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O. OPERATIONS/FIELD OFFICE DATA SUMMARY

O.1. Operations/Field Office

Carlsbad Area Office

O.2. FY 1999 Operations/Field Office Full Compliance Case (in \$000)

203,196

O.3. Lifecycle Cost Data

O.3.1. Lifecycle Costs for this Operations/Field Office for each Funding Scenario (All dollars in thousands)

Note: See Section 3.0 of the guidance for funding level for each scenario.

Note: EP = Enhanced Performance

Funding Scenario	Total	1997	1998	1999	2000	2001	2002	2003	2004	2005
5.75		The 5.75 cost data will be determined by rolling up the PBS costs.								
5.75 (with all EP)	7,775,902	187,840	194,866	203,196	190,000	190,000	190,000	190,000	190,000	190,000

Funding Scenario	Total	2006	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030
5.75		The 5.75 cost data will be determined by rolling up the PBS costs.								
5.75 (with all EP)	7,775,902	190,000	190,000	190,000	190,000	190,000	950,000	950,000	950,000	950,000

Funding Scenario	Total	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
5.75		The 5.75 cost data will be determined by rolling up the PBS costs.							
5.75 (with all EP)	7,775,902	950,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000

O.3.2. Describe the methodology used to develop your lifecycle cost estimates and how you will achieve enhanced performance:

The Carlsbad Area Office estimates for lifecycle costs are based upon the established baseline of 35 years of operation of the WIPP site followed by 5 years of dismantling and decommissioning the site. During this 5 year period, controls will be established for the 100 year Active Institutional Control Period as specified in the WIPP Land Withdrawal Amendment Act of 1996. Costs from FY98 through FY2008 have been developed using Activity Based Methodologies (i.e. establishing best cost estimates for scope and schedule). Although the schedule for initiation and completion of the various phases for disposing transuranic waste may change as a result of funding restrictions or political barriers, the scope remains relatively constant. As specified in the WIPP Land Withdrawal Amendment Act, WIPP is authorized to dispose of 175.6 thousand cubic meters of TRU waste. The Carlsbad Area Office has developed a TRU Waste System Model to help determine the optimum disposal rates considering the TRU waste sites' ability to characterize waste, transportation systems, and the WIPP site's ability to receive waste. This model establishes the National TRU System's operational plan which is published in the National TRU Waste Management Plan, Rev.1, dated December 1997. The current schedule includes opening WIPP in 1998, increasing contact handled

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(CH) TRU waste throughput to the optimum level by FY2000, initiating remote handled (RH) TRU Waste in FY2003, and the first re-certification submission to EPA in FY2002. The Re-certification cycle is scheduled for every five years and costing has been developed to reflect this cyclical process. The transportation and disposal process will become relatively steady during the periods from FY2005 through FY2033. There will be major equipment replacements for mining equipment approximately every 10 years. The dismantling period from FY2033 to FY2038 will require additional funding to close and seal the shafts. Berms will be used with land restrictions for the 16 square miles surrounding the WIPP site. Limited presence will be required for the ensuing 100 years of Active Institutional Controls. The enhanced performance goals may be achievable through breakthroughs in transportation system costs such as reductions in state emergency training, reduced state cooperative payments, and cheaper transportation equipment. Re-certification costs may also be reducible dependent upon agreements with the Regulators. The CAO continues to be committed to reducing all operational costs through strong financial and managerial processes including: utilizing fixed price contracts as much as feasible; annual revalidation of scope, schedule, and costing estimates; and implementation of process improvements whenever feasible.

O.4. Support Costs Breakout

O.4.1. M&O/M&I Functional Support Cost Reporting (Section O.2. in the 2/28/97 OBS)

All dollars in thousands.	1997-2006 Total	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
General Support	326,618	32,844	31,397	32,287	32,987	33,184	32,888	32,763	32,805	32,576	32,887
Mission Support	365,901	36,589	35,584	37,202	36,539	36,816	36,382	36,082	36,287	36,146	38,274
Mission Direct (non-construction)	205,056	15,107	15,236	21,109	21,962	23,715	22,724	21,321	21,799	21,096	20,987
Construction Direct	50,221	6,170	4,113	5,081	6,114	5,287	4,588	5,060	4,816	4,816	4,176
Total	947,796	90,710	86,330	95,679	97,602	99,002	96,582	95,226	95,707	94,634	96,324

O.4.2. EM Functional Support Cost Reporting (Section O.3. in the 2/28/97 OBS)

