Table Of Contents

CAO-2: WIPP DISPOSAL PHASE CERTIFICATION AND EXPERIMENTAL PROGRAM

A.1. - Project Identification/Header Information (Section A.0. in 2/28/97 PBS)

A.1.1. Project Title:	**WIPP Disposal Phase Certification and Experimental Program**
A.1.2. Unique Site-Designated Project ID:	**CAO-2**
A.1.3. Site/Group of Sites :	**Waste Isolation Pilot Plant**
A.1.4. Operations/Field Office :	**Carlsbad Area Office**
A.1.5. DOE Project Manager:	**Michael H. MeFadden**
A.1.6. DOE Project Manager Phone Number:	**505-234-7300**
A.1.7. DOE Project Manager FAX Number:	**505-234-7027**
A.1.8. DOE Project Manager e-mail Address (Internet Format):	**mcfaddenm@wipp.carlsbad.nm.us**
A.1.9. Contractor Project Manager:	**Various**
A.1.10. Contractor Project Manager Phone Number:	
A.1.11. Contractor Project Manager FAX Number:	
A.1.12. Contractor Project Manager e-mail Address (Internet Format):	
A.1.13. Unique Project ID :	**CBWP0009**
A.1.14. Program Element :	**WM**
A.1.15. Is this a Pure, Operational, or Privatization Project?	**O: Operational**
A.1.16. Is this a High Visibility Project? (Y/N)	**Y**

A.1.17. DOE Project Manager's Signature/Date	**A.1.18. Contractor Project Manager's Signature/Date**

A.2. Technical and Scope Narratives (Section A.1. in 2/28/97 PBS)

A.2.1. Purpose of Project:

Predecessor Project: None.

This program is an integral part of the WIPP program and it is not possible to separate this project from the overall objectives of the WIPP program. The purpose of the WIPP Disposal Phase Certification and Experimental Program is to support the overall objectives of the Waste Isolation Pilot Plant (WIPP) and the national transuranic (TRU) radioactive waste management system. Providing support to the operations of the national TRU system, including the WIPP, will be a major component of the activities during the disposal phase. To maintain certification for operating WIPP, the DOE will: (1) monitor and verify predicted disposal system performance; and (2) perform calculations in accordance with the requirements of 40 CFR194.4 and Section 8(f) of the Land Withdrawal Act (LWA).

The DOE plans to begin disposal operations at the WIPP following receipt of certification by the EPA. The disposal phase is expected to last for 35 years, and will include certification activities no less than once every five years. The WIPP Disposal Phase Certification and Experimental Program contains the experimental program to be conducted during the initial 5-year certification period. It also forms the basis for longer-term activities to be carried out throughout the 35-year disposal phase.

This program includes all of the M & O`s, Scientific Advisor's and supporting laboratories experimental, compliance, and performance assessment work in support of certification and operational performance improvement for the WIPP site and the national TRU system; and establishing a focused international nuclear waste disposal research development program. The DOE will conduct experimental activities to: (1) support WIPP operations, by maintaining compliance certification and enhancing WIPP and national TRU system operations; and (2) support future waste management needs, by establishing a focused international nuclear waste disposal research and development program and by enhancing proactive response to emerging DOE TRU waste management needs. This program is intended to provide the framework to maintain the WIPP as an international leader in nuclear waste management research and development activities during the disposal phase.

A.2.2. Definition of Scope:

Once the WIPP has been shown to be in compliance with regulatory requirements, the disposal phase gives an opportunity to affirm the compliance status of the WIPP, enhance the operations of the WIPP and the national TRU system, and contribute to the resolution of national nuclear waste management technical needs. The scope of the WIPP Disposal Phase Certification and Experimental Program is designed to achieve two main objectives.

