ENCLOSURE 2 TO AEP-NRC-2012-105

Decommissioning study of the D.C. Cook Nuclear Power Plant

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Prepared for Indiana Michigan Power Company

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1.0 INTRODUCTION

1.1 DONALD C. COOK UNITS 1 AND 2 PLANT SITE

The Donald C. Cook Plant Nuclear Power Plant (D.C. Cook Plant) is a nuclear-powered electrical generating facility located in Bridgman, Michigan. D.C. Cook Plant consists of two pressurized water reactors (PWR). Its electrical rating is 1020 Mwe for reactor Unit 1 and 1090 Mwe for reactor Unit 2. D.C. Cook Plant has been granted a twenty year license extension by the Nuclear Regulatory Commission (NRC). Based on the terms of this extension, Unit 1 is scheduled for shutdown on October 25, 2034; Unit 2 is scheduled for shutdown on December 23, 2037. Units 1 & 2 are planned to be decommissioned in series following shut down.

This study is an update of the 2009 site-specific Decommissioning Cost Estimate of the D.C. Cook Nuclear Power Plant, Units 1 & 2, prepared for the Indiana Michigan Power Company (the Company). As such, it reflects site specific plant information and cost factors. The most current decommissioning experience and logic have been incorporated into this estimate, including spent fuel acceptance rates, spent fuel storage issues, decommissioning methodologies, decommissioning management and waste disposal.

1.2 OVERVIEW OF SCENARIOS

This study consists of five decommissioning scenarios, comprised of four DECON scenarios and one SAFSTOR scenario.

Two of the DECON scenarios assume on-site dry spent fuel storage as follows: one with spent fuel remaining on-site indefinitely and one with a 2032 spent fuel shipping start and at the most recent acceptance rate. One DECON scenario assumes off-site dry spent fuel storage with spent fuel remaining off-site facility indefinitely. The final DECON scenarios assume wet spent fuel storage 2032 spent fuel shipping start and at the most recent acceptance rate.

The SAFSTOR scenario assumes on-site dry storage with spent fuel remaining on-site indefinitely.

The cost estimates contained herein were developed based on a May, 2012 configuration. They utilize previously-developed site specific plant systems and building inventory, and have been modified as appropriate. Costs have been determined for removal, packaging, transportation and disposal.

The decommissioning activities contained herein were previously developed and have been modified as required, with costs determined for each activity. The critical path schedule was previously developed and has been modified based on new spent fuel shipping assumptions and new and modified task durations. Period-dependent costs include utility staff, decommissioning general contractor staff, security, insurance, energy and others. Cost levels were determined

based on specific periods or groups of activities per the schedule. Total period dependent costs were determined by the scenario-specific durations. Activity and period dependent costs were totaled to determine overall costs for each scenario.

The purpose of this study is to provide a range of decommissioning costs for financial planning. All costs are in summer, 2012 dollars. All costs are based on the aforementioned spent fuel shipping and storage assumptions. The selected assumptions are then applied to one of two basic decommissioning scenarios.

Utilizing the above estimating methodology, costs range from $1,316,367,800 to $1,954,519,300. This range encompasses the initial decommissioning cost and 60 years of on or off site spent fuel storage.

2.0 SUMMARY

Decommissioning is the safe removal of a facility or site from service and the reduction of radioactivity to a level that permits either the release of the property for unrestricted use and NRC license termination; or a restricted release of the property and NRC license termination.

2.1 DECOMMISSIONING ALTERNATIVES

The NRC allows three types of scenarios in estimating the decommissioning of a nuclear site, DECON, SAFSTOR and ENTOMB. The first, DECON, occurs soon after shutdown. It assumes that all systems, structures and contaminated site areas will be removed or decontaminated and that the facility's license will be terminated.

For the second type of scenario, SAFSTOR, preparations occur soon after shutdown. It assumes limited site decontamination and dismantlement; that all liquid will be drained from systems; that the facility will be placed in a safe and stable condition; that all spent fuel will be held in storage or shipped from the site; and that the site will be decontaminated and its license terminated within sixty years.

In the third type of scenario, ENTOMB, preparations occur soon after shutdown. It assumes limited site decontamination and dismantlement; that all liquid will be drained from systems; that the remaining radioactive systems and structures will be encased inside an entombment structure; that the facility will be continuously monitored; that spent fuel will be held in storage or shipped from the site; that the site will be decontaminated and license terminated within 60 years; and that most reactors will have radionuclides in concentrations exceeding the limits for unrestricted release after 100 years. This study does not consider the ENTOMB scenario.

Per NRC regulations, there are specific reporting requirements for decommissioning and spent fuel storage. Regulation 10 CFR 50.75, *Reporting and Recordkeeping for Decommissioning Planning,* requires a decommissioning report certifying that financial assurance will be available for decommissioning. The amount funded must be adjusted annually. A report on the status of funding must be submitted every two years. Costs not associated with decommissioning, such as spent fuel storage and clean removal costs, are specifically excluded.

Regulation 10 CFR 50.54(bb) requires a program by which the licensee plans to manage and provide funding for the management of spent fuel following permanent cessation. This is required within two years of permanent cessation or within five years before license expiration. The licensee must demonstrate the actions will be consistent with NRC requirements and will be implemented on a timely basis according to these requirements.

While neither of the above NRC regulations require Greenfield or clean system and structure removal costs, these costs may be required by local authorities to minimize liability. Removal of

clean systems and structures may also be required to access contaminated components and structures. Therefore, Greenfield costs have been included in this study.

Table 2-1 provides a summary of costs for the five scenarios. Each summary of costs is based on one of two decommissioning scenarios. Costs are separated into the three cost categories based on the aforementioned spent fuel shipping and storage assumptions and have been determined based on the described estimating methodology.

TABLE 2-1
SUMMARY OF COSTS

Scenario 1 — **DECON, Indefinite On-Site Dry Storage and Modified Spent Fuel Pool Systems**

Decommissioning Alternative	Fuel Storage and Decommissioning Cost	Dormancy Period Cost	Delayed Dismantling Cost	Total Program Cost
10 CFR 50.75(c)	$793,192,081	N/A	N/A	$793,192,081
10 CFR 50.54(bb)	$386,210,019	N/A	N/A	$386,210,019
Greenfield	$142,003,089	N/A	N/A	$142,003,089
			total:	**$1,321,405,189**
Annual ISFSI	$4,477,802			**$4,477,802**

Scenario 2 — **DECON, Indefinite Off-Site Dry Storage and Modified Spent Fuel Pool Systems**

Decommissioning Alternative	Fuel Storage and Decommissioning Cost	Dormancy Period Cost	Delayed Dismantling Cost	Total Program Cost
10 CFR 50.75(c)	$791,899,423	N/A	N/A	$791,899,423
10 CFR 50.54(bb)	$349,807,122	N/A	N/A	$349,807,122
Greenfield	$143,715,003	N/A	N/A	$143,715,003
			total:	**$1,285,421,548**
Annual ISFSI	$6,604,893			**$6,604,893**

Scenario 3 — **DECON, On-Site Dry Storage, Modified Systems, 2032 Repository and Recent DOE Acceptance Rate**

Decommissioning Alternative	Fuel Storage and Decommissioning Cost	Dormancy Period Cost	Delayed Dismantling Cost	Total Program Cost
10 CFR 50.75(c)	$792,522,613	N/A	N/A	$792,522,613
10 CFR 50.54(bb)	$428,426,257	N/A	N/A	$428,426,257
Greenfield	$142,032,743	N/A	N/A	$142,032,743
			total:	**$1,362,981,613**

Scenario 4 — **SAFSTOR, Indefinite On-Site Dry Storage and Modified Spent Fuel Pool Systems**

Decommissioning Alternative	Fuel Storage and Decommissioning Cost	Dormancy Period Cost	Delayed Dismantling Cost	Total Program Cost
10 CFR 50.75(c)	$144,497,666	$223,368,512	$533,460,886	$901,327,065
10 CFR 50.54(bb)	$193,393,386	$416,521,135	$30,271,567	$640,186,089
Greenfield	N/A	N/A	$143,414,045	$143,414,045
			total:	**$1,684,927,198**
Annual ISFSI	$4,493,201			**$4,493,201**

Scenario 5 — **DECON, On-Site Wet Storage, Modified Systems, 2032 Repository and Recent DOE Acceptance Rate**

Decommissioning Alternative	Fuel Storage and Decommissioning Cost	Dormancy Period Cost	Delayed Dismantling Cost	Total Program Cost
10 CFR 50.75(c)	$814,816,904	N/A	N/A	$814,816,904
10 CFR 50.54(bb)	$359,209,532	N/A	N/A	$359,209,532
Greenfield	$142,341,328	N/A	N/A	$142,341,328
			total:	**$1,316,367,763**

3.0 DECOMMISSIONING COST ESTIMATING METHODOLOGIES

3.1 DECON

There are typically six periods associated with the DECON methodology of decommissioning cost estimating. Period one consists of decommissioning planning prior to shutdown. Period two involves post-shutdown preparations. These include isolation of spent fuel; decontamination of the primary system; flushing and draining of all systems; implementation of cold and dark; and characterization surveys. Period three consists of removal of reactor internals and removal of the reactor vessel. The critical path task for period three is the removal, packaging, shipping and disposal of the reactor internals and the reactor vessel. Also in period three, the steam generators, pressurizers, contaminated systems and structures are removed, packaged, shipped and disposed of. Additionally, clean structures and systems are removed as they become unnecessary. In period four, the buildings undergo decontamination. This includes decontamination of the reactor building(s), removal, packaging, shipping and disposition of spent fuel racks after spent fuel has been removed from the spent fuel pool, decontamination of the spent fuel pool and the balance of the auxiliary building(s), a formal site survey of any remaining buildings, and termination of 10 CFR Part 50 license. Period five consists of demolition of clean buildings. In this period, all clean structures are removed with the exception of any required to support spent fuel storage. Period six consists of site restoration. In this period, the site is graded and landscaped to conform to the natural surroundings. Depending on the spent fuel storage assumptions, these periods may be separated by a wet spent fuel storage period, a dry spent fuel storage period, and/or a combination of both.

Four of the five scenarios in this study utilize the DECON methodology.

There are advantages to utilizing the DECON methodology. This methodology provides quick termination of the NRC license. Knowledgeable employees who are familiar with the site will still be available. There is no need for long-term security and surveillance. The DECON method provides a greater certainty of regulatory requirements due to the inherent uncertainty in trying to assess future regulatory requirements. Finally, the total cost will be lower as it is incurred in current dollars and there is no extended dormancy period.

Disadvantages of the DECON methodology include the following: the short time period that elapses following shut-down means less radioactive decay and therefore a higher worker dose. The initial cash outlay will be larger. There is less time for funds to accrue, which means a larger present value; and work will have to be performed in proximity to the on-site storage of spent fuel.

3.2 SAFSTOR

There are typically eight periods associated with the SAFSTOR methodology of decommissioning cost estimating. Period one consists of planning prior to shutdown. Period two

is post-shutdown preparations. These include isolation of spent fuel; decontamination of the primary system; flushing and draining of all systems; general cleanup and decontamination of site buildings; and characterization surveys. Period three is a period of dormancy. There may be a storage period during dormancy when spent fuel remains in the spent fuel pool, on-site in dry storage, or a combination of both. Period four consists of decommissioning planning during the dormancy period. Period five involves removal of reactor vessel internals and removal of the reactor vessel. The critical path task for period five is the removal, packaging, shipping and disposal of the reactor internals and the reactor vessel. Also in period five, the steam generators, pressurizers, contaminated systems and structures are removed, packaged, shipped and disposed of as they become available. Additionally, clean structures and systems are removed as they become unnecessary. In period six, the building undergoes decontamination. This includes decontamination of the reactor building(s), removal, packaging, shipping and disposition of spent fuel racks after spent fuel has been removed from the spent fuel pool, decontamination of the spent fuel pool and the balance of the auxiliary building(s), a formal site survey of any remaining buildings, and termination of 10 CFR Part 50 license. During period seven, all clean structures are demolished and removed with the exception of those required to support spent fuel storage. During period eight, the site is restored by being graded and landscaped to conform to the natural surroundings.

One of the five scenarios in this study assumes the SAFSTOR methodology.

There are advantages to using the SAFSTOR methodology of decommissioning cost estimating. As a result of decay, there will be a reduction in the amount of radioactivity present, meaning a reduced worker dose. There will be a smaller initial cash outlay and a smaller present value due to more time for funds to accrue interest. On-site spent fuel storage will most likely occur during dormancy, allowing decommissioning to proceed without the constraints imposed by spent fuel storage.

Disadvantages of utilizing the SAFSTOR methodology include the following: employees familiar with site history will no longer be available; this methodology necessitates ongoing maintenance and surveillance; there will be inherent uncertainties regarding regulatory requirements and uncertainties around low-level waste disposal facility availability.

3.3 SPENT FUEL ACTIVITIES

There are many uncertainties associated with the Department of Energy's (DOE) acceptance of spent fuel. The Department of Energy (DOE) originally contracted to begin accepting spent fuel from nuclear power plants no later than January 31, 1998. To date, no spent fuel has been taken by the DOE. Many utilities have brought legal proceedings against the DOE for their breach of contract with the majority winning court ordered compensation. Recently, all activity at Yucca Mountain has been shutdown and, at least in the near term, has been removed as a potential spent fuel repository. It appears unlikely that that spent fuel shipments to a Federal repository will

occur anytime in the foreseeable future. In light of this fact, all nuclear utilities should be prepared to store spent fuel on-site for a long period of time. Three scenarios in the study assume indefinite storage, two on-site and one off-site.

There has been some renewed discussion on interim storage at privately funded facility, Private Fuel Storage (PFS). In July 2010 a U. S. District Court rejected two U.S. Department of Interior decisions that placed the PFS on hold. Based on this ruling, the Interior's decisions have been remanded to the agency for further consideration. Should interim storage come to fruition, some spent fuel acceptance rate, short of that currently published, would most likely be implemented. One scenario in the study assumes spent fuel will be transferred off-site to a PFS.

With the shutdown of Yucca Mountain there is currently no published DOE acceptance schedule of spent fuel. The most recent DOE acceptance schedule is outlined in *DOE/RW-0591 Total System Life Cycle Cost Report, July 2008*. The following are the assumed acceptance rates:

- Year 1: 400 Metric Tons Heavy Metal (MTHM)
- Year 2: 600 MTHM
- Year 3: 1,200 MTHM
- Year 4: 2,000 MTHM
- Year 5: 3,000 MTHM
- Any year after year 5: 3,000 MTHM

This rate has been utilized in two scenarios within this study.

Considering the current status of Yucca Mountain and the lack of alternatives for the DOE's retrieval of spent fuel a spent fuel shipping start date is an unknown at this time. Two of the scenarios in this study assume a start date twenty years in the future, 2032. Twenty years should be sufficient time to develop at least an interim storage facility should progress begin in the near term.

One scenario within study assumes spent fuel will remain in the spent fuel pool for an extended storage period versus transfer to dry storage. While dry storage will be required during operations to maintain full core discharge capabilities, no additional dry storage will be purchased after shutdown.

In order to minimize post-shutdown spent fuel storage costs the spent fuel island concept will be implemented. Modifications to the site will provide self contained fuel pool cooling, cleanup, monitoring, control and electrical power systems. This will isolate the spent fuel pool from the remainder of the site and will allow decommissioning to continue safely on the balance of site.

Three scenarios within study assume spent fuel will be transferred to an on-site Independent Spent Fuel Storage Installation (ISFSI) after shutdown. Dry storage will be required during operations to maintain full core discharge capabilities. The ISFSI will be expanded after shutdown to accommodate the long term storage of spent fuel. The storage system is anticipated

to be licensed for both storage and transportation facilitating the eventual transfer to the DOE site.

It is assumed that spent fuel cannot be transferred to dry storage until it has cooled a minimum of five years in the spent fuel pool. In order to minimize post-shutdown spent fuel storage costs during this five year period the spent fuel island concept, as discussed above, will be implemented. This option will provide the low cost option for the long term on-site storage of spent fuel.

Per ISFSI Licensing requirements, a 10 CFR part 72 license will be required in order to terminate the 10 CFR Part 50 license. Systems approved for use under the provisions of 10 CFR part 72 Subpart K, a Certificate of Compliance, may be used on a site with a 10 CFR part 50 license without a 10 CFR Part 72 Subpart C license. The process to obtain a 10 CFR Part 72 license will be simplified by utilizing a storage system with a Certificate of Compliance. For this reason, this study assumes the dry storage system utilized will have a Certificate of Compliance.

A site re-evaluation is not required to obtain the Part 72 subpart C ISFSI license if it is shown that original site findings have not changed. A reevaluation would only be required if new information is available that alters the original findings. It is assumed that the system utilized for dry storage will meet or could be modified to meet the original site design conditions.

3.4 OFF-SITE DRY STORAGE

One scenario in this study assumes spent fuel will be transferred to and stored in an off-site dry storage facility. Private Fuel Storage LLC (PFS) has been licensed by the NRC to store spent fuel at an away-from plant-facility. PFS, a consortium of eight nuclear utilities including AEP, is located on property belonging to the Goshute Indian Tribe. This land is in Tooele County, Utah. The construction and operation of this facility is currently being held up by court actions. Maximum storage capacity of this facility will be 40,000 MTHM of spent fuel from U.S. commercial power reactors.

One scenario of this study assumes that the PFS facility will be in operation and available to accept spent fuel from D. C. Cook in 2035. Spent fuel will be stored in on-site dry storage during operations to maintain full core off load capability. This fuel, along with all spent fuel stored in the spent fuel pool after Unit 2 shutdown, will be transferred to off-site storage after cooling a minimum of five years in the spent fuel pool. It is assumed that all spent fuel in the pool will be off-site approximately five and one half years after shutdown. Initial cost to AEP for shipping to the off-site facility and the storage casks is estimated to be $128.37/kgU. Additionally, an estimated cost of $200/kgU will be incurred for annual storage fees.

3.5 DECOMMISSIONING MANAGEMENT

The utility staff will retain certain of their ongoing functions during decommissioning, including the following:

- Shipment of low-level waste remaining from plant operations
- Radiological health and safety
- Security
- Quality assurance
- Health physics monitoring
- Defueling of the reactor
- Draining and de-energizing of all systems
- Continued safe on-site storage of spent fuel
- Management of the decommissioning general contractor.

The number of staff during each period depends on the major work planned for each period. Details are provided in section seven of this report.

This study assumes that the utility will hire an experienced decommissioning general contractor (DGC) who will be responsible for performing the decommissioning activities. The DGC in turn will hire and be responsible for subcontractors hired to perform activities, such as primary system decontamination flush and large component removal. The number of staff during each period depends on the major work planned for each period. Details are provided in section seven of this report.

3.6 COLD & DARK

To simplify the removal of systems and structures, a "cold & dark" status will be implemented. The cold & dark status will allow component removal without individually verifying that each component has been de-energized. To implement cold & dark, all systems will be drained and electrical power to components will be removed as appropriate. After the spent fuel pool isolation has been completed, a new minimized control room will be constructed. Construction power will be supplied to the site for decommissioning and to operate essential loads with color coded wire. This process ensures that all energy sources are removed prior to the beginning of decommissioning activities, simplifying the removal process and greatly increasing safety during the decommissioning process.

3.7 DECONTAMINATION PROCEDURES

To facilitate the removal of contaminated large components, contamination control envelopes (CCE's) will be set up inside the reactor building. CCEs will have integral ventilation systems for contamination control and to maintain negative pressure. Cutting stations, including for underwater cutting, will be set up within the reactor building.

The reactor vessel internals will be removed from the vessel and transferred to the fuel transfer canal. Once in the transfer canal, they will be segmented and loaded underwater into shipping liners. The liner outer surfaces will be washed and loaded into shipping casks for transport to the disposal facility.

The reactor vessel will be cut into ring segments with each segment transferred to the fuel transfer canal. Here, each segment will be further segmented and loaded into shipping cask liners. The outer surfaces of the liners will be washed and then loaded into shipping casks for transport to the disposal facility.

With the exception of the upper shell, the steam generator will be removed intact. A steam generator transfer system and support equipment will be installed to remove the steam generator from the reactor building. A CCE and ventilation system, scaffolding, temporary lighting and shielding will also be installed. The insulation will be removed from the steam generators, followed by cutting of the main steam, feedwater and miscellaneous piping. Next the upper shell and components will be cut and removed. These will be surveyed, decontaminated and released if possible.

A steel plate will be welded to the top of the lower shell. The lower shell will be removed, transferred from the building, prepared for transport and transported to the disposal facility.

The pressurizer will be removed in a similar fashion, excluding segmentation.

The following process will be used for removal and disposal of contaminated systems, previously drained by the utility staff: Contaminated pipe and components will be cut free and segmented as necessary. The components will be transferred to a packaging area where a crew will package them, survey the containers and prepare the containers for shipment.

Clean pipe and components will be cut free and segmented when necessary. The components will be transferred to a packaging area where a crew will package the material into containers and prepare for them for shipment. It is assumed that clean waste will be disposed of at a local landfill.

With the exception of the reactor building interior, contaminated concrete surfaces will be decontaminated by partial surface removal. In some cases entire walls and/or floors will be removed. The remaining structures will be surveyed for conformance to release limits. Depending on the results of the survey, more decontamination may be required. Bulk removal of the reactor building interior floors and walls will be performed with all of the material being sent out for off-site processing. This leads to a large disposal volume; however, at a lower rate for bulk processing than for direct burial. In addition, there will be far less characterization and iterative decontamination.

Clean structures will be demolished using explosives and/or mechanical means and disposed of at a local landfill.

3.8 CONTINGENCY

Contingencies are applied to cost estimates primarily to account for unknown or unplanned events that experience tells us are likely to occur. These events include increased radioactive waste materials in volumes exceeding the amount anticipated; equipment breakdowns; weather delays; labor strikes, etc. Estimates are based on assumed values of cost which in reality are subject to variability. The actual costs may be higher or lower than the estimated value; however, they usually go higher. The amount of contingency to be added is directly related to the level of detail and uncertainty contained in the estimate.

The U.S. Department of Energy (DOE) Cost Estimating Guide, DOE G 430.1-1, 3-28-97; defines contingency as follows: "Covers costs that may result from incomplete design, unforeseen and unpredictable conditions, or uncertainties within the defined project scope. The amount of contingency will depend on the status of design, procurement, and construction; and the complexity and uncertainties of the component parts of the project. Contingency is not to be used to avoid making an accurate assessment of expected costs."

DOE G 430.1-1 provides a recommended range of contingencies as a function of program design:

Time of Estimate	Contingency Range as a % of Total Estimate
Planning Phase	20-30
Budget	15-25
Title I	10-20
Title II	5-15

The AACE International Certification Study Guide, Second Edition - Revised, 2003, defines contingency as follows: "Contingency is a cost element of an estimate to cover a statistical probability of the occurrence of unforeseeable elements of cost within the defined project scope due to a combination of uncertainties, intangibles and unforeseen, highly-unlikely occurrences of future events based on management decisions to assume certain risks."

AIF/NESP-0036 "Guidelines for Producing Nuclear Plant Decommissioning Cost Estimates" (AIF) is another source for published contingency values. This document identifies contingencies for activities specific to nuclear power plant decommissioning. Except for system decontamination, reactor vessel removal and disposal and reactor internals removal and disposal, the contingencies presented in AIF are consistent with the values presented in DOE G 430.1-1 for a Budget/Title I estimate. The contingencies identified in AIF for system decontamination and reactor vessel and reactor internals removal and disposal are higher than the ranges identified in DOE G 430.1-1. This is in part due to the lack of actual decommissioning work performed during the time period the AIF document was published.

An estimate of the nature developed for D. C. Cook would be considered somewhere between a Budget estimate (based on conceptual design) and a Title I (based on more detailed site specific design). As such, an overall contingency in the 15% to 25% range would be appropriate. Knight Cost Engineering Services, LLC (KCES) has determined contingency values specific to DC Cook utilizing the information presented in AIF and consistent with DOE G 430.1-1. There are a number of large scale decommissioning projects in progress or nearing completion. The DC Cook decommissioning cost estimate incorporates the lessons learned from these projects. As such, costs can be estimated with a greater degree of confidence than was true at the time AIF was published. This increased level of confidence allows for a downward adjustment to the recommended contingency. The following table provides a summary of the contingency values that were applied to each activity for each cost category.

TABLE 3.1

	Staff Labor	Craft Labor	Equip & Mtls	Pkging	Trans-portation	Clean Disposal	Contam-inated Disposal	Energy	Other
Engineering and Project Management	15%								
Contaminated removal		25%		10%	15%		25%		
Reactor Vessel and Internals		50%		25%	25%		50%		
Clean removal		15%		10%	25%	10%			
Supplies and consumables			25%						
Other								15%	15%

There is some variation associated with the contingency analysis for on-site spent fuel storage. The activity costs associated with spent fuel storage, such as the purchase and construction of the ISFSI, the modification of the spent fuel pool and the transfer of spent fuel pool to the ISFSI are subject to many of the unknown or unplanned occurrences for which contingency is based. As such, the above methodology will be applied. During periods of spent fuel storage only, either wet or dry, the operating costs of the spent fuel storage facility include only a ten percent contingency because of the higher degree of knowledge and confidence in the factors comprising the operation of the wet or dry storage facility. Any variability in the duration of the fuel storage period due to failed DOE schedules is excluded from the contingency. This is treated by the different spent fuel shipping scenarios.

4.0 ASSUMPTIONS

Following is a list of assumptions developed by KCES in completing this study. These assumptions are based on the most current decommissioning methodologies and site-specific considerations.

1. **Component quantities** were previously developed from actual plant inventory listings.

2. **Concrete volumes** were previously obtained from plant construction records and detailed drawings.

3. **The utility staff** is assumed to be the same size at the time of Unit 2 shutdown as it was in July, 2012.

4. **Subcontractor base labor rates and fringe benefits** were supplied by AEP for most crafts. These rates were current as of June, 2012. The overhead and profit structure for these rates was developed by KCES.

5. **Craft labor rates** for positions not supplied by the Company were determined by KCES.

6. **Utility staff positions and costs** were supplied by the Company and represent July, 2012 salary and benefit data.

7. **Activity labor** costs do not include any allowance for delays between activities, nor is there any cost allowance for craft labor retained on-site while waiting for work to become available.

8. All **skilled laborers** will be supplied by the local union hall and hired by the Decommissioning General Contractor (DGC).

9. The **professional personnel** used for the planning and preparation activities will be paid per diem at the rate of $131.00/day. Since the skilled laborers are being supplied by local union hall they will not be paid per diem.

10. The cost for **Utility personnel** assisting the DGC to develop decommissioning activity specifications is included in the Utility Staff costs.

11. **Health Physics technicians** used during vessel and internal removal will be supplied by the Utility Staff.

12. **The separate DGC staff salaries**, including overhead and profit, were determined by KCES.

13. **Transportation** costs are based on actual mileage from D. C. Cook to each disposal or processing facility utilized in the estimate.

14. **Class B & C radioactive waste base disposal costs** are based on actual out of compact disposal rates and fees incurred at the WCS facility in Andrews, TX. In addition, the disposal costs of the >C waste, e.g., the core shroud, include present day curie surcharges as imposed at the WCS facility to more accurately reflect handling costs for highly radioactive material.

15. **Class A waste** will be disposed of at the Energy*Solutions* facility in Utah, Energy*Solutions* metal melt facility in Tennessee or the Studsvik processing facility in Tennessee. Waste is assumed to be transported to the lowest cost facility for which it qualifies. Further details on these processes are presented in Section 8.1.

16. **Clean waste** is assumed to be disposed of at a local landfill at a cost of $90.00 per ton.

17. It is assumed that **all radioactive waste** generated during operations and stored on-site will be disposed of prior to shutdown. The cost of disposal of this material is considered an operating expense and is assumed not to be a decommissioning cost.

18. **Greater than Class C waste** will be removed from the reactor vessel, segmented and packaged in containers of similar size and shape to the spent fuel assemblies. The containers will be stored in the spent fuel pool or transferred to the ISFSI. The additional containers are assumed to be shipped offsite with the spent fuel and are included in the spent fuel shipping analysis. Eighty-four containers will be filled per unit for all scenarios except Scenario 3, which will fill 16 per unit.

19. **All costs** used in these calculations were current on July, 2012.

20. The costs of all **required safety analyses and safety measures** for the protection of the general public, the environment, and decommissioning workers are included in the cost estimates.

21. All post shutdown costs necessitated by the presence of **stored spent fuel** are presented separately.

22. It is assumed that **Unit 1 will shutdown** in October, 2034 and that **Unit 2 will remain operational** until December 2037.

23. **On-site dry storage** will utilize the Holtec Vertical Concrete Casks (VCC) and Multi-Purpose Canister (MPC) system. Each MPC is designed to store and transport 32 spent fuel assemblies. Separate overpacks will be used for transportation and disposal.

24. It is assumed that spent fuel will cool five years in the spent fuel pool prior to being transferred to the ISFSI.

25. Only the costs for the **expanded storage pad, canister and overpacks** projected to be purchased after Unit 2 shutdown are included in this study as a spent fuel storage expense. Any canister and overpacks required during operations, in order to maintain full

core discharge capabilities, are assumed to be an operations expense. The cost per canister and storage overpack is estimated to be $1,929,750, including closure services.

26. **For Scenario 2 only**, it is assumed that the off-site dry storage facility will be available to begin accepting spent fuel in 2035. Spent fuel will be transferred to on-site dry storage during operations.

27. **Spent fuel shipments to a DOE facility** are based on D.C. Cook Plant spent fuel inventory, the constraints imposed by each scenario and the July 2004 Acceptance Priority Ranking & Annual Capacity Report.

28. All **spent fuel** must remain in the spent fuel pool a minimum of five years before either being shipped to the DOE facility or being transferred to the dry storage facility.

29. **Spent fuel assemblies to be shipped to the DOE facility** will be taken from the spent fuel pool when possible. By removing as much of the spent fuel from the spent fuel pool a minimum number of assemblies will remain in the pool five years after shutdown of Unit 2.

30. **The Unit 1 and Unit 2 reactor vessel and internals** will be removed sequentially.

31. **The Unit 1 and reactor vessel and internals** are considered identical.

32. **Vessel and internals curie estimates** were derived from the values for the Reference PWR vessel and internals in NUREG/CR-0130. These values were adjusted for MWt rating, weight and decay period.

33. It has been assumed for purpose of this study that **property taxes** for the D.C. Cook Plant will be zero after shutdown.

34. No **PCBs** will be on-site at shutdown.

35. It is assumed that all **asbestos insulation** will have been removed during the operating life of the plant.

36. **Clean building walls and foundations** more than three feet below grade may be left in place if there are no voids.

37. KCES has assumed that for the **on-site dry storage** scenarios, a site specific 10 CFR Part 72 license will be required for the balance of the dry storage period prior to terminating the 10 CFR Part 50 operating license.

38. The decommissioning will be performed under the **current regulations.** These regulations require a Post-Shutdown Decommissioning Activities Report (PSDAR) to be submitted prior to or within two years of after shutdown. In addition, certificates for permanent cessation of operations and permanent removal of fuel from the vessel must be

submitted to the NRC 90 days after the PSDAR submittal. Major decommissioning activities that meet the criteria of 10 CFR Part 50.59, may be performed provided NRC agrees with the PSDAR.

5.0 SCENARIO DESCRIPTIONS

Five decommissioning scenarios have been analyzed for this report. Utilizing the above described estimating methodology costs range from $1,323,204,200 to $1,961,355,500. The assumptions pertinent to each are described in the following sections.