All dollars in thousands.	1997-2006 Total	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
General Support	326,618	32,844	31,397	32,287	32,987	33,184	32,888	32,763	32,805	32,576	32,887
Mission Support	792,849	79,600	77,021	77,408	77,789	80,547	80,707	78,236	78,486	79,453	83,602
Mission Direct (non-construction)	832,923	69,226	82,335	88,420	76,718	78,118	83,287	82,430	85,583	89,580	97,226
Construction Direct	50,221	6,170	4,113	5,081	6,114	5,287	4,588	5,060	4,816	4,816	4,176
Total	2,002,611	187,840	194,866	203,196	193,608	197,136	201,470	198,489	201,690	206,425	217,891

O.5. Workforce/Employment Levels

O.5.1. Operations/Field Office Federal FTEs at Year End (Section O.4.a. in the 2/28/97 OBS)

	1997-2006 Total	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Federal FTEs	625	58	63	63	63	63	63	63	63	63	63

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O.5.2. Operations/Field Office and Major Site M&O/M&I FTEs at Year End (excluding subcontractors) (Section O.4.b. in the 2/28/97 OBS)

M&O/M&I FTEs

Major Site	1997-2006 Total	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
WP: CB, Waste Isolation Pilot Plant	7,255	637	701	709	728	744	750	746	746	744	747
All Others	0										
Operations/Field Office Total	7,255	637	701	709	728	744	750	746	746	744	747

O.6. Environmental Management Contracting Data

O.6.1. Environmental Management Contracting Profile (Section O.5. in the 2/28/97 OBS)

(Prime Contractors plus 1st Tier Subcontractors)

Contract Type	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Firm Fixed Price	11%	8%	10%	10%	10%	10%	11%	11%	11%	11%
Fixed Price Award Fee										
Fixed Price Incentive	31%	34%	35%	36%	36%	36%	38%	39%	39%	39%
Fixed Price, Level-of-Effort										
Cost Plus Award Fee	8%	7%	5%	5%	6%	5%	5%	6%	6%	6%
Cost Plus Incentive Fee										
Cost Plus Fixed Fee	23%	16%	19%	18%	17%	16%	13%	12%	12%	12%
Basic/Task Ordering Agreement	7%	6%	7%	6%	7%	7%	7%	7%	7%	7%
Time and Materials/Labor Hours										
Indefinite Delivery										
Other	20%	29%	24%	25%	24%	26%	26%	25%	25%	25%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

O.6.2. Contracting Strategy Narrative

The current five year contract (FY95-FY99) with the M&O contractor, Westinghouse, Waste Isolation Division (WID), is structured so that each fiscal year's scope and contract type is annually re-negotiated. WID comprises approximately 50% of the Carlsbad Area Office funding requirements. Within the current year's contract for WID, over 63% is Fixed Price Incentive, 22% Firm Fixed Price and 15% Cost Plus Award Fee with contract incentives. The remainder of the CAO funding program is either directed towards certification and recertification to regulators criteria or towards the CAO's mission of managing the National TRU Waste program and maintaining a TRU Waste Transportation System. The cost plus fixed fee is composed of the work by the CAO Scientific Advisor, Sandia National Laboratories, and enhanced laboratory work at Los Alamos National Laboratory. The CAO's technical support contractor, CTAC, contract has been negotiated for five years starting in FY96 as a task order contract. The other category includes grants, cooperative agreements, stakeholder and oversight funding, emergency management commitments with the Southern States Energy Board and the Western Governors Association, and payments of over \$20 million annually to the State of New Mexico for impact assistance as specified in the WIPP Land Withdrawal

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Amendment Act. Also included in the other category are the funds to pay the privatized contractor for both contact handled (CH) and remote handled (RH) transportation from the TRU waste sites to the WIPP. These contracts should be fixed price whenever they are negotiated.