1. Support WIPP and national TRU system operations. Experimental activities supporting WIPP operations will be designed to maintain compliance certification. This will be accomplished by monitoring and verifying performance of the system's sensitive parameters, evaluating the information, and performing certification calculations at five-year intervals in accordance with the requirements of 40 CFR 194.4 and the WIPP Land Withdrawal Act (LWA). Enhanced operations will be accomplished through focused efforts to refine knowledge and develop new methods and procedures which will reduce worker exposure to radiation and other hazards, enhance operational efficiency, reduce design and

operational complexity of the WIPP and the national TRU system, and reduce costs. These goals are inter-related (for example, reducing complexity of operations is likely to reduce worker exposure to hazards and also reduce costs).

2. Support future waste management needs. Experimental activities supporting future waste management needs will be designed to accomplish two goals:

a. Establish a focused international nuclear waste disposal research and development program by continuing and implementing applicable joint programs with other nations and other programs. This will be accomplished through the implementation of focused experimental activities in cooperation with other national and international waste management programs and efforts. Through synergistic activities with other nations and other programs, the DOE will gain access to relevant information from other programs, will provide information to other programs, and will share costs.

b. Enhancing proactive response to emerging DOE TRU waste management needs. This will be accomplished by providing guidance and support to generators of TRU waste, particularly in the area of waste characterization. The CAO, as the national TRU waste program leader, will develop and provide technical information for the DOE's use in formulating radioactive waste management policies.

A.2.3. Technical Approach:

Once the WIPP has been shown to be in compliance with regulatory requirements, the disposal phase gives an opportunity to affirm the compliance status of the WIPP, enhance the operations of the WIPP and the national TRU system, and contribute to the resolution of national nuclear waste management technical needs. The scope of the WIPP Disposal Phase Certification and Experimental Program is designed to achieve two main objectives.

1. Support WIPP and national TRU system operations. Experimental activities supporting WIPP operations will be designed to maintain compliance certification. This will be accomplished by monitoring and verifying performance of the system's sensitive parameters, evaluating the information, and performing certification calculations at five-year intervals in accordance with the requirements of 40 CFR 194.4 and the WIPP Land Withdrawal Act (LWA). Enhanced operations will be accomplished through focused efforts to refine knowledge and develop new methods and procedures which will reduce worker exposure to radiation and other hazards, enhance operational efficiency, reduce design and operational complexity of the WIPP and the national TRU system, and reduce costs. These goals are inter-related (for example, reducing complexity of operations is likely to reduce worker exposure to hazards and also reduce costs).

2. Support future waste management needs. Experimental activities supporting future waste management needs will be designed to accomplish two goals:

a. Establish a focused international nuclear waste disposal research and development program by continuing and implementing applicable joint programs with other nations and other programs. This will be accomplished through the implementation of focused experimental activities in cooperation with other national and international waste management programs and efforts. Through synergistic activities with other nations and other programs, the DOE will gain access to relevant information from other programs, will provide information to other programs, and will share costs.

b. Enhancing proactive response to emerging DOE TRU waste management needs. This will be accomplished by providing guidance and support to generators of TRU waste, particularly in the area of waste characterization. The CAO, as the national TRU waste program leader, will develop and provide technical information for the DOE's use in formulating radioactive waste management policies.

A.2.4. Project Status in FY 2006:

The WIPP Disposal Phase Certification & Experimental Program will have completed the first five (5) year certification by FY2003. The Complimentary Cumulative Distribution Function (CCDF) calculations and the Performance Input for the first five (5) year certification will be completed by the end of FY2002.

A.2.5. Post 2006 Project Scope:

Continued disposal of the remaining TRU waste inventory until the WIPP waste volume capacity reaches the statutory limits in FY2033, after which five years are planned to seal the repository and dismantle and decommission the surface facilities. Active institutional controls will then be activated and maintained for 100 years.

The WIPP Disposal Phase Certification & Experimental Program will complete the Complimentary Cumulative Distribution Function (CCDF) calculations and the Performance Input for the five (5) year certification by the end of FY2007, FY2012, FY2017, FY2022, FY2027, FY2032, and 2038.