5.1 SCENARIO 1 -DECON WITH INDEFENITE ON-SITE DRY STORAGE

This scenario includes Unit 1 shutdown on Oct 25, 2034 and Unit 2 on Dec 23, 2037. The transfer of spent fuel remaining in the spent fuel pool to the dry storage facility will begin in 2036. The existing ISFSI will be expanded to accommodate all spent fuel remaining on-site. With the exception of the last core load of fuel assemblies, transfer of all remaining fuel to the ISFSI will be completed within five years after shutdown. The transfer of the last core load of 193 assemblies and a few remaining assemblies will occur immediately after the required five year cooling period. The site will remain as an Independent Spent Fuel Storage Installation indefinitely.

The spent fuel pool will be modified immediately after shutdown to isolate it from the remainder of the facility. The capital cost of the skid mounted pool support systems package is included in this estimate. This will allow decommissioning to proceed exclusive of the spent fuel pool. Once all spent fuel has been removed from the spent fuel pool, the spent fuel pool island will be decommissioned. As soon as all spent fuel is transferred to dry storage, the balance of the D.C. Cook Plant will be decommissioned. All spent fuel will be stored on-site in Holtec's VCC and MPC system.

The six sequential periods in this scenario and the major activities occurring in each are as follows:

Period	Description	Period Duration, Months
1	BETWEEN SHUTDOWN OF UNIT 1 AND SHUTDOWN OF UNIT 2 • Planning for spent fuel pool modifications • Planning for cold and dark • Planning for primary systems flush • Select DGC • Planning for decommissioning	38
2	POST-SHUTDOWN ACTIVITIES • Transfer spent fuel from pool to the ISFSI • Modification of spent fuel pool systems • Primary system decontamination flush • Flush and drain non-essential systems • Perform characterization survey • Implement cold and dark • Vessel and Internals removal preparations	12

3	REMOVAL OF MAJOR COMPONENTS • Transfer spent fuel from pool to the ISFSI • Removal of Unit 1 and Unit 2 reactor vessels and internals • Removal of Unit 1 and Unit 2 steam generators • Removal of Unit 1 contaminated systems • Remove Unit 1 clean systems • Decontaminate Unit 1 Reactor Building • Begin Unit 1 and Unit 2 structures decontamination	38
4	DECON BALANCE OF SITE • Removal of Unit 2 contaminated systems • Remove Unit 2 clean systems • Decontaminate Unit 2 Reactor Building • Remove spent fuel racks • Decontaminate spent fuel storage building • Completion of Unit 1 and Unit 2 structures decontamination • Final site survey of reactor plant confirming satisfactory removal	29
5	CLEAN STRUCTURES DEMOLITION • Demolition of decontaminated Unit 1 and Unit 2 structures	16
6	RESTORATION OF PLANT SITE • Backfill, grading and landscaping of Unit 1 and Unit 2 sites	2

In this scenario, decommissioning and site restoration will be complete approximately 97 months or 8 years after Unit 2 shutdown. Spent fuel will remain on-site indefinitely.

5.2 SCENARIO 2 - DECON WITH INDEFINITE OFF-SITE DRY STORAGE

This scenario includes Unit 1 shutdown on Oct 25, 2034 and Unit 2 on Dec 23, 2037. The transfer of spent fuel remaining in the spent fuel pool to the dry storage facility will begin in 2036. With the exception of the last core load of fuel assemblies, transfer of all remaining fuel to the ISFSI will be completed within five years after shutdown. The transfer of the last core load of 193 assemblies and a few remaining assemblies will occur immediately after the required five year cooling period. In addition, the spent fuel stored in the on-site ISFSI will be transferred to the off-site ISFSI. Spent fuel will remain at the off-site storage facility indefinitely

In this scenario, it is assumed that all spent fuel will be transferred to an off-site dry storage facility. The Utility will be responsible for the initial cost of $128.37/kgU covering shipping, storage casks and transportation as well as an annual cost of $2.00/kgU. The canister will be transferred directly from the storage facility to a shipping cask and individual handling of the fuel assemblies will be avoided. While the Company is currently investigating PFS, the ultimate success of PFS is subject to on-going regulatory and other uncertainties.

There are seven sequential periods in this scenario as follows:

Period	Description	Period Duration, Months
1	BETWEEN SHUTDOWN OF UNIT 1 AND SHUTDOWN OF UNIT 2 • Planning for spent fuel pool modifications • Planning for cold and dark • Planning for primary systems flush • Select DGC • Planning for decommissioning	38
2	POST-SHUTDOWN ACTIVITIES • Transfer spent fuel from the existing ISFSI and/or spent fuel pool to the off-site ISFSI • Modification of spent fuel pool systems • Primary system decontamination flush • Flush and drain non-essential systems • Perform characterization survey • Implement cold and dark • Vessel and Internals removal preparations	12
3	REMOVAL OF MAJOR COMPONENTS • Transfer spent fuel from existing ISFSI and/or spent fuel pool to the off-site ISFSI • Removal of Unit 1 and Unit 2 reactor vessels and internals • Removal of Unit 1 and Unit 2 steam generators • Removal of Unit 1 contaminated systems • Remove Unit 1 clean systems • Decontaminate Unit 1 Reactor Building • Begin Unit 1 and Unit 2 structures decontamination	38
4	DECON BALANCE OF SITE • Removal of Unit 2 contaminated systems • Remove Unit 2 clean systems • Decontaminate Unit 2 Reactor Building • Remove spent fuel racks • Decontaminate spent fuel storage building • Completion of Unit 1 and Unit 2 structures decontamination • Final site survey of reactor plant confirming satisfactory removal	29
5	CLEAN STRUCTURES DEMOLITION • Demolition of decontaminated Unit 1 and Unit 2 structures	16

6	RESTORATION OF PLANT SITE • Backfill, grading and landscaping of Unit 1 and Unit 2 sites	2

In this scenario, decommissioning and site restoration will be complete approximately 97 months or 8 years after Unit 2 shutdown. Spent fuel will remain at the off-site facility indefinitely.

5.3 SCENARIO 3 - DECON WITH ON-SITE DRY STORAGE, REPOSITORY OPEN IN 2032 & RECENT ACCEPTANCE RATE

This scenario includes Unit 1 shutdown on Oct 25, 2034 and Unit 2 on Dec 23, 2037, a spent fuel repository open in 2032 with the first assemblies leaving the D.C. Cook Plant in 2035. The existing ISFSI will be expanded to accommodate all spent fuel remaining on-site. The transfer of spent fuel remaining in the spent fuel pool to the dry storage facility will begin in 2036. With the exception of the last core load of fuel assemblies, transfer of all remaining fuel to the ISFSI will be completed within five years after shutdown. The transfer of the last core load of 193 assemblies and a few remaining assemblies will occur immediately after the required five year cooling period.

The spent fuel pool systems will be modified as in Scenario 1 to reduce the costs of operating and maintaining the spent fuel pool after plant shutdown. As soon as all spent fuel is transferred to dry storage, the balance of the D.C. Cook Plant will be decommissioned. All spent fuel will be stored on-site in Holtec's VCC and MPC system.

The eight sequential periods in this scenario and the major activities occurring in each are as follows:

Period	Description	Period Duration, Months
1	BETWEEN SHUTDOWN OF UNIT 1 AND SHUTDOWN OF UNIT 2 • Continue spent fuel shipments from pool to DOE • Planning for spent fuel pool modifications • Planning for cold and dark • Planning for primary systems flush • Select DGC • Planning for decommissioning	38
2	POST-SHUTDOWN ACTIVITIES • Continuation of spent fuel shipment from pool to DOE • Transfer spent fuel from pool to the ISFSI • Modification of spent fuel pool systems • Primary system decontamination flush • Flush and drain non-essential systems • Perform characterization survey • Implement cold and dark • Vessel and Internals removal preparations	12

3	REMOVAL OF MAJOR COMPONENTS • Continuation of spent fuel shipment from pool to DOE • Transfer spent fuel from pool to the ISFSI • Removal of Unit 1 and Unit 2 reactor vessels and internals • Removal of Unit 1 and Unit 2 steam generators • Removal of Unit 1 contaminated systems • Remove Unit 1 clean systems • Decontaminate Unit 1 Reactor Building • Begin Unit 1 and Unit 2 structures decontamination	38
4	DECON BALANCE OF SITE • Continue spent fuel shipments from ISFSI to DOE • Removal of Unit 2 contaminated systems • Remove Unit 2 clean systems • Decontaminate Unit 2 Reactor Building • Remove spent fuel racks • Decontaminate spent fuel storage building • Completion of Unit 1 and Unit 2 structures decontamination • Final site survey of reactor plant confirming satisfactory removal	29
5	CLEAN STRUCTURES DEMOLITION • Continue spent fuel shipments from ISFSI to DOE • Demolition of decontaminated Unit 1 and Unit 2 structures	16
6	RESTORATION OF PLANT SITE • Continue spent fuel shipments from ISFSI to DOE • Backfill, grading and landscaping of Unit 1 and Unit 2 sites	2
7	DRY STORAGE • Completion of spent fuel shipment from dry storage to DOE	438
8	RESTORATION OF ISFSI SITE • Decontaminate ISFSI • Remove casks and pad	3

In this scenario, there will be an extended period of time, approximately 36.5 years, following shutdown when the activities on site will consist mainly of the ISFSI, Period 7. Cask loading activities for off-site spent fuel shipments will also be occurring on a periodic basis. All spent fuel will be removed from site, decommissioning complete and the site restored to native vegetation by October, 2082, 538 months or 45 years after Unit 2 shutdown.

5.4 SCENARIO 4 – SAFSTOR WITH INDEFINITE ON-SITE DRY STORAGE

This scenario includes Unit 1 shutdown on Oct 25, 2034 and Unit 2 on Dec 23, 2037. The transfer of spent fuel remaining in the spent fuel pool to the dry storage facility will begin in 2036. The existing ISFSI will be expanded to accommodate all spent fuel remaining on-site. With the exception of the last core load of fuel assemblies, transfer of all remaining fuel to the ISFSI will be completed within five years after shutdown. The transfer of the last core load of 193 assemblies and a few remaining assemblies will occur immediately after the required five year cooling period. The site will remain as an Independent Spent Fuel Storage Installation indefinitely.

The spent fuel pool systems will be modified to reduce the costs of operating and maintaining the spent fuel pool after plant shutdown. As soon as all spent fuel is transferred to dry storage, the balance of the D.C. Cook Plant will be decommissioned. All spent fuel will be stored on-site in Holtec's VCC and MPC system.

The first 53 months of SAFSTOR dormancy will include both wet and dry storage of spent fuel. Once the spent fuel pool has been emptied, approximately 5 years and 5 months after Unit 2 shutdown dormancy preparations will be completed. There will then be a dormancy period of approximately 589 months with spent fuel remaining in the on-site in the ISFSI.

Decommissioning will not begin until approximately 54 years after Unit 2 shutdown. In accordance with the NRC's Final Rule on decommissioning all residual radioactivity will be removed within 60 years of shutdown.

The nine sequential periods in this scenario and the major activities occurring in each are as follows:

Period	Description	Period Duration, Months
1	BETWEEN SHUTDOWN OF UNIT 1 AND SHUTDOWN OF UNIT 2 • Planning for spent fuel pool modifications • Planning for primary systems flush • Select SAFSTOR contractor • Planning for dormancy	38
2	POST-SHUTDOWN ACTIVITIES • Modification of spent fuel pool systems • Primary system decontamination flush • Flush and drain non-essential systems • Perform characterization survey • Decontaminate and clean up plant areas	12
3	DORMANCY WITH WET & DRY SPENT FUEL STORAGE • Perform routine surveillance of the site	53

4	DORMANCY WITH DRY SPENT FUEL STORAGE • Perform routine surveillance of the site	537
5	DECOMMISSIONING PLANNING DURING DORMANCY • Planning for cold and dark • Select DGC • Planning for decommissioning • Perform characterization survey • Implement cold and dark • Vessel and Internals removal preparations	53
6	REMOVAL OF MAJOR COMPONENTS • Removal of Unit 1 and Unit 2 reactor vessels and internals • Removal of Unit 1 and Unit 2 steam generators • Removal of Unit 1 contaminated systems • Remove Unit 1 clean systems • Decontaminate Unit 1 Reactor Building • Begin Unit 1 and Unit 2 structures decontamination	38
7	DECON BALANCE OF SITE • Removal of Unit 2 contaminated systems • Remove Unit 2 clean systems • Decontaminate Unit 2 Reactor Building • Remove spent fuel racks • Decontaminate spent fuel storage building • Completion of Unit 1 and Unit 2 structures decontamination • Final site survey of reactor plant confirming satisfactory removal	29
8	CLEAN STRUCTURES DEMOLITION • Demolition of decontaminated Unit 1 and Unit 2 structures	16
9	RESTORATION OF PLANT SITE • Backfill, grading and landscaping of Unit 1 and Unit 2 sites	2

5.5 SCENARIO 5 - DECON WITH WET STORAGE, MODIFIED SYSTEMS, REPOSITORY OPEN IN 2032 & RECENT ACCEPTANCE RATE

This scenario includes Unit 1 shutdown on Oct 25, 2034 and Unit 2 on Dec 23, 2037, a spent fuel repository open in 2032 with the first assemblies leaving the D.C. Cook Plant in 2035. The existing ISFSI will be maintained until all spent fuel pool has been removed from the spent fuel pool. Spent fuel shipments to the DOE facility will be from the spent fuel pool first. The pool will be empty in 2060 at which time shipments will be from the ISFSI. All spent fuel will be removed from site in 2082.

The spent fuel pool systems will be modified as in Scenario 1 to reduce the costs of operating and maintaining the spent fuel pool after plant shutdown. As soon as all spent fuel is transferred to dry storage, the balance of the D.C. Cook Plant will be decommissioned.

The 10 sequential periods in this scenario and the major activities occurring in each are as follows:

Period	Description	Period Duration, Months
1	BETWEEN SHUTDOWN OF UNIT 1 AND SHUTDOWN OF UNIT 2 • Continue spent fuel shipments from pool to DOE • Planning for spent fuel pool modifications • Planning for cold and dark • Planning for primary systems flush • Select DGC • Planning for decommissioning	38
2	POST-SHUTDOWN ACTIVITIES • Continuation of spent fuel shipment from pool to DOE • Transfer spent fuel from pool to the ISFSI • Modification of spent fuel pool systems • Primary system decontamination flush • Flush and drain non-essential systems • Perform characterization survey • Implement cold and dark • Vessel and Internals removal preparations	12
3	REMOVAL OF MAJOR COMPONENTS • Continuation of spent fuel shipment from pool to DOE • Transfer spent fuel from pool to the ISFSI • Removal of Unit 1 and Unit 2 reactor vessels and internals • Removal of Unit 1 and Unit 2 steam generators • Removal of Unit 1 contaminated systems • Remove Unit 1 clean systems • Decontaminate Unit 1 Reactor Building • Begin Unit 1 and Unit 2 structures decontamination	38
4	DECON BALANCE OF SITE • Continue spent fuel shipments from ISFSI to DOE • Removal of Unit 2 contaminated systems • Remove Unit 2 clean systems • Decontaminate Unit 2 Reactor Building • Remove spent fuel racks • Decontaminate spent fuel storage building	29

	• Completion of Unit 1 and Unit 2 structures decontamination • Final site survey of reactor plant confirming satisfactory removal	
5	CLEAN STRUCTURES DEMOLITION • Continue spent fuel shipments from pool to DOE • Demolition of decontaminated Unit 1 and Unit 2 structures	16
6	RESTORATION OF PLANT SITE • Continue spent fuel shipments from pool to DOE • Backfill, grading and landscaping of Unit 1 and Unit 2 sites	2
7	WET FUEL STORAGE • Continue on-site wet storage of spent fuel • Completion of spent fuel shipment from pool to DOE	188
8	DECON SPENT FUEL STORAGE BUILDING • Complete spent fuel shipment from dry storage to DOE • Remove spent fuel racks • Decontaminate spent fuel storage building • Final survey of spent fuel storage building and remove	12
9	DRY STORAGE • Completion of spent fuel shipment from dry storage to DOE	240
10	RESTORATION OF ISFSI SITE • Decontaminate ISFSI • Remove casks and pad	3

In this scenario, Period 7 reflects an extended period of time following shutdown, approximately 16 years, when the activities on site will consist mainly of the operation and maintenance of the skid mounted cooling systems required to support the spent fuel pool. Cask loading activities for off-site spent fuel shipments will also be occurring on a periodic basis. Once the spent fuel pool has been emptied and the building removed there will be a period of dry storage, approximately 20 years, with periodic shipments off-site, Period 9. All spent fuel will be removed from site, decommissioning is complete and the site is restored to native vegetation by October, 2082, 540 months or 45 years after Unit 2 shutdown.

6.0 SCHEDULES

A scenario-specific schedule has been developed for each of the ten decommissioning scenarios in this study. Each schedule is based on some combination of the following assumptions:

- DECON or SAFSTOR
- Spent fuel shipping start date
- Spent fuel shipping rate
- Wet storage, on-site dry storage or off-site dry storage

The first step in determining each schedule is assessment of the spent fuel disposition for each of the scenarios. These spent fuel disposition schedules will have a major influence on the overall schedule critical path. The spent fuel disposition analysis will then be combined with the decommissioning activities to determine the overall project schedule.

Activity durations are determined based on the unit cost factor approach. Once the plant material inventory has been determined specific unit rates for cost, man hours and schedule hours for a specific activity, such as surface decontamination, are applied to the inventory. From this calculation the removal or decontamination cost, total man hours and total schedule hours are determined for an activity. The schedule hours are then entered into the schedule to determine project duration. The schedule will be divided into multiple periods depending on the activities occurring during that time period. The separation into multiple periods allows for better control in determining the period dependent costs such as staffing, insurance and security.

The spent fuel disposition analysis for Unit 1 and Unit 2 are presented in Tables 6.1 through 6.5 for scenarios 1 through 5, respectively. Scenarios 3 and 5 incorporate a recent DOE acceptance rate for spent fuel to a repository and a shipping start date of 2032. Spent fuel will be complete in 2082 for these scenarios. Scenarios 1 and 4 assume an indefinite on-site storage period. Scenario 2 assumes an indefinite off-site storage period.

Detailed decommissioning schedules for the five scenarios studied, based upon these spent fuel transfer schedules and a critical path analysis of the decommissioning activities, are presented in Appendix A.

6.1 SCENARIO 1 -DECON WITH ON-SITE DRY STORAGE AND NO SPENT FUEL SHIPPING

Spent fuel is assumed to remain on-site in dry storage indefinitely. The schedule of spent fuel movements is reflected in Table 6.1. The detailed project schedule is present in Appendix A. The decommissioning schedule has been optimized within the limitations imposed by the spent fuel storage requirements. Program periods and durations for Scenario 1 are as follows:

Period	Description	Duration, months
1	U1 & U2 Decommissioning Planning Cost:	38
2	Post-Shutdown Activities Costs:	12

3	Vessel and Internals Removal Costs:	38
4	Decontaminate Balance of Site Costs:	29
5	Clean Structure Demolition Costs:	16
6	Restore Site Costs:	2
7	Dry Storage (Indefinitely)	

Decommissioning of the site will be complete in 2046, which is 97 months after the shutdown of Unit 2. Spent fuel will remain on site in dry storage indefinitely.

TABLE 6.1
SPENT FUEL SHIPPING SCHEDULE

Year	Unit 1 Fuel Discharged	Unit 2 Fuel Discharged	Total Assemblies & other items on Site	Assemblies to Dry Storage	Total Assemblies in Dry Storage	Pool Locations Occupied
2012			3355	448 note 4	448	2907
2013	89	104 note 1	3548	0	448	3100
2014	89	0	3637	0	448	3189
2015	0	104	3741	512	960	2781
2016	89	104	3934	0	960	2974
2017	89	0	4023	0	960	3063
2018	0	104	4127	512	1472	2655
2019	89	104	4320	0	1472	2848
2020	89	0	4409	0	1472	2937
2021	0	104	4513	320	1792	2721
2022	89	104	4706	0	1792	2914
2023	89	0	4795	0	1792	3003
2024	0	104	4899	320	2112	2787
2025	89	104	5092	0	2112	2980
2026	89	0	5181	0	2112	3069
2027	0	104	5285	320	2432	2853
2028	89	104	5478	0	2432	3046
2029	89	0	5567	0	2432	3135
2030	0	104	5671	320	2752	2919
2031	89	104	5864	0	2752	3112
2032	89	0	5953	0	2752	3201
2033	0	104	6057	320	3072	2985
2034	89	104	6250	0	3072	3178
2035	193	0	6443	0	3072	3371
2036		104	6547	320	3392	3155
2037		193	6740	384	3776	2964
2038			6740	512	4288	2452
2039		42 note 2	6782	512	4800	1982
2040		84	6866	704	5504	1362
2041		42	6908	704	6208	700
2042			6908	700	6908	0
2043			6908 note 3		6908	0

NOTES:

1. Discharge schedule presented in Dry Cask Storage Master Plan 2012.
2. 84 spent fuel baskets loaded with GTCC will be discharged into the spent fuel pool, from each unit, during internals removal.
3. Spent fuel will remain on-site indefinitely.
4. Assemblies to dry storage determined by AEP through, 2033. Assemblies to dry storage after Unit 1 shutdown determined by KCES
5. Max number of casks required: 216
6. Casks purchased after shutdown 120

6.2 SCENARIO 2 - DECON WITH INDEFINITE OFF-SITE DRY STORAGE

The spent fuel movements in and out of the pool are presented in Table 6.2. The detailed project schedule is present in Appendix A. The decommissioning schedule has been optimized within the limitations imposed by the spent fuel storage requirements. Program periods and durations for Scenario 9 are as follows:

Period	Description	Duration, months
1	U1 & U2 Decommissioning Planning Cost:	38
2	Post-Shutdown Activities Costs:	12
3	Vessel and Internals Removal Costs:	38
4	Decontaminate Balance of Site Costs:	29
5	Clean Structure Demolition Costs:	16
6	Restore Site Costs:	2
7	Off Site Dry Storage (Indefinitely)	

Decommissioning of the site will be complete in 2046, which is 97 months after the shutdown of Unit 2. Spent fuel will remain off-site in dry storage indefinitely.

TABLE 6.2
SPENT FUEL SHIPPING SCHEDULE

Year	Unit 1 Fuel Discharged	Unit 2 Fuel Discharged	Total Assemblies & other items on Site	Assemblies to Dry Storage	Total Assemblies in Dry Storage	Assemblies To Off-site Dry Storage from ISFSI	Assemblies To Off-site Dry Storage from pool	Number of Assemblies in Off-site Dry Storage
2012			3355	448 [note 4]	448			
2013	89	104 [note 1]	3548	0	448		0	0
2014	89	0	3637	0	448		0	0
2015	0	104	3741	512	960		0	0
2016	89	104	3934	0	960		0	0
2017	89	0	4023	0	960		0	0

2018	0	104	4127	512	1472		0	0
2019	89	104	4320	0	1472		0	0
2020	89	0	4409	0	1472		0	0
2021	0	104	4513	320	1792		0	0
2022	89	104	4706	0	1792		0	0
2023	89	0	4795	0	1792		0	0
2024	0	104	4899	320	2112		0	0
2025	89	104	5092	0	2112		0	0
2026	89	0	5181	0	2112		0	0
2027	0	104	5285	320	2432		0	0
2028	89	104	5478	0	2432		0	0
2029	89	0	5567	0	2432		0	0
2030	0	104	5671	320	2752		0	0
2031	89	104	5864	0	2752		0	0
2032	89	0	5953	0	2752		0	0
2033	0	104	6057	320	3072		0	0
2034	89	104	6250		3072		0	0
2035	193	0	6443		3072		0	0
2036		104	5779		2624	448	320	768
2037		193	5140		2176	448	384	1600
2038			4180		1728	448	512	2560
2039		42 [note 2]	3262		1280	448	512	3520
2040		84	2194		832	448	704	4672
2041		42	1084		384	448	704	5824
2042			0		0	384	700	6908
2043			0		0			6908 [note 3]

NOTES:

1. Discharge schedule presented in Dry Cask Storage Master Plan 2012.
2. 84 spent fuel baskets loaded with GTCC will be discharged into the spent fuel pool, from each unit, during internals removal.
3. Spent fuel will remain in off-site storage indefinitely.
4. Assemblies to dry storage determined by AEP through, 2033.
5. Max number of casks required: 96

6.3 SCENARIO 3 - DECON WITH ON-SITE DRY STORAGE, REPOSITORY OPEN IN 2032 & RECENT ACCEPTANCE RATE

The spent fuel movements in and out of the pool are presented in Table 6.3. The detailed project schedule is present in Appendix A. The decommissioning schedule has been optimized within the limitations imposed by the spent fuel storage requirements. Program periods and durations for Scenario 3 are as follows:

Period	Description	Duration, months
1	U1 & U2 Decommissioning Planning Cost:	38
2	Post-Shutdown Activities Costs:	12
3	Vessel and Internals Removal Costs:	38
4	Decontaminate Balance of Site Costs:	29
5	Clean Structure Demolition Costs:	16
6	Restore Site Costs:	2
7	Dry Storage	438
8	Decontaminate and Remove ISFSI	3

The total period of time that spent fuel will be in dry storage following the shutdown of Unit 2 will be 535 months or about 44.5 years. During this time spent fuel cooling will be performed by on-site dry storage.

Scenario 3 concludes in 2082, which is 538 months after the shutdown of Unit 2.

TABLE 6.3
SPENT FUEL SHIPPING SCHEDULE

Year	Unit 1 Fuel Discharged	Unit 2 Fuel Discharged	Assemblies To DOE	Total Assemblies & other items on Site	Assemblies to Dry Storage	Total Assemblies in Dry Storage	Locations Occupied
2012				3355	448 [note 5]	448	2907
2013	89	104 [note 1]		3548	0	448	3100
2014	89	0		3637	0	448	3189
2015	0	104		3741	512	960	2781
2016	89	104		3934	0	960	2974
2017	89	0		4023	0	960	3063
2018	0	104		4127	512	1472	2655
2019	89	104		4320	0	1472	2848
2020	89	0		4409	0	1472	2937
2021	0	104		4513	320	1792	2721
2022	89	104		4706	0	1792	2914
2023	89	0		4795	0	1792	3003
2024	0	104		4899	320	2112	2787
2025	89	104		5092	0	2112	2980
2026	89	0		5181	0	2112	3069
2027	0	104		5285	320	2432	2853
2028	89	104		5478	0	2432	3046
2029	89	0		5567	0	2432	3135
2030	0	104		5671	320	2752	2919
2031	89	104		5864	0	2752	3112
2032	89	0	0 [note 2]	5953	0	2752	3201
2033	0	104	0	6057	320	3072	2985
2034	89	104	0	6250	0	3072	3178
2035	193	0	127	6316	0	3072	3244
2036		104	294	6126	0	3072	3054
2037		193	275	6044	0	3072	2972

2038			274	5770	320	3392	2378
2039		42 note 4	80	5732	448	3840	1892
2040		84	152	5664	512	4352	1312
2041		42	166	5540	576	4928	612
2042			155	5385	457	5385	0
2043			80	5305	0	5305	0
2044			159	5146	0	5146	0
2045			82	5064	0	5064	0
2046			188	4876	0	4876	0
2047			0	4876	0	4876	0
2048			0	4876	0	4876	0
2049			166	4710	0	4710	0
2050			128 note 3	4582	0	4582	0
2051			160	4422	0	4422	0
2052			128	4294	0	4294	0
2053			160	4134	0	4134	0
2054			128	4006	0	4006	0
2055			160	3846	0	3846	0
2056			128	3718	0	3718	0
2057			160	3558	0	3558	0
2058			128	3430	0	3430	0
2059			160	3270	0	3270	0
2060			128	3142	0	3142	0
2061			160	2982	0	2982	0
2062			128	2854	0	2854	0
2063			160	2694	0	2694	0
2064			128	2566	0	2566	0
2065			160	2406	0	2406	0
2066			128	2278	0	2278	0
2067			160	2118	0	2118	0
2068			128	1990	0	1990	0
2069			160	1830	0	1830	0
2070			128	1702	0	1702	0
2071			160	1542	0	1542	0
2072			128	1414	0	1414	0
2073			160	1254	0	1254	0
2074			128	1126	0	1126	0
2075			160	966	0	966	0
2076			128	838	0	838	0
2077			160	678	0	678	0
2078			128	550	0	550	0
2079			160	390	0	390	0
2080			128	262	0	262	0
2081			160	102	0	102	0
2082			102	0	0	0	0

NOTES:

1. Discharge schedule presented in Dry Cask Storage Master Plan 2012.
2. Acceptance rate is based on the following assumptions: 400 MTUs shipped in year 1, 600 MTUs in year 2 & 1200 MTUs in year 3, 2000 MTUs in year 4 and 3000 MTUs from year 5 on. This acceptance rate plotted against the July 2004 Acceptance Priority Ranking, DOE/RW-0567
3. The average number of assemblies shipped in years 5 - 18 is 148. Since all spent fuel in dry storage, shipments will be in multiples of 32, alternating 128 and 160 per year.
4. 84 spent fuel baskets loaded with GTCC will be discharged into the spent fuel pool, from each unit, during internals removal.
5. Assemblies to dry storage determined by AEP through, 2033. Assemblies to dry storage after Unit 1 shutdown determined by KCES.
6. Max number of casks required: 168
7. Casks purchased after shutdown 72

6.4 SCENARIO 4 – SAFSTOR WITH INDEFINITE ON-SITE DRY STORAGE

This scenario assumes license termination within 60 years of Unit 2 shut down, on-site dry spent fuel storage and delayed decommissioning. Spent fuel will be stored in the spent fuel pool with modified systems for the first five years after shutdown. The spent fuel movements in and out of the pool and to the DOE facility are the same as those presented in Table 6.1. The decommissioning schedule is presented in Appendix A.

There are two dormancy only periods in this scenario, one with fuel on-site in the spent fuel pool, 53 months and one with spent fuel in dry storage, 537 months.

Program periods and durations for Scenario 3 are as follows:

Period	Description	Duration, months
1	U1 & U2 Decommissioning Planning Cost:	38
2	Post-Shutdown Activities Costs:	12
3	Dormancy with Wet & Dry Spent Fuel Storage:	53
4	Dormancy with Dry Spent Fuel Storage:	537
5	Dormancy with Decommissioning Planning Cost:	53
6	Vessel and Internals Removal Costs:	38
7	Decontaminate Balance of Site Costs:	29
8	Clean Structure Demolition Costs:	16
9	Restore Site Costs:	2
10	Dry Storage (Indefinitely)	

Spent fuel will remain on-site indefinitely following the shutdown of Unit 2.

Scenario 4 decommissioning will conclude in 2099 which is 740 months

6.5 SCENARIO 5 – DECON WITH WET STORAGE, MODIFIED SYSTEMS, REPOSITORY OPEN IN 2032 & RECENT DOE ACCEPTANCE RATE

The spent fuel movements in and out of the pool are presented in Table 6.4. The detailed project schedule is present in Appendix A. The decommissioning schedule has been optimized within the limitations imposed by the spent fuel storage requirements. Program periods and durations for Scenario 1 are as follows:

Period	Description	Duration, months
1	U1 & U2 Decommissioning Planning Cost:	38
2	Post-Shutdown Activities Costs:	12
3	Vessel and Internals Removal Costs:	38
4	Decontaminate Balance of Site Costs:	27
5	Clean Structure Demolition Costs:	16
6	Restore Site Costs:	2
7	Wet & Dry Storage Costs:	188
8	Auxiliary Building Removal Costs:	12
9	Dry Storage	240
10	Decontaminate and Remove ISFSI	3

The total period that spent fuel will be on-site in the pool following the shutdown of Unit 2 will be 283 months or about 23.5 years. Spent fuel will continue to be transferred from dry storage for another 252 months or 21 years. During wet storage the modified systems required to support the spent fuel storage pool will be operated and maintained.

Scenario 4 concludes in 2082, which is 538 months after the shutdown of Unit 2.