O.7. 1998 EM Safety and Health Performance Indicator Data Report

Target	Cumulative Actual	1st Quarter Actual	2nd Quarter Actual	3rd Quarter Actual	4th Quarter Actual
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O.7.1. Safety and Health Indicator #1 - Total Recordable Case Rate (Section O.6. in the 2/28/97 OBS)

Ops Office annual TRC rate goal	1.67				
1.1 Enter total number of recordable death, illness, and injury cases (for all contractors and subcontractors)					
1.2 Enter total number of above cases resulting in a fatality					
1.3 Enter total person-hours worked (for all contractors and subcontractors)					
1.4 Total number of recordable injury cases per 200,000 hours worked (TRC) =					

O.7.2. Safety and Health Indicator #2 - Lost Workday Case Rate (Section O.7. in the 2/28/97 OBS)

Ops Office annual Lost Workday Case Rate goal	0.30				
2.1 Enter total number of lost workday cases this quarter (for all contractors and subcontractors)					
2.2 Enter total person-hours worked this quarter					
2.3 Number of lost workday cases per 200,000 hours worked (LWC) =					

O.7.3. Safety and Health Indicator #3 - Procedure Deficiencies and Violations (Section O.8. in the 2/28/97 OBS)

Ops Office annual goal	0.11				
3.1 Enter total number of procedure deficiencies and violations this quarter					
3.2 Enter total person-hours worked this quarter (same total from step 1.3)					
3.3 Procedure violations per 200,000 person-hours worked					

O.7.4. Safety and Health Indicator #4 - ORPS Corrective Action Status (Section O.9. in the 2/28/97 OBS)

Ops Office annual goal	0.00				
4.1 Enter total number of open corrective actions which are overdue					
4.2 Enter total number of open corrective actions					
4.3 Corrective action status ratio (percent)					

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O.8. Integrated Priority List Data

O.8.1. Integrated Priority List

(Attachment 4 in 1997 Mid-year Performance Measures Update)

Integrated Priority List Contact: Dave Holmes / Freida Huckeba
 Integrated Priority List Contact's Phone Number: 505-234-7314 / 7315

All Dollars in Thousands

Priority Ranking	Unique Site-Designated Project ID	Sub-PBS ID	Project Title	Sub-PBS Title	FY 99 Request
1	0008	1B	WIPP Base Operations	Base Program	69,216
2	0009	1B	WIPP Disposal Phase Certification and Experimental Program	Base Program	7,207
3	0011	1B	WIPP TRU Waste Sites Integration and Preparation	Base Program	14,774
4	0011	2A	WIPP TRU Waste Sites Integration and Preparation	Accelerated Compliance Program	393
5	0008	5C	WIPP Base Operations	CH Receipt in FY98	3,567
6	0010	5C	WIPP Transportation	CH Receipt in FY98	6,056
7	0011	5C	WIPP TRU Waste Sites Integration and Preparation	CH Receipt in FY98	1,819
8	0008	2DP	WIPP Base Operations	Disposal Phase Compliance	2,497
9	0009	2DP	WIPP Disposal Phase Certification and Experimental Program	Disposal Phase Compliance	26,855
10	0011	2DP	WIPP TRU Waste Sites Integration and Preparation	Disposal Phase Compliance	465
11	0008	5CL	WIPP Base Operations	LWA Impact Assistance	20,600
12	0011	3N	WIPP TRU Waste Sites Integration and Preparation	NTP Management Studies	1,834
13	0009	2DPI	WIPP Disposal Phase Certification and Experimental Program	International Collaboration	618
14	0009	2DPI	WIPP Disposal Phase Certification and Experimental Program	International Collaboration	1,128
15	0008	4E	WIPP Base Operations	Performance Improvements	623
16	0008	7R	WIPP Base Operations	First RH Receipt	5,103
17	0010	7R	WIPP Transportation	First RH Receipt	1,188
18	0011	7R	WIPP TRU Waste Sites Integration and Preparation	First RH Receipt	604
19	0008	9CC	WIPP Base Operations	Compliance Certainty Program	1,581
20	0009	9CC	WIPP Disposal Phase Certification and Experimental Program	Compliance Certainty Program	658
21	0011	9CC	WIPP TRU Waste Sites Integration and Preparation	Compliance Certainty Program	805

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Priority Ranking	Unique Site-Designated Project ID	Sub-PBS ID	Project Title	Sub-PBS Title	FY 99 Request
22	0008	6CF	WIPP Base Operations	Full CH Development	2,765
23	0010	6CF	WIPP Transportation	Full CH Development	16,490
24	0011	6CF	WIPP TRU Waste Sites Integration and Preparation	Full CH Development	1,203
25	various	various	Enhanced Performance Target	Enhanced Performance Target	-4,458
26	0010	5CSF	WIPP Transportation	Santa Fe Relief Route	8,069