A.2.6. Project End State:

TRU waste management activities for both CH and RH waste are projected to be completed by FY 2038 after completing the Disposal Phase in FY 2033 and five years for decommissioning of the surface facilities and permanently closing the underground. In accordance with the WIPP Land Withdrawal Amendment Act of 1996, DOE will have disposed of 175,600 cubic meters of TRU waste in the WIPP facility. Starting in FY 2039, a reduced Federal staff and technical contractor support will maintain the active institutional controls associates with the land and records of the WIPP. Monuments and markers will be built at the site to warn people of the presence of the repository. Active institutional controls over the site will be maintained for 100 years. Low risk has been assigned based upon performance assessments included in the licensing of the facility, which requires no migration of hazardous or radioactive material for 10,000 years. Following completion of the active institutional control phase, the surface area will be unrestricted for recreational and agricultural uses.

The WIPP Disposal Phase Certification and Experimental Program end state will occur by the end of FY2033. The final Complimentary Cumulative Distribution Function (CCDF) calculations and the final Performance Input for the last five (5) year certification will be completed following dismantling and decommissioning (D&D) in FY2037 and the final certification will be submitted to the regulator in FY2038.

(Safety and Health Narrative, Section A.1.7. in the 2/28/97 PBS, has been replaced and is no longer maintained. Safety and Health Narratives are now found in Section D.1.)

A.2.7. General Narrative:

The CAO has recommended a Management Plan configuration for implementation that will guide the ten-year planning process consistent with the strategic objectives, as well as achieve the overall TRU waste management goals. The facilities and activities described in the National TRU Waste Management Plan, Revision 1, combined with the disposal-ready waste preparation schedules, summarize current guidance to support development of site 2006 Plan.

The WIPP Disposal Phase Certification and Experimental Program is required to meet the requirements of the WIPP Land Withdrawal Act (LWA) of 1992 (public Law 102-579) as amended and the requirements of Title 40 of the Code of Federal Regulations (40 CFR) parts 191 and 194. The program is based on the need to verify performance of the system`s sensitive parameters, evaluate the information, and perform certification calculations at five-year intervals as in accordance with the requirements of 40 CFR 194.4 and the WIPP LWA. The disposal phase is expected to last for 35 years, and will include certification activities no less than every five years, extending through D&D in 2038.

(Section A.1.9. in the 2/28/97 PBS has been moved to Section A.2.14.)
(Section A.1.10. in the 2/28/97 PBS has been moved to Section A.2.15.)
(Section A.1.11. in the 2/28/97 has been moved to Section A.2.16.)

A.2.8. Cost Baseline Narrative (A.2.5. in 2/28/97 PBS)

Since 1994, the CAO has institutionalized a formal program planning and budget execution process. The confidence level of cost estimates for the next three years is very high (+/- 5%). Out year estimates through FY 2008 have been developed with a confidence level of +/- 10 to 20%. Estimates from FY 2009 through completion are within +/- 30%. There are no contingency funds included in the CAO estimates.

Current CAO assumptions support operations of the WIPP facility, including its infrastructure, as an operational nuclear facility capable of receiving TRU waste at an initial disposal at a rate of 5 shipments per week and ramping to 17 shipments per week. The statutory requirement to pay impact assistance to the State of New Mexico is funded. The CAO baseline provides adequate funding to meet the National TRU Waste Management Plan, however, it assumes funding relief in FY98. Escalation has been applied to the activities in accordance with the DOE Environmental management guidelines.

The Cost Baseline for the WIPP Disposal Phase Certification and Experimental Program is based on the requirements in the WIPP Land Withdrawal Act (LWA) and the requirements of Title 40 of the Code of Federal Regulations parts 191 and 194. The program is based on the need to verify performance of the system's sensitive parameters , evaluate the information, and perform certification calculations at five-year intervals. Escalation has been applied to the activities in accordance with DOE Environmental Management guidelines.

