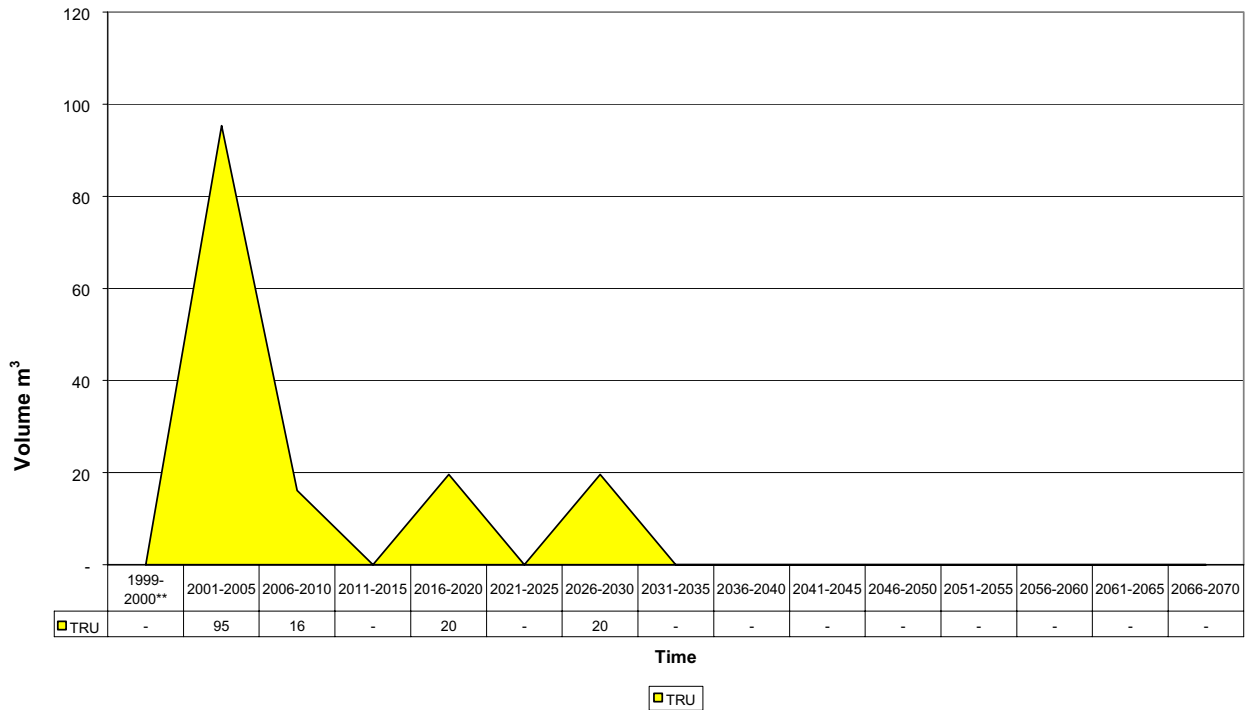
**WIPP**  
Incoming TRU Shipments from Miamisburg Environmental Management Project



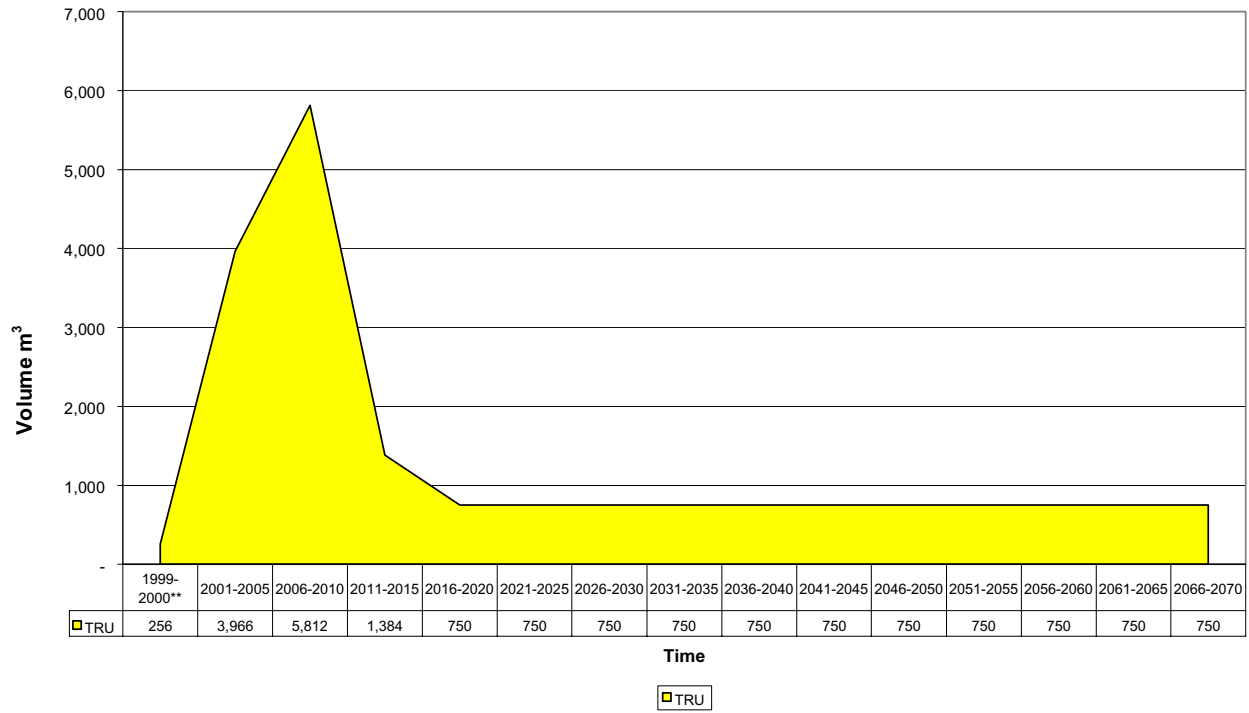
**WIPP  
Waste Stream Disposition  
Life-cycle Incoming Volume**