TABLE 6.4
SPENT FUEL SHIPPING SCHEDULE

Year	Unit 1 Fuel Discharged	Unit 2 Fuel Discharged	Assemblies To DOE	Total Assemblies & other items on Site	Assemblies to Dry Storage	Total Assemblies in Dry Storage	Assemblies in Pool
2012				3355	448	2907	2907
2013	89	104 [note 1]		3548	0	448	3100
2014	89	0		3637	0	448	3189
2015	0	104		3741	512	960	2781
2016	89	104		3934	0	960	2974
2017	89	0		4023	0	960	3063
2018	0	104		4127	512	1472	2655
2019	89	104		4320	0	1472	2848
2020	89	0		4409	0	1472	2937
2021	0	104		4513	320	1792	2721
2022	89	104		4706	0	1792	2914
2023	89	0		4795	0	1792	3003
2024	0	104		4899	320	2112	2787

2025	89	104		5092	0	2112	2980
2026	89	0		5181	0	2112	3069
2027	0	104		5285	320	2432	2853
2028	89	104		5478	0	2432	3046
2029	89	0		5567	0	2432	3135
2030	0	104		5671	320	2752	2919
2031	89	104		5864	0	2752	3112
2032	89	0	0 note 2	5953	0	2752	3201
2033	0	104	0	6057	320	3072	2985
2034	89	104	0	6250	0	3072	3178
2035	193	0	127	6316	0	3072	3244
2036		104	294	6126	0	3072	3054
2037		193	275	6044	0	3072	2972
2038			274	5770	0	3072	2698
2039		42 note 4	80	5732	0	3072	2660
2040		84	152	5664	0	3072	2592
2041		42	166	5540	0	3072	2468
2042			155	5385	0	3072	2313
2043			80	5305	0	3072	2233
2044			159	5146	0	3072	2074
2045			82	5064	0	3072	1992
2046			188	4876	0	3072	1804
2047			0	4876	0	3072	1804
2048			0	4876	0	3072	1804
2049			166	4710	0	3072	1638
2050			128 note 3	4582	0	3072	1510
2051			160	4422	0	3072	1350
2052			128	4294	0	3072	1222
2053			160	4134	0	3072	1062
2054			128	4006	0	3072	934
2055			160	3846	0	3072	774
2056			128	3718	0	3072	646
2057			160	3558	0	3072	486
2058			128	3430	0	3072	358
2059			160	3270	0	3072	198
2060			128	3142	0	3072	70
2061			160	2982	0	2982	0
2062			128	2854	0	2854	0
2063			160	2694	0	2694	0
2064			128	2566	0	2566	0
2065			160	2406	0	2406	0
2066			128	2278	0	2278	0
2067			160	2118	0	2118	0
2068			128	1990	0	1990	0
2069			160	1830	0	1830	0
2070			128	1702	0	1702	0
2071			160	1542	0	1542	0
2072			128	1414	0	1414	0

2073			160	1254	0	1254	0
2074			128	1126	0	1126	0
2075			160	966	0	966	0
2076			128	838	0	838	0
2077			160	678	0	678	0
2078			128	550	0	550	0
2079			160	390	0	390	0
2080			128	262	0	262	0
2081			160	102	0	102	0
2082			102	0	0	0	0

NOTES:

1. Discharge schedule presented in Dry Cask Storage Master Plan 2012.
2. Acceptance rate is based on the following assumptions: 400 MTUs shipped in year 1, 600 MTUs in year 2 & 1200 MTUs in year 3, 2000 MTUs in year 4 and 3000 MTUs from year 5 on. This acceptance rate plotted against the July 2004 Acceptance Priority Ranking, DOE/RW-0567
3. The average number of assemblies shipped in years 5 - 18 is 148. Since all spent fuel in dry storage, shipments will be in multiples of 32, alternating 128 and 160 per year.
4. 84 spent fuel baskets loaded with GTCC will be discharged into the spent fuel pool, from each unit, during internals removal.
5. Max number of casks required: 96

7.0 PROJECT MANAGEMENT

There are three components to project management during decommissioning, Utility Staff (staff), Decommissioning General Contractor Staff (DGC) and Security. Each of these is further broken down into that required for decommissioning and that required for spent fuel storage. The person levels for each are specific to each scenario and decommissioning period.

7.1 UTILITY STAFF

The staff size at Unit 1 shutdown is assumed to be the same size and composition as it was in the spring of 2012. Immediately after Unit 1 shutdown, the staff is reduced approximately 33%, with the majority of the remaining staff attributed to the operation of Unit 2. Upon shutdown of Unit 2 this staff is reduced to the level required for decommissioning operations and spent fuel storage. All severed employees will receive a severance package based on the existing severance policy.

There are two components to the staff, decommissioning and spent fuel storage. The majority of the staff during the early part of the decommissioning process will be attributed to decommissioning. During the DECON scenarios, a staff level of 11.5 full time employees (FTE) will be required during period 1, between Unit 1 and Unit 2 shutdown. Upon shutdown of Unit 2, period 2, approximately 145 FTEs will be required to prepare the site for decommissioning, including the spent fuel pool, security and control room modifications. Once these modifications have been made the staff will be reduced to 96 FTEs to support the reactor internals and reactor vessel removal, period 3. The staff will be further reduced to 78 FTEs, 7 FTEs and 3 FTEs for period 4 site decontamination, period 5 structures removal and period 6 site restorations, respectively. These values represent the dry storage scenarios, there may be some variation in these values between the wet and dry storage due to sharing of upper management with spent fuel storage activities. Details are provided below. Additionally, a staff of 23.75 FTEs will be required for the decontamination and removal of the spent fuel pool and Auxiliary Building, period 8 of the wet storage scenario; after all spent fuel has been removed.

During the SAFSTOR scenario the decommissioning staff levels will be the same as DECON for periods 1 and 2. For this scenario there is no decommissioning staff required during Dormancy, with or without spent fuel. For SAFSTOR, there will be a decommissioning staff of 49.5 FTE during period 5 decommissioning planning. This staff will be increased to 99 FTEs during period 6 reactor internals and reactor vessel removal. The staff will be reduced to 79 FTEs, 10 FTEs and 5 FTEs for period 7 site decontamination, period 8 structures removal and period 9 site restorations, respectively.

During the decommissioning process there is a need to manage the safe operations of the spent fuel storage facilities, whether spent fuel is in wet storage or dry storage. The Utility staff will maintain responsibility for these actions. In all scenarios spent fuel will remain in the spent fuel pool for a minimum of five years, longer in the wet storage scenario. Also, in all scenarios there will be an existing ISFSI, required during operations to maintain full core off load capabilities. As such, there are two on-site spent fuel storage scenarios, wet and dry storage in operations at the same time and dry storage only. During the wet and dry storage periods the Utility staff will

be 33 FTEs and during dry storage only the Utility staff will consist of 14.25 FTEs. There will be some fluctuation in these staffs due to sharing of upper management personnel with the decommissioning staff. A staff of 10 FTEs is attributed to spent fuel storage during the ISFSI removal.

7.2 DECOMMISSIONING GENERAL CONTRACTOR

The DGC is assumed to have no role in the post shutdown management of the spent fuel storage facility. For all scenarios, upon selection of a DGC or Dormancy preparation contractor, the contractor will begin to mobilize on site. A DGC staff of 27 FTEs is assumed to be on site during the last 12 months of period 1, between Unit 1 and Unit 2 shutdown. For the DECON scenarios a DGC staff of 76 FTEs will be on site to prepare for decommissioning during period 2 site preparations. The DGC staff will be increased to 89 FTEs to support the reactor internals and reactor vessel removal, period 3. The DGC staff will be reduced to 76 FTEs, 34 FTEs and 15 FTEs for period 4 site decontamination, period 5 structures removal and period 6 site restorations, respectively. For wet storage scenario, a DGC staff of 40 FTEs will be required for the decontamination and removal of the spent fuel pool and Auxiliary Building, period 8, after all spent fuel has been removed. This DGC staff will begin to arrive on site during the final six months of period 7.

During the SAFSTOR scenario, the DGC staff levels will be the same as DECON for period 1. The DGC staff will remain at this level, 27 FTEs for the entire dormancy preparation period, period 2. For SAFSTOR, there will be a DGC staff of 89 FTEs during period 7 reactor internals and reactor vessel removal. The DGC staff will be reduced to 76 FTEs, 34 FTEs and 15 FTEs for period 8 site decontamination, period 9 structures removal and period 10 site restorations, respectively.

7.3 SECURITY

There are two components to the security staff, decommissioning and spent fuel storage. The majority of the security staff during the early part of the decommissioning process will be attributed to decommissioning. During the DECON scenarios, a security staff level of 3.5 full time employees (FTE) will be required during period 1, between Unit 1 and Unit 2 shutdown. Upon shutdown of Unit 2, period 2, approximately 60 FTEs will be required during preparations for decommissioning. Once modifications have been made to the spent fuel pool, security and control room the security staff will be reduced to 28 FTEs to support the reactor internals and reactor vessel removal, period 3 and site decontamination, period 4. The staff will be further reduced to 6 FTEs and 2 FTEs for period 5 structures removal and period 6 site restorations, respectively. For wet storage scenario, a security staff of 18 FTEs will be required for the decontamination and removal of the spent fuel pool and Auxiliary Building, period 8, after all spent fuel has been removed.

During the SAFSTOR scenario, the security staff levels will be the same as DECON for periods 1 and 2. For both of these scenarios there is a security staff of six attributed to decommissioning during all Dormancy periods. For SAFSTOR, there will be a security staff of 28 FTE during period 7 reactor internals and reactor vessel removal and site decontamination, period 8. The

security staff will be reduced to 7 FTEs and 3 FTEs for period 9 structures removal and period 10 site restorations, respectively.

During the decommissioning process there will be a need to manage the safe operations of the spent fuel storage facilities, whether spent fuel is in wet storage or dry storage. A dedicated security staff will be assigned to both the wet and dry storage facility. In all scenarios spent fuel will remain in the spent fuel pool for a minimum of five years, longer in the wet storage scenario. Also, in all scenarios there will be an existing ISFSI, required during operations to maintain full core off load capabilities. As such, there are two on-site spent fuel storage scenarios, wet and dry storage in operations at the same time and dry storage only. During the wet and dry storage periods the security staff will be 21 FTEs and during dry storage only the security staff will consist of 12 FTEs. A security staff of 6 FTEs is attributed to spent fuel storage during the ISFSI removal.

The following is a summary of the utility staff, DGC and security staff levels required for each scenario.

7.4 SCENARIO 1 - DECON WITH INDEFINITE DRY STORAGE

Table 7.1 summarizes the staff level for Decommissioning and Table 7.2 summarizes the staff levels for spent fuel storage as defined above, by period.

TABLE 7-1 DECOMMISSIONING STAFF SUMMARY

Position:	1	2	3	4	5	6	7
Health Physics	2.25	29	24	24	0	0	0
Engineering	1.25	20	11	10	2	1	0
Maintenance Services	2.75	19	5	5	3	0	0
Operations	0.75	38	14	5	0	0	0
Projects	3.25	13	29	22	0	0	0
Administration	1.25	26	13	12	2	2	0
	11.5	**145**	**96**	**78**	**7**	**3**	**0**
DGC	27	76	89	76	34	15	
Security Guards	3.5	60	28	28	6	2	

TABLE 7-2 SPENT FUEL STORAGE STAFF SUMMARY

Position:	1	2	3	4	5	6	7
Health Physics	0	5	5	1.25	1.25	1.25	1.25
Engineering	0	1	1	0	0	0	0
Maintenance Services	0	5	5	2	2	2	2
Operations	0	13	13	5	5	5	5
Projects	0	0	0	2	2	2	2

Administration	0	9	9	4	4	4	4
	0	**33**	**33**	**14.25**	**14.25**	**14.25**	**14.25**
DGC	0	0	0	0	0	0	0
Security Guards	0	21	21	12	12	12	12

7.5 SCENARIO 2 - DECON WITH INDEFINITE OFF-SITE DRY STORAGE

Table 7.3 summarizes the staff level for Decommissioning and Table 7.4 summarizes the staff levels for spent fuel storage as defined above, by period.

TABLE 7-3 DECOMMISSIONING STAFF SUMMARY

Position:	1	2	3	4	5	6
Health Physics	2.25	29	24	24	0	0
Engineering	1.25	20	11	10	2	1
Maintenance Services	2.75	19	5	5	3	0
Operations	0.75	38	14	5	0	0
Projects	3.25	13	29	22	0	0
Administration	1.25	26	13	12	2	2
	11.5	**145**	**96**	**78**	**7**	**3**
DGC	27	76	89	76	34	15
Security Guards	3.5	60	28	28	6	2

TABLE 7-4 SPENT FUEL STORAGE STAFF SUMMARY

Position:	1	2	3	4	5	6
Health Physics	0	5	5	5	0	0
Engineering	0	1	1	1	0	0
Maintenance Services	0	5	5	5	0	0
Operations	0	13	13	13	0	0
Projects	0	0	0	0	0	0
Administration	0	9	9	9	0	0
	0	**33**	**33**	**33**	**0**	**0**
DGC	0	0	0	0	0	0
Security Guards	0	21	21	21	0	0

7.6 SCENARIO 3 - DECON WITH ON-SITE DRY STORAGE, REPOSITORY OPEN IN 2032 & RECENT DOE ACCEPTANCE RATE

Table 7.5 summarizes the staff level for Decommissioning and Table 7.6 summarizes the staff levels for spent fuel storage as defined above, by period.

TABLE 7-5 DECOMMISSIONING STAFF SUMMARY

Position:	1	2	3	4	5	6
Health Physics	2.25	29	24	24	0	0
Engineering	1.25	20	11	10	2	1
Maintenance Services	2.75	19	5	5	3	0
Operations	0.75	38	14	5	0	0
Projects	3.25	13	29	22	0	0
Administration	1.25	26	13	12	2	2
	11.5	**145**	**96**	**78**	**7**	**3**
DGC	27	76	89	76	34	15
Security Guards	3.5	60	28	28	6	2

TABLE 7-6 SPENT FUEL STORAGE STAFF SUMMARY

Position:	1	2	3	4	5	6	7	8
Health Physics	0	5	5	1.25	1.25	1.25	1.25	0
Engineering	0	1	1	0	0	0	0	2
Maintenance Services	0	5	5	2	2	2	2	0
Operations	0	13	13	5	5	5	5	0
Projects	0	0	0	2	2	2	2	4
Administration	0	9	9	4	4	4	4	4
	0	**33**	**33**	**14.25**	**14.25**	**14.25**	**14.25**	**10**
DGC	0	0	0	0	0	0	0	11
Security Guards	0	21	21	12	12	12	12	6

7.7 SCENARIO 4 – SAFSTOR WITH INDEFINITE ON-SITE DRY STORAGE

Table 7.7 summarizes the staff level for Decommissioning and Table 7.8 summarizes the staff levels for spent fuel storage as defined above, by period.

TABLE 7-7 DECOMMISSIONING STAFF SUMMARY

Position:	1	2	3	4	5	6	7	8	9
Health Physics	2.25	29	0	0	12	24	24	0	0
Engineering	1.25	20	0	0	5.5	11	10	1	1
Maintenance Services	2.75	19	0	0	2.5	5	5	4	0
Operations	0.75	38	0	0	7.5	15	6	0	0
Projects	3.25	13	0	0	14.5	29	22	0	0
Administration	1.25	26	0	0	7.5	15	12	5	4
	11.5	**145**	**0**	**0**	**49.5**	**99**	**79**	**10**	**5**

DGC	27	27	0	0	0	89	76	34	15
Security Guards	3.5	60	6	6	6	28	28	7	3

TABLE 7-8 SPENT FUEL STORAGE STAFF SUMMARY

Position:	1	2	3	4	5	6	7	8	9	10
Health Physics	0	5	5	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Engineering	0	1	1	0	0	0	0	0	0	0
Maintenance Services	0	5	5	2	2	2	2	2	2	2
Operations	0	13	13	5	5	5	5	5	5	5
Projects	0	0	0	2	2	2	2	2	2	2
Administration	0	9	9	4	4	4	4	4	4	4
	0	**33**	**33**	**14.25**	**14.25**	**14.25**	**14.25**	**14.25**	**14.25**	**14.25**
DGC	0	0	0	0	0	0	0	0	0	0
Security Guards	0	21	21	12	12	12	12	12	12	12

7.8 SCENARIO 5 - DECON WITH ON-SITE WET STORAGE, REPOSITORY OPEN IN 2032 & RECENT DOE ACCEPTANCE RATE

Table 7.9 summarizes the staff level for Decommissioning. Table 7.10 summarizes the staff levels for spent fuel storage as defined above, by period.

TABLE 7-9 DECOMMISSIONING STAFF SUMMARY

Position:	1	2	3	4	5	6	7	8
Health Physics	2.25	29	24	24	0	0	0	6.75
Engineering	1.25	20	11	10	2	1	0	2
Maintenance Services	2.75	19	5	5	3	0	0	2
Operations	0.75	38	14	5	0	0	0	8
Projects	3.25	13	29	22	0	0	0	0
Administration	1.25	26	13	9	1	1	0	5
	11.5	**145**	**96**	**75**	**6**	**2**	**0**	**23.75**
DGC	27	76	89	76	34	15	13.5	40
Security Guards	3.5	60	28	28	6	2	0	18

TABLE 7-10 SPENT FUEL STORAGE STAFF SUMMARY

Position:	1	2	3	4	5	6	7	8	9	10
Health Physics	0	5	5	5	5	5	5	1.25	1.25	0
Engineering	0	1	1	1	1	1	1	0	0	2
Maintenance Services	0	5	5	5	5	5	5	2	2	0
Operations	0	13	13	13	13	13	13	5	5	0
Projects	0	0	0	0	0	0	0	2	2	4
Administration	0	9	9	9	10	10	10	3	4	4
	0	**33**	**33**	**33**	**34**	**34**	**34**	**13.25**	**14.25**	**10**
DGC	0	0	0	0	0	0	0	0	0	0
Security Guards	0	21	21	21	21	21	21	12	12	6

8.0 WASTE DISPOSAL

8.1 LOW LEVEL WASTE DISPOSAL BACKGROUND

The Low-Level Waste Policy Act (LLWPA), passed by Congress in 1980 and the Low-Level Waste Policy Amendments Act of 1985 encouraged states to form compacts for the disposal of low-level radioactive waste. The Acts made each state responsible for disposing of their own radioactive waste. The formation of compacts allowed states to limit their disposal facility to compact members thereby limiting the amount of waste accepted. On the other hand, the Acts also required that states not participating in the process would be required to take title to waste generated within that state. This provision was overturned by the U. S. Supreme Court in 1992 thus eliminating the need for states to develop their own disposal facility, including those already in a compact. The compact process has been anything but successful; to date there has been just one new disposal facility licensed to accept all low level radioactive waste, including Class A, B & C.

There are currently three facilities licensed to accept all low level radioactive waste: the Barnwell, South Carolina facility operated by Energy*Solutions*, LLC; the Waste Control Specialists, LLC (WCS) facility in Andrews, TX and the Hanford, Washington facility operated by U. S. Ecology. There is one other site in Clive, Utah owned and operated by Energy*Solutions*, LLC; however, this facility is currently licensed to accept only Class A radioactive waste. As of July 1, 2008 the Barnwell facility will only accept waste from the Atlantic Compact states. The Atlantic Compact member states include South Carolina, Connecticut and New Jersey. The Hanford facility only accepts waste from the Northwest Compact and the Rocky Mountain Compact; this has been the case since 1993. The Northwest Compact and Rocky Mountain Compact member states include Alaska, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming. While the WCS facility is the compact disposal facility for Texas and Vermont it will accept waste from out of compact. WCS is licensed to accept Class A, B and C radioactive waste, as such this estimate assumes that Class B & C waste will be disposed of at this facility with the costs based on the current rate structure for out of compact waste.

8.2 CLASS A WASTE DISPOSAL

There are currently multiple options for the disposition of Class A waste. These include metal melt, direct burial and waste processing. Table 8-1 provides a summary of waste disposition options for class A waste and their unit rates considered in this estimate. KCES assumes that each waste stream will be transported to the least cost option for which it qualifies. Packaging and transportation costs have been calculated based on these specific locations.

Table 8-1
Class A Waste Disposal Options

Description	Disposal Cost, $/cu. ft.
ENERGY*SOLUTIONS* disposal	$158.54 per cubic foot
ENERGY*SOLUTIONS* METAL MELT	$2.10 per pound
WCS disposal	$208.79 per cubic foot
Studsvik processing	$0.13 per pound

KCES assumed that the reactor building internal floors and walls will be removed in bulk and sent for processing at the Studsvik facility in Memphis TN. This approach will produce a large volume of waste compared to the traditional decontamination, survey and release methodology but at a lower rate. In addition, the approach will reduce the amount of characterization and iterative decontamination. Other contaminated structures will follow the decontamination, survey and release approach due to the smaller areas of potentially contaminated surfaces.

8.3 CLASS B & C WASTE

As discussed above, the WCS facility is licensed to accept Class B and C waste. This study assumes that all Class B & C waste will be disposed of at WCS. There is currently only a published fee and surcharge structure for in compact generators. Based on guidance from WCS personnel, increasing the published fees and surcharges by 20% would be representative the rates that would be charged to out of compact generators. The base disposal rate, including the 20% is $208.79/cubic foot.

Additionally, there is a dose rate surcharge and a millicurie charge that must be added. The basic millicurie charge is $0.55 per millicurie up to $220,000 per shipment. There is also a weight surcharge, up to $20,000 per shipment; a dose rate surcharge, up to $400 per cu. ft.; an irradiated hardware there is an additional surcharge of $75,000 per shipment and a cask handling surcharge of $2,500 per cask. Finally there are State and County fees of 5% each. This estimate includes all applicable surcharges and fees.

8.4 DISPOSAL OF WASTES GREATER THAN CLASS C

While waste identified as Class A, B and C, according to 10 CFR 61, may be disposed of at a near-surface disposal facility, certain components may exceed the radionuclide concentration limitations for 10 CFR 61 Class C waste. These components cannot be disposed in a near-surface radioactive waste disposal facility based on 10 CFR 61 definitions. They will have to be transferred to a geologic repository or a similar site approved by the NRC.

The KCES site-specific classification of radioactive wastes for the D.C. Cook Plant identified that the Spent Fuel Assemblies and two components within each reactor vessel (the Core Baffle and the Lower Core Grid Plate) will exceed Class C limitations. Like the spent fuel assemblies, the reactor vessel components will be stored with the spent fuel either in wet or dry storage. Here they will wait for transportation to a DOE geologic disposal facility for disposal. The costs

for disposing of these components was estimated based upon the maximum curie surcharges currently in effect at the WCS disposal facility. Prior to placing in storage with the spent fuel, these components will be segmented and the pieces placed into spent fuel sized containers, it is estimated that 168 containers will be generated from the two units.

8.5 RADIOACTIVE WASTE VOLUMES PER 10 CFR 61 CLASSIFICATIONS

KCES has determined the classifications of radioactive wastes resulting from decommissioning the D.C. Cook Plant. The radioactive waste associated with each decommissioning activity is based upon the site-specific decommissioning calculations prepared for this cost estimate. The total volumes of 10 CFR 61 wastes for Units 1 and 2 are presented in Table 8.2. These volumes represent waste volumes generated at the site, for both units.

Table 8-2
10 CFR 61 Radioactive Waste Volumes (cubic feet)

Class A	3,374,145
Class B	5,480
Class C	2,340
Greater Than Class C	1,411
Total:	3,383,376

8.6 PROJECTION OF NON-RADIOACTIVE WASTE QUANTITIES

KCES has included the cost for disposal of all non-contaminated waste at a local landfill. As seen in the Maine Yankee decommissioning, on-site use of concrete rubble to fill below grade voids can be problematic. Maine Yankee originally intended to utilize remediated concrete to fill below grade voids. Many felt that this would essentially be considered on-site disposal of radioactive material since the concrete, although below the limits specified in the License Termination Plan (LTP), might still be slightly radioactive. Maine Yankee decided to eliminate potential legacy waste by transporting and disposing of this material in a licensed landfill. For this reason KCES has assumed that all non-contaminated waste, including pipe and components will be disposed of in a licensed landfill at a rate of $0.045 per pound. Table 8-3 presents the total volumes of non-contaminated waste resulting from the decommissioning program.

Table 8-3
Non-Contaminated Waste (pounds)

Structures	517,810,100
Systems	50,960,230

9.0 COST SUMMARIES

9.1. ESTIMATING APPROACH

The estimating methodology utilized in the development of the cost estimates for the various scenarios in this study is consistent with that presented in both *Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates*, AIF/NESP-036, May 1986 and *Revised Analysis of Decommissioning for the Reference Pressurized Water Reactor Power Station*, NUREG/CR-5884, PNL-8742, November, 1995. Specifically the estimating methodology used by KCES herein is based on the Unit Cost Factor (UCF) approach. In addition, current experience from recently completed decommissioning projects has been considered in developing the estimating methodology.

KCES has developed a database of unit cost factors specific to the work activities associated with decommissioning a nuclear power reactor such as the cutting of a section of six inch contaminated pipe. These UCFs define the duration of an activity on a unit basis, including for the example above, contamination control set-up, cutting, capping pipe ends, removal from area, removal of contamination control and productivity adjustment factors. From the durations, removal costs are determined, including associated consumable costs. Material waste volumes, man-hours, disposal costs, packaging costs and transportation costs are also determined, again on a unit basis for each UCF. Each UCF is adjusted based on site specific factors such as labor rates, transportation costs and disposal rates.

The first step in developing the site specific activity removal and disposal cost is to develop a site specific plant inventory. KCES used the system and structures inventories developed for the previous estimates, incorporating any changes or modifications identified by the company. These quantities were originally determined by reviewing plant system inventory records, drawings, construction records and visiting the plant site. The plant system inventory list was separated into contaminated and non-contaminated components and unique unit cost factors were developed for each radiological condition. The site specific material quantities are then multiplied by the appropriate UCF to determine the total activity cost and removal man-hours.

The decommissioning activities are inserted into a project schedule and sequenced based on order of performance. The schedule hours, as determined by the UCFs for each activity are then incorporated in the project schedule to determine the critical path of the project. The schedule is then divided into several periods. Each period is defined by an activity or group of activities requiring a specific amount of oversight or support. For instance during the vessel internals and reactor vessel removal activities both the Utility staff, DGC staff and security staff are required to be maintained at a certain level. Once these activities are complete the levels may change based on the controlling activities.

Period dependent costs are those costs that are not specific to the decommissioning activities but are required as support. Costs such as those for the Utility staff, DGC staff, security staff, insurance, health physics supplies and energy are calculated on a monthly basis based on the major activities defining a given period. Many of the monthly costs are the same from scenario to scenario for similar periods. These monthly costs are then multiplied by the duration of the

respective period to determine period dependent costs. The activity and period dependent costs are then summed to determine total decommissioning costs.

These activity and period dependent costs are either spent fuel storage related (10 CFR 50.54(bb)), decommissioning related (10 CFR 50.75(c)), greenfield (g) or a combination of the three. KCES has separated costs in each of these categories during the estimating process.

Detailed decommissioning cost tables for the five scenarios are presented in Appendix B and are summarized below. All costs are presented in 2012 dollars. The summarized costs include contingency.

9.2 SCENARIO 1 - DECON WITH INDEFINITE ON-SITE DRY STORAGE

The total cost for this scenario is **$1,321.4** million fixed and **$4.5** million annual, as shown in Table 9.1. A total of $386.2 million fixed is attributed to the preparation and transfer of spent fuel to the ISFSI. An annual cost of $4.5 million will be incurred for the continuing maintenance and surveillance of the ISFSI. A total of $793.2 million is attributed to the decommissioning, and $142.0 million for greenfield. For this scenario, there is a large fixed cost required for the design, license, cask procurement, and construction and installation of the dry storage facility. There are also annual surveillance costs, NRC license fees and NRC inspection fees. The cost attributed to the operation and maintenance of the spent fuel pool has been optimized by minimizing the spent fuel support systems.

An ISFSI will have been constructed during operations in order to maintain full core offload capabilities in the spent fuel pool. The existing facility will be expanded shortly after Unit 1 shutdown to accommodate the long term storage of spent fuel. The transfer of the spent fuel assemblies remaining in the spent fuel pool at shutdown, to the ISFSI, will begin just after Unit 2 shutdown. This transfer will proceed at a rate sufficient to allow the spent fuel pool to be empty approximately 5.5 years after Unit 2 shutdown. The maximum number of spent fuel assemblies stored at the ISFSI at any time will be approximately 6,740 requiring 210 storage casks, 96 of which will have been purchased to maintain full core offload capability and are an operations expense. In addition to the spent fuel, 168 spent fuel size containers loaded with GTCC will be stored at the ISFSI, requiring an additional six casks.

The existing ISFSI and infrastructure will have to be expanded to accommodate the post shutdown transfer of spent fuel. The additional pad and infrastructure will cost approximately $25.1 million, before contingency. It is assumed that the Holtec vertical storage system will be utilized in the ISFSI at a cost of $1,929,750 per 32 assembly PWR canister and overpack, including welding services. All casks purchased during operations to maintain full core offload capability are considered an operations expense. A total of 120 casks will be purchased after Unit 2 shutdown at a cost of $231.6 million, before contingency. All costs associated with the operation of the ISFSI such as staff oversight, maintenance costs, insurance costs, etc. are included in the 10 CFR 50.54(bb) costs.

TABLE 9.1

PERIOD	DESCRIPTION	50.75(c) Cost	50.54(bb) Cost	Greenfield Cost	Total Cost
1	U1 & U2 DECOMMISSIONING PLANNING COST:	$58,118,473	$34,535,807		$92,654,280
2	POST-SHUTDOWN ACTIVITIES COSTS:	$108,536,051	$159,622,558		$268,158,609
3	VESSEL AND INTERNALS REMOVAL COSTS:	$419,098,715	$175,173,464	$13,811,461	$608,083,640
4	DECONTAMINATE BALANCE OF SITE COSTS:	$207,438,841	$10,364,213	$25,142,731	$242,945,785
5	CLEAN STRUCTURE DEMOLITION COSTS:		$5,854,160	$101,444,398	$107,298,558
6	RESTORE SITE COSTS:		$659,818	$1,604,499	$2,264,317
	TOTAL COSTS:	**$793,192,081**	**$386,210,019**	**$142,003,089**	**$1,321,405,189**
7	ANNUAL DRY STORAGE		$4,477,802		$4,477,802

9.3 SCENARIO 2 - DECON WITH INDEFINITE OFF-SITE DRY STORAGE

The total cost for this scenario is **$1,285.4** million fixed and **$6.6** million annual as shown in Table 9.2. A total of $349.8 million is attributable to spent fuel storage, and $791.9 million is the cost of decommissioning, and $143.7 million is attributable to clean removal. The costs for this scenario are similar to those for Scenario 1. The difference in costs is due to the incorporation of off-site dry storage; therefore, no additional on-site dry storage will be required.

An ISFSI will have been constructed during operations in order to maintain full core offload capabilities in the spent fuel pool. The off-site storage facility is assumed to be available in 2036 therefore; no additional on-site dry storage will be required. The transfer of all spent fuel assemblies from the site to the off-site ISFSI, will begin just after Unit 2 shutdown. This transfer will proceed at a rate sufficient to allow all spent fuel to be removed from site approximately 5.5 years after Unit 2 shutdown. The maximum number of spent fuel assemblies stored at the on-site ISFSI at any time will be approximately 3,072 requiring 96 storage casks.