Priority Ranking	FY 99 Cumulative Total	Approp. Account	Reg. Driver Total (1-10)	1	2	3	4	5	6	7	8	9	10
1	69,216	D	69,216			69,216							
2	76,423	D	7,207			7,207							
3	91,197	D	14,774			14,774							
4	91,590	D	393			393							
5	95,157	D	3,567			3,567							
6	101,213	D	6,056			6,056							
7	103,032	D	1,819			1,819							
8	105,529	D	2,497			2,497							
9	132,384	D	26,855			26,855							
10	132,849	D	465			465							
11	153,449	D	20,600			20,600							
12	155,283	D	1,834			1,834							
13	155,901	D	618			618							
14	157,029	D	1,128			1,128							
15	157,652	D	623			623							
16	162,755	D	5,103			5,103							
17	163,943	D	1,188			1,188							
18	164,547	D	604			604							
19	166,128	D	1,581			1,581							
20	166,786	D	658			658							
21	167,591	D	805			805							
22	170,356	D	2,765			2,765							
23	186,846	D	16,490			16,490							
24	188,049	D	1,203			1,203							
25	183,591	D	-4,458			-4,458							
26	191,660	D	8,069			8,069							

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Impact of \$5.0 Billion Funding Level/ Advantage of \$6.0 Billion Plus Funding Level on Affected Data Element

Priority Ranking	Impact of \$5.0 Billion Funding Level/ Advantage of \$6.0 Billion Plus Funding Level on Affected Data Element
1	Maintains the WIPP site as a nuclear facility in compliance with DOE Orders and Federal, State, and Local requirements not related to the disposal of TRU Waste - No waste can be disposed at this level.
2	Maintains the core business and management structure for the WIPP scientific advisor - Performance Assessments and the certification process are not achieved at this level.
3	Maintains current agreements for oversight and economic impact to local community as well as other institutional activities - State Impact Assistance is not covered at this level and management responsibilities for the National TRU Complex are not covered.
4	Support continuing TRU waste baseline inventory collection and analysis - TRU waste management and integration activities are not accomplished at this level.
5	Enables the WIPP site to operate as a nuclear facility and receive waste at a level of 5 shipments per week - At this level it will take 100 years to fill the WIPP design capacity, no Remote Handled waste would be received and waste would come from only RFETS, LANL, and INEEL until FY2026. The WIPP site would be non-compliant in meeting re-certification with EPA every five years.
6	Provides the infrastructure for transportation and emergency management for the northern corridor (RFETS, LANL, and INEEL) at 5 shipments per week.
7	Provides the TRU Waste site certification of LANL, RFETS, and INEEL and implementation of the Quality Assurance Program Plan - No certification activities can be undertaken at the remaining TRU Waste Sites.
8	WIPP site activities which compliment the disposal phase experimental activities necessary for completing and maintaining certification and permitting requirements associated with receipt of TRU Waste - does not implement additional compliance certification activities desired by EPA and NMED such as engineered barriers (backfill and closure systems).
9	Provides continuing experimental support necessary during the disposal phase to meet re-certification requirements for performance assessment - does not provide for closure and sealing systems or compliance assurance activities.
10	Provides for management support for implementation of regulatory documentation. Priorities 8 and 9 can not be accomplished without this support.
11	Provides payment to the State of New Mexico for Impact Assistance as specified in the WIPP Land Withdrawal Amendment Act The total commitment is \$20,000,000 in FY 1997 and FY 1998. DOE must begin adding escalation to the payments to the State in FY 1999. If DOE does not make this payment annually, the State of New Mexico can stop any transportation activities through the State effectively closing the WIPP site.
12	Provides integration studies for improvements of the TRU complex's treatment and transportation systems to gain efficiencies and increase transportation envelop - if not funded, the TRU waste sites' costs in preparing waste for transportation and the CAO cost of transportation can not be substantially reduced. This activity is key to the TRU waste complex mortgage reduction activities.
13	Provides for the technology sharing of disposal room sealing system development with Canada and other international communities - failure to fund activities will eliminate current fund sharing agreements and eventually result in increased cost to the U.S. to develop cost effective technologies.
14	Provides for international collaboration for other than the disposal room sealing system - failure to fund activities will eliminate current fund sharing agreements and eventually result in increased cost to the U.S. to develop cost effective technologies.