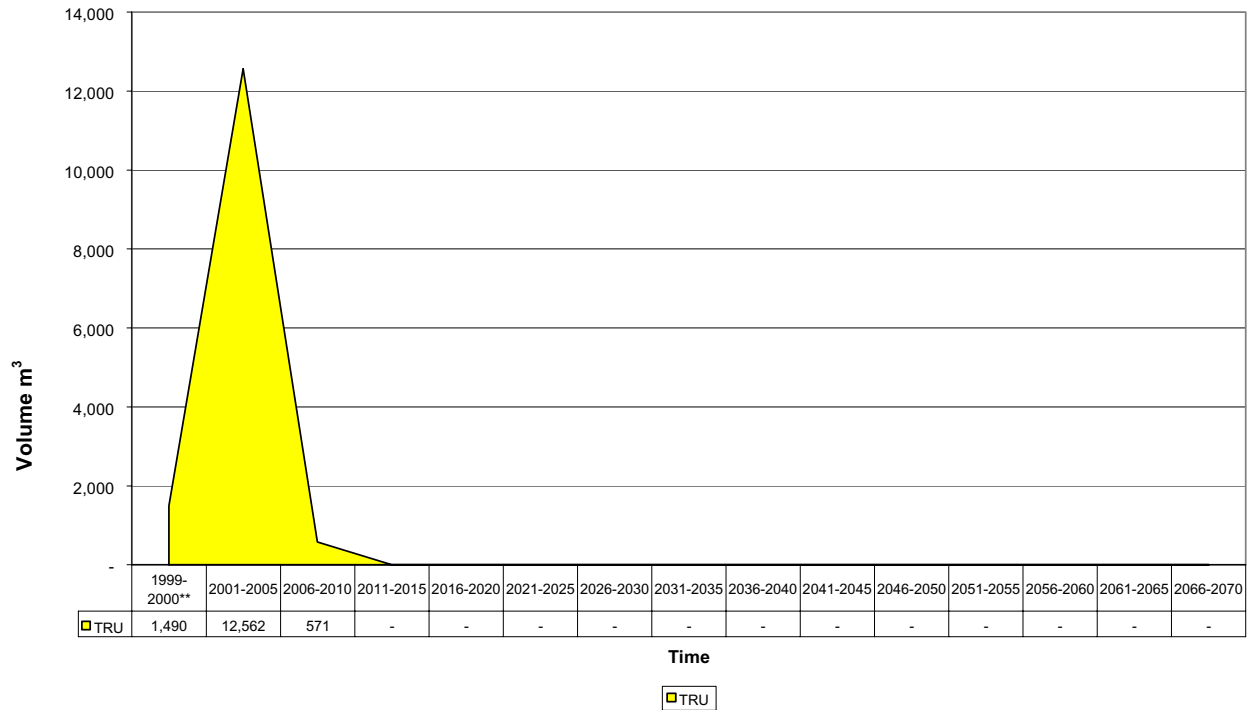
**WIPP  
Incoming TRU Volume from Argonne National Laboratory East**