TABLE 9.2

PERIOD	DESCRIPTION	50.75(c) Cost	50.54(bb) Cost	Greenfield Cost	Total Cost
1	U1 & U2 DECOMMISSIONING PLANNING COST:	$58,118,473	$50,949,011		$109,067,485
2	POST-SHUTDOWN ACTIVITIES COSTS:	$108,492,361	$50,321,492		$158,813,854
3	VESSEL AND INTERNALS REMOVAL COSTS:	$418,881,715	$178,546,101	$14,003,361	$611,431,178
4	DECONTAMINATE BALANCE OF SITE COSTS:	$206,406,873	$58,481,929	$25,081,831	$289,970,633
5	CLEAN STRUCTURE DEMOLITION COSTS:		$10,357,740	$103,026,711	$113,384,450
6	RESTORE SITE COSTS:		$1,150,849	$1,603,099	$2,753,948
	TOTAL COSTS:	**$791,899,423**	**$349,807,122**	**$143,715,003**	**$1,285,421,548**
7	ANNUAL OFF-SITE DRY STORAGE COSTS:		$6,604,893		$6,604,893

9.4 SCENARIO 3 – DECON WITH ON-SITE DRY STORAGE, REPOSITORY OPEN IN 2032 & RECENT DOE ACCEPTANCE RATE

The total cost for decommissioning utilizing dry storage is **$1,363.0** million as shown in Table 9.3. The fuel storage component of this cost is $428.4 million, decommissioning cost at $792.5 million and greenfield costs at $142.0 million. For this scenario, there is a large fixed cost required for the design, license, cask procurement, and construction and installation of the dry storage facility. There are also annual surveillance costs, NRC license fees and NRC inspection fees. The cost attributed to the operation and maintenance of the spent fuel pool has been optimized by minimizing the spent fuel support systems.

An ISFSI will have been constructed during operations in order to maintain full core offload capabilities in the spent fuel pool. The existing facility will be expanded shortly after Unit 1 shutdown to accommodate the long term storage of spent fuel. The transfer of the spent fuel assemblies remaining in the spent fuel pool at shutdown, to the ISFSI, will begin just after Unit 2 shutdown. This transfer will proceed at a rate sufficient to allow the spent fuel pool to be empty approximately 5.5 years after Unit 2 shutdown. The maximum number of spent fuel assemblies stored at the ISFSI at any time will be approximately 5,217 requiring 163 storage casks, 96 of

which will have been purchased to maintain full core offload capability and are an operations expense. In addition to the spent fuel, 168 spent fuel size container loaded with GTCC will be stored at the ISFSI, requiring an additional six casks.

The existing ISFSI and infrastructure will have to be expanded to accommodate the post shutdown transfer of spent fuel. The additional pad and infrastructure will cost approximately $17 million, before contingency. It is assumed that the Holtec vertical storage system will be utilized in the ISFSI at a cost of $1,929,750 per 32 assembly PWR canister and overpack, including welding services. All casks purchased during operations to maintain full core offload capability are considered an operations expense. A total of 72 casks will be purchased after Unit 2 shutdown at a cost of $138.9 million, before contingency. All costs associated with the operation of the ISFSI such as staff oversight, maintenance costs, insurance costs, etc. are included in the 10 CFR 50.54(bb) costs.

TABLE 9.3

		50.75(c)	50.54(bb)	Greenfield	Total
PERIOD	DESCRIPTION	Cost	Cost	Cost	Cost
1	U1 & U2 DECOMMISSIONING PLANNING COST:	$58,118,473	$24,511,300		$82,629,774
2	POST-SHUTDOWN ACTIVITIES COSTS:	$108,521,861	$101,728,039		$210,249,900
3	VESSEL AND INTERNALS REMOVAL COSTS:	$418,991,715	$117,278,066	$14,029,561	$550,299,343
4	DECONTAMINATE BALANCE OF SITE COSTS:	$206,890,563	$10,361,927	$25,129,931	$242,382,422
5	CLEAN STRUCTURE DEMOLITION COSTS:		$5,852,864	$101,422,398	$107,275,261
6	RESTORE SITE COSTS:		$659,694	$1,450,853	$2,110,546
7	DRY STORAGE		$163,422,919		$163,422,919
8	DECON AND REMOVE ISFSI		$4,611,447		$4,611,447
	TOTAL COSTS:	**$792,522,613**	**$428,426,257**	**$142,032,743**	**$1,362,981,613**

9.5 SCENARIO 4 - SAFSTOR WITH INDEFINITE ON-SITE DRY STORAGE

The total cost for this scenario is **$1,684.9** million fixed and **$4.5** million annual as shown in Table 9.4. A total of $640.2 million is attributable to spent fuel storage; $901.3 million is the

cost of decommissioning and $143.4 million for clean removal. This scenario follows the NRC requirement that decommissioning be completed within sixty years of shutdown. SAFSTOR dormancy includes a period with wet and dry spent fuel storage, period 3; and a period with dry spent fuel storage, period 4. Decommissioning will follow the dormancy periods and be completed within the sixty year time frame.

TABLE 9.4

PERIOD	DESCRIPTION	50.75(c) Cost	50.54(bb) Cost	Greenfield Cost	Total Cost
1	DECOMMISSIONING PLANNING COST:	$55,919,351	$34,548,223		$90,467,574
2	POST-SHUTDOWN ACTIVITIES COSTS:	$88,578,315	$158,845,163		$247,423,478
3	DORMANCY WITH WET & DRY SPENT FUEL STORAGE:	$21,443,378	$193,749,929		$215,193,308
4	DORMANCY WITH DRY SPENT FUEL STORAGE:	$132,350,127	$203,899,560		$336,249,687
5	DORMANCY WITH DECOMMISSIONING PLANNING COST:	$69,575,007	$18,871,646		$88,446,653
6	VESSEL AND INTERNALS REMOVAL COSTS:	$325,166,750	$13,575,773	$13,815,661	$352,558,184
7	DECONTAMINATE BALANCE OF SITE COSTS:	$208,294,136	$10,214,186	$25,150,731	$243,659,054
8	CLEAN STRUCTURE DEMOLITION COSTS:		$5,820,232	$102,553,018	$108,373,250
9	RESTORE SITE COSTS:		$661,376	$1,894,634	$2,556,010
	TOTAL COSTS:	**$901,327,065**	**$640,186,089**	**$143,414,045**	**$1,684,927,198**
10	ANNUAL DRY STORAGE		$4,493,201		$4,493,201

9.6 SCENARIO 5 – DECON WITH WET STORAGE, MODIFIED SYSTEMS, REPOSITORY OPEN IN 2032 & RECENT DOE ACCEPTANCE RATE

The total cost for this scenario is **$1,316.4** million as summarized in Table 9.5. A total of $359.2 million is attributable to the 282 months of post shutdown in-pool spent fuel storage and 534

months of post shutdown dry spent fuel storage. Dry storage is required prior to shutdown to maintain full core offload capabilities. The capital costs for these casks are assumed to be an operations expense. The decommissioning cost is $814.8 million and is reflected as 50.75(c) costs in Table 9.5 while clean removal costs, $142.3 million, are shown as greenfield cost. The cost attributed to the operation and maintenance of the spent fuel pool has been optimized by minimizing the spent fuel support systems.

TABLE 9.5

		50.75(c)	50.54(bb)	Greenfield	Total
PERIOD	DESCRIPTION	Cost	Cost	Cost	Cost
1	U1 & U2 DECOMMISSIONING PLANNING COST:	$58,685,955	$3,372,905		$62,058,860
2	POST-SHUTDOWN ACTIVITIES COSTS:	$109,764,930	$14,675,868		$124,440,798
3	VESSEL AND INTERNALS REMOVAL COSTS:	$424,009,276	$30,420,973	$13,782,361	$468,212,610
4	DECONTAMINATE BALANCE OF SITE COSTS:	$183,613,141	$21,379,071	$25,089,431	$230,081,644
5	CLEAN STRUCTURE DEMOLITION COSTS:		$13,303,604	$68,722,852	$82,026,457
6	RESTORE SITE COSTS:		$1,453,694	$1,531,535	$2,985,228
7	WET & DRY STORAGE COSTS:	$1,394,159	$177,042,240		$178,436,399
8	AUXILIARY BUILDING REMOVAL COSTS:	$37,349,443	$3,981,075	$33,215,149	$74,545,666
9	DRY STORAGE		$90,658,111		$90,658,111
10	DECON AND REMOVE ISFSI		$2,921,990		$2,921,990
	TOTAL COSTS:	**$814,816,904**	**$359,209,532**	**$142,341,328**	**$1,316,367,763**

10.0 References

1. Radiation Safety and Control Services, Inc.

2. Smith, R. I., et. al., *Revised Analysis of Decommissioning for the Reference Pressurizer Water Reactor Power Station, NUREG/CR-5884, PNL-8742, Volumes 1 & 2*, November 1995

3. Laquardia, Thomas S., et. al., Guidelines *for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates, AIF/NESP-036, Volumes 1 & 2*, May 1986

4. Taboas, Anibal L., et. al., *The Decommissioning Handbook, ASME*, 2004

5. New Horizon Scientific, LLC, *Maine Yankee Decommissioning Experience Report, Detailed Experiences 1997 – 2004*, 2005

6. R.S. Means, Inc, *Building Construction Cost Data*, Kingston, Massachusetts, 2012.

7. *NRC Rules and Regulations, 10 CFR 50, 61, 71, 72, 170, 171*

8. *Cost Estimating Guide, DOE G 430.1-1*, March 1997

9. McMaster-Carr Supply Co., Internet catalog 2012

10. DOE/RW-0567 *Acceptance Priority Ranking & Annual Capacity Report*, July 2004

11. U.S.NRC, Office of Public Affairs, *Decommissioning Nuclear Power Plants Fact Sheet*, 2008

12. American Nuclear Society, *Disposal of Low Level Radioactive Waste, Background Information*, revised February 2009

13. South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, *Status of the Barnwell Low-Level Radioactive Waste Disposal Facility*, February 2007

14. Gregory B. Jaczko, *The Need for Alternatives in Low-Level Radioactive Waste Disposal*, June 26, 2007

15. U.S. Dept of Energy Office of Civilian Radioactive Waste Management, *Total System Life Cycle Cost Report*, July 2008

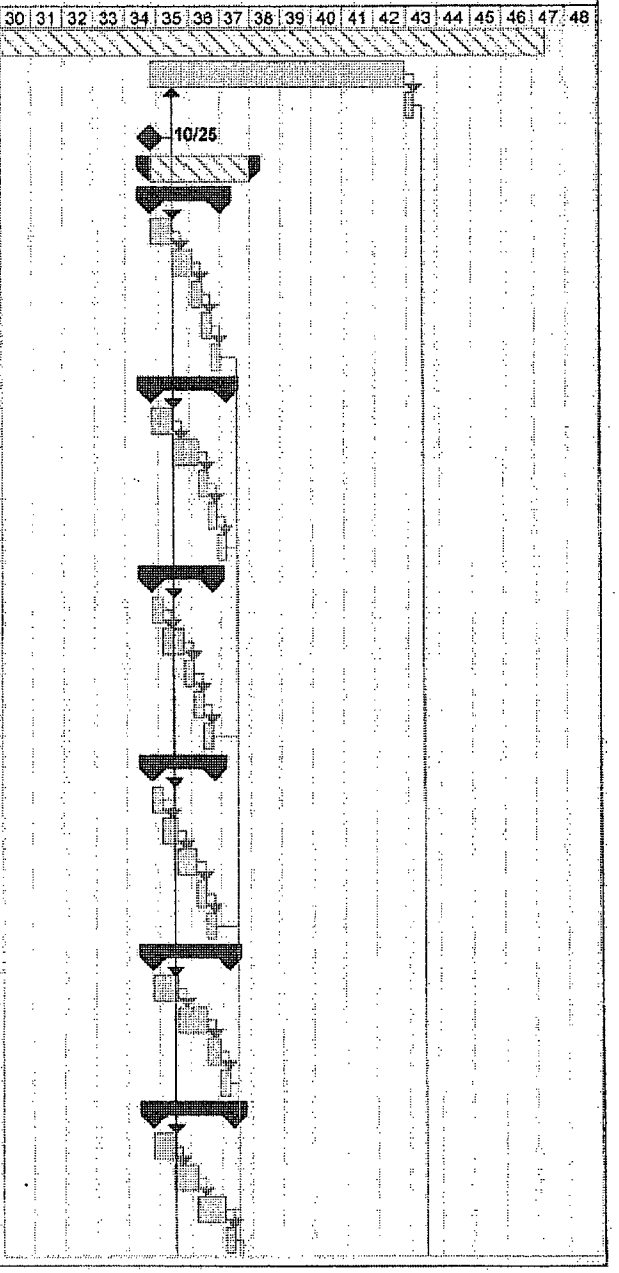
16. U.S. Department of Energy Office of Civilian Radioactive Waste Management, *Report to Congress on the Demonstration of the Interim Storage of Spent Nuclear Fuel from Decommissioned Nuclear Power Reactor Sites*, December 2008

APPENDIX A

SCHEDULES

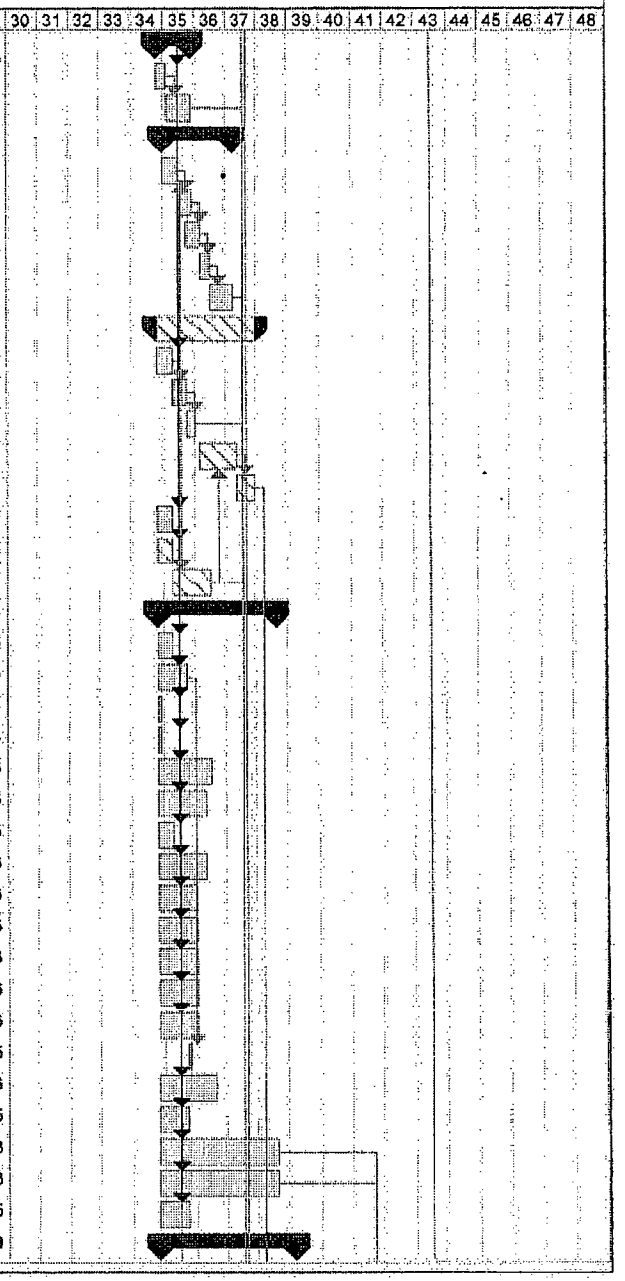
2012 D. C. Cook
Scenario 1

ID	Task Name	Duration	Start	Finish
1	Dry spent fuel storage	1874 wks	Fri 7/1/11	Thu 5/30/47
2	Post-shutdown wet storage	426 wks	Wed 10/25/34	Tue 12/23/42
3	Transfer remaining assemblies to ISFSI	13 wks	Wed 12/24/42	Tue 3/24/43
4	Unit 1 Down	0 days	Wed 10/25/34	Wed 10/25/34
5	**Period 1 Decommissioning Planning**	**825 days**	**Wed 10/25/34**	**Tue 12/22/37**
6	**Modify spent fuel support systems**	**576 days**	**Wed 10/25/34**	**Wed 1/7/37**
7	Define systems modification	168 days	Wed 10/25/34	Fri 6/15/35
8	Design systems modification and equipment specificatons	168 days	Mon 6/18/35	Wed 2/6/36
9	Prepare installation procedures	80 days	Thu 2/7/36	Wed 5/28/36
10	Prepare test procedures	80 days	Thu 5/29/36	Wed 9/17/36
11	Prepare maintenance procedures	80 days	Thu 9/18/36	Wed 1/7/37
12	**Control room relocation**	**624 days**	**Wed 10/25/34**	**Mon 3/16/37**
13	Define control room equipment	168 days	Wed 10/25/34	Fri 6/15/35
14	Design control room modification and equipment specificatons	216 days	Mon 6/18/35	Mon 4/14/36
15	Prepare installation procedures	80 days	Tue 4/15/36	Mon 8/4/36
16	Prepare test procedures	80 days	Tue 8/5/36	Mon 11/24/36
17	Prepare maintenance procedures	80 days	Tue 11/25/36	Mon 3/16/37
18	**Design spent fuel storage security modifications**	**504 days**	**Wed 10/25/34**	**Mon 9/29/36**
19	Define modification	88 days	Wed 10/25/34	Fri 2/23/35
20	Design modification and equipment specificatons	176 days	Mon 2/26/35	Mon 10/29/35
21	Prepare installation procedures	80 days	Tue 10/30/35	Mon 2/18/36
22	Prepare test procedures	80 days	Tue 2/19/36	Mon 6/9/36
23	Prepare maintenance procedures	80 days	Tue 6/10/36	Mon 9/29/36
24	**Primary system decontamination**	**520 days**	**Wed 10/25/34**	**Tue 10/21/36**
25	Define scope	80 days	Wed 10/25/34	Tue 2/13/35
26	Evaluate processes	120 days	Wed 2/14/35	Tue 7/31/35
27	Prepare bid specifications and RFP	160 days	Wed 8/1/35	Tue 3/11/36
28	Qualify Contractors	80 days	Wed 3/12/36	Tue 7/1/36
29	Evaluate Proposals	80 days	Wed 7/2/36	Tue 10/21/36
30	**Select Decommissioning General Contractor**	**640 days**	**Wed 10/25/34**	**Tue 4/7/37**
31	Define scope	200 days	Wed 10/25/34	Tue 7/31/35
32	Prepare bid specifications and RFP	240 days	Wed 8/1/35	Tue 7/1/36
33	Qualify Contractors	120 days	Wed 7/2/36	Tue 12/16/36
34	Evaluate Proposals	80 days	Wed 12/17/36	Tue 4/7/37
35	**U1 & U2 cold and dark site repowering**	**680 days**	**Wed 10/25/34**	**Tue 6/2/37**
36	Define scope	160 days	Wed 10/25/34	Tue 6/5/35
37	Design modification and equipment specificatons	200 days	Wed 6/6/35	Tue 3/11/36
38	Prepare installation procedures	240 days	Wed 3/12/36	Tue 2/10/37
39	Prepare test procedures	80 days	Wed 2/11/37	Tue 6/2/37



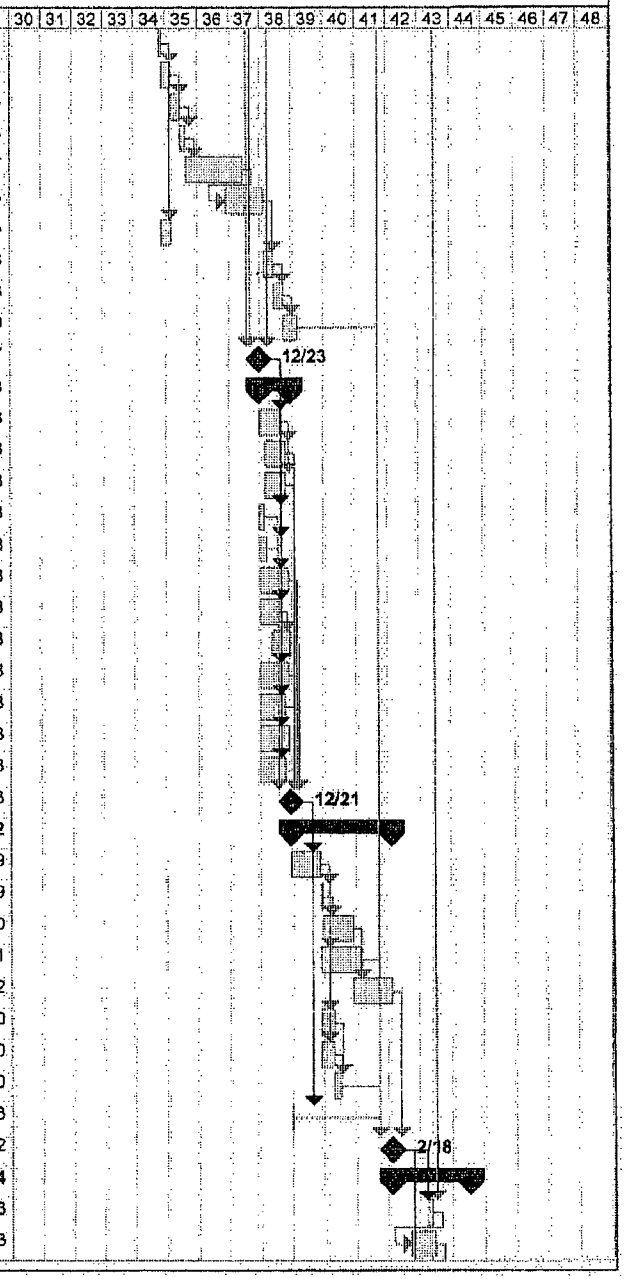
2012 D. C. Cook
Scenario 1

ID	Task Name	Duration	Start	Finish
40	**Modify U1 & U2 containment access**	**280 days**	**Wed 10/25/34**	**Tue 11/20/35**
41	Select new access location	80 days	Wed 10/25/34	Tue 2/13/35
42	Design access and equipment specifications	200 days	Wed 2/14/35	Tue 11/20/35
43	**U1 & U2 Site Characterization**	**590 days**	**Wed 12/27/34**	**Tue 3/31/37**
44	Define scope	120 days	Wed 12/27/34	Tue 6/12/35
45	Prepare bid specifications and RFP	120 days	Wed 6/13/35	Tue 11/27/35
46	Qualify Contractors	120 days	Wed 6/19/35	Tue 3/4/36
47	Evaluate Proposals	80 days	Wed 3/5/36	Tue 6/24/36
48	Prepare procedures	200 days	Wed 6/25/36	Tue 3/31/37
49	**ADMINISTRATIVE ACTIVITIES**	**825 days**	**Wed 10/25/34**	**Tue 12/22/37**
50	Develop staff transition plan	120 days	Wed 10/25/34	Tue 4/10/35
51	Develop severance and retention policy	120 days	Wed 4/11/35	Tue 9/25/35
52	Prepare project administrative procedures	80 days	Wed 9/26/35	Tue 1/15/36
53	Develop area based decommissioning cost estimate	320 days	Wed 2/20/36	Tue 5/12/37
54	Develop project budget and schedule controls	160 days	Wed 5/13/37	Tue 12/22/37
55	Assemble plant drawings	120 days	Wed 10/25/34	Tue 4/10/35
56	Define end product	120 days	Wed 10/25/34	Tue 4/10/35
57	Develop technical approach and detailed project plans	320 days	Wed 4/11/35	Tue 7/1/36
58	**LICENSING/PERMITTING DOCUMENTATION**	**1000 days**	**Wed 10/25/34**	**Tue 8/24/38**
59	Insurance exemption	120 days	Wed 10/25/34	Tue 4/10/35
60	Prepare Post-Shutdown Decommissioning Activities Report	240 days	Wed 10/25/34	Tue 9/25/35
61	Prepare certification of permanent cessation of operations	24 days	Wed 10/25/34	Mon 11/27/34
62	Prepare certification of permanent reactor defueling	24 days	Wed 10/25/34	Mon 11/27/34
63	Prepare post-shutdown technical specification modifications	440 days	Wed 10/25/34	Tue 7/1/36
64	Update FSAR	400 days	Wed 10/25/34	Tue 5/6/36
65	Develop certified fuel handler program	120 days	Wed 10/25/34	Tue 4/10/35
66	Prepare post-shutdown emergency plan	400 days	Wed 10/25/34	Tue 5/6/36
67	Prepare post-shutdown QA plan	320 days	Wed 10/25/34	Tue 1/15/36
68	Prepare post-shutdown security plan	320 days	Wed 10/25/34	Tue 1/15/36
69	Prepare post-shutdown fire protection plan	320 days	Wed 10/25/34	Tue 1/15/36
70	Prepare post-shutdown radiation protection manual	320 days	Wed 10/25/34	Tue 1/15/36
71	Prepare and submit state and local permits	320 days	Wed 10/25/34	Tue 1/15/36
72	Respond to NRC questions on PSDAR	24 days	Wed 9/26/35	Mon 10/29/35
73	Prepare detailed resource loaded project schedule	480 days	Wed 10/25/34	Tue 8/26/36
74	Perform 50.59 unreviewed safety questions	240 days	Wed 10/25/34	Tue 9/25/35
75	Prepare activity specifications	1000 days	Wed 10/25/34	Tue 8/24/38
76	Prepare detailed work procedures	1000 days	Wed 10/25/34	Tue 8/24/38
77	Select shipping casks and obtain permits	240 days	Wed 10/25/34	Tue 9/25/35
78	**LICENSE TERMINATION PLAN**	**1144 days**	**Wed 10/25/34**	**Mon 3/14/39**



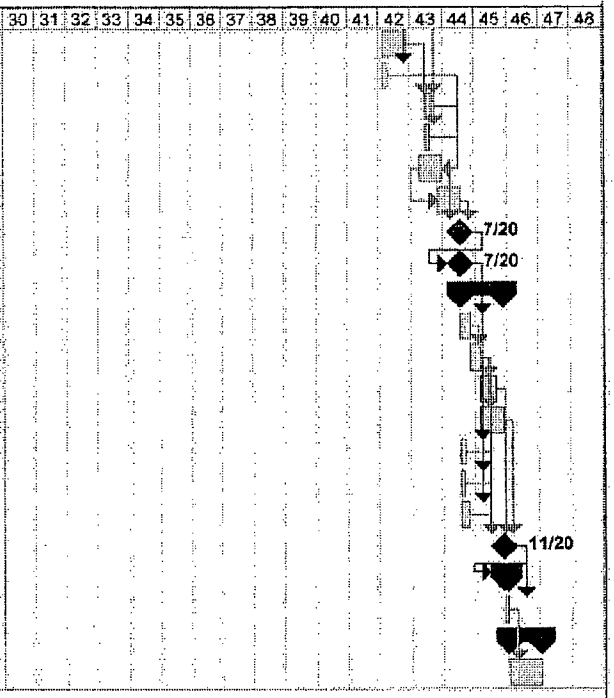
2012 D. C. Cook
Scenario 1

ID	Task Name	Duration	Start	Finish
79	General information	16 days	Wed 10/25/34	Wed 11/15/34
80	Site Characterization	80 days	Thu 11/16/34	Wed 3/7/35
81	Identification of remaining site dismantlement activities	80 days	Thu 3/8/35	Wed 6/27/35
82	Remediation Plans	40 days	Thu 6/28/35	Wed 8/22/35
83	Final Radiation Survey Plan	480 days	Thu 8/23/35	Wed 6/24/37
84	Compliance with the radiological criteria for license termination	320 days	Thu 11/27/36	Wed 2/17/38
85	Update decommissioning cost estimate	80 days	Thu 11/16/34	Wed 3/7/35
86	Supplement to the environmental report	80 days	Thu 2/18/38	Wed 6/9/38
87	Respond to NRC questions	80 days	Thu 6/10/38	Wed 9/29/38
88	Update LTP	118 days	Thu 9/30/38	Mon 3/14/39
89	Unit 2 Down	0 days	Wed 12/23/37	Wed 12/23/37
90	**Period 2 Post-Shutdown Activities**	**260 days**	**Wed 12/23/37**	**Tue 12/21/38**
91	Modify Spent Fuel Cooling System	173 days	Wed 12/23/37	Fri 8/20/38
92	Modify control room	173 days	Mon 3/1/38	Wed 10/27/38
93	Modify security system	173 days	Mon 3/1/38	Wed 10/27/38
94	Primary System Decon	40 days	Wed 12/23/37	Tue 2/16/38
95	Flush & Drain Systems	60 days	Wed 12/23/37	Tue 3/16/38
96	Implement cold & dark	240 days	Wed 12/23/37	Tue 11/23/38
97	Modify U1 Containment Access	160 days	Wed 12/23/37	Tue 8/3/38
98	Modify U2 Containment Access	160 days	Wed 5/12/38	Tue 12/21/38
99	Historical Site Assessment	240 days	Wed 12/23/37	Tue 11/23/38
100	Vessel and internals activation analysis	215 days	Wed 12/23/37	Tue 10/19/38
101	Characterization survey	250 days	Wed 12/23/37	Tue 12/7/38
102	Test special equipment and training	215 days	Wed 12/23/37	Tue 10/19/38
103	End Period 2	0 days	Tue 12/21/38	Tue 12/21/38
104	**Period 3 Reactor Vessel and Internals Removal**	**825 days**	**Wed 12/22/38**	**Tue 2/18/42**
105	Remove Unit 1 reactor vessel internals and reactor vessel	240 days	Wed 12/22/38	Tue 11/22/39
106	Transfer Equipment to Unit 2	4 wks	Wed 11/23/39	Tue 12/20/39
107	Remove Unit 2 reactor vessel internals and reactor vessel	240 days	Wed 12/21/39	Tue 11/20/40
108	Remove Unit 1 steam generators	65 wks	Wed 11/23/39	Tue 2/19/41
109	Remove Unit 2 steam generators	65 wks	Wed 11/21/40	Tue 2/18/42
110	Remove Unit 1 contaminated systems	105 days	Wed 11/23/39	Tue 4/17/40
111	Remove Unit 1 clean systems	103 days	Wed 11/23/39	Fri 4/13/40
112	Decon Unit 1 reactor building	56 days	Wed 4/18/40	Wed 7/4/40
113	Remove miscellaneous structures	8 days	Wed 12/22/38	Fri 12/31/38
114	End Period 3	0 days	Tue 2/18/42	Tue 2/18/42
115	**Period 4 Building Decontamination**	**631 days**	**Wed 2/19/42**	**Wed 7/20/44**
116	Remove Spent fuel storage racks	8 wks	Wed 3/25/43	Tue 5/19/43
117	Remove Unit 2 contaminated systems	194 days	Thu 9/18/42	Tue 6/16/43