The five-year certification activities will include experimental activities in Near Field, Far Field, and Seals Engineering. The experimental activities will collect additional data to verify and evaluate the system's sensitive parameters. This information will be used by the Compliance and Performance Assessment (PA) groups to perform the certification calculations. In addition, the activities will focus efforts to refine knowledge and develop new methods and procedures which will reduce worker exposure to radiation and other hazards, enhance operational efficiency, reduce design and operational complexity of the WIPP and

the national TRU system, and reduce costs. The five-year certification intervals include increased activities and costs during the years the PA calculations are being performed and during the EPA review. The PA efforts for certification include maintaining and upgrading codes and the parameter database to support the five-year certification, PA Methodology will be continually updated, and sensitivity analyses will be performed to support new information during the disposal phase. The compliance effort facilitates communication with external organizations.

The WIPP Disposal Phase Certification and Experimental Program end state will occur by the end of FY2033. The final Complimentary Cumulative Distribution Function (CCDF) calculations and the final Performance Input for the last five (5) year certification will be completed in FY2032 and the final application will be submitted to the regulator in FY2038. Escalation has been applied to the activities in accordance with the DOE Environmental management guidelines.

A.2.9. Discuss How NEPA will be or has been Addressed

The WIPP Supplemental Environmental Impact Statement (SEIS) was approved in September 1997 and the Record of Decision was issued in January 1998. A supplemental analysis may be required as WIPP prepares to receive Remote-handled TRU waste. The SEIS examined various alternatives for the disposal of TRU waste at WIPP, as well as alternatives for continued storage at TRU waste sites rather than disposal at WIPP. The process began with public meetings to obtain comment on the scope of the analysis. On November 19, 1996, DOE issued a draft SEIS and began the public hearings process to get comments on the SEIS. The final SEIS addresses all public comments and contains a revised analysis of the environmental impacts for the alternatives considered. DOE weighed the environmental impacts and considered all public comments prior to reaching a Record of Decision for WIPP. The SEIS is intended to provide information required for making a sound and justifiable decision to dispose or not dispose of TRU waste at WIPP. The Waste Management Programmatic Environmental Impact Statement, which followed the same process as the WIPP SEIS, is intended to provide the same type of information needed for deciding the proper locations to treat and store TRU waste prior to shipping to WIPP for permanent disposal.

A.2.10. 1997 Actual Accomplishments

October - DOE submitted the Compliance Certification Application to EPA.
September - Los Alamos National Laboratory site certification.
September - WIPP SEIS approved by the Department

A.2.11. 1998 Planned Accomplishments

The following accomplishments are contingent upon completion of all FY97 activities and all activities included in the remainder of the CAO projects. It is expected:

1) The Secretary of Energy will issue a Record of Decision for theWIPP SEIS in January 1998;
2) WIPP will be declared operationally ready to receive waste in March;
3) The EPA will certify WIPP by approving the Compliance Certification Application in April;
4) The Secretary of Energy will make the decision to operate WIPP as a disposal facility in April;
5) DOE will notify the States and Native American Tribes of the intent to transport TRU waste in April;

6) Non-mixed, Contact-Handled TRU waste disposal will begin at WIPP with a rate of 5 shipments per week in May.
CAO will receive approximately 67 shipments or approximately 592 cubic meters of non-mixed TRU waste from the Idaho National Engineering and Environmental Laboratory, Rocky Flats Environmental Technology Site, and Los Alamos National Laboratory.

A.2.12. 1999 Planned Accomplishments

The following accomplishments are contingent upon completion of all FY98 activities and all activities included in the remainder of the CAO projects. It is expected:
1) DOE will receive a RCRA Part B permit from the State of New Mexico sometime in FY 1999;
2) WIPP will receive approximately 500 shipments or approximately 3,786 cubic meters of Contact-handled TRU waste.