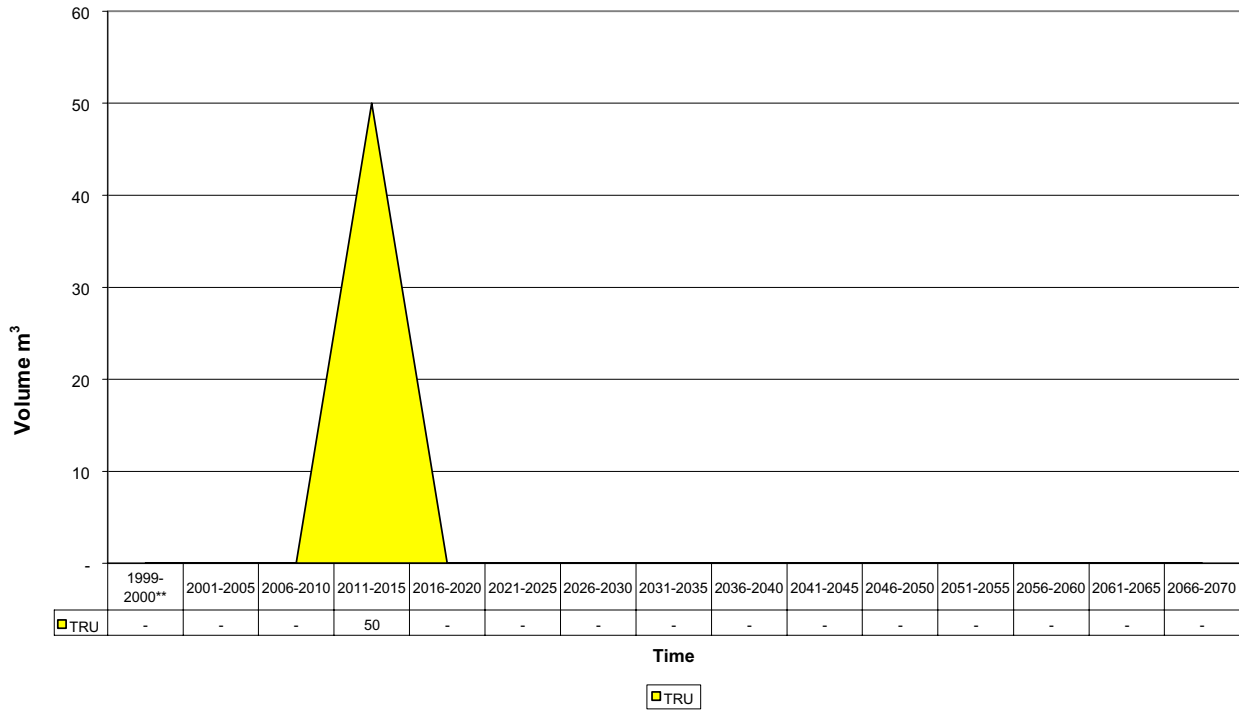
**WIPP**  
Incoming TRU Volume from Los Alamos National Laboratory



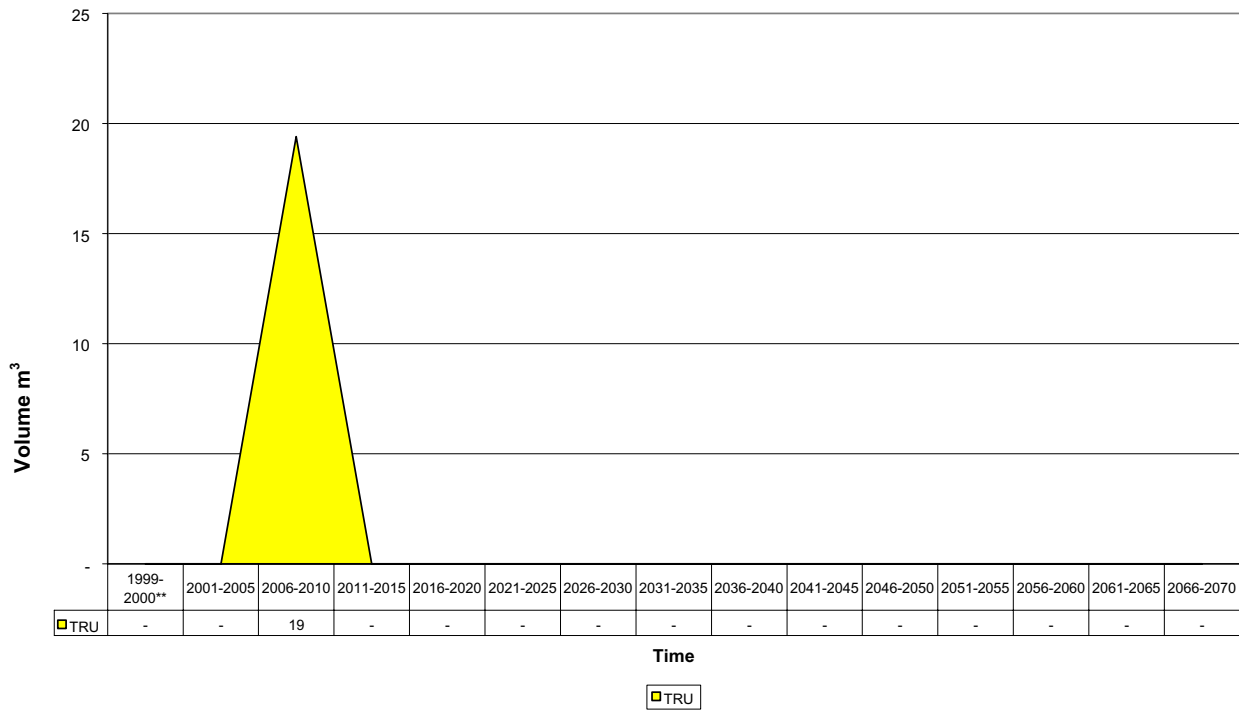
**WIPP**  
Incoming TRU Volume from Rocky Flats