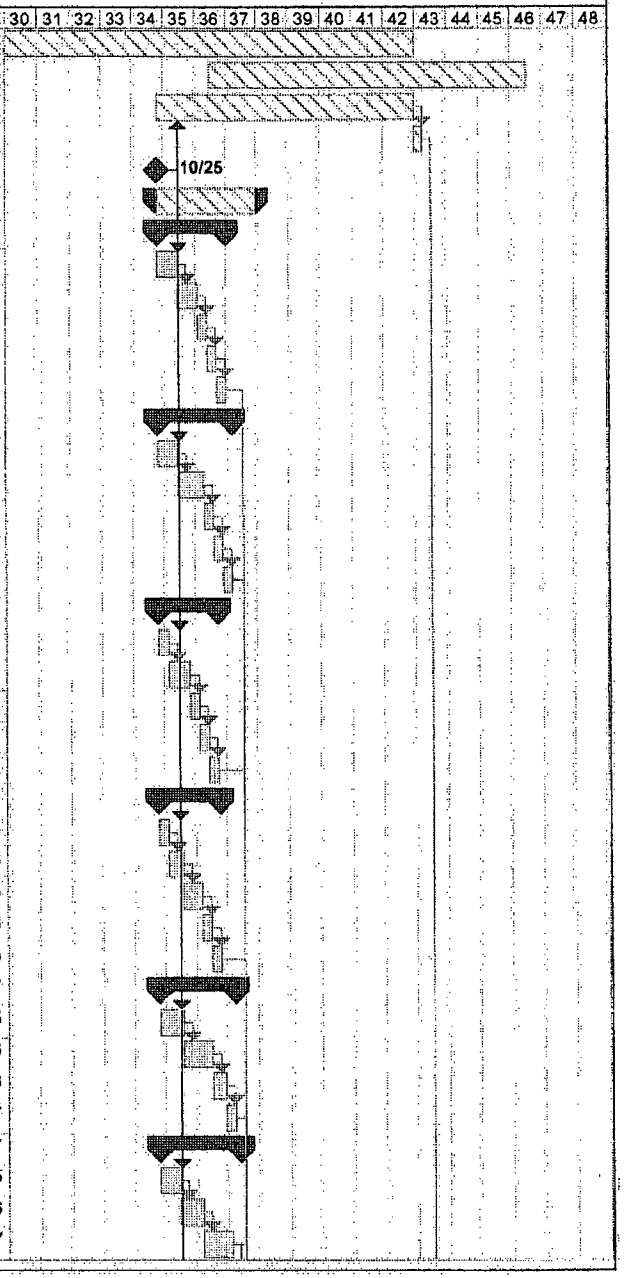
2012 D. C. Cook
Scenario 1

ID	Task Name	Duration	Start	Finish
118	Remove Unit 2 clean systems	190 days	Wed 2/19/42	Tue 11/11/42
119	Decon Steam Generator Storage Building	35 days	Wed 2/19/42	Tue 4/8/42
120	Decon Unit 2 Reactor Building	56 days	Wed 6/17/43	Wed 9/2/43
121	Decon Auxiliary Building	47 days	Wed 6/17/43	Thu 8/20/43
122	Perform final radiological survey of all structures	36 wks	Thu 4/16/43	Wed 12/29/43
123	Perform final survey of the site	36 wks	Thu 11/12/43	Wed 7/20/44
124	Obtain NRC approval	0 days	Wed 7/20/44	Wed 7/20/44
125	End Period 4	0 days	Wed 7/20/44	Wed 7/20/44
126	**Period 5 Clean Removal**	**348 days**	**Thu 7/21/44**	**Mon 11/20/45**
127	Remove Unit 1 reactor building	80 days	Thu 7/21/44	Wed 11/9/44
128	Remove Unit 2 reactor building	80 days	Thu 11/10/44	Wed 3/1/45
129	Remove Auxillary Building	132 days	Thu 3/2/45	Fri 9/1/45
130	Remove Turbine Building	188 days	Thu 3/2/45	Mon 11/20/45
131	Remove Steam Generator Storage Building	40 days	Thu 7/21/44	Wed 9/14/44
132	Remove Administration building	31 days	Thu 7/21/44	Thu 9/1/44
133	Remove Low Level Radwaste building	66 days	Thu 7/21/44	Thu 10/20/44
134	End Period 5	0 days	Mon 11/20/45	Mon 11/20/45
135	**Period 6 Restore site**	**40 days**	**Tue 11/21/45**	**Mon 1/15/46**
136	Restore site	8 wks	Tue 11/21/45	Mon 1/15/46
137	**Period 7 Dry Storage**	**260 days**	**Tue 1/16/46**	**Mon 1/14/47**
138	Dry Storage	52 wks	Tue 1/16/46	Mon 1/14/47



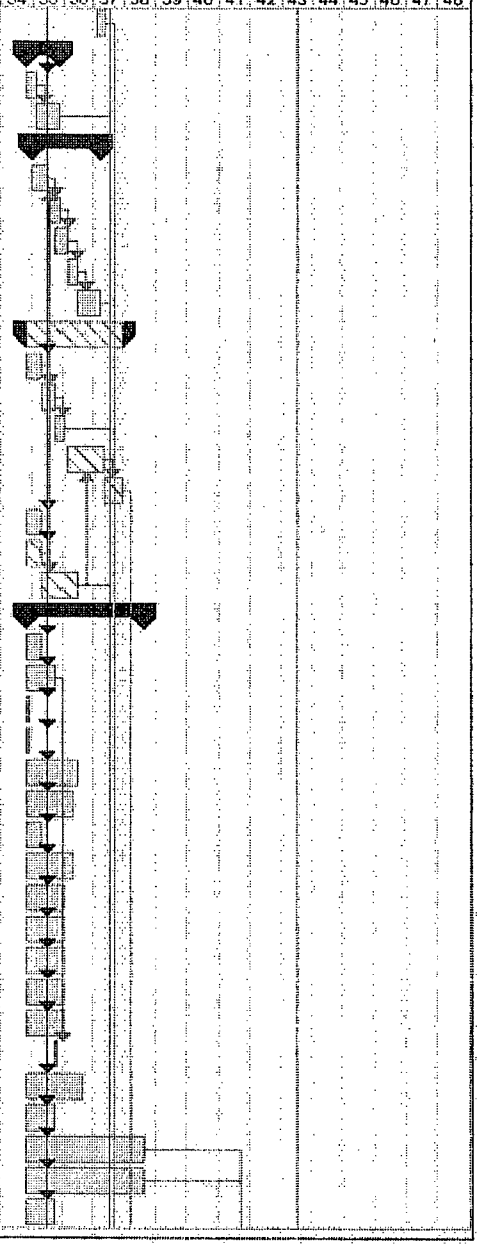
2012 D. C. Cook
Scenario 2

ID	Task Name	Duration	Start	Finish
1	On-site dry spent fuel storage	1591 wks	Sun 7/1/12	Fri 12/26/42
2	Off-site spent fuel storage	524 wks	Tue 7/1/36	Mon 7/16/46
3	Post-shutdown wet storage	426 wks	Wed 10/25/34	Tue 12/23/42
4	Transfer remaining assemblies to off-site	13 wks	Wed 12/24/42	Tue 3/24/43
5	Unit 1 Down	0 days	Wed 10/25/34	Wed 10/25/34
6	**Period 1 Decommissioning Planning**	**825 days**	**Wed 10/25/34**	**Tue 12/22/37**
7	**Modify spent fuel support systems**	**576 days**	**Wed 10/25/34**	**Wed 1/7/37**
8	Define systems modification	168 days	Wed 10/25/34	Fri 6/15/35
9	Design systems modification and equipment specificatons	168 days	Mon 6/18/35	Wed 2/6/36
10	Prepare installation procedures	80 days	Thu 2/7/36	Wed 5/28/36
11	Prepare test procedures	80 days	Thu 5/29/36	Wed 9/17/36
12	Prepare maintenance procedures	80 days	Thu 9/18/36	Wed 1/7/37
13	**Control room relocation**	**624 days**	**Wed 10/25/34**	**Mon 3/16/37**
14	Define control room equipment	168 days	Wed 10/25/34	Fri 6/15/35
15	Design control room modification and equipment specificatons	216 days	Mon 6/18/35	Mon 4/14/36
16	Prepare installation procedures	80 days	Tue 4/15/36	Mon 8/4/36
17	Prepare test procedures	80 days	Tue 8/5/36	Mon 11/24/36
18	Prepare maintenance procedures	80 days	Tue 11/25/36	Mon 3/16/37
19	**Design spent fuel storage security modifications**	**504 days**	**Wed 10/25/34**	**Mon 9/29/36**
20	Define modification	88 days	Wed 10/25/34	Fri 2/23/35
21	Design modification and equipment specificatons	176 days	Mon 2/26/35	Mon 10/29/35
22	Prepare installation procedures	80 days	Tue 10/30/35	Mon 2/18/36
23	Prepare test procedures	80 days	Tue 2/19/36	Mon 6/9/36
24	Prepare maintenance procedures	80 days	Tue 6/10/36	Mon 9/29/36
25	**Primary system decontamination**	**520 days**	**Wed 10/25/34**	**Tue 10/21/36**
26	Define scope	80 days	Wed 10/25/34	Tue 2/13/35
27	Evaluate processes	120 days	Wed 2/14/35	Tue 7/31/35
28	Prepare bid specifications and RFP	160 days	Wed 8/1/35	Tue 3/11/36
29	Qualify Contractors	80 days	Wed 3/12/36	Tue 7/1/36
30	Evaluate Proposals	80 days	Wed 7/2/36	Tue 10/21/36
31	**Select Decommissioning General Contractor**	**640 days**	**Wed 10/25/34**	**Tue 4/7/37**
32	Define scope	200 days	Wed 10/25/34	Tue 7/31/35
33	Prepare bid specifications and RFP	240 days	Wed 8/1/35	Tue 7/1/36
34	Qualify Contractors	120 days	Wed 7/2/36	Tue 12/18/36
35	Evaluate Proposals	80 days	Wed 12/17/36	Tue 4/7/37
36	**U1 & U2 cold and dark site repowering**	**680 days**	**Wed 10/25/34**	**Tue 6/2/37**
37	Define scope	160 days	Wed 10/25/34	Tue 6/5/35
38	Design modification and equipment specificatons	200 days	Wed 6/6/35	Tue 3/11/36
39	Prepare installation procedures	240 days	Wed 3/12/36	Tue 2/10/37



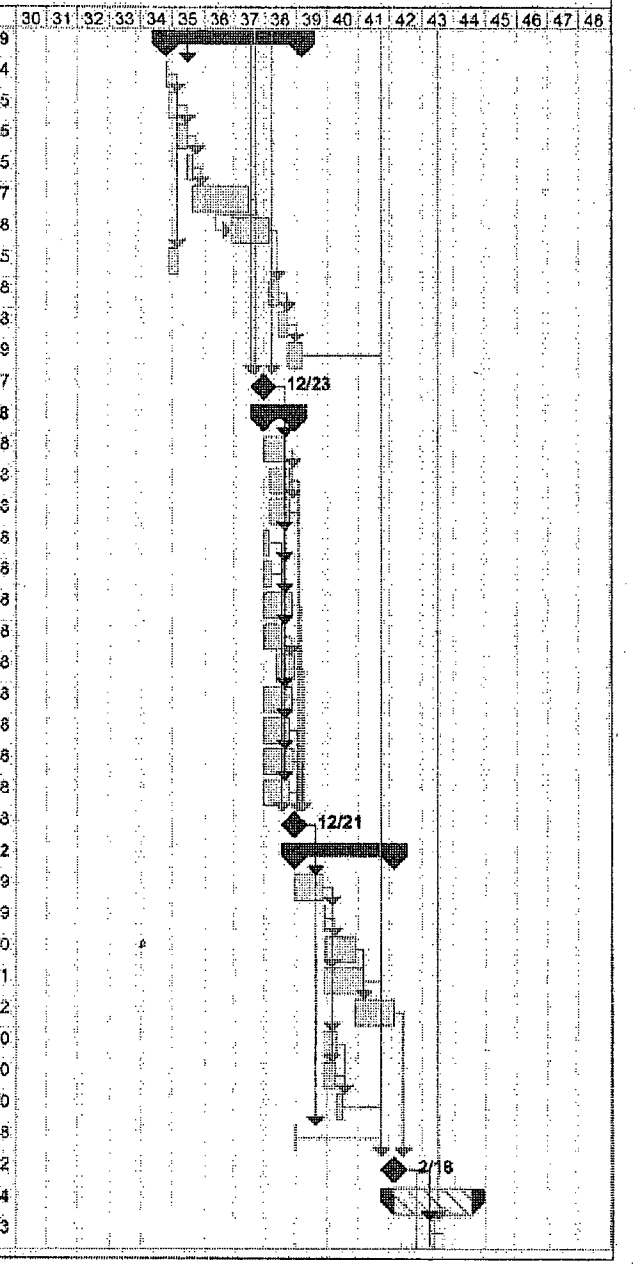
2012 D. C. Cook
Scenario 2

ID	Task Name	Duration	Start	Finish
40	Prepare test procedures	60 days	Wed 2/11/37	Tue 6/2/37
41	**Modify U1 & U2 containment access**	**280 days**	**Wed 10/25/34**	**Tue 11/20/35**
42	Select new access location	60 days	Wed 10/25/34	Tue 2/13/35
43	Design access and equipment specifications	200 days	Wed 2/14/35	Tue 11/20/35
44	**U1 & U2 Site Characterization**	**590 days**	**Wed 12/27/34**	**Tue 3/31/37**
45	Define scope	120 days	Wed 12/27/34	Tue 6/12/35
46	Prepare bid specifications and RFP	120 days	Wed 6/13/35	Tue 11/27/35
47	Qualify Contractors	120 days	Wed 9/19/35	Tue 3/4/36
48	Evaluate Proposals	60 days	Wed 3/5/36	Tue 6/24/36
49	Prepare procedures	200 days	Wed 6/25/36	Tue 3/31/37
50	**ADMINISTRATIVE ACTIVITIES**	**825 days**	**Wed 10/25/34**	**Tue 12/22/37**
51	Develop staff transition plan	120 days	Wed 10/25/34	Tue 4/10/35
52	Develop severance and retention policy	120 days	Wed 4/11/35	Tue 9/25/35
53	Prepare project administrative procedures	80 days	Wed 9/26/35	Tue 1/15/36
54	Develop area based decommissioning cost estimate	320 days	Wed 2/20/36	Tue 5/12/37
55	Develop project budget and schedule controls	160 days	Wed 5/13/37	Tue 12/22/37
56	Assemble plant drawings	120 days	Wed 10/25/34	Tue 4/10/35
57	Define end product	120 days	Wed 10/25/34	Tue 4/10/35
58	Develop technical approach and detailed project plans	320 days	Wed 4/11/35	Tue 7/1/36
59	**LICENSING/PERMITTING DOCUMENTATION**	**1000 days**	**Wed 10/25/34**	**Tue 8/24/38**
60	Insurance exemption	120 days	Wed 10/25/34	Tue 4/10/35
61	Prepare Post-Shutdown Decommissioning Activities Report	240 days	Wed 10/25/34	Tue 9/25/35
62	Prepare certification of permanent cessation of operations	24 days	Wed 10/25/34	Mon 11/27/34
63	Prepare certification of permanent reactor defueling	24 days	Wed 10/25/34	Mon 11/27/34
64	Prepare post-shutdown technical specification modifications	440 days	Wed 10/25/34	Tue 7/1/36
65	Update FSAR	400 days	Wed 10/25/34	Tue 5/6/36
66	Develop certified fuel handler program	120 days	Wed 10/25/34	Tue 4/10/35
67	Prepare post-shutdown emergency plan	400 days	Wed 10/25/34	Tue 5/6/36
68	Prepare post-shutdown QA plan	320 days	Wed 10/25/34	Tue 1/15/36
69	Prepare post-shutdown security plan	320 days	Wed 10/25/34	Tue 1/15/36
70	Prepare post-shutdown fire protection plan	320 days	Wed 10/25/34	Tue 1/15/36
71	Prepare post-shutdown radiation protection manual	320 days	Wed 10/25/34	Tue 1/15/36
72	Prepare and submit state and local permits	320 days	Wed 10/25/34	Tue 1/15/36
73	Respond to NRC questions on PSDAR	24 days	Wed 9/26/35	Mon 10/29/35
74	Prepare detailed resource loaded project schedule	460 days	Wed 10/25/34	Tue 8/26/36
75	Perform 50.59 unreviewed safety questions	240 days	Wed 10/25/34	Tue 9/25/35
76	Prepare activity specifications	1000 days	Wed 10/25/34	Tue 8/24/38
77	Prepare detailed work procedures	1000 days	Wed 10/25/34	Tue 8/24/38
78	Select shipping casks and obtain permits	240 days	Wed 10/25/34	Tue 9/25/35



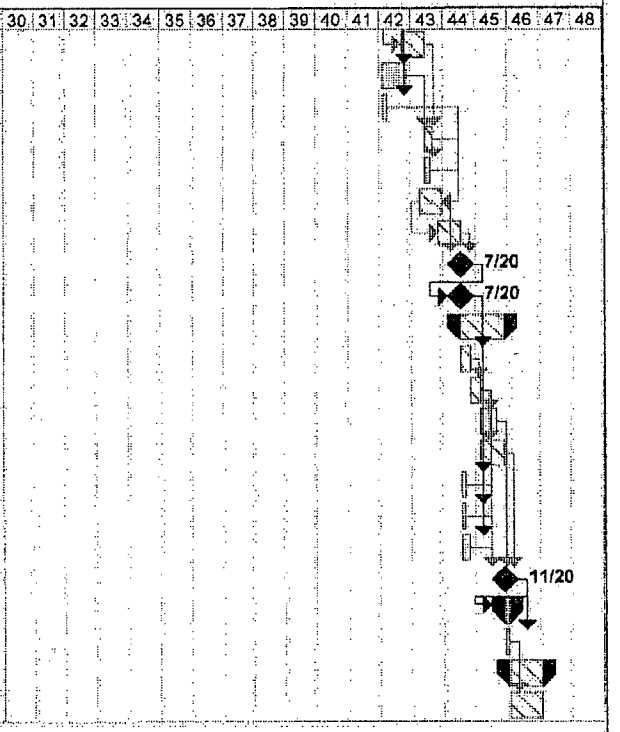
2012 D. C. Cook
Scenario 2

ID	Task Name	Duration	Start	Finish
79	**LICENSE TERMINATION PLAN**	**1144 days**	**Wed 10/25/34**	**Mon 3/14/39**
80	General information	16 days	Wed 10/25/34	Wed 11/15/34
81	Site Characterization	80 days	Thu 11/16/34	Wed 3/7/35
82	Identification of remaining site dismantlement activities	80 days	Thu 3/8/35	Wed 6/27/35
83	Remediation Plans	40 days	Thu 6/28/35	Wed 8/22/35
84	Final Radiation Survey Plan	480 days	Thu 8/23/35	Wed 6/24/37
85	Compliance with the radiological criteria for license termination	320 days	Thu 11/27/36	Wed 2/17/38
86	Update decommissioning cost estimate	80 days	Thu 11/16/34	Wed 3/7/35
87	Supplement to the environmental report	80 days	Thu 2/18/38	Wed 6/8/38
88	Respond to NRC questions	80 days	Thu 6/10/38	Wed 9/28/38
89	Update LTP	118 days	Thu 9/30/38	Mon 3/14/39
90	Unit 2 Down	0 days	Wed 12/23/37	Wed 12/23/37
91	**Period 2 Post-Shutdown Activities**	**260 days**	**Wed 12/23/37**	**Tue 12/21/38**
92	Modify Spent Fuel Cooling System	173 days	Wed 12/23/37	Fri 8/20/38
93	Modify control room	173 days	Mon 3/1/38	Wed 10/27/38
94	Modify security system	173 days	Mon 3/1/38	Wed 10/27/38
95	Primary System Decon	40 days	Wed 12/23/37	Tue 2/16/38
96	Flush & Drain Systems	60 days	Wed 12/23/37	Tue 3/15/38
97	Implement cold & dark	240 days	Wed 12/23/37	Tue 11/23/38
98	Modify U1 Containment Access	160 days	Wed 12/23/37	Tue 8/3/38
99	Modify U2 Containment Access	160 days	Wed 5/12/38	Tue 12/21/38
100	Historical Site Assessment	240 days	Wed 12/23/37	Tue 11/23/38
101	Vessel and internals activation analysis	215 days	Wed 12/23/37	Tue 10/19/38
102	Characterization survey	250 days	Wed 12/23/37	Tue 12/7/38
103	Test special equipment and training	215 days	Wed 12/23/37	Tue 10/19/38
104	End Period 2	0 days	Tue 12/21/38	Tue 12/21/38
105	**Period 3 Reactor Vessel and Internals Removal**	**825 days**	**Wed 12/22/38**	**Tue 2/18/42**
106	Remove Unit 1 reactor vessel internals and reactor vessel	240 days	Wed 12/22/38	Tue 11/22/39
107	Transfer Equipment to Unit 2	4 wks	Wed 11/23/39	Tue 12/20/39
108	Remove Unit 2 reactor vessel internals and reactor vessel	240 days	Wed 12/21/39	Tue 11/20/40
109	Remove Unit 1 steam generators	65 wks	Wed 11/23/39	Tue 2/19/41
110	Remove Unit 2 steam generators	65 wks	Wed 11/21/40	Tue 2/18/42
111	Remove Unit 1 contaminated systems	105 days	Wed 11/23/39	Tue 4/17/40
112	Remove Unit 1 clean systems	103 days	Wed 11/23/39	Fri 4/13/40
113	Decon Unit 1 reactor building	56 days	Wed 4/18/40	Wed 7/4/40
114	Remove miscellaneous structures	8 days	Wed 12/22/38	Fri 12/31/38
115	End Period 3	0 days	Tue 2/18/42	Tue 2/18/42
116	**Period 4 Building Decontamination**	**631 days**	**Wed 2/19/42**	**Wed 7/20/44**
117	Remove Spent fuel storage racks	8 wks	Wed 3/25/43	Tue 5/19/43



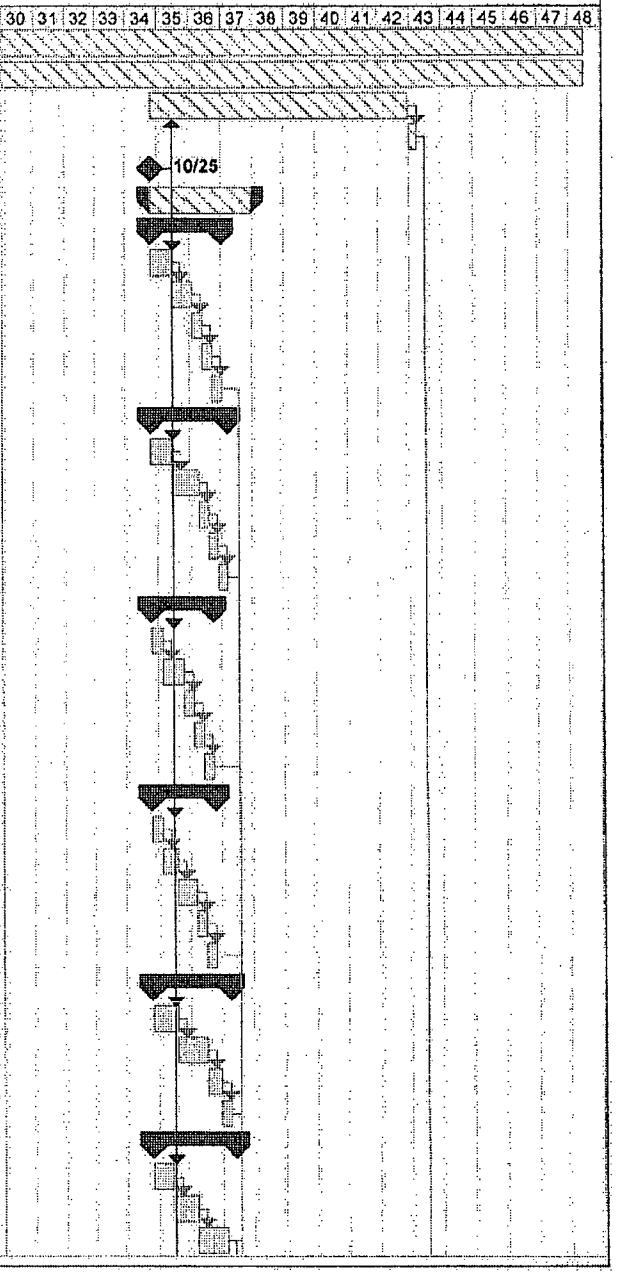
2012 D. C. Cook
Scenario 2

ID	Task Name	Duration	Start	Finish
118	Remove Unit 2 contaminated systems	194 days	Thu 9/18/42	Tue 6/16/43
119	Remove Unit 2 clean systems	190 days	Wed 2/19/42	Tue 11/11/42
120	Decon Steam Generator Storage Building	35 days	Wed 2/19/42	Tue 4/8/42
121	Decon Unit 2 Reactor Building	56 days	Wed 6/17/43	Wed 9/2/43
122	Decon Auxiliary Building	47 days	Wed 6/17/43	Thu 8/20/43
123	Perform final radiological survey of all structures	36 wks	Thu 4/16/43	Wed 12/23/43
124	Perform final survey of the site	36 wks	Thu 11/12/43	Wed 7/20/44
125	Obtain NRC approval	0 days	Wed 7/20/44	Wed 7/20/44
126	End Period 4	0 days	Wed 7/20/44	Wed 7/20/44
127	**Period 5 Clean Removal**	**348 days**	**Thu 7/21/44**	**Mon 11/20/45**
128	Remove Unit 1 reactor building	80 days	Thu 7/21/44	Wed 11/9/44
129	Remove Unit 2 reactor building	80 days	Thu 11/10/44	Wed 3/1/45
130	Remove Auxiliary Building	132 days	Thu 3/2/45	Fri 9/1/45
131	Remove Turbine Building	188 days	Thu 3/2/45	Mon 11/20/45
132	Remove Steam Generator Storage Building	40 days	Thu 7/21/44	Wed 9/14/44
133	Remove Administration building	31 days	Thu 7/21/44	Thu 9/1/44
134	Remove Low Level Radwaste building	66 days	Thu 7/21/44	Thu 10/20/44
135	End Period 5	0 days	Mon 11/20/45	Mon 11/20/45
136	**Period 6 Restore site**	**40 days**	**Tue 11/21/45**	**Mon 1/15/46**
137	Restore site	8 wks	Tue 11/21/45	Mon 1/15/46
138	**Period 7 Off-Site Dry Storage**	**260 days**	**Tue 1/16/46**	**Mon 1/14/47**
139	Dry Storage	52 wks	Tue 1/16/46	Mon 1/14/47



2012 D. C. Cook
Scenario 3

ID	Task Name	Duration	Start	Finish
1	Dry spent fuel storage (Add 34 year to end date)	1931.25 wks	Fri 7/1/11	Mon 7/6/48
2	Spent Fuel Shipping (Add 34 year to end date)	1481.25 wks	Wed 7/1/20	Thu 7/2/48
3	Post-shutdown wet storage	426 wks	Wed 10/25/34	Tue 12/23/42
4	Transfer remaining assemblies to ISFSI	13 wks	Wed 12/24/42	Tue 3/24/43
5	Unit 1 Down	0 days	Wed 10/25/34	Wed 10/25/34
6	**Period 1 Decommissioning Planning**	**825 days**	**Wed 10/25/34**	**Tue 12/22/37**
7	**Modify spent fuel support systems**	**576 days**	**Wed 10/25/34**	**Wed 1/7/37**
8	Define systems modification	168 days	Wed 10/25/34	Fri 6/15/35
9	Design systems modification and equipment specificatons	168 days	Mon 6/18/35	Wed 2/6/36
10	Prepare installation procedures	80 days	Thu 2/7/36	Wed 5/28/36
11	Prepare test procedures	80 days	Thu 5/29/36	Wed 9/17/36
12	Prepare maintenance procedures	80 days	Thu 9/18/36	Wed 1/7/37
13	**Control room relocation**	**624 days**	**Wed 10/25/34**	**Mon 3/16/37**
14	Define control room equipment	168 days	Wed 10/25/34	Fri 6/15/35
15	Design control room modification and equipment specificatons	216 days	Mon 6/18/35	Mon 4/14/36
16	Prepare installation procedures	80 days	Tue 4/15/36	Mon 8/4/36
17	Prepare test procedures	80 days	Tue 8/5/36	Mon 11/24/36
18	Prepare maintenance procedures	80 days	Tue 11/25/36	Mon 3/16/37
19	**Design spent fuel storage security modifications**	**504 days**	**Wed 10/25/34**	**Mon 9/29/36**
20	Define modification	88 days	Wed 10/25/34	Fri 2/23/35
21	Design modification and equipment specificatons	176 days	Mon 2/26/35	Mon 10/29/35
22	Prepare installation procedures	80 days	Tue 10/30/35	Mon 2/18/36
23	Prepare test procedures	80 days	Tue 2/19/36	Mon 6/9/36
24	Prepare maintenance procedures	80 days	Tue 6/10/36	Mon 9/29/36
25	**Primary system decontamination**	**520 days**	**Wed 10/25/34**	**Tue 10/21/36**
26	Define scope	80 days	Wed 10/25/34	Tue 2/13/35
27	Evaluate processes	120 days	Wed 2/14/35	Tue 7/31/35
28	Prepare bid specifications and RFP	160 days	Wed 8/1/35	Tue 3/11/36
29	Qualify Contractors	80 days	Wed 3/12/36	Tue 7/1/36
30	Evaluate Proposals	80 days	Wed 7/2/36	Tue 10/21/36
31	**Select Decommissioning General Contractor**	**640 days**	**Wed 10/25/34**	**Tue 4/7/37**
32	Define scope	200 days	Wed 10/25/34	Tue 7/31/35
33	Prepare bid specifications and RFP	240 days	Wed 8/1/35	Tue 7/1/36
34	Qualify Contractors	120 days	Wed 7/2/36	Tue 12/16/36
35	Evaluate Proposals	80 days	Wed 12/17/36	Tue 4/7/37
36	**U1 & U2 cold and dark site repowering**	**680 days**	**Wed 10/25/34**	**Tue 6/2/37**
37	Define scope	160 days	Wed 10/25/34	Tue 6/5/35
38	Design modification and equipment specificatons	200 days	Wed 6/6/35	Tue 3/11/36
39	Prepare installation procedures	240 days	Wed 3/12/36	Tue 2/10/37



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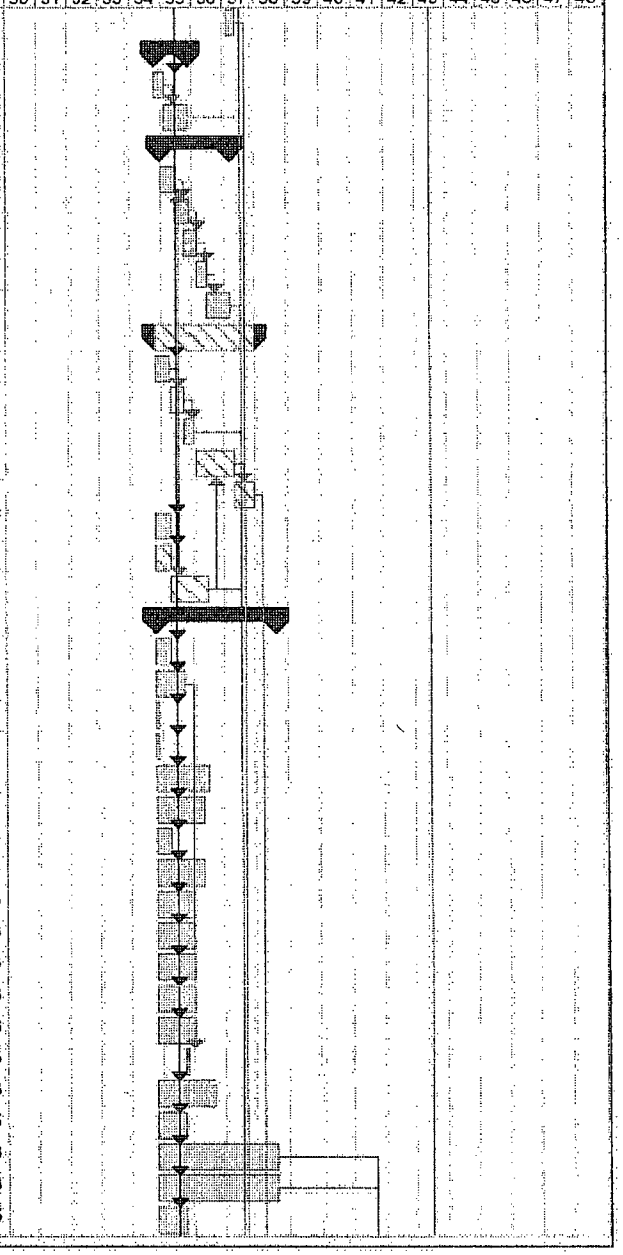
Scenario 3