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Priority Ranking	Impact of \$5.0 Billion Funding Level/ Advantage of \$6.0 Billion Plus Funding Level on Affected Data Element
15	Maintains WIPP site staffing at a level to meet increasing regulatory drivers.
16	Provides for WIPP facility upgrade to accommodate the receipt of Remote Handled waste - if the facility is not upgraded, RH waste can not be received by FY2003 and Oak Ridge compliance agreement will not be met.
17	Provides for the development and implementation of a remote handled transportation system for first receipt of RH waste by FY2003 - If not funded, RH waste will not be transported to WIPP
18	Provides management infrastructure for the licensing of the RH transportation system (72B Cask) and direction to studies for efficient implementation of the RH program.
19	Provides for engineered barrier activities (backfill with magnesium oxide) as specified in the WIPP Compliance Certification Application.
20	Provides for the WIPP sealing system performance evaluation required for re-certification of the facility.
21	Provides for priority technology development for TRU programs and improvements to waste characterization process to reduce restrictive requirements
22	Expands the WIPP site capability to receive waste from a rate of 5 shipments per week to 10 shipments per week by the end of FY99 - not funding this activity extends the operational life of the facility from 35 years to 100 years.
23	Provides the transportation system to expand the CH receipt from 5 shipments a week to 10 shipments a week by the end of FY99 - not funding this activity extends the operational life of the facility from 35 years to 100 years.
24	Provides for the opening of transportation routes, proving the performance of laboratories and systems that will be performing analysis of characterization data, and mobile systems. Not funding this activity only allows for a single corridor to be open, added costs to small quantity sites for characterization and repackaging, and non-compliance with EPA requirements for confirmatory data on characterization.
25	\$2.458 million CAO commitment for program efficiency established at the March 1997 Corporate Forum, and \$2.0 million OMB general reduction.
26	Continued payment to the State of New Mexico for the relief route (by-pass) around Santa Fe, New Mexico from the Los Alamos National Laboratory.

O.8.2. Integrated Priority List Narratives

(Attachment 4 in the 1997 Mid-year Performance Measures Update)

O.8.2.1. Accomplishments and Compliance Issues at \$5.0 Billion Funding Level (Table 1)

The CAO program at the EM \$5.0 billion funding level (CAO program = \$161.4M) will maintain a compliant facility ready to receive 5 TRU waste shipments from DOE sites. The \$5.0 billion funding level does not achieve: 1) the ramp-up to full contact-handled (CH) TRU waste capacity of the WIPP facility including transportation, TRU waste site certification, or transportation route preparedness; 2) continuation of remote handled (RH) waste activities including facility modifications, transportation, or regulatory compliance; 3) adequate allowance for certainty with EPA requirements. At this funding level, the DOE commitment at the TRU waste sites will not be met. If this level was

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continued throughout the program years, it would take over 100 years to fill the WIPP facility to its regulatory capacity.

O.8.2.2. Accomplishments and Compliance Issues at \$5.5 Billion Funding Level (Table 1)

At the \$5.5 billion funding level CAO would dispose of approximately 13,286 cubic meters of CH TRU waste in the WIPP by FY2006. The WIPP site could receive no more than 5 shipments of CH TRU waste per week until additional funding is provided. At this rate, it would take over 100 years to fill the repository. CH TRU waste would be received from no more than three sites (INEEL, RFETS, and LANL) for the first 60 years of operations. There would be no RH TRU waste disposed at this level. DOE will not comply with any current TRU Waste site's regulatory compliance commitments.

O.8.2.3. Accomplishments and Compliance Issues at \$5.75 Billion Funding Level (Table 1)

The full funding level requested as well as the full out-year funding requests will result in CAO disposing of 43,852 cubic meters of contact handled and remote handled TRU waste by FY2006 (330% increase over the lower funding level). All TRU waste sites will be disposing or will have completed disposal of TRU waste. This level achieves a risk reduction of 93% to the population base in and around TRU waste sites and achieves a 99.8% reduction by FY2033. All TRU waste sites are in compliance with compliance agreements and orders, except for Oak Ridge, since RH receipt has been deferred until FY 2003 and may be further deferred due to the additional \$2 million general reduction imposed by OMB for FY99. At this funding level, CAO can fund RH TRU waste disposal and maintain compliance with EPA certification requirements. However, DOE can not pay the commitment made to the State of New Mexico for expansion of the Santa Fe Relief Route to a four lane highway. This commitment, made in October 1997, was to fund \$3 million in FY98 and \$8 million in FY99 for this activity. The TRU waste located at Los Alamos National Laboratory may be held in abeyance by the State if the DOE reneges on this commitment. INEEL complies with the BATT agreement by only 2.58 cubic meters. Further delays will force INEEL to be out of compliance.