**WIPP**  
Incoming TRU Volume from Separations Process Research Unit

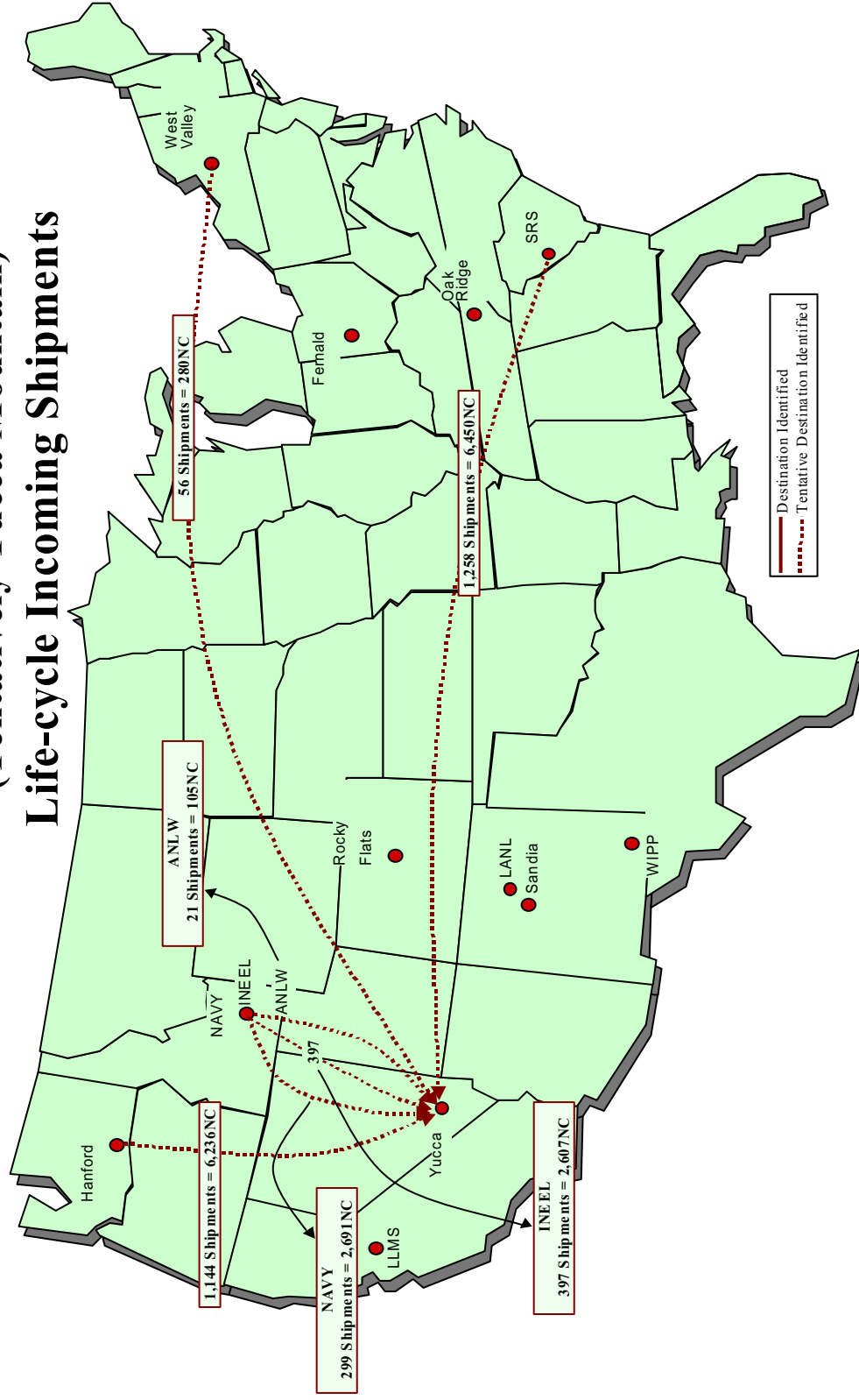


**WIPP**  
Incoming TRU Volume from "TBDO"

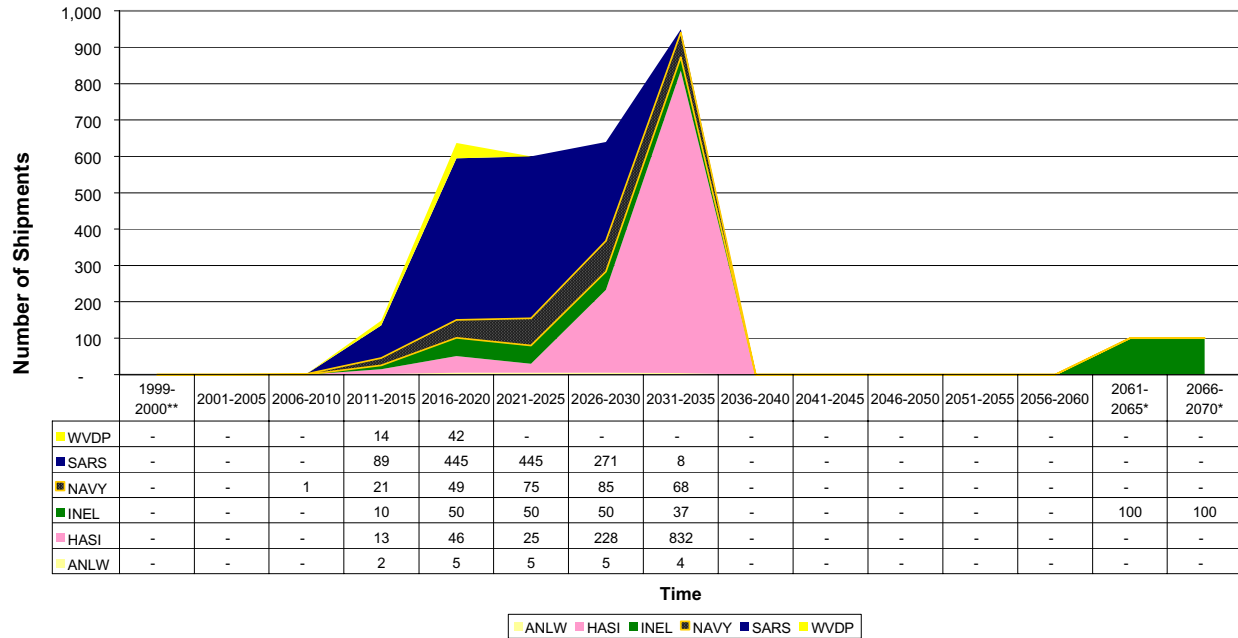




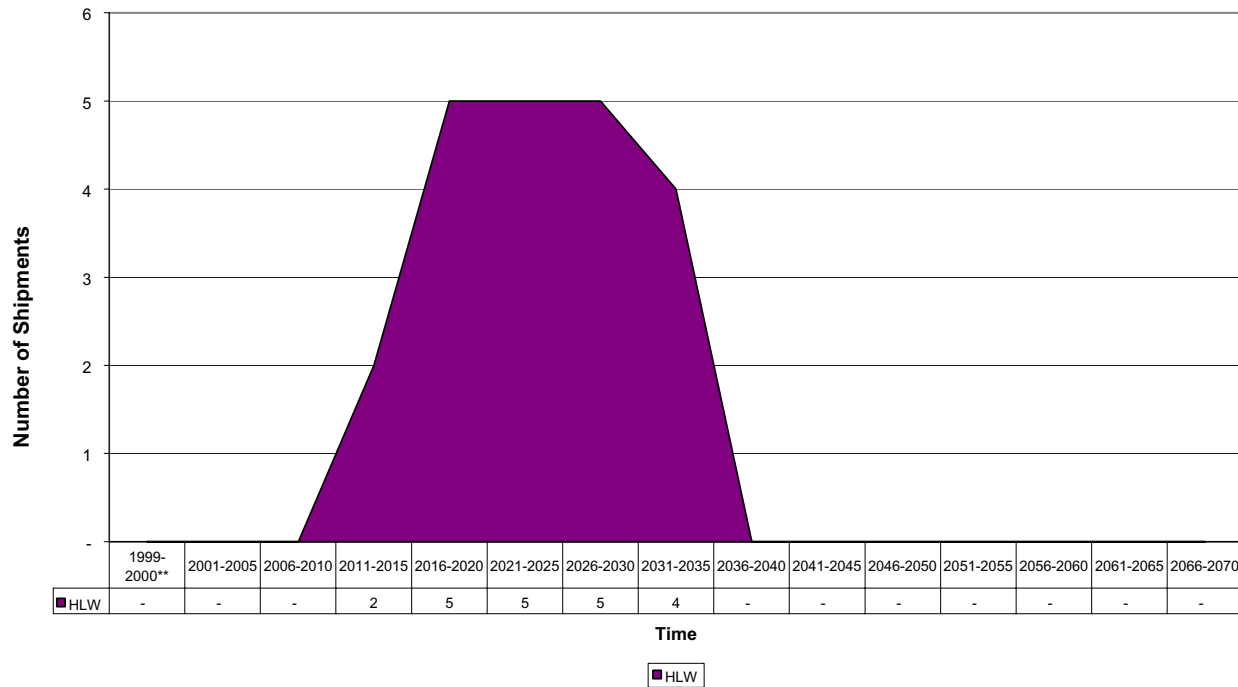
# Geologic Repository Disposal (Tentatively Yucca Mountain) Life-cycle Incoming Shipments



**Geologic Repository Disposal  
(Tentatively Yucca Mountain)  
Waste Stream Disposition  
Life-cycle Incoming Shipments**