ID	Task Name	Duration	Start	Finish
40	Prepare test procedures	80 days	Wed 2/11/37	Tue 6/2/37
41	**Modify U1 & U2 containment access**	**280 days**	**Wed 10/25/34**	**Tue 11/20/35**
42	Select new access location	80 days	Wed 10/25/34	Tue 2/13/35
43	Design access and equipment specificatons	200 days	Wed 2/14/35	Tue 11/20/35
44	**U1 & U2 Site Characterization**	**590 days**	**Wed 12/27/34**	**Tue 3/31/37**
45	Define scope	120 days	Wed 12/27/34	Tue 6/12/35
46	Prepare bid specifications and RFP	120 days	Wed 6/13/35	Tue 11/27/35
47	Qualify Contractors	120 days	Wed 9/19/35	Tue 3/4/36
48	Evaluate Proposals	80 days	Wed 3/5/36	Tue 6/24/36
49	Prepare procedures	200 days	Wed 6/25/36	Tue 3/31/37
50	**ADMINISTRATIVE ACTIVITIES**	**825 days**	**Wed 10/25/34**	**Tue 12/22/37**
51	Develop staff transition plan	120 days	Wed 10/25/34	Tue 4/10/35
52	Develop severance and retention policy	120 days	Wed 4/11/35	Tue 9/25/35
53	Prepare project administrative procedures	80 days	Wed 9/26/35	Tue 1/15/36
54	Develop area based decommissioning cost estimate	320 days	Wed 2/20/36	Tue 5/12/37
55	Develop project budget and schedule controls	160 days	Wed 5/13/37	Tue 12/22/37
56	Assemble plant drawings	120 days	Wed 10/25/34	Tue 4/10/35
57	Define end product	120 days	Wed 10/25/34	Tue 4/10/35
58	Develop technical approach and detailed project plans	320 days	Wed 4/11/35	Tue 7/1/36
59	**LICENSING/PERMITTING DOCUMENTATION**	**1000 days**	**Wed 10/25/34**	**Tue 8/24/38**
60	Insurance exemption	120 days	Wed 10/25/34	Tue 4/10/35
61	Prepare Post-Shutdown Decommissioning Activities Report	240 days	Wed 10/25/34	Tue 9/25/35
62	Prepare certification of permanent cessation of operations	24 days	Wed 10/25/34	Mon 11/27/34
63	Prepare certification of permanent reactor defueling	24 days	Wed 10/25/34	Mon 11/27/34
64	Prepare post-shutdown technical specification modifications	440 days	Wed 10/25/34	Tue 7/1/36
65	Update FSAR	400 days	Wed 10/25/34	Tue 5/6/36
66	Develop certified fuel handler program	120 days	Wed 10/25/34	Tue 4/10/35
67	Prepare post-shutdown emergency plan	400 days	Wed 10/25/34	Tue 5/6/36
68	Prepare post-shutdown QA plan	320 days	Wed 10/25/34	Tue 1/15/36
69	Prepare post-shutdown security plan	320 days	Wed 10/25/34	Tue 1/15/36
70	Prepare post-shutdown fire protection plan	320 days	Wed 10/25/34	Tue 1/15/36
71	Prepare post-shutdown radiation protection manual	320 days	Wed 10/25/34	Tue 1/15/36
72	Prepare and submit state and local permits	320 days	Wed 10/25/34	Tue 1/15/36
73	Respond to NRC questions on PSDAR	24 days	Wed 9/26/35	Mon 10/29/35
74	Prepare detailed resource loaded project schedule	480 days	Wed 10/25/34	Tue 8/26/36
75	Perform 50.59 unreviewed safety questions	240 days	Wed 10/25/34	Tue 9/25/35
76	Prepare activity specifications	1000 days	Wed 10/25/34	Tue 8/24/38
77	Prepare detailed work procedures	1000 days	Wed 10/25/34	Tue 8/24/38
78	Select shipping casks and obtain permits	240 days	Wed 10/25/34	Tue 9/25/35



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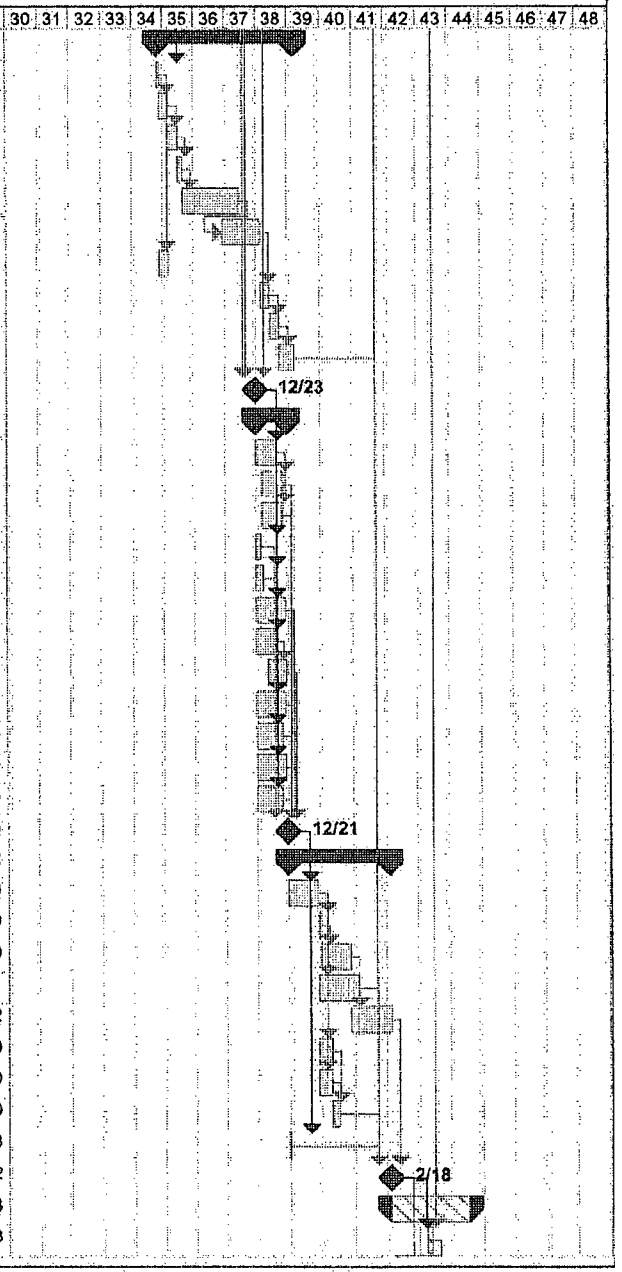
Scenario 3

ID	Task Name	Duration	Start	Finish
79	**LICENSE TERMINATION PLAN**	**1144 days**	**Wed 10/25/34**	**Mon 3/14/39**
80	General information	16 days	Wed 10/25/34	Wed 11/15/34
81	Site Characterization	80 days	Thu 11/16/34	Wed 3/7/35
82	Identification of remaining site dismantlement activities	80 days	Thu 3/8/35	Wed 6/27/35
83	Remediation Plans	40 days	Thu 6/28/35	Wed 8/22/35
84	Final Radiation Survey Plan	480 days	Thu 8/23/35	Wed 6/24/37
85	Compliance with the radiological criteria for license termination	320 days	Thu 11/27/36	Wed 2/17/38
86	Update decommissioning cost estimate	80 days	Thu 11/16/34	Wed 3/7/35
87	Supplement to the environmental report	80 days	Thu 2/18/38	Wed 6/9/38
88	Respond to NRC questions	80 days	Thu 6/10/38	Wed 9/29/38
89	Update LTP	118 days	Thu 9/30/38	Mon 3/14/39
90	Unit 2 Down	0 days	Wed 12/23/37	Wed 12/23/37
91	**Period 2 Post-Shutdown Activities**	**260 days**	**Wed 12/23/37**	**Tue 12/21/38**
92	Modify Spent Fuel Cooling System	173 days	Wed 12/23/37	Fri 8/20/38
93	Modify control room	173 days	Mon 3/1/38	Wed 10/27/38
94	Modify security system	173 days	Mon 3/1/38	Wed 10/27/38
95	Primary System Decon	40 days	Wed 12/23/37	Tue 2/16/38
96	Flush & Drain Systems	60 days	Wed 12/23/37	Tue 3/16/38
97	Implement cold & dark	240 days	Wed 12/23/37	Tue 11/23/38
98	Modify U1 Containment Access	160 days	Wed 12/23/37	Tue 8/3/38
99	Modify U2 Containment Access	160 days	Wed 5/12/38	Tue 12/21/38
100	Historical Site Assessment	240 days	Wed 12/23/37	Tue 11/23/38
101	Vessel and internals activation analysis	215 days	Wed 12/23/37	Tue 10/19/38
102	Characterization survey	250 days	Wed 12/23/37	Tue 12/7/38
103	Test special equipment and training	215 days	Wed 12/23/37	Tue 10/19/38
104	End Period 2	0 days	Tue 12/21/38	Tue 12/21/38
105	**Period 3 Reactor Vessel and Internals Removal**	**825 days**	**Wed 12/22/38**	**Tue 2/18/42**
106	Remove Unit 1 reactor vessel internals and reactor vessel	240 days	Wed 12/22/38	Tue 11/22/39
107	Transfer Equipment to Unit 2	4 wks	Wed 11/23/39	Tue 12/20/39
108	Remove Unit 2 reactor vessel internals and reactor vessel	240 days	Wed 12/21/39	Tue 11/20/40
109	Remove Unit 1 steam generators	65 wks	Wed 11/23/39	Tue 2/19/41
110	Remove Unit 2 steam generators	65 wks	Wed 11/21/40	Tue 2/18/42
111	Remove Unit 1 contaminated systems	105 days	Wed 11/23/39	Tue 4/17/40
112	Remove Unit 1 clean systems	103 days	Wed 11/23/39	Fri 4/13/40
113	Decon Unit 1 reactor building	56 days	Wed 4/18/40	Wed 7/4/40
114	Remove miscellaneous structures	8 days	Wed 12/22/38	Fri 12/31/38
115	End Period 3	0 days	Tue 2/18/42	Tue 2/18/42
116	**Period 4 Building Decontamination**	**631 days**	**Wed 2/19/42**	**Wed 7/20/44**
117	Remove Spent fuel storage racks	8 wks	Wed 3/25/43	Tue 5/19/43



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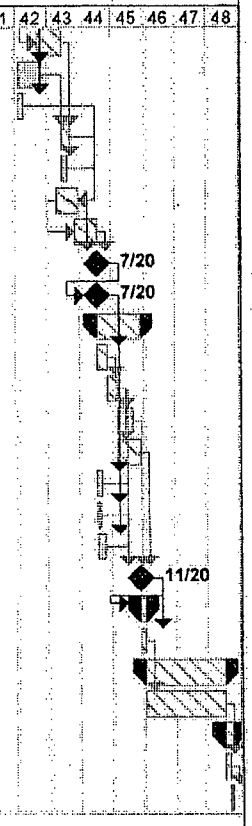
Scenario 3

ID	Task Name	Duration	Start	Finish
118	Remove Unit 2 contaminated systems	194 days	Thu 9/18/42	Tue 6/16/43
119	Remove Unit 2 clean systems	190 days	Wed 2/19/42	Tue 11/11/42
120	Decon Steam Generator Storage Building	35 days	Wed 2/19/42	Tue 4/8/42
121	Decon Unit 2 Reactor Building	56 days	Wed 6/17/43	Wed 9/2/43
122	Decon Auxiliary Building	47 days	Wed 6/17/43	Thu 8/20/43
123	Perform final radiological survey of all structures	36 wks	Thu 4/16/43	Wed 12/23/43
124	Perform final survey of the site	36 wks	Thu 11/12/43	Wed 7/20/44
125	Obtain NRC approval	0 days	Wed 7/20/44	Wed 7/20/44
126	End Period 4	0 days	Wed 7/20/44	Wed 7/20/44
127	**Period 5 Clean Removal**	**348 days**	**Thu 7/21/44**	**Mon 11/20/45**
128	Remove Unit 1 reactor building	80 days	Thu 7/21/44	Wed 11/9/44
129	Remove Unit 2 reactor building	80 days	Thu 11/10/44	Wed 3/1/45
130	Remove Auxiliary Building	132 days	Thu 3/2/45	Fri 9/1/45
131	Remove Turbine Building	188 days	Thu 3/2/45	Mon 11/20/45
132	Remove Steam Generator Storage Building	40 days	Thu 7/21/44	Wed 9/14/44
133	Remove Administration building	31 days	Thu 7/21/44	Thu 9/1/44
134	Remove Low Level Radwaste building	66 days	Thu 7/21/44	Thu 10/20/44
135	End Period 5	0 days	Mon 11/20/45	Mon 11/20/45
136	**Period 6 Restore site**	**40 days**	**Tue 11/21/45**	**Mon 1/15/46**
137	Restore site	8 wks	Tue 11/21/45	Mon 1/15/46
138	**Period 7 Dry Storage (Add 34 to end date)**	**645 days**	**Tue 1/16/46**	**Mon 7/6/48**
139	Dry Storage	129 wks	Tue 1/16/46	Mon 7/6/48
140	**Period 10 ISFSI Removal (Add 34 years to all dates)**	**60 days**	**Tue 7/7/48**	**Mon 9/28/48**
141	Decon and remove ISFSI	8 wks	Tue 7/7/48	Mon 8/31/48
142	Restore site	4 wks	Tue 9/1/48	Mon 9/28/48



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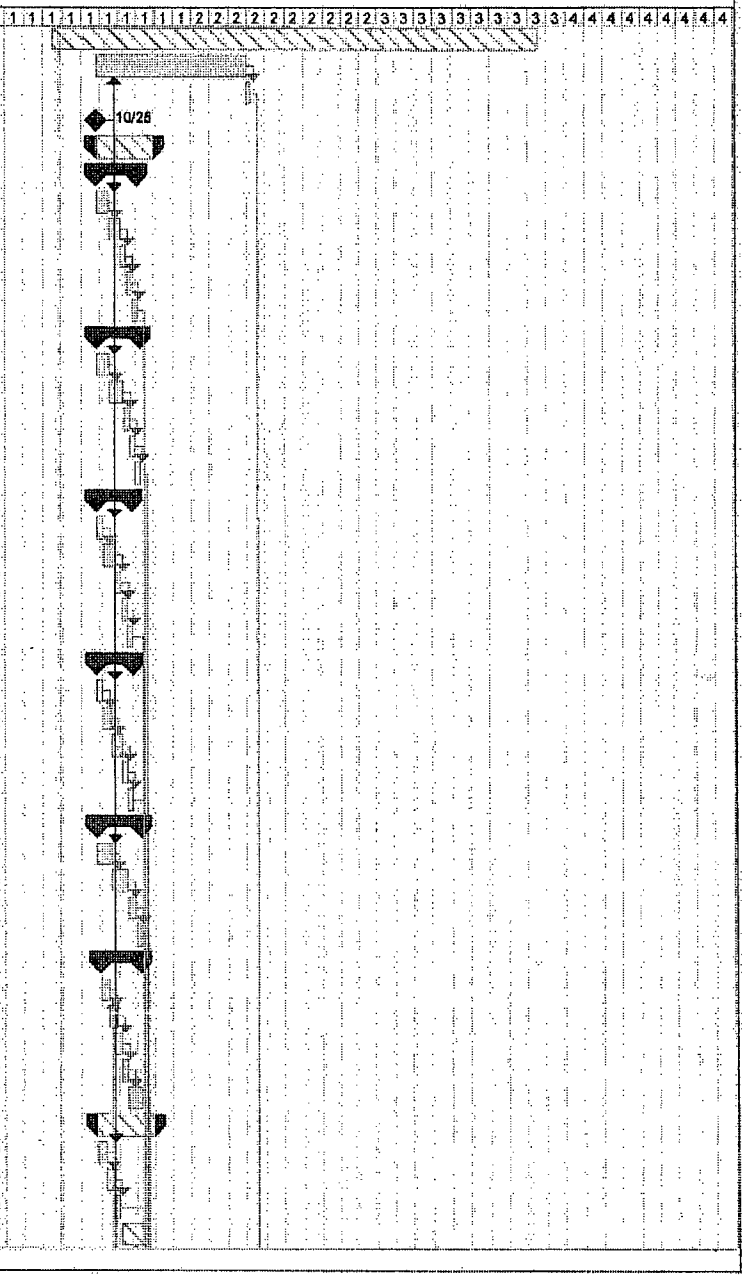
Scenario 4 - SAFSTOR

ID	Task Name	Duration	Start	Finish
1	Dry spent fuel storage (Add 51 year to end date)	1358 wks	Sun 7/1/12	Fri 7/6/38
2	Post-shutdown wet storage (Add 20 years to all dates)	426 wks	Mon 10/27/14	Fri 12/23/22
3	Transfer remaining assemblies to ISFSI (Add 20 years to all dates)	13 wks	Mon 12/26/22	Fri 3/24/23
4	Unit 1 Down	0 days	Sat 10/25/14	Sat 10/25/14
5	**Period 1 Decommissioning Planning (Add 20 years to all dates)**	**825 days**	**Mon 10/27/14**	**Fri 12/22/17**
6	**Modify spent fuel support systems**	**576 days**	**Mon 10/27/14**	**Mon 1/9/17**
7	Define systems modification	168 days	Mon 10/27/14	Wed 6/17/15
8	Design systems modification and equipment specificatons	168 days	Thu 6/18/15	Mon 2/8/16
9	Prepare installation procedures	80 days	Tue 2/9/16	Mon 5/30/16
10	Prepare test procedures	80 days	Tue 5/31/16	Mon 9/19/16
11	Prepare maintenance procedures	80 days	Tue 9/20/16	Mon 1/9/17
12	**Control room relocation**	**624 days**	**Mon 10/27/14**	**Thu 3/16/17**
13	Define control room equipment	168 days	Mon 10/27/14	Wed 6/17/15
14	Design control room modification and equipment specificatons	216 days	Thu 6/18/15	Thu 4/14/16
15	Prepare installation procedures	80 days	Fri 4/15/16	Thu 8/4/16
16	Prepare test procedures	80 days	Fri 8/5/16	Thu 11/24/16
17	Prepare maintenance procedures	80 days	Fri 11/25/16	Thu 3/16/17
18	**Design spent fuel storage security modifications**	**504 days**	**Mon 10/27/14**	**Thu 9/29/16**
19	Define modification	88 days	Mon 10/27/14	Wed 2/25/15
20	Design modification and equipment specificatons	176 days	Thu 2/26/15	Thu 10/29/15
21	Prepare installation procedures	80 days	Fri 10/30/15	Thu 2/18/16
22	Prepare test procedures	80 days	Fri 2/19/16	Thu 6/9/16
23	Prepare maintenance procedures	80 days	Fri 6/10/16	Thu 9/29/16
24	**Primary system decontamination**	**520 days**	**Mon 10/27/14**	**Fri 10/21/16**
25	Define scope	80 days	Mon 10/27/14	Fri 2/13/15
26	Evaluate processes	120 days	Mon 2/16/15	Fri 7/31/15
27	Prepare bid specifications and RFP	160 days	Mon 8/3/15	Fri 3/11/16
28	Qualify Contractors	80 days	Mon 3/14/16	Fri 7/1/16
29	Evaluate Proposals	80 days	Mon 7/4/16	Fri 10/21/16
30	**Select SAFSTOR Contractor**	**640 days**	**Mon 10/27/14**	**Fri 4/7/17**
31	Define scope	200 days	Mon 10/27/14	Fri 7/31/15
32	Prepare bid specifications and RFP	240 days	Mon 8/3/15	Fri 7/1/16
33	Qualify Contractors	120 days	Mon 7/4/16	Fri 12/16/16
34	Evaluate Proposals	80 days	Mon 12/19/16	Fri 4/7/17
35	**U1 & U2 Site Characterization**	**599 days**	**Mon 12/29/14**	**Fri 3/31/17**
36	Define scope	120 days	Mon 12/29/14	Fri 6/12/15
37	Prepare bid specifications and RFP	120 days	Mon 6/15/15	Fri 11/27/15
38	Qualify Contractors	120 days	Mon 9/21/15	Fri 3/4/16
39	Evaluate Proposals	80 days	Mon 3/7/16	Fri 6/24/16
40	Prepare procedures	200 days	Mon 6/27/16	Fri 3/31/17
41	**ADMINISTRATIVE ACTIVITIES**	**825 days**	**Mon 10/27/14**	**Fri 12/22/17**
42	Develop staff transition plan	120 days	Mon 10/27/14	Fri 4/10/15
43	Develop severance and retention policy	120 days	Mon 4/13/15	Fri 9/25/15
44	Prepare project administrative procedures	80 days	Mon 9/28/15	Fri 1/15/16
45	Develop area based decommissioning cost estimate	320 days	Mon 2/22/16	Fri 5/12/17



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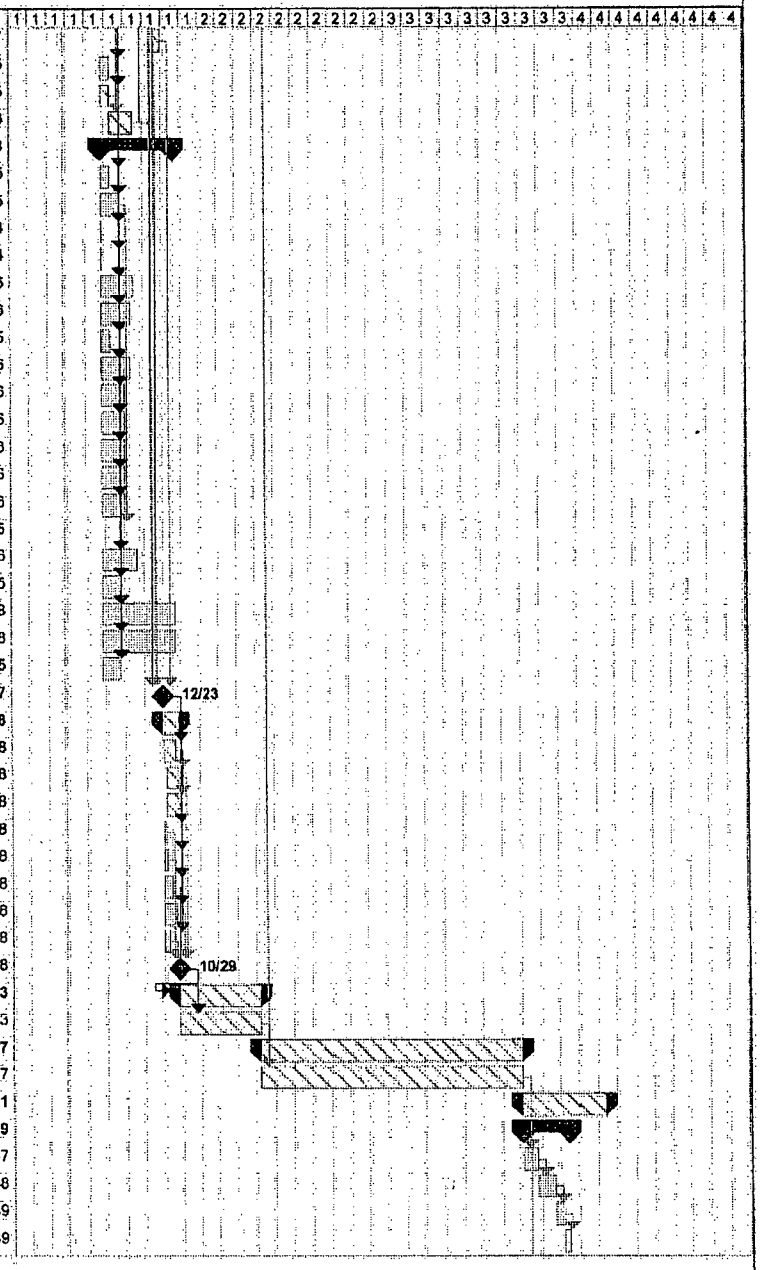
Scenario 4 - SAFSTOR

ID	Task Name	Duration	Start	Finish
46	Develop project budget and schedule controls	160 days	Mon 5/15/17	Fri 12/22/17
47	Assemble plant drawings	120 days	Mon 10/27/14	Fri 4/10/15
48	Define end product	120 days	Mon 10/27/14	Fri 4/10/15
49	Develop technical approach and detailed project plans	320 days	Mon 4/13/15	Fri 7/1/16
50	**LICENSING/PERMITTING DOCUMENTATION**	**1000 days**	**Mon 10/27/14**	**Fri 8/24/18**
51	Insurance exemption	120 days	Mon 10/27/14	Fri 4/10/15
52	Prepare Post-Shutdown Decommissioning Activities Report	240 days	Mon 10/27/14	Fri 9/25/15
53	Prepare certification of permanent cessation of operations	24 days	Mon 10/27/14	Thu 11/27/14
54	Prepare certification of permanent reactor defueling	24 days	Mon 10/27/14	Thu 11/27/14
55	Prepare post-shutdown technical specification modifications	440 days	Mon 10/27/14	Fri 7/1/16
56	Update FSAR	400 days	Mon 10/27/14	Fri 5/6/16
57	Develop certified fuel handler program	120 days	Mon 10/27/14	Fri 4/10/15
58	Prepare post-shutdown emergency plan	400 days	Mon 10/27/14	Fri 5/6/16
59	Prepare post-shutdown QA plan	320 days	Mon 10/27/14	Fri 1/15/16
60	Prepare post-shutdown security plan	320 days	Mon 10/27/14	Fri 1/15/16
61	Prepare post-shutdown fire protection plan	320 days	Mon 10/27/14	Fri 1/15/16
62	Prepare post-shutdown radiation protection manual	320 days	Mon 10/27/14	Fri 1/15/16
63	Prepare and submit state and local permits	320 days	Mon 10/27/14	Fri 1/15/16
64	Respond to NRC questions on PSDAR	24 days	Mon 9/28/15	Thu 10/29/15
65	Prepare detailed resource loaded project schedule	480 days	Mon 10/27/14	Fri 8/26/16
66	Perform 50.59 unreviewed safety questions	240 days	Mon 10/27/14	Fri 9/25/15
67	Prepare activity specifications	1000 days	Mon 10/27/14	Fri 8/24/18
68	Prepare detailed work procedures	1000 days	Mon 10/27/14	Fri 8/24/18
69	Select shipping casks and obtain permits	240 days	Mon 10/27/14	Fri 9/25/15
70	Unit 2 Down	0 days	Sat 12/23/17	Sat 12/23/17
71	**Period 2 Post-Shutdown Activities (Add 20 years to all dates)**	**221 days**	**Mon 12/25/17**	**Mon 10/29/18**
72	Modify Spent Fuel Cooling System	173 days	Mon 12/25/17	Wed 8/22/18
73	Modify control room	173 days	Thu 3/1/18	Mon 10/29/18
74	Modify security system	173 days	Thu 3/1/18	Mon 10/29/18
75	Primary System Decon	40 days	Mon 12/25/17	Fri 2/16/18
76	Flush & Drain Systems	60 days	Mon 12/25/17	Fri 3/16/18
77	Decontaminate and clean up reactor buildings	126 days	Mon 12/25/17	Mon 6/18/18
78	Install environmental monitors	185 days	Mon 12/25/17	Fri 9/7/18
79	Prepare SAFSTOR report	80 days	Mon 12/25/17	Fri 4/13/18
80	End Period 2	0 days	Mon 10/29/18	Mon 10/29/18
81	**Period 3 Dormancy with Wet Storage (Add 20 years to all dates)**	**1150 days**	**Tue 10/30/18**	**Mon 3/27/23**
82	Dormancy with Wet Storage	230 wks	Tue 10/30/18	Mon 3/27/23
83	**Period 4 Dormancy with Dry Storage (Add 20 years to start date and 51 years to end date)**	**3595 days**	**Tue 3/28/23**	**Mon 1/5/37**
84	Dormancy with Dry Storage	719 wks	Tue 3/28/23	Mon 1/5/37
85	**Period 5 Decommissioning Planning (Add 51 years to all dates)**	**1144 days**	**Tue 1/6/37**	**Fri 5/24/41**
86	**Select SAFSTOR Contractor**	**640 days**	**Tue 1/6/37**	**Mon 6/20/39**
87	Define scope	200 days	Tue 1/6/37	Mon 10/12/37
88	Prepare bid specifications and RFP	240 days	Tue 10/13/37	Mon 9/13/38
89	Qualify Contractors	120 days	Tue 9/14/38	Mon 2/26/39
90	Evaluate Proposals	80 days	Tue 3/1/39	Mon 6/20/39



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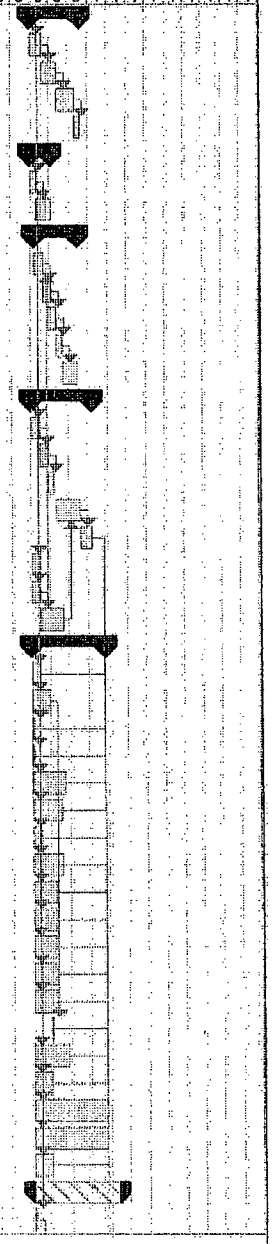
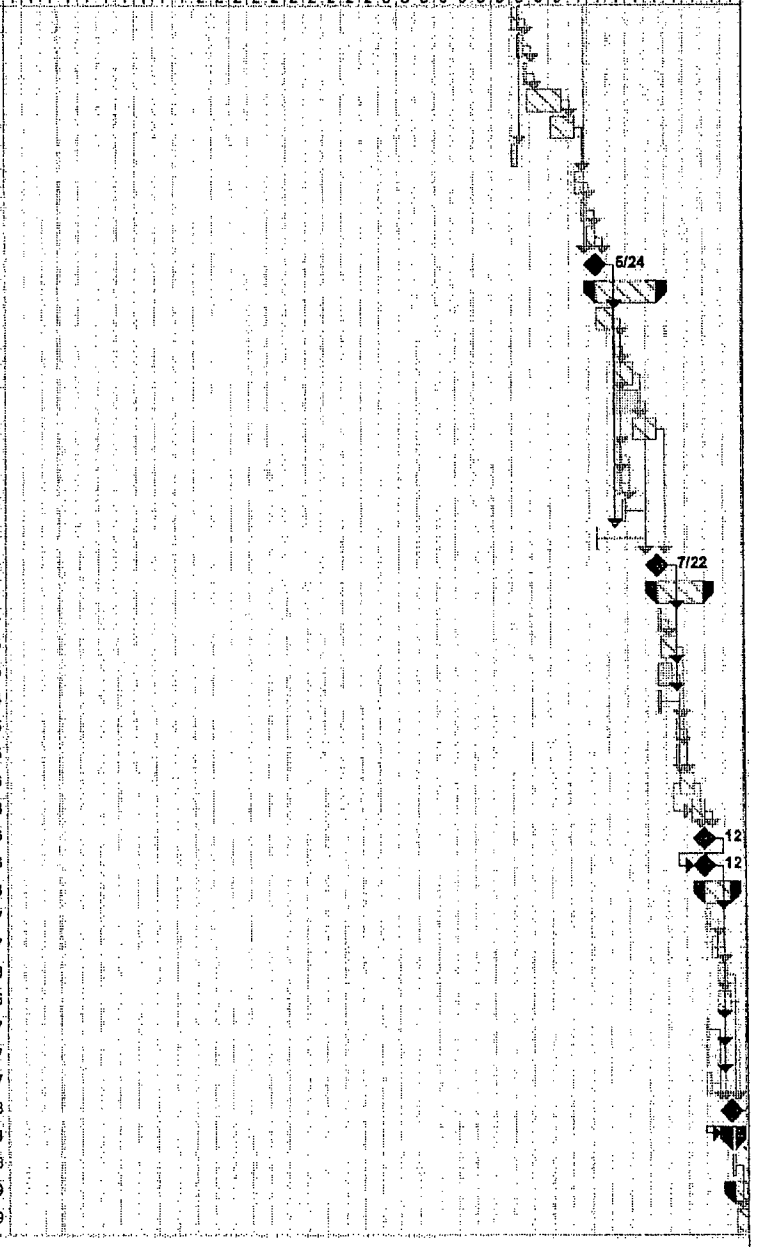
Scenario 4 - SAFSTOR