A.2.13. 2000 Planned Accomplishments

The following accomplishments are contingent upon completion of all FY99 activities and all activities included in the remainder of the CAO projects. It is expected:
WIPP will receive approximately 751 shipments or approximately 5,474 cubic meters of Contact-handled TRU waste.

A.2.14. Baseline Cost Summary

(Section A.2.1. in the 2/28/97 PBS)

1997-2006:	334,362	Post 2006:	1,535,493	Total Project Cost:	1,869,855

A.2.15. Baseline Costs

(Section A.2.2. in the 2/28/97 PBS)

All dollars in thousands.	Date Submitted	1997-2006 Total	2007-Completion Total	Grand Total	1997		1998	1999	2000
					Planned	Actual			
Original	2/28/97	**330,777**	**1,535,492**	**1,866,269**	42,528	Empty	38,678	36,466	35,640
Current Cost Baseline		**332,087**	**1,535,493**	**1,868,300**	46,113	46,113	41,647	36,178	35,295
Escalation Rate							0.00%	2.70%	2.70%
Cost Baseline in Constant FY 1998 Dollars					**46,113**	**46,113**	**41,647**	**35,227**	**33,464**

All dollars in thousands.	Date Submitted	2001	2002	2003	2004	2005	2006	2007	2008
Original	2/28/97	35,615	34,685	27,447	25,572	25,615	28,531	30,710	30,710
Current Cost Baseline		35,178	34,293	26,838	23,627	25,341	28,297	30,861	33,617
Escalation Rate		2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%
Cost Baseline in Constant FY 1998 Dollars		**32,476**	**30,826**	**23,491**	**20,137**	**21,030**	**22,865**	**24,282**	**25,755**

All dollars in thousands.	Date Submitted	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040
Original	2/28/97	30,710	30,710	175,556	202,532	233,653	269,555	310,974	220,383
Current Cost Baseline		28,764	29,598	175,556	202,532	233,653	269,555	310,974	220,383
Escalation Rate		2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%
Cost Baseline in Constant FY 1998 Dollars		**21,457**	**21,499**	**117,806**	**118,958**	**120,121**	**121,295**	**122,480**	**75,975**

(Section A.2.3. in the 2/28/97 PBS has been removed.)
(Section A.2.4. in the 2/28/97 PBS has been removed.)
(Section A.2.5. in the 2/28/97 PBS has been moved to Section A.2.9.)
(Section A.2.6. in the 2/28/97 PBS has been moved to Section A.2.13.)

A.2.16. Non-EM Costs Included in the Cost Baseline (Section A.2.6. in the 2/28/97 PBS) (All dollars in thousands)

	Organization	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
% EM	EM	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
EM Dollars (Calculated)		46,113	38,678	36,466	35,640	35,615	34,685	27,447	25,572	25,615	28,531

	Organization	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040
% EM	EM	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
EM Dollars (Calculated)		30,861	33,617	28,764	29,598	175,556	202,532	233,653	269,555	310,974	220,383

A.2.17. Related Projects at the Same Site or Operations/Field Office (Section A.1.9. in the 2/28/97 PBS)

Unique Site-Designated Project ID and Project Name	Relation to this Project
008: CB, CAO-1 – WIPP Base Operations	Primary support to all WIPP facility operations
010: CB, CAO-3 – WIPP Transportation	Safe transportation of TRU waste from TRU waste sites to WIPP
011: CB, CAO-4 – WIPP TRU Waste Sites Integration and Preparation	Continued TRU waste sites communication and preparation for waste acceptance at the WIPP
013: CB, CAO-6 – WIPP TRU Waste Transportation Privatization	Privatization Projects

A.2.18. Operations/Field Offices with Activities Related to this Project (Section A.1.10. in the 2/28/97 PBS)