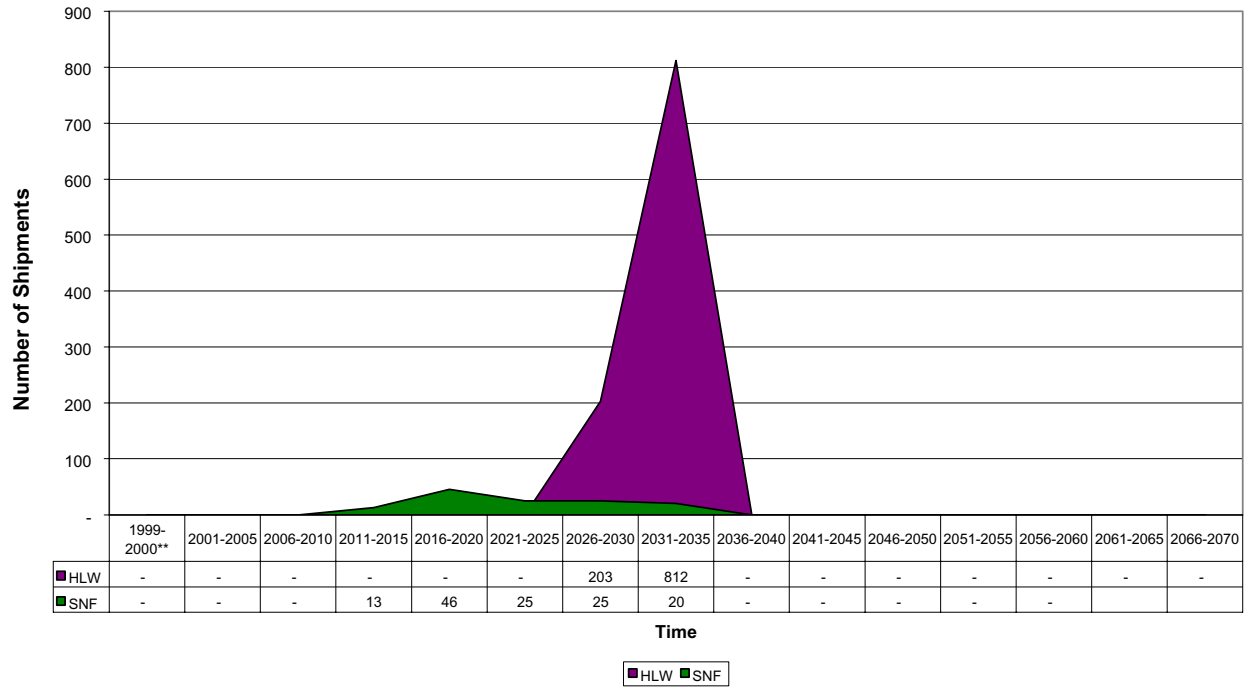
**Geologic Repository Disposal  
(Tentatively Yucca Mountain)  
Incoming HLW Shipments from Argonne National Laboratory West**



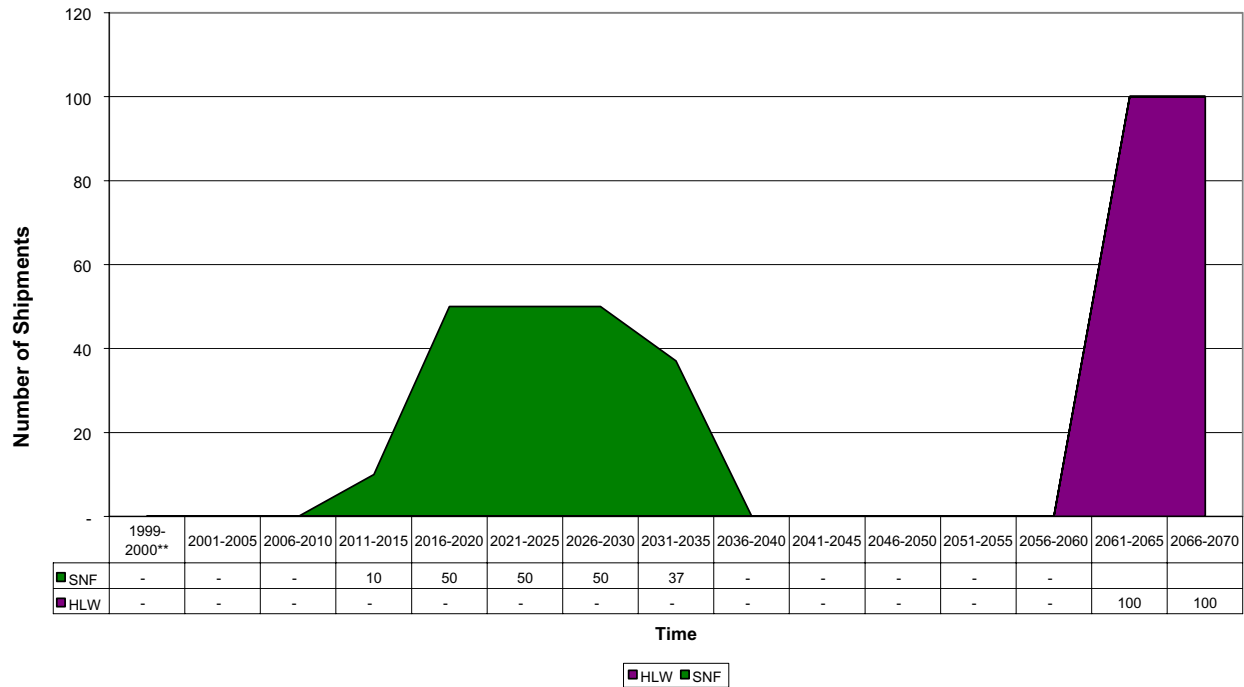
Total life-cycle values per 7/30/99 Stream Disposition Data (SDD) (<http://id.inel.gov/avs/>) (and/or 1999 Integrated Repository Receipts Workshop for GRD data). Printed: March 30, 2000  
 \*\* Represents data for a two year period.