ID	Task Name	Duration	Start	Finish
91	**U1 & U2 cold and dark site repowering**	**680 days**	**Tue 1/6/37**	**Mon 8/15/39**
92	Define scope	160 days	Tue 1/6/37	Mon 8/17/37
93	Design modification and equipment specificatons	200 days	Tue 8/18/37	Mon 5/24/38
94	Prepare installation procedures	240 days	Tue 5/25/38	Mon 4/25/39
95	Prepare test procedures	80 days	Tue 4/26/39	Mon 8/15/39
96	**Modify U1 & U2 containment access**	**280 days**	**Tue 1/6/37**	**Mon 2/1/38**
97	Select new access location	80 days	Tue 1/6/37	Mon 4/27/37
98	Design access and equipment specificatons	200 days	Tue 4/28/37	Mon 2/1/38
99	**U1 & U2 Site Characterization**	**590 days**	**Tue 3/10/37**	**Mon 6/13/39**
100	Define scope	120 days	Tue 3/10/37	Mon 8/24/37
101	Prepare bid specifications and RFP	120 days	Tue 8/25/37	Mon 2/8/38
102	Qualify Contractors	120 days	Tue 12/1/37	Mon 5/17/38
103	Evaluate Proposals	80 days	Tue 5/18/38	Mon 9/6/38
104	Prepare procedures	200 days	Tue 9/7/38	Mon 6/13/39
105	**ADMINISTRATIVE ACTIVITIES**	**825 days**	**Tue 1/6/37**	**Mon 3/5/40**
106	Develop staff transition plan	120 days	Tue 1/6/37	Mon 6/22/37
107	Develop severance and retention policy	120 days	Tue 6/23/37	Mon 12/7/37
108	Prepare project administrative procedures	80 days	Tue 12/8/37	Mon 3/29/38
109	Develop area based decommissioning cost estimate	320 days	Tue 5/4/38	Mon 7/25/39
110	Develop project budget and schedule controls	160 days	Tue 7/26/39	Mon 3/5/40
111	Assemble plant drawings	120 days	Tue 1/6/37	Mon 6/22/37
112	Define end product	120 days	Tue 1/6/37	Mon 6/22/37
113	Develop technical approach and detailed project plans	320 days	Tue 6/23/37	Mon 9/13/38
114	**LICENSING/PERMITTING DOCUMENTATION**	**1000 days**	**Tue 1/6/37**	**Mon 11/5/40**
115	Insurance exemption	120 days	Tue 1/6/37	Mon 6/22/37
116	Prepare Post-Shutdown Decommissioning Activities Report	240 days	Tue 1/6/37	Mon 12/7/37
117	Prepare certification of permanent cessation of operations	24 days	Tue 1/6/37	Fri 2/6/37
118	Prepare certification of permanent reactor defueling	24 days	Tue 1/6/37	Fri 2/6/37
119	Prepare post-shutdown technical specification modifications	440 days	Tue 1/6/37	Mon 9/13/38
120	Update FSAR	400 days	Tue 1/6/37	Mon 7/19/38
121	Develop certified fuel handler program	120 days	Tue 1/6/37	Mon 6/22/37
122	Prepare post-shutdown emergency plan	400 days	Tue 1/6/37	Mon 7/19/38
123	Prepare post-shutdown QA plan	320 days	Tue 1/6/37	Mon 3/29/38
124	Prepare post-shutdown security plan	320 days	Tue 1/6/37	Mon 3/29/38
125	Prepare post-shutdown fire protection plan	320 days	Tue 1/6/37	Mon 3/29/38
126	Prepare post-shutdown radiation protection manual	320 days	Tue 1/6/37	Mon 3/29/38
127	Prepare and submit state and local permits	320 days	Tue 1/6/37	Mon 3/29/38
128	Respond to NRC questions on PSDAR	24 days	Tue 12/8/37	Fri 1/8/38
129	Prepare detailed resource loaded project schedule	480 days	Tue 1/6/37	Mon 11/8/38
130	Perform 50.59 unreviewed safety questions	240 days	Tue 1/6/37	Mon 12/7/37
131	Prepare activity specifications	1000 days	Tue 1/6/37	Mon 11/5/40
132	Prepare detailed work procedures	1000 days	Tue 1/6/37	Mon 11/5/40
133	Select shipping casks and obtain permits	240 days	Tue 1/6/37	Mon 12/7/37
134	**LICENSE TERMINATION PLAN**	**1144 days**	**Tue 1/8/37**	**Fri 5/24/41**
135	General Information	16 days	Tue 1/6/37	Tue 1/27/37



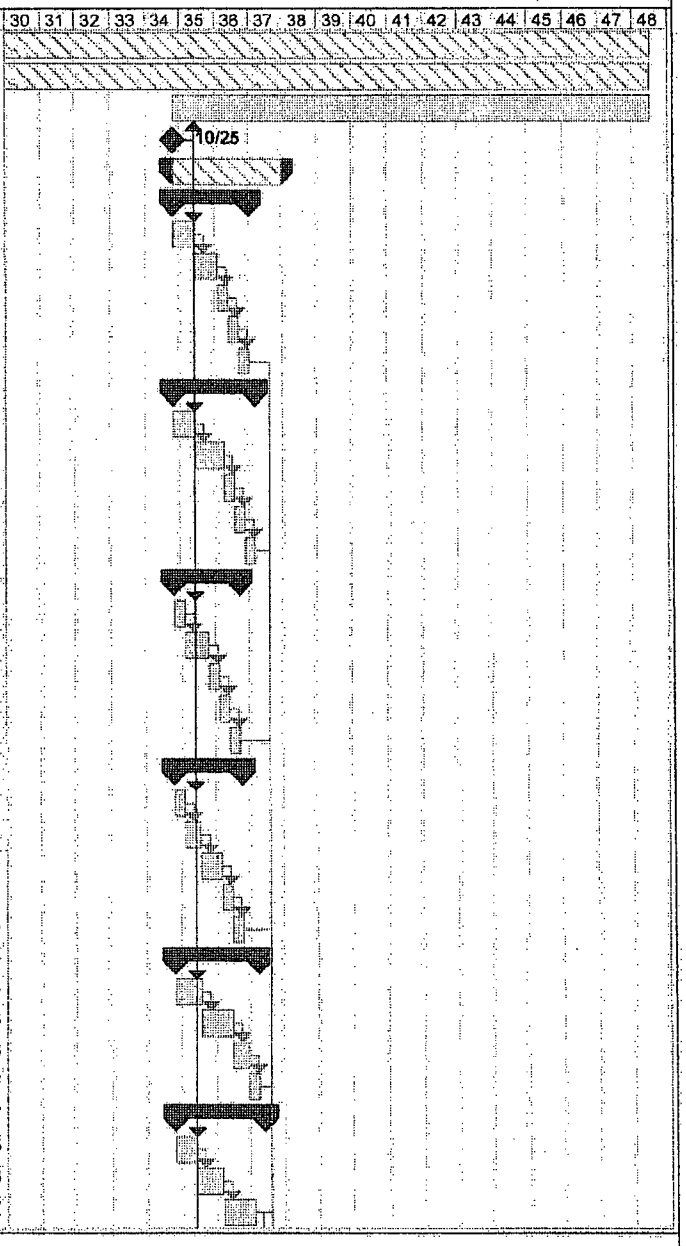
2012 D. C. Cook
Scenario 4 - SAFSTOR

ID	Task Name	Duration	Start	Finish
136	Site Characterization	80 days	Wed 1/26/37	Tue 5/19/37
137	Identification of remaining site dismantlement activities	80 days	Wed 5/20/37	Tue 9/8/37
138	Remediation Plans	40 days	Wed 9/9/37	Tue 11/3/37
139	Final Radiation Survey Plan	480 days	Wed 11/4/37	Tue 9/8/39
140	Compliance with the radiological criteria for license termination	320 days	Wed 2/9/39	Tue 5/1/40
141	Update decommissioning cost estimate	80 days	Wed 1/26/37	Tue 5/19/37
142	Supplement to the environmental report	80 days	Wed 5/2/40	Tue 8/21/40
143	Respond to NRC questions	80 days	Wed 8/22/40	Tue 12/11/40
144	Update LTP	118 days	Wed 12/12/40	Fri 5/24/41
145	End Period 6	0 days	Fri 5/24/41	Fri 5/24/41
146	**Period 6 Reactor Vessel and Internals Removal (Add 51 years to all dates)**	**825 days**	**Mon 5/27/41**	**Fri 7/22/44**
147	Remove Unit 1 reactor vessel internals and reactor vessel	240 days	Mon 5/27/41	Fri 4/25/42
148	Transfer Equipment to Unit 2	4 wks	Mon 4/28/42	Fri 5/23/42
149	Remove Unit 2 reactor vessel internals and reactor vessel	240 days	Mon 5/26/42	Fri 4/24/43
150	Remove Unit 1 steam generators	65 wks	Mon 4/28/42	Fri 7/24/43
151	Remove Unit 2 steam generators	65 wks	Mon 4/27/43	Fri 7/22/44
152	Remove Unit 1 contaminated systems	105 days	Mon 4/28/42	Fri 9/19/42
153	Remove Unit 1 clean systems	103 days	Mon 4/28/42	Wed 9/17/42
154	Decon Unit 1 reactor building	56 days	Mon 9/22/42	Mon 12/8/42
155	Remove miscellaneous structures	8 days	Mon 5/27/41	Wed 6/5/41
156	End Period 7	0 days	Fri 7/22/44	Fri 7/22/44
157	**Period 7 Building Decontamination (Add 51 years to all dates)**	**620 days**	**Mon 7/25/44**	**Fri 12/7/46**
158	Remove Spent fuel storage racks	8 wks	Mon 7/25/44	Fri 9/16/44
159	Remove Unit 2 contaminated systems	194 days	Mon 9/19/44	Thu 6/15/45
160	Remove Unit 2 clean systems	190 days	Mon 7/25/44	Fri 4/14/45
161	Decon Steam Generator Storage Building	35 days	Mon 7/25/44	Fri 9/9/44
162	Decon Unit 2 Reactor Building	56 days	Fri 6/16/45	Fri 9/1/45
163	Decon Auxiliary Building	47 days	Fri 6/16/45	Mon 8/21/45
164	Perform final radiological survey of all structures	36 wks	Mon 9/4/45	Fri 5/11/46
165	Perform final survey of the site	36 wks	Mon 4/2/46	Fri 12/7/46
166	Obtain NRC approval	0 days	Fri 12/7/46	Fri 12/7/46
167	End Period 8	0 days	Fri 12/7/46	Fri 12/7/46
168	**Period 8 Clean Removal (Add 51 years to all dates)**	**348 days**	**Mon 12/10/46**	**Wed 4/8/48**
169	Remove Unit 1 reactor building	80 days	Mon 12/10/46	Fri 3/29/47
170	Remove Unit 2 reactor building	80 days	Mon 4/1/47	Fri 7/19/47
171	Remove Auxiliary Building	132 days	Mon 7/22/47	Tue 1/21/48
172	Remove Turbine Building	166 days	Mon 7/22/47	Wed 4/7/48
173	Remove Steam Generator Storage Building	40 days	Mon 12/10/46	Fri 2/1/47
174	Remove Administration building	31 days	Mon 12/10/46	Mon 1/21/47
175	Remove Low Level Radwaste building	66 days	Mon 12/10/46	Mon 3/17/47
176	End Period 9	0 days	Wed 4/8/48	Wed 4/8/48
177	**Period 9 Restore site (Add 51 years to all dates)**	**40 days**	**Thu 4/9/48**	**Wed 6/3/48**
178	Restore site	8 wks	Thu 4/9/48	Wed 6/3/48
179	**Period 10 Continued spent fuel storage**	**260 days**	**Thu 6/4/48**	**Wed 6/2/49**
180	Dry Storage	52 wks	Thu 6/4/48	Wed 6/2/49



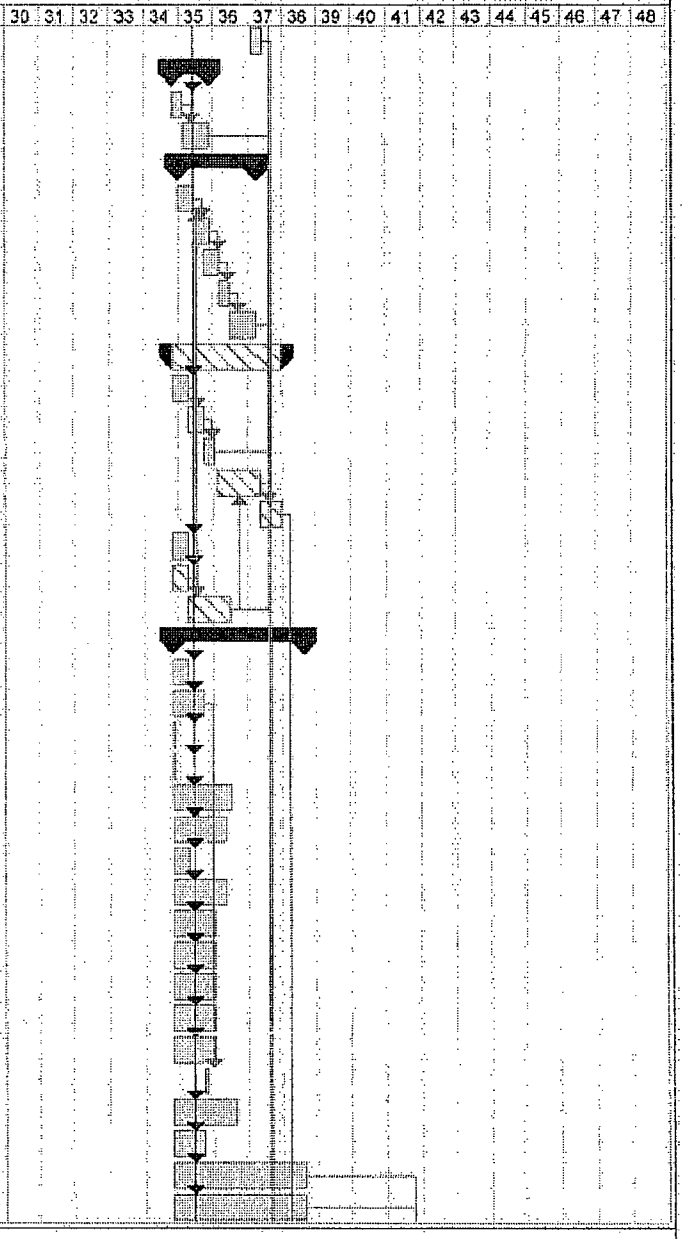
2012 D. C. Cook
Scenario 5

Task Name	Duration	Start	Finish
Dry spent fuel storage (Add 34 year to end date)	1931.25 wks	Fri 7/1/11	Mon 7/6/48
Spent Fuel Shipping (Add 34 year to end date)	1461.25 wks	Wed 7/1/20	Thu 7/2/48
Post-shutdown wet storage (Add 13 years to end date)	715 wks	Wed 10/25/34	Tue 7/7/48
Unit 1 Down	0 days	Wed 10/25/34	Wed 10/25/34
Period 1 Decommissioning Planning	**825 days**	**Wed 10/25/34**	**Tue 12/22/37**
Modify spent fuel support systems	**576 days**	**Wed 10/25/34**	**Wed 1/7/37**
Define systems modification	168 days	Wed 10/25/34	Fri 6/15/35
Design systems modification and equipment specificatons	168 days	Mon 6/18/35	Wed 2/6/36
Prepare installation procedures	80 days	Thu 2/7/36	Wed 5/28/36
Prepare test procedures	80 days	Thu 5/29/36	Wed 9/17/36
Prepare maintenance procedures	80 days	Thu 9/18/36	Wed 1/7/37
Control room relocation	**624 days**	**Wed 10/25/34**	**Mon 3/16/37**
Define control room equipment	168 days	Wed 10/25/34	Fri 6/15/35
Design control room modification and equipment specificatons	216 days	Mon 6/18/35	Mon 4/14/36
Prepare installation procedures	80 days	Tue 4/15/36	Mon 8/4/36
Prepare test procedures	80 days	Tue 8/5/36	Mon 11/24/36
Prepare maintenance procedures	80 days	Tue 11/25/36	Mon 3/16/37
Design spent fuel storage security modifications	**504 days**	**Wed 10/25/34**	**Mon 9/29/36**
Define modification	88 days	Wed 10/25/34	Fri 2/23/35
Design modification and equipment specificatons	176 days	Mon 2/26/35	Mon 10/29/35
Prepare installation procedures	80 days	Tue 10/30/35	Mon 2/18/36
Prepare test procedures	80 days	Tue 2/19/36	Mon 6/9/36
Prepare maintenance procedures	80 days	Tue 6/10/36	Mon 9/29/36
Primary system decontamination	**520 days**	**Wed 10/25/34**	**Tue 10/21/36**
Define scope	80 days	Wed 10/25/34	Tue 2/13/35
Evaluate processes	120 days	Wed 2/14/35	Tue 7/31/35
Prepare bid specifications and RFP	160 days	Wed 8/1/35	Tue 3/11/36
Qualify Contractors	80 days	Wed 3/12/36	Tue 7/1/36
Evaluate Proposals	80 days	Wed 7/2/36	Tue 10/21/36
Select Decommissioning General Contractor	**640 days**	**Wed 10/25/34**	**Tue 4/7/37**
Define scope	200 days	Wed 10/25/34	Tue 7/31/35
Prepare bid specifications and RFP	240 days	Wed 8/1/35	Tue 7/1/36
Qualify Contractors	120 days	Wed 7/2/36	Tue 12/16/36
Evaluate Proposals	80 days	Wed 12/17/36	Tue 4/7/37
U1 & U2 cold and dark site repowering	**680 days**	**Wed 10/25/34**	**Tue 6/2/37**
Define scope	160 days	Wed 10/25/34	Tue 6/5/35
Design modification and equipment specificatons	200 days	Wed 6/6/35	Tue 3/11/36
Prepare installation procedures	240 days	Wed 3/12/36	Tue 2/10/37



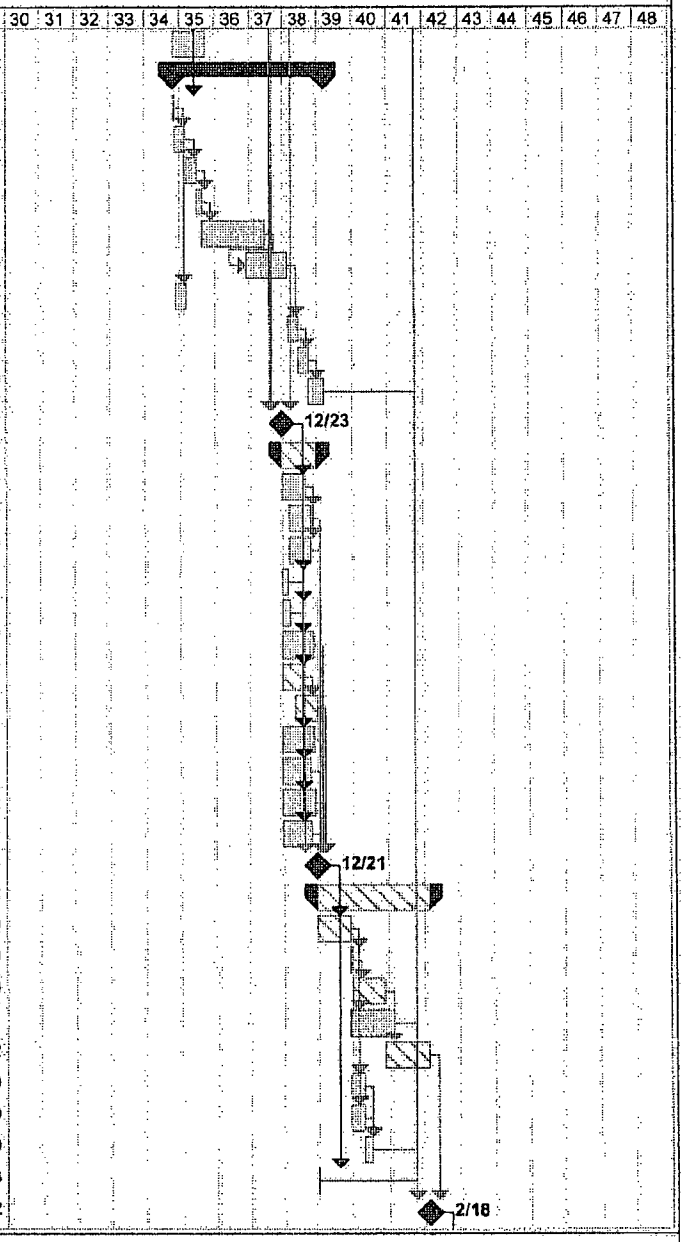
2012 D. C. Cook
Scenario 5

Task Name	Duration	Start	Finish
Prepare test procedures	80 days	Wed 2/11/37	Tue 6/2/37
Modify U1 & U2 containment access	**280 days**	**Wed 10/25/34**	**Tue 11/20/35**
Select new access location	80 days	Wed 10/25/34	Tue 2/13/35
Design access and equipment specificatons	200 days	Wed 2/14/35	Tue 11/20/35
U1 & U2 Site Characterization	**590 days**	**Wed 12/27/34**	**Tue 3/31/37**
Define scope	120 days	Wed 12/27/34	Tue 6/12/35
Prepare bid specifications and RFP	120 days	Wed 6/13/35	Tue 11/27/35
Qualify Contractors	120 days	Wed 9/19/35	Tue 3/4/36
Evaluate Proposals	80 days	Wed 3/5/36	Tue 6/24/36
Prepare procedures	200 days	Wed 6/25/36	Tue 3/31/37
ADMINISTRATIVE ACTIVITIES	**825 days**	**Wed 10/25/34**	**Tue 12/22/37**
Develop staff transition plan	120 days	Wed 10/25/34	Tue 4/10/35
Develop severance and retention policy	120 days	Wed 4/11/35	Tue 9/25/35
Prepare project administrative procedures	80 days	Wed 9/26/35	Tue 1/15/36
Develop area based decommissioning cost estimate	320 days	Wed 2/20/36	Tue 5/12/37
Develop project budget and schedule controls	160 days	Wed 5/13/37	Tue 12/22/37
Assemble plant drawings	120 days	Wed 10/25/34	Tue 4/10/35
Define end product	120 days	Wed 10/25/34	Tue 4/10/35
Develop technical approach and detailed project plans	320 days	Wed 4/11/35	Tue 7/1/36
LICENSING/PERMITTING DOCUMENTATION	**1000 days**	**Wed 10/25/34**	**Tue 8/24/38**
Insurance exemption	120 days	Wed 10/25/34	Tue 4/10/35
Prepare Post-Shutdown Decommissioning Activities Report	240 days	Wed 10/25/34	Tue 9/25/35
Prepare certification of permanent cessation of operations	24 days	Wed 10/25/34	Mon 11/27/34
Prepare certification of permanent reactor defueling	24 days	Wed 10/25/34	Mon 11/27/34
Prepare post-shutdown technical specification modifications	440 days	Wed 10/25/34	Tue 7/1/36
Update FSAR	400 days	Wed 10/25/34	Tue 5/5/36
Develop certified fuel handler program	120 days	Wed 10/25/34	Tue 4/10/35
Prepare post-shutdown emergency plan	400 days	Wed 10/25/34	Tue 5/5/36
Prepare post-shutdown QA plan	320 days	Wed 10/25/34	Tue 1/15/36
Prepare post-shutdown security plan	320 days	Wed 10/25/34	Tue 1/15/36
Prepare post-shutdown fire protection plan	320 days	Wed 10/25/34	Tue 1/15/36
Prepare post-shutdown radiation protection manual	320 days	Wed 10/25/34	Tue 1/15/36
Prepare and submit state and local permits	320 days	Wed 10/25/34	Tue 1/15/36
Respond to NRC questions on PSDAR	24 days	Wed 9/26/35	Mon 10/29/35
Prepare detailed resource loaded project schedule	480 days	Wed 10/25/34	Tue 8/26/36
Perform 50.59 unreviewed safety questions	240 days	Wed 10/25/34	Tue 9/25/35
Prepare activity specifications	1000 days	Wed 10/25/34	Tue 8/24/38
Prepare detailed work procedures	1000 days	Wed 10/25/34	Tue 8/24/38



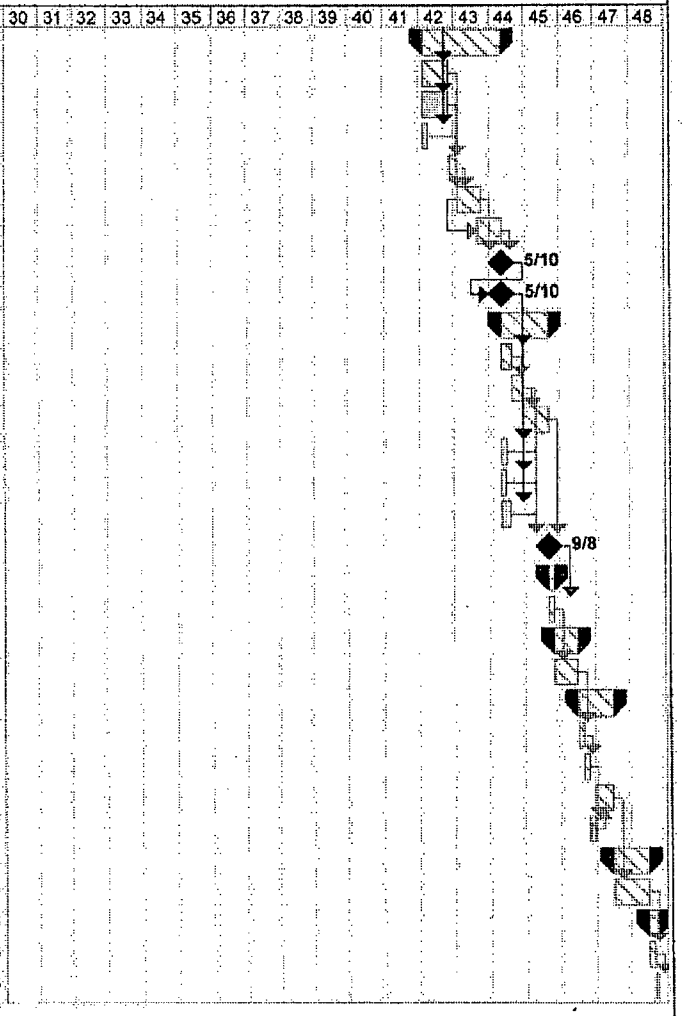
2012 D. C. Cook
Scenario 5

Task Name	Duration	Start	Finish
Select shipping casks and obtain permits	240 days	Wed 10/25/34	Tue 9/25/35
LICENSE TERMINATION PLAN	**1144 days**	**Wed 10/25/34**	**Mon 3/14/39**
General information	16 days	Wed 10/25/34	Wed 11/15/34
Site Characterization	80 days	Thu 11/16/34	Wed 3/7/35
Identification of remaining site dismantlement activities	80 days	Thu 3/8/35	Wed 6/27/35
Remediation Plans	40 days	Thu 6/28/35	Wed 8/22/35
Final Radiation Survey Plan	480 days	Thu 8/23/35	Wed 6/24/37
Compliance with the radiological criteria for license termination	320 days	Thu 11/27/36	Wed 2/17/38
Update decommissioning cost estimate	80 days	Thu 11/16/34	Wed 3/7/35
Supplement to the environmental report	80 days	Thu 2/18/38	Wed 6/9/38
Respond to NRC questions	80 days	Thu 6/10/38	Wed 9/29/38
Update LTP	116 days	Thu 9/30/38	Mon 3/14/39
Unit 2 Down	0 days	Wed 12/23/37	Wed 12/23/37
Period 2 Post-Shutdown Activities	**260 days**	**Wed 12/23/37**	**Tue 12/21/38**
Modify Spent Fuel Cooling System	173 days	Wed 12/23/37	Fri 8/20/38
Modify control room	173 days	Mon 3/1/38	Wed 10/27/38
Modify security system	173 days	Mon 3/1/38	Wed 10/27/38
Primary System Decon	40 days	Wed 12/23/37	Tue 2/16/38
Flush & Drain Systems	60 days	Wed 12/23/37	Tue 3/16/38
Implement cold & dark	240 days	Wed 12/23/37	Tue 11/23/38
Modify U1 Containment Access	160 days	Wed 12/23/37	Tue 8/3/38
Modify U2 Containment Access	160 days	Wed 5/12/38	Tue 12/21/38
Historical Site Assessment	240 days	Wed 12/23/37	Tue 11/23/38
Vessel and internals activation analysis	215 days	Wed 12/23/37	Tue 10/19/38
Characterization survey	250 days	Wed 12/23/37	Tue 12/7/38
Test special equipment and training	215 days	Wed 12/23/37	Tue 10/19/38
End Period 2	0 days	Tue 12/21/38	Tue 12/21/38
Period 3 Reactor Vessel and Internals Removal	**825 days**	**Wed 12/22/38**	**Tue 2/18/42**
Remove Unit 1 reactor vessel internals and reactor vessel	240 days	Wed 12/22/38	Tue 11/22/39
Transfer Equipment to Unit 2	4 wks	Wed 11/23/39	Tue 12/20/39
Remove Unit 2 reactor vessel internals and reactor vessel	240 days	Wed 12/21/39	Tue 11/20/40
Remove Unit 1 steam generators	65 wks	Wed 11/23/39	Tue 2/19/41
Remove Unit 2 steam generators	65 wks	Wed 11/21/40	Tue 2/18/42
Remove Unit 1 contaminated systems	105 days	Wed 11/23/39	Tue 4/17/40
Remove Unit 1 clean systems	103 days	Wed 11/23/39	Fri 4/13/40
Decon Unit 1 reactor building	56 days	Wed 4/18/40	Wed 7/4/40
Remove miscellaneous structures	8 days	Wed 12/22/38	Fri 12/31/38
End Period 3	0 days	Tue 2/18/42	Tue 2/18/42