O.8.2.4. Accomplishments and Compliance Issues at \$6.0 Billion Funding Level (Table 1)

The CAO activities necessary to continue disposal of the National TRU waste will be appropriately funded. In FY99, The WIPP site will be capable of receiving 3,834 cubic meters of contact handled waste from three TRU waste sites. Transportation corridors and other TRU waste sites will continue to be opened and certified on an optimum schedule which will meet all TRU Waste Sites' compliance agreements, except for ORNL. DOE's commitment for completing the Santa Fe relief route will be met.

O.8.2.5. Justify Any Additional Funding Requirements

No additional requirements.

("Impacts of Differences Between Table 1 and the Revised April 1, 1997 Reference Case" narrative in Attachment 4 of the 1997 Mid-year Performance Measures Update has been removed.)

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O.9. Science and Technology Development (Section O.10. in the 2/28/97 OBS)

O.9.1. Innovative Technology Deployment

Waste Type/ Problem Area	STCG Needs		Science/Technology Data					PBS	
	ID #	Title	Innovative Technology Name	TTP or Project ID #	OST Tech ID	Projected Deployment Date	Site Deployment Plan	Site Designated Project ID #	Project Title
MW	96-01-NTP	Improved TRU Waste Assay; CTEN	CTEN	AL16MW51	1568	1999		CAO-2	WIPP Disposal Phase Certification
MW	96-12-NTP	NDA Support of CAO's Performance Demo Program	PDP	AL16MW52	2017	1999		CAO-2	WIPP Disposal Phase Certification
MW		Development and Evaluation of High Speed Neutron Defactors		AL16MW51	New				
MW	96-01-NTP	Characterization-NDA	Non Destructive Assay	ID 76MW51	260	1999		CAO-2	WIPP Disposal Phase Certification
		Task A: Nondestructive containerized TRU Waste Exam/Assay.							
		Task B: Laboratory/Industry NDA Performance Demonstration Tests							
MW		Characterization-RH Waste	Non Destructive Assay	ID 76MW54	New			CAO-2	
		Task A: Direct Measurement NDA Demo for RH-TRU Waste Using Gamma Neutron Assay Technique combined with Fission Assay Timing System							
		Task B: NDA of an RH-TRU Debris Waste using Gamma Spectrometry and Acceptable Knowledge (GSAK)							
MW		Characterization - ORNL NDE/NDA Activities	Non Destructive Exam/Assay	OR16MW51	New			CAO-2	
		Task A: Characterization.							
		Task B: Radio-frequency Quadruple NDA of TRU Waste							
MW	96-01-NTP	NDA via Gamma-Ray A&PCT/Oakland	Non Destructive Assay	SF26MW51	260				
MW	96-15-NTP	Hydrogen Gas Getters for TRU Waste	Hydrogen Gas Getters	AL16MW53	2021	1999		CAO-2	WIPP Disposal Phase Certification

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		STCG Needs	Science/Technology Data					PBS	
MW		RH Gas Generation Issues in Waste Containers		AL16MW54	2016	2000		CAO-3	WIPP Transportation
		Task A: Gas Sampling in Waste Containers.							
		Task B: Gas Generation/Matrix Depletion from Beta Exposure.							
		Task C: 72B SARP Appendix Review							
MW	96-15-NTP	Matrix Depletion Program Support	Matrix Depletion	AL16MW55	2022	2000		CAO-3	WIPP Transportation
		Task A: Quantification of Matrix Depletion Effect in Simulated CH Waste During Initial Exposure.							
		Task B: Evaluation of Surface Condition of Simulated CH Waste Materials after prolonged Exposure.							
		Task C: Integration of Matrix Depletion Program Results.							
MW	96-15-NTP	Headspace Sampling of RH-TRU Waste Containers	Headspace Gas Sampling	CH23MW52	2025	2000		CAO-3	WIPP Transportation
MW		TRU Transportation		ID76MW55	New				

O.9.2. Science and Technology Needs

Waste Type/ Problem Area	Geographic Site	ID #	Title	Timing In Years	2006 Plan Priority	Site Designated Project ID #	Project Title
		CH-0001	Subsurface Barriers/Reactive Rad Barriers: Barrier systems for containment and reactive barriers are needed at BNL to prevent the further spread of groundwater contamination caused by VOCs such as TCE and TCA, and radioactive isotopes such as Sr -90.				

O.9.3. Innovative Technology Cost Savings & Other Benefits

O.9.4. Science and Technology Development Narrative

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