Operations/ Field Office Name	Unique Site-Designated Project ID	Relation to this Project
All	All	All TRU programs are dependent upon disposal availability at WIPP

A.2.19. Drivers (Section A.1.11. in the 2/28/97 PBS)

	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
Select all applicable Drivers	X	X	X	X		X	X	X

A.2.20. Is this project A-106 (FEDPLAN) compliant? Yes

(Section D.2.1. in the FY 1999 Budget Update)

A.3. Milestones

Milestone/Activity	Field Milestone Code	Planned Date Month/Year	Forecast Date Month/Year	Actual Date Month/Year	Status Indicator	EA (Y/N)	DNFSB (Y/N)	EM-1 or S-1 (Y/N)	Intersite (Y/N)	HQ Change Control (Y/N)	Management Commitments (Y/N)	Key Decision (Y/N)
Project Start												
Project Mission Complete		Sep-39										
LT S&M Completion (If applicable)												
Completion of Pre-Disposal Phase	CAO-001-001	May-98				N	N	Y	Y	N	N	N
Completion of Disposal Phase	CAO-001-002	May-33				N	N	Y	Y	N	N	N
Completion of Decommissiong Phase	CAO-001-003	May-38				N	N	Y	Y	N	N	N
Completion of Active Institutional Controls	CAO-001-004	05/2138				N	N	Y	Y	N	N	N
Begin Passive Institutional Controls	CAO-001-005	05/2138				N	N	Y	Y	N	N	N
Complete Actinide Source Term Test Program (STTP)	CAO-001-006	Aug-00				N	N	Y	Y	N	N	N
Complete TRU Waste Lab Experiments	CAO-001-007	Jan-01				N	N	Y	Y	N	N	N
Compliance Certification Application	CAO-001-008	Nov-02				N	N	Y	Y	N	Y	N
Compliance Certification Application	CAO-001-009	Nov-07				N	N	Y	Y	N	Y	N
Compliance Certification Application	CAO-001-010	Nov-12				N	N	Y	Y	N	Y	N
Compliance Certification Application	CAO-001-011	Nov-17				N	N	Y	Y	N	Y	N
Compliance Certification Application	CAO-001-012	Nov-22				N	N	Y	Y	N	Y	N
Compliance Certification Application	CAO-001-013	Nov-27				N	N	Y	Y	N	Y	N
Compliance Certification Application	CAO-001-014	Nov-32				N	N	Y	Y	N	Y	N
Compliance Certification Application	CAO-001-015	Nov-38				N	N	Y	Y	N	Y	N

A.4. Performance Measure Metrics

(Section A.4.a. in the 2/28/97 PBS; Attachment 2 in the 1997 Mid-year Performance Measures Update; SectionC.1. in the FY 1999 Budget Update)

[No information provided in this section]

A.5. Release Sites and Facilities

[No information provided in this section]

A.6. Validation (Section C.2. in the 2/28/97 PBS)

A.6.1. Project Validated? (Y/ N) Y

A.6.2. Date Validated: 9/23/96

A.6.3. Validation Method:

Public Law 104-201 Compliance Certification Application to EPA, SEIS-II, and the National Research Council Report, "WIPP, a Potential Solution for the Disposal of Transuranic Waste" dated November 1996.

A.6.4. Technical Approach Reference Documents:

WIPP SEIS-II
Compliance Certification Application
RCRA Part B Permit Application

A.6.5. Current Status of your Project Baseline:

Life Cycle cost and technical scope has had continuous reviews since FY 1988 by the GAO, IG, NAS, EEG, and other stakeholders.

A.6.6. Is this PBS Consistent with your Site Baseline? (Y/ N) Y

A.6.7. If A.6.6. was answered No, why not?

A.6.8. Future Validation Plans and Schedule

None

A.6.9. Site Baseline Consistency

How consistent is the Site Baseline(s) with this PBS? Check the appropriate box.