**Geologic Repository Disposal**  
(Tentatively Yucca Mountain)  
Incoming HLW/SNF Shipments from Hanford

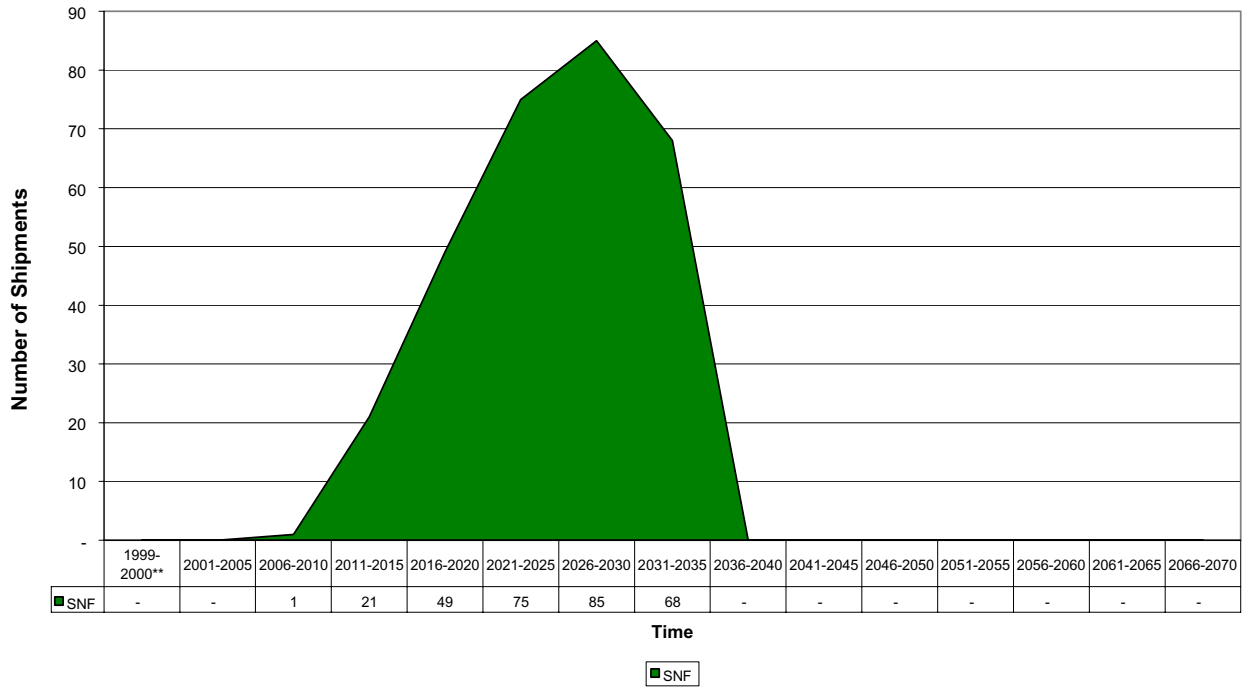


**Geologic Repository Disposal**  
(Tentatively Yucca Mountain)  
Incoming HLW/SNF Shipments from INEEL

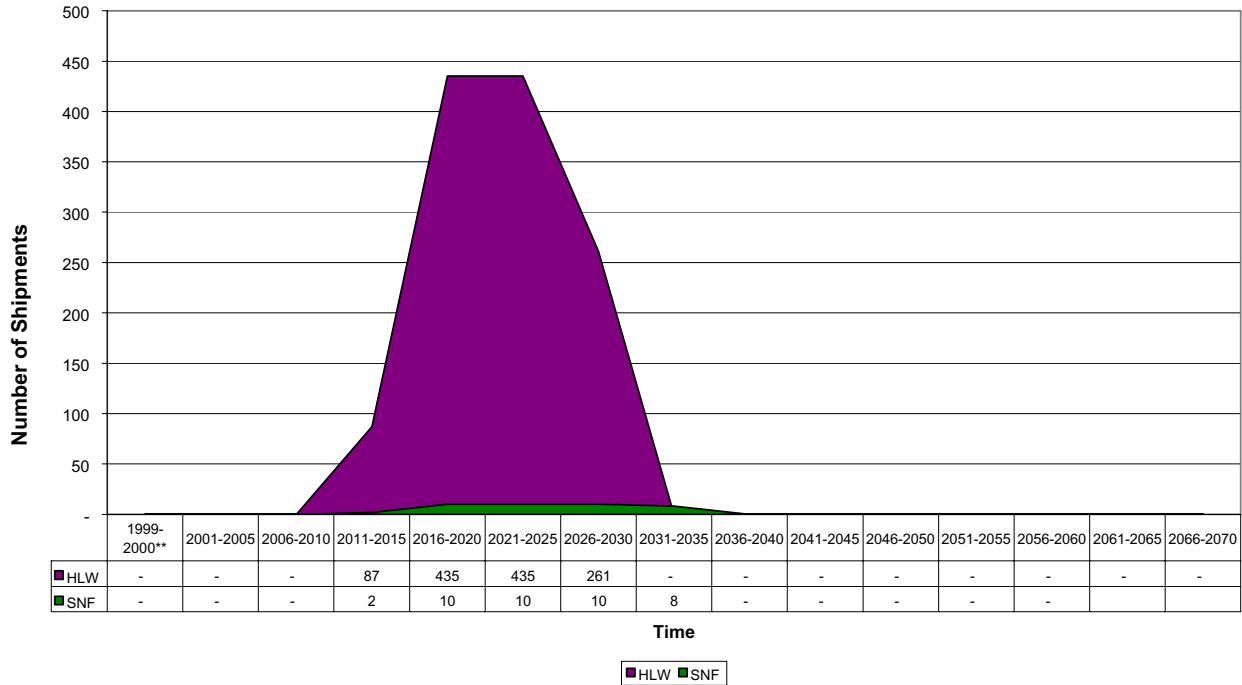


Total life-cycle values per 7/30/99 Stream Disposition Data (SDD) (<http://id.inel.gov/avs/>) (and/or 1999 Integrated Repository Receipts Workshop for GRD data). Printed: March 30, 2000  
\*\* Represents data for a two year period.

**Geologic Repository Disposal**  
(Tentatively Yucca Mountain)  
Incoming SNF Shipments from NAVY

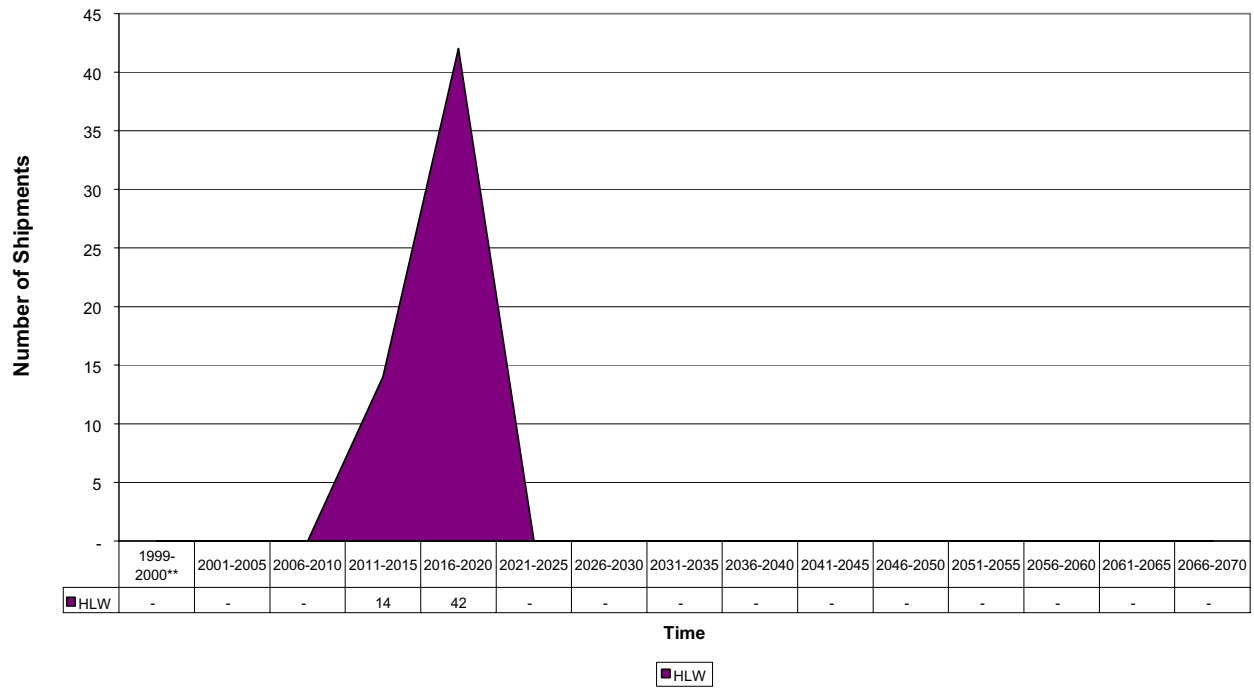


**Geologic Repository Disposal**  
(Tentatively Yucca Mountain)  
Incoming HLW/SNF Shipments from Savannah River Site



Total life-cycle values per 7/30/99 Stream Disposition Data (SDD) (<http://id.inel.gov/avs/>) (and/or 1999 Integrated Repository Receipts Workshop for GRD data). Printed: March 30, 2000  
\*\* Represents data for a two year period.

**Geologic Repository Disposal**  
 (Tentatively Yucca Mountain)  
 Incoming HLW Shipments from West Valley



Total life-cycle values per 7/30/99 Stream Disposition Data (SDD) (<http://id.inel.gov/avs/>) (and/or 1999 Integrated Repository Receipts Workshop for GRD data). Printed: March 30, 2000  
 \*\* Represents data for a two year period.







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