X	100% - PBS Fully Supported by Site Baseline(s)
	75% - PBS Well Supported by Site Baseline(s)
	50% - PBS Mostly Supported by Site Baseline(s)
	25% or less- PBS Not Well Supported by Site Baseline(s)

A.6.10. Project End State Definition

How certain is the Project End State for this PBS? Check the appropriate box.

X	100% - Agreement with Stakeholders
	75% - Project End State is Well Defined

50% - Project End State is Mostly Defined
25% or less- PBS Not Well Supported by Site Baseline(s)

A.7. Project Assumptions (Section C.3. in the 2/28/97 PBS)

1) WIPP will open in 1998
2) Funding will be adequate to meet the National TRU Waste Management Plan, Rev. 1 (NTWMP) schedule.
3) WIPP will receive non mixed TRU waste until the RCRA permit is received.
4) WIPP will receive only defense generated TRU waste.
5) CAO will provide an integrated transportation system.
6) TRU waste sites will have adequate road ready waste to meet the objectives of the NTWMP.
7) Remote Handled TRU waste will be disposed at WIPP starting in FY2003
8) WIPP will be filled to capacity (175.6 thousand cubic meters) by FY2033.
9) All WIPP dismantlement and decommissioning will take 5 years (FY2034 - FY2038)
10) Active institutional controls will be implemented in FY2039 and last for 100 years.
11) EPA will certify every 5 years.

B.1. Budget by Appropriations Account (in thousands)

Appropriations Account	1997 BA	1998 BA	1999 BA	2000 BA
Defense Environmental Management	46,113	38,678	36,466	35,640
Energy Supply, Research and Development				
Uranium Enrichment Decontamination and Decommissioning Fund				
Total	**46,113**	**38,678**	**36,466**	**35,640**

C.1. Risk (Section E.1. in the FY 1999 Budget Update)

C.1.1. Risk Data

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Public	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D
Worker	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C
Environment	3C	3C	3C	3C	3C	3C	3C	3C	3C	3C

	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040
Public	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D
Worker	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C
Environment	3C	3C	3C	3C	3C	3C	3C	3C	3C	3C

	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
Public	3D	3D	3D	3D	3D	3D
Worker	4D	4D	4D	4D	4D	4D

Environment	3D	3D	3D	3D	3D	3D

C.1.2. Choose either the public, worker, or the environment as the End-State Risk driver: (P, W, or E):	
C.1.3. Choose either the public, worker, or the environment as the Interim Risk driver: (P, W, or E):	
C.1.4. If upon completion of this project, another project manages its hazards, indicate that project ID:	
C.1.5. Has the risk evaluation been internally peer reviewed by ES&H professionals? (Y/N)	Y
C.1.6. Has the risk evaluation been externally peer reviewed? (Y/N)	Y
C.1.7. Have regulators, stakeholders, & Tribal Nations been involved in validating the project risk evaluations? (Y/N)	Y

D.1. Direct Safety & Health and Risk Narratives

(Indirect Safety & Health Narratives are located in the Site Summary Level)
(Section D.1.1. in the FY 1999 Budget Update has been replaced by narratives below and in the Site Summary Level and is no longer maintained.)

D.1.2. Direct S&H Narrative - Hazards:

See CAO-1

D.1.3. Direct S&H Narrative - Controls:

See CAO-1

D.1.4. Direct S&H Narrative - Work Performance:

See CAO-1

D.1.5. Direct S&H Narrative - Feedback and Continuous Improvement:

See CAO-1

D.1.6. Risk Evaluation Narrative (Indicate incremental risk reduction metric and references to supporting risk

See risk evaluation in CAO-1 and CAO-3

D.2. Safety and Health Direct Data

(Section D.2.1. in the FY 1999 Budget Update has been moved to Section A.2.17.)

D.2.2. Safety and Health Cost Reporting - Direct Costs (All dollars in thousands)

	1997	1998	1999	2000
A. Emergency Preparedness				
B. Fire Protection				
C. Industrial Hygiene				
D. Industrial Safety				
E. Occupational Medicine				
F. Nuclear Safety				

G. Radiation Protection				
H. Transportation Safety				
I. Management Oversight				
Total S&H Direct Costs	**0**	**0**	**0**	**0**
Total Baseline Costs (from A.2.15.)	**46,113**	**38,678**	**36,466**	**35,640**
% S&H Direct Costs (calculated)	**0%**	**0%**	**0%**	**0%**

(Section D.2.3. in the FY 1999 Budget Update has been moved to the Site Summary Level)

(Section D.2.4. in the FY 1999 Budget Update has been removed)

D.2.5. Safety and Health FTE Reporting - Direct Contractor FTEs

	1997	1998	1999	2000
A. Emergency Preparedness				
B. Fire Protection				
C. Industrial Hygiene				
D. Industrial Safety				
E. Occupational Medicine				
F. Nuclear Safety				
G. Radiation Protection				
H. Transportation Safety				
I. Management Oversight				
Total Direct Contractor FTEs	**0.00**	**0.00**	**0.00**	**0.00**

(Section D.2.6. in the FY 1999 Budget Update has been moved to the Site Summary Level)

E. Enhanced Performance Measures

E.1. Project Estimates (All dollars in thousands)

E.1.1. Current Estimated Lifecycle Cost of Project: 1,869,855

E.1.2. Previously Estimated Lifecycle Cost of Project: 1,866,269

E.1.3. Projected Cost for FY 97: 46,113

E.1.4. Projected % Work Completed by End of FY 98: 4% [Assuming 0% was complete on 10/1/96]

E.1.5. Current Projected End Date of Project: Sep-39 ["Jan-00" is default value if the planned project completion milestone date is blank]

E.1.6. Previously Projected End Date of Project:

E.2. Performance for FY 1997 (All dollars in thousands)

E.2.1. Actual Cost for FY 97: 46,113

E.2.2. Actual % Work Completed to Date: 2% [Assuming 0% was complete on 10/1/96]

E.3. Comparing Baseline to the Actuals (All dollars in thousands)

E.3.1. Cost Deltas

	Change	% Difference
Diff. Between Actual and Projected Cost for FY 97:	**0**	**0%**
Change in Estimated Lifecycle Cost of Project:	**3,586**	**0%**

E.3.2. Change in % Work Completed: **[Empty until end of FY 1998]**

E.4. Enhanced Performance Categorization Process

	FY 1997		Lifecycle	
Change Type	**Applicable? (Y/N)**	**If Yes, Why?**	**Applicable? (Y/N)**	**If Yes, Why?**
End State	**N**		**N**	
Scope	**Y**	**SA: Scope Addition**	**Y**	**SA: Scope Addition**
End Date (Acceleration/Deferral)	**N**		**N**	

E.5. Categorizing Sources of Enhanced Performance

If enhanced performance (cost avoidance, scope deletion, or accelerated schedule) was indicated in E.4., provide the % of total change in cost next to the categories that best represent the sources of enhanced performance:

	FY 1997	Lifecycle
Use of new technologies or techniques		
Streamlined process		
Resequencing of projects (mortgage reduction)		
Privatization		
Innovative contracting		
Pollution prevention		
Site activity integration		
Site support cost changes		
Total % (calculated)	0%	0%

E.6. Total Calculated Enhanced Performance (All dollars in thousands)

FY 1997:	
Lifecycle Projected:	

E.7. Enhanced Performance Narratives

Not Applicable

E.7.1. Cost Avoidance Narrative (if applicable):

Not Applicable

E.7.2. Scope Deletion Narrative (if applicable):

Not Applicable

E.7.3. Accelerated Schedule Narrative (if applicable):

Not Applicable

E.8. Mortgage Reduction Potential Narrative

Not Applicable