2012 D. C. Cook
Scenario 5

Task Name	Duration	Start	Finish
Period 4 Building Decontamination	**680 days**	**Wed 2/19/42**	**Tue 5/10/44**
Remove Unit 2 contaminated systems	194 days	Wed 2/19/42	Mon 11/17/42
Remove Unit 2 clean systems	190 days	Wed 2/19/42	Tue 11/11/42
Decon Steam Generator Storage Building	35 days	Wed 2/19/42	Tue 4/8/42
Decon Unit 2 Reactor Building	56 days	Tue 11/18/42	Tue 2/3/43
Perform final radiological survey of all structures	36 wks	Wed 2/4/43	Tue 10/13/43
Perform final survey of the site	36 wks	Wed 9/2/43	Tue 5/10/44
Obtain NRC approval	0 days	Tue 5/10/44	Tue 5/10/44
End Period 4	0 days	Tue 5/10/44	Tue 5/10/44
Period 5 Clean Removal	**348 days**	**Wed 5/11/44**	**Fri 9/8/45**
Remove Unit 1 reactor building	80 days	Wed 5/11/44	Tue 8/30/44
Remove Unit 2 reactor building	80 days	Wed 8/31/44	Tue 12/20/44
Remove Turbine Building	188 days	Wed 12/21/44	Fri 9/8/45
Remove Steam Generator Storage Building	40 days	Wed 5/11/44	Tue 7/5/44
Remove Administration building	31 days	Wed 5/11/44	Wed 6/22/44
Remove Low Level Radwaste building	66 days	Wed 5/11/44	Wed 8/10/44
End Period 5	0 days	Fri 9/8/45	Fri 9/8/45
Period 6 Restore Site	**40 days**	**Mon 9/11/45**	**Fri 11/3/45**
Restore site	8 wks	Mon 9/11/45	Fri 11/3/45
Period 7 Wet Storage (Add 15 years to end date)	**175 days**	**Mon 11/6/45**	**Fri 7/6/46**
Wet Storage	35 wks	Mon 11/6/45	Fri 7/6/46
Period 8 Balance of Decontamination (Add 15 years to all dates)	**259 days**	**Mon 7/9/46**	**Thu 7/4/47**
Remove Spent fuel storage racks	8 wks	Mon 7/9/46	Fri 8/31/46
Decon Auxiliary Building	47 days	Mon 9/3/46	Tue 11/6/46
Remove Auxiliary Building	132 days	Wed 1/2/47	Thu 7/4/47
Final Survey	8 wks	Wed 11/7/46	Tue 1/1/47
Period 9 Dry Storage (Add 15 years to start date and 34 to end date)	**260 days**	**Fri 7/5/47**	**Thu 7/2/48**
Dry Storage	52 wks	Fri 7/5/47	Thu 7/2/48
Period 10 ISFSI Removal	**60 days**	**Fri 7/3/48**	**Thu 9/24/48**
Decon and remove ISFSI	8 wks	Fri 7/3/48	Thu 8/27/48
Restore site	4 wks	Fri 8/28/48	Thu 9/24/48



APPENDIX B

COST TABLES

2012 D.C. Cook
Scenario 1
DECON and Permanent On-Site Dry Storage

	Type		Staff Labor $	Craft Labor $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	Subtotal without Contingency, $	Contingency, $	Total with Contingency, $	Staff Manhours	Clean Craft Manhours	Contaminated Craft Manhours
PERIOD 1 - U1 & U2 DECOMMISSIONING PLANNING COST:																	
		SPENT FUEL ACTIVITIES															
		Modify spent fuel support systems															
1	A 50.54(bb)	Define systems modification	$62,772									$62,772	$9,400	$72,172	608		
1	A 50.54(bb)	Design systems modification and equipment specifications	$147,993									$147,993	$22,200	$169,993	1,598		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
		Control room relocation															
1	A 50.54(bb)	Define control room equipment	$62,772									$62,772	$9,400	$72,172	608		
1	A 50.54(bb)	Design control room modification and equipment specifications	$170,982									$170,982	$26,800	$205,782	1,856		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
		Design spent fuel storage security modifications															
1	A 50.54(bb)	Define modification	$28,405									$28,405	$4,400	$33,805	288		
1	A 50.54(bb)	Design modification and equipment specifications	$102,741									$102,741	$15,400	$118,141	1,018		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	ISFSI Pad Construction		$25,102,477								$25,102,477	$5,746,600	$30,849,077	192		
		SUBTOTAL - SPENT FUEL ACTIVITIES	$749,487	$25,102,477								$25,851,964	$5,859,400	$31,711,364	7,804		
		SPENT FUEL PERIOD DEPENDENT															
1	PD 50.54(bb)	Utility Staff															
1	PD 50.54(bb)	Security															
1	PD 50.54(bb)	Insurance									$2,183,119	$2,183,119	$327,500	$2,510,619			
1	PD 50.54(bb)	O & M Budget Items															
1	PD 50.54(bb)	Permits & Fees															
1	PD 50.54(bb)	Waste Transfer and Loading															
1	PD 50.54(bb)	Energy															
1	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies															
1	PD 50.54(bb)	Small Tools			$251,025							$251,025	$62,800	$313,825			
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT			$251,025						$2,183,119	$2,434,143	$390,300	$2,824,443			
		DECOMMISSIONING ACTIVITIES															
		Primary system decontamination															
1	A 50.75(c)	Define scope	$41,838									$41,838	$6,200	$47,838	328		
1	A 50.75(c)	Evaluate processes	$53,024									$53,024	$8,000	$61,024	448		
1	A 50.75(c)	Prepare bid specifications and RFP	$52,989									$52,989	$7,900	$60,788	512		
1	A 50.75(c)	Qualify Contractors	$14,104									$14,104	$2,100	$16,204	112		
1	A 50.75(c)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	248		
		Select Decommissioning General Contractor															
1	A 50.75(c)	Define scope	$79,863									$79,863	$11,900	$91,863	736		
1	A 50.75(c)	Prepare bid specifications and RFP	$84,013									$84,013	$12,600	$96,613	776		
1	A 50.75(c)	Qualify Contractors	$21,646									$21,646	$3,200	$24,846	176		
1	A 50.75(c)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	248		
		U1 & U2 cold and dark site reconverting															
1	A 50.75(c)	Define scope	$88,277									$88,277	$10,200	$78,477	616		
1	A 50.75(c)	Design modification and equipment specifications	$150,932									$150,932	$22,600	$173,532	1,560		
1	A 50.75(c)	Prepare installation procedures	$212,724									$212,724	$31,900	$244,624	2,080		
1	A 50.75(c)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
		Modify U1 & U2 containment access															
1	A 50.75(c)	Select new access location	$30,251									$30,251	$4,500	$34,751	208		
1	A 50.75(c)	Design access and equipment specifications	$139,533									$139,533	$20,000	$159,533	1,350		
		U1 & U2 Site Characterization															
1	A 50.75(c)	Define scope	$47,781									$47,781	$7,200	$54,981	408		
1	A 50.75(c)	Prepare bid specifications and RFP	$53,465									$53,465	$8,000	$61,465	456		
1	A 50.75(c)	Qualify Contractors	$21,646									$21,646	$3,200	$24,846	176		
1	A 50.75(c)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	248		
1	A 50.75(c)	Prepare procedures	$133,000									$133,000	$19,900	$152,900	1,256		
		ADMINISTRATIVE ACTIVITIES															
1	A 50.75(c)	Develop staff transition plan	$41,532									$41,532	$6,200	$47,732	352		
1	A 50.75(c)	Develop severance and retention policy	$41,532									$41,532	$6,200	$47,732	352		
1	A 50.75(c)	Prepare project administrative procedures	$45,028									$45,028	$6,800	$51,828	488		
1	A 50.75(c)	Develop area based decontamination cost estimate	$209,038									$209,038	$31,400	$240,438	2,240		
1	A 50.75(c)	Develop project budget and schedule controls	$60,924									$60,924	$9,100	$70,024	648		
1	A 50.75(c)	Assemble plant drawings	$24,307									$24,307	$3,600	$27,907	288		
1	A 50.75(c)	Define end product	$36,216									$36,216	$5,400	$41,616	280		
1	A 50.75(c)	Develop technical approach and detailed project plans	$223,854									$223,854	$33,600	$257,454	2,440		

	Type		Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
		LICENSING/PERMITTING DOCUMENTATION															
1	A 50.75(c)	Insurance exemption	$46,144									$46,144	$6,900	$53,044	376		
1	A 50.75(c)	Prepare Post-Shutdown Decommissioning Activities Report	$134,589									$134,589	$20,200	$154,789	1,400		
1	A 50.75(c)	Prepare certification of permanent cessation of operations	$6,143									$6,143	$900	$7,043	40		
1	A 50.75(c)	Prepare certification of permanent reactor defueling	$6,143									$6,143	$900	$7,043	40		
1	A 50.75(c)	Prepare post-shutdown technical specification modifications	$335,249									$335,249	$50,300	$385,549	3,600		
1	A 50.75(c)	Update FSAR	$311,424									$311,424	$46,700	$358,124	3,360		
1	A 50.75(c)	Develop certified fuel handler program	$36,166									$36,166	$5,400	$41,566	336		
1	A 50.75(c)	Prepare post-shutdown emergency plan	$162,778									$162,778	$24,400	$187,178	1,480		
1	A 50.75(c)	Prepare post-shutdown QA plan	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare post-shutdown security plan	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare post-shutdown fire protection plan	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare post-shutdown radiation protection manual	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare and submit state and local permits	$95,422									$95,422	$14,300	$109,722	960		
1	A 50.75(c)	Respond to NRC questions on PSDAR	$6,143									$6,143	$900	$7,043	40		
1	A 50.75(c)	Prepare detailed resource loaded project schedule	$258,157									$258,157	$36,400	$294,557	2,480		
1	A 50.75(c)	Perform 50.59 unreviewed safety questions	$92,271									$92,271	$13,800	$106,071	736		
1	A 50.75(c)	Prepare activity specifications	$1,700,771									$1,700,771	$255,100	$1,955,871	18,080		
1	A 50.75(c)	Prepare detailed work procedures	$1,604,383									$1,604,383	$240,700	$1,845,083	16,080		
1	A 50.75(c)	Select shipping casks and obtain permits	$24,032									$24,032	$3,600	$27,632	240		
		LICENSE TERMINATION PLAN															
1	A 50.75(c)	General Information	$1,350									$1,350	$200	$1,550	16		
1	A 50.75(c)	Site Characterization	$33,967									$33,967	$5,100	$39,067	336		
1	A 50.75(c)	Identification of remaining site dismantlement activities	$33,967									$33,967	$5,100	$39,067	336		
1	A 50.75(c)	Remediation Plans	$17,880									$17,880	$2,700	$20,580	176		
1	A 50.75(c)	Final Radiation Survey Plan	$338,813									$338,813	$50,800	$389,613	3,620		
1	A 50.75(c)	Compliance with the radiological criteria for license termination	$227,508									$227,508	$34,100	$261,608	2,640		
1	A 50.75(c)	Update decommissioning cost estimate	$55,404									$55,404	$8,300	$63,704	596		
1	A 50.75(c)	Supplement to the environmental report	$55,404									$55,404	$8,300	$63,704	596		
1	A 50.75(c)	Respond to NRC questions	$25,693									$25,693	$3,900	$29,593	200		
1	A 50.75(c)	Update LTP	$51,042									$51,042	$7,700	$58,742	536		
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$8,089,742									$8,089,742	$1,213,000	$9,302,742	81,340		
		DECOMMISSIONING PERIOD DEPENDENT															
1	PD 50.75(c)	Utility Staff	$4,429,012									$4,429,012	$664,400	$5,093,412	75,675		
1	PD 50.75(c)	DOC Staff	$4,493,043									$4,493,043	$674,100	$5,167,143	56,160		
1	PD 50.75(c)	Security	$682,660									$682,660	$102,400	$785,060	23,001		
1	PD 50.75(c)	HP Supplies			$287,905							$287,905	$72,000	$359,905			
1	PD 50.75(c)	Equipment			$152,797							$152,797	$38,200	$190,997			
1	PD 50.75(c)	Unit 1 Insurance									$844,076	$844,076	$126,600	$970,676			
1	PD 50.75(c)	Unit 2 Insurance															
1	PD 50.75(c)	O & M Budget Items			$12,095,435							$12,095,435	$3,023,900	$15,119,335			
1	PD 50.75(c)	Permits & Fees									$1,506,191	$1,506,191	$226,200	$1,732,391			
1	PD 50.75(c)	Waste Transfer and Loading															
1	PD 50.75(c)	Energy								$1,292,386		$1,292,386	$193,900	$1,486,286			
1	PD 50.75(c)	Severance	$15,571,925									$15,571,925	$2,335,800	$17,907,725			
1	PD 50.75(c)	Small Tools															
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$25,177,442		$12,536,137					$1,292,386	$2,352,267	$41,358,232	$7,457,500	$48,815,732	154,736		
		TOTAL PERIOD 1 - U1 & U2 DECOMMISSIONING PLANNING COST:	$34,016,070	$25,102,477	$17,787,183					$1,292,386	$4,536,385	$77,754,080	$14,920,200	$92,654,280	243,980		
		ACTIVITY															
		UNIT 1 - PERIOD 1 COSTS															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Total 10 CFR 50.75(c):	$8,089,742									$8,089,742	$1,213,000	$9,302,742	81,340		
		Total 10 CFR 50.54(bb):	$748,487	$25,102,477								$25,851,964	$5,859,400	$31,711,364	7,904		
		PERIOD DEPENDENT															
		UNIT 1 - PERIOD 1 COSTS															
		Unit 1 Subtotal 10 CFR 50.75(c):	$25,177,442		$12,536,137					$1,292,386	$2,352,267	$41,358,232	$7,457,500	$48,815,732	154,736		
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															

Type			Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	w/out Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
		Total 10 CFR 50.75(c):															
		Total 10 CFR 50.54(bb):			$261,026						$2,183,118	$2,434,143	$390,300	$2,824,443			
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$33,297,183		$12,630,137					$1,202,384	$2,382,207	$40,447,973	$8,070,600	$60,110,473	236,076		
		Total 10 CFR 50.54(bb):	$749,487	$25,102,477	$261,026						$2,183,118	$28,286,107	$6,249,700	$34,535,807	7,904		
PERIOD 2 - POST-SHUTDOWN ACTIVITIES COSTS:																	
		SPENT FUEL ACTIVITIES															
2	A 50.54(bb)	Modify Spent Fuel Cooling System		$634,094	$1,165,000							$1,799,094	$436,400	$2,235,494		9,360	
2	A 50.54(bb)	Modify control room		$582,042	$800,000							$1,382,042	$333,200	$1,715,242		8,360	
2	A 50.54(bb)	Modify security system		$456,755	$505,000							$960,755	$235,600	$1,246,355		7,280	
2	A 50.54(bb)	Purchase ISFSI casks			$115,785,000							$115,785,000	$28,946,300	$144,731,300		7,280	
		SUBTOTAL - SPENT FUEL ACTIVITIES		$1,671,891	$118,275,000							$119,946,891	$28,951,600	$149,898,391		33,280	
		SPENT FUEL PERIOD DEPENDENT															
2	PD 50.54(bb)	Utility Staff	$4,098,995									$4,098,995	$614,600	$4,713,795	68,406		
2	PD 50.54(bb)	Security	$1,616,274									$1,616,274	$242,400	$1,858,674	43,531		
2	PD 50.54(bb)	Insurance									$1,177,898	$1,177,898	$176,700	$1,354,598			
2	PD 50.54(bb)	O & M Budget Items															
2	PD 50.54(bb)	Permits & Fees									$807,106	$807,100	$121,100	$928,206			
2	PD 50.54(bb)	Waste Transfer and Loading															
2	PD 50.54(bb)	Energy								$249,904		$249,904	$37,500	$287,404			
2	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$448,472							$448,472	$112,100	$560,572			
2	PD 50.54(bb)	Small Tools			$16,719							$16,719	$4,200	$20,919			
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$5,715,269		$465,191					$249,904	$1,985,004	$8,415,367	$1,308,830	$9,724,197	111,937		
		DECOMMISSIONING ACTIVITIES															
2	A 50.75(c)	Primary System Decon Unit 1 & 2		$8,545,040	$1,417,080				$8,966,640			$18,929,760	$5,688,500	$24,618,260			
2	A 50.75(c)	Flush & Drain Systems (PERFORMED BY UTILITY STAFF)															
2	A 50.75(c)	Implement cold & dark		$761,035	$1,600,000							$2,361,035	$574,200	$2,935,235		11,620	
2	A 50.75(c)	Modify U1 Containment Access		$346,437	$525,000							$871,437	$210,600	$1,082,037		6,760	
2	A 50.75(c)	Modify U2 Containment Access		$346,437	$525,000							$871,437	$210,600	$1,082,037		6,760	
2	A 50.75(c)	Historical Site Assessment	$375,882									$375,882	$56,400	$432,282	4,880		
2	A 50.75(c)	Vessel and Internals activation analysis	$109,336									$109,336	$16,400	$125,736	640		
2	A 50.75(c)	Characterization survey	$789,088									$789,088	$118,400	$907,488	12,880		
2	A 50.75(c)	Test special equipment and training		$939,723								$939,723	$215,100	$1,154,823		13,440	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$1,274,306	$10,938,672	$4,067,080				$8,966,640			$25,247,697	$7,088,200	$32,335,897	18,400	38,480	
		DECOMMISSIONING PERIOD DEPENDENT															
2	PD 50.75(c)	Utility Staff	$18,243,380									$18,243,380	$2,736,500	$20,979,880	300,870		
2	PD 50.75(c)	DOC Staff	$11,702,745									$11,702,745	$1,755,400	$13,458,145	187,540		
2	PD 50.75(c)	Security	$3,206,454									$3,206,454	$481,000	$3,687,454	124,374		
2	PD 50.75(c)	HP Supplies			$758,560							$758,560	$189,600	$948,160			
2	PD 50.75(c)	Equipment			$1,019,956							$1,019,956	$255,000	$1,274,956			
2	PD 50.75(c)	Unit 1 Insurance									$266,242	$266,242	$40,000	$306,142			
2	PD 50.75(c)	Unit 2 Insurance									$266,242	$266,242	$40,000	$306,142			
2	PD 50.75(c)	O & M Budget Items			$2,885,773							$2,885,773	$721,400	$3,607,173			
2	PD 50.75(c)	Permits & Fees									$2,075,053	$2,075,053	$311,300	$2,386,353			
2	PD 50.75(c)	Waste Transfer and Loading															
2	PD 50.75(c)	Energy								$1,992,469		$1,992,469	$298,900	$2,291,369			
2	PD 50.75(c)	Severance	$23,200,806									$23,200,806	$3,480,100	$26,680,906			
2	PD 50.75(c)	Small Tools			$218,793							$218,793	$54,700	$273,493			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$56,353,384		$4,883,083					$1,992,469	$2,607,538	$65,836,454	$10,363,700	$76,200,154	582,484		
		TOTAL PERIOD 2 - POST-SHUTDOWN ACTIVITIES COSTS:	$63,342,959	$12,611,063	$127,690,354				$8,966,640	$2,242,372	$4,592,542	$219,446,409	$48,712,200	$268,158,609	712,821	68,760	
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):		$4,619,487	$1,233,540				$4,483,320			$10,336,317	$3,063,850	$13,390,167		6,760	
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):		$4,619,487	$1,233,540				$4,483,320			$10,336,317	$3,063,850	$13,390,167		6,760	
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal - 10 CFR 50.75(c):	$1,274,306	$1,700,787	$1,600,000							$4,575,092	$980,400	$5,555,492	18,400	24,960	
		Common Subtotal - 10 CFR 50.54(bb):		$1,671,891	$118,275,000							$119,946,891	$29,951,600	$149,898,391		33,280	

Type			Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours	
		PERIOD DEPENDENT																
		UNIT 1																
		Unit 1 Subtotal 10 CFR 50.75(c):																
		Unit 1 Subtotal 10 CFR 50.54(bb):																
		UNIT 2																
		Unit 2 Subtotal 10 CFR 50.75(c):																
		Unit 2 Subtotal 10 CFR 50.54(bb):																
		Common																
		Common Subtotal - 10 CFR 50.75(c):	$56,353,364		$4,353,093					$1,232,469	$2,607,538	$66,836,454	$10,363,700	$76,200,164	583,484			
		Common Subtotal - 10 CFR 50.54(bb):	$5,718,299		$465,191					$249,304	$1,985,804	$8,416,367	$1,306,800	$9,724,167	111,537			
		Unit 1, Unit 2 & Common																
		Total 10 CFR 50.75(c):	$57,627,899	$10,939,672	$8,850,163				$8,968,840	$1,392,469	$2,607,538	$91,084,151	$17,401,609	$106,986,061	600,884	36,469		
		Total 10 CFR 50.54(bb):	$5,718,299	$1,471,881	$118,740,191					$249,304	$1,985,804	$128,342,318	$31,260,399	$159,622,866	111,837	33,283		
PERIOD 3 VESSEL AND INTERNALS REMOVAL COSTS:																		
		SPENT FUEL ACTIVITIES																
3	A 50.54(bb)	Purchase SFSI Casks			$115,785,000							$115,785,000	$28,946,300	$144,731,300				
		SUBTOTAL - SPENT FUEL ACTIVITIES			$115,785,000							$115,785,000	$28,946,300	$144,731,300				
		SPENT FUEL PERIOD DEPENDENT																
3	PD 50.54(bb)	Utility Staff	$12,995,166									$12,995,166	$1,949,300	$14,944,466	216,866			
3	PD 50.54(bb)	Security	$5,124,120									$5,124,120	$768,600	$5,892,720	184,010			
3	PD 50.54(bb)	Insurance									$3,734,324	$3,734,324	$560,100	$4,294,424				
3	PD 50.54(bb)	O & M Budget Items																
3	PD 50.54(bb)	Permits & Fees									$2,558,793	$2,558,793	$383,800	$2,942,593				
3	PD 50.54(bb)	Waste Transfer and Loading																
3	PD 50.54(bb)	Energy								$510,656		$513,656	$77,000	$590,656				
3	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$1,421,806							$1,421,806	$355,500	$1,777,306				
3	PD 50.54(bb)	Small Tools																
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$18,119,286		$1,421,806					$513,656	$6,293,116	$26,347,864	$4,094,300	$30,442,164	400,876			
		DECOMMISSIONING ACTIVITIES																
		UNIT 1																
3	A 50.75(c)	Install all reactor operating floor contamination control envelopes (CCEs), support structures, rigging, internals work platforms and process equipment (BY UTILITY STAFF)																Utility Staff
3	A 50.75(c)	Finalize Residual Radiation Inventory (WITH SITE CHARACTERIZATION)																
3	A 50.75(c)	Finalize Internals and Vessel Segmenting Details (WITH ACTIVATION ANALYSIS)																
3	A 50.75(c)	Remove, pack, ship and bury Unit 1 Pressurizer		$1,016,045		$600	$72,554		$659,360			$1,990,560	$587,500	$2,578,060			78,775	
3	A 50.75(c)	Decon, remove, package, ship and bury Unit 1 steam generators		$4,260,772	$1,397,587	$12,600	$639,257		$12,054,588			$18,364,804	$5,876,600	$24,280,094			79,163	
3	A 50.75(c)	Remove Unit 1 equipment hatch closure (BY UTILITY STAFF)																Utility Staff
3	A 50.75(c)	Remove Unit 1 control rod drive and reactor cavity missile shields (BY UTILITY STAFF)																Utility Staff
3	A 50.75(c)	Remove Unit 1 CRD mechanisms and cables, air ducts, and reactor vessel head (BY UTIL)																Utility Staff
3	A 50.75(c)	Remove, segment, package and bury Unit 1 vessel & vessel head insulation		$174,720					$350,040			$524,760	$171,800	$696,560				
3	A 50.75(c)	Prepare Unit 1 vessel head for shipment as its own container (WITH VESSEL REMOVAL)																
3	A 50.75(c)	Decontaminate and clean up Unit 1 plant areas (BY UTILITY STAFF)																Utility Staff
3	A 50.75(c)	Process liquid and solid radioactive wastes (BY UTILITY STAFF)																Utility Staff
3	A 50.75(c)	Decon, remove, package, ship and dispose of Unit 1 contaminated systems		$8,806,752	$482,690	$98,565	$431,286		$8,178,152			$18,000,067	$5,326,700	$23,327,767			180,371	
3	A Greenfield	Remove, package, ship and dispose of Unit 1 clean systems		$9,999,329	$620,368		$159,316	$818,944				$11,094,986	$2,443,800	$13,538,386		102,318		
3	A 50.75(c)	Install Unit 1 water cleanup system in fuel transfer canal (BY UTILITY STAFF)																Vessel Removal
3	A 50.75(c)	Segment, package and ship Unit 1 internals as radioactive waste		$2,561,654	$502,830	$51,300	$4,574,800		$33,431,981			$41,182,335	$14,310,500	$55,492,835			47,360	
3	A 50.75(c)	Decontaminate internals work platform and store (BY UTILITY STAFF)																Vessel Removal
3	A 50.75(c)	Install Unit 1 vessel support structure (WITH VESSEL REMOVAL)																Vessel Removal
3	A 50.75(c)	Segment and process Unit 1 reactor vessel and associated equipment as LLW		$1,352,922	$141,461	$24,500	$2,096,283		$14,627,150			$18,184,413	$6,298,300	$24,482,713			24,620	
3	A 50.75(c)	Decontaminate reactor vessel platform and store																Vessel Removal
3	A 50.75(c)	Decontaminate Unit 1 reactor building		$4,415,224	$558,223	$418,436	$7,072,602		$13,922,464			$21,980,152	$7,023,800	$29,003,952			80,879	
		UNIT 2																
3	A 50.75(c)	Finalize Residual Radiation Inventory (WITH SITE CHARACTERIZATION)																
3	A 50.75(c)	Finalize Internals and Vessel Segmenting Details (WITH ACTIVATION ANALYSIS)																
3	A 50.75(c)	Revise Integrated Work Sequence and Schedule	$51,231									$51,231	$7,700	$58,931				
3	A 50.75(c)	Transfer all reactor operating floor CCEs support structures, rigging, internals work platforms and process equipment to position and install (BY UTILITY STAFF)																Utility Staff
3	A 50.75(c)	Remove Unit 2 equipment hatch closure (BY UTILITY STAFF)																Utility Staff
3	A 50.75(c)	Remove Unit 2 CRD missile and reactor cavity missile shields (BY UTILITY STAFF)																Utility Staff
3	A 50.75(c)	Remove Unit 2 CRD mechanisms and cables, air ducts, and reactor vessel head (BY UTIL)																Utility Staff
3	A 50.75(c)	Remove, segment, package and bury Unit 2 vessel & vessel head insulation		$174,720					$350,040			$524,760	$171,800	$696,560				

2012 D. C. Cook
Scenario 1
DECON and Permanent On-Site Dry Storage

	Type		Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours	
3	A 50.75(c)	Prepare Unit 2 vessel head for shipment as its own container (WITH VESSEL REMOVAL)																
3	A 50.75(c)	Decontaminate and clean up Unit 2 plant areas (BY UTILITY STAFF)																Utility Staff
3	A 50.75(c)	Process liquid and solid radioactive wastes (BY UTILITY STAFF)																Utility Staff
3	A 50.75(c)	Install Unit 2 water cleanup system in fuel transfer canal (BY UTILITY STAFF)																Vessel Removal
3	A 50.75(c)	Segment, package and ship Unit 2 internals as radioactive waste		$2,591,854	$202,630	$61,000	$4,574,890		$33,431,861			$41,182,335	$14,310,500	$55,492,835			47,360	
3	A 50.75(c)	Decontaminate internals work platform and process as LLW (BY UTILITY STAFF)																Vessel Removal
3	A 50.75(c)	Install Unit 2 vessel support structure (WITH VESSEL REMOVAL)																Vessel Removal
3	A 50.75(c)	Segment and process Unit 2 reactor vessel and miscellaneous equipment as LLW		$1,352,572	$141,451	$74,000	$2,039,782		$14,827,158			$18,184,413	$6,258,300	$24,442,713			24,820	
3	A 50.75(c)	Decon reactor vessel cutting equipment and work platform; package and process as LLW (I																Vessel Removal
3	A 50.75(c)	Decon, remove, package, ship and bury Unit 2 steam generators		$4,280,772	$1,082,887	$12,800	$833,267		$12,054,868			$18,284,094	$5,976,600	$24,260,694			76,183	
3	A 50.75(c)	Remove, pack, ship and bury Unit 2 Pressurizer		$1,018,045		$400	$72,564		$808,361			$1,900,590	$557,500	$2,578,090			18,775	
3	A 50.75(c)	Decontaminate non-essential structures		$156,242	$68,643	$10,400	$82,728		$121,066			$399,272	$108,900	$508,122			2,242	
3	A Greenfield	Remove non-essential structures		$111,101	$62,947		$10,887	$63,241				$226,176	$44,900	$273,076		1,694		
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$51,231	$42,022,487	$8,081,808	$712,190	$18,376,547	$878,885	$144,844,980			$212,087,917	$69,644,200	$281,732,017		193,911	603,323	
		DECOMMISSIONING PERIOD DEPENDENT																
3	PD 50.75(c)	Utility Staff	$40,956,935									$38,956,935	$5,392,400	$45,349,335	580,890			
3	PD 50.75(c)	DGC Staff	$44,380,951									$44,380,951	$6,642,100	$50,923,051	554,888			
3	PD 50.75(c)	Security	$5,292,258									$5,292,258	$793,800	$6,088,058	164,010			
3	PD 50.75(c)	HP Supplies			$8,005,157							$8,005,157	$2,001,300	$10,006,457				
3	PD 50.75(c)	Equipment			$4,779,061							$4,779,061	$1,194,800	$5,973,861				
3	PD 50.75(c)	Unit 1 Insurance									$844,078	$844,078	$126,600	$970,678				
3	PD 50.75(c)	Unit 2 Insurance									$844,076	$844,076	$126,600	$970,676				
3	PD 50.75(c)	O & M Budget Items			$2,077,376							$2,077,376	$519,300	$2,596,676				
3	PD 50.75(c)	Permits & Fees									$6,157,842	$6,157,842	$923,700	$7,081,542				
3	PD 50.75(c)	Waste Transfer and Loading		$8,435,653								$8,435,653	$1,031,100	$10,966,753			164,323	
3	PD 50.75(c)	Energy								$5,640,807		$5,640,807	$846,100	$6,486,907				
3	PD 50.75(c)	Severance	$2,177,995									$2,177,995	$326,700	$2,504,695				
3	PD 50.75(c)	Small Tools			$1,009,163							$1,009,163	$252,300	$1,261,463				
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$91,707,140	$8,435,653	$15,870,757					$5,640,807	$7,846,993	$129,600,360	$21,677,800	$151,178,160	1,299,787		164,323	
		TOTAL PERIOD 3 VESSEL AND INTERNALS REMOVAL COSTS:	$108,577,597	$50,459,141	$136,186,268	$720,990	$16,378,547	$878,885	$144,944,980	$6,154,483	$14,136,110	$483,721,040	$124,982,600	$608,703,640	1,800,865	193,911	767,645	
		ACTIVITY																
		UNIT 1																
		Unit 1 Subtotal 10 CFR 50.75(c):		$22,748,887	$2,722,960	$581,684	$10,823,805		$83,463,788			$120,148,411	$39,894,200	$159,842,411			431,184	
		Unit 1 Subtotal 10 CFR 50.54(bb):																
		Unit 1 Subtotal Greenfield:		$9,599,326	$320,355		$169,218	$816,644				$11,024,686	$2,443,800	$13,638,386		192,210		
		UNIT 2																
		Unit 2 Subtotal 10 CFR 50.75(c):	$51,231	$19,427,811	$1,736,747	$118,800	$7,519,813		$61,363,120			$80,217,423	$27,352,400	$107,569,823			169,817	
		Unit 2 Subtotal 10 CFR 50.54(bb):																
		Unit 2 Subtotal Greenfield:																
		Common																
		Total 10 CFR 50.75(c):		$156,242	$68,643	$10,400	$82,728		$121,066			$399,272	$108,900	$508,122			2,242	
		Total 10 CFR 50.54(bb):			$116,785,000							$116,785,000	$28,946,300	$146,731,300				
		Total Greenfield		$111,101	$62,947		$10,887	$63,241				$228,176	$44,900	$273,076		1,694		
		PERIOD DEPENDENT																
		UNIT 1																
		Unit 1 Subtotal 10 CFR 50.75(c):																
		Unit 1 Subtotal 10 CFR 50.54(bb):																
		UNIT 2																
		Unit 2 Subtotal 10 CFR 50.75(c):																
		Unit 2 Subtotal 10 CFR 50.54(bb):																
		Common																
		Total 10 CFR 50.75(c):	$91,707,140	$8,436,653	$15,870,767					$5,640,857	$7,846,993	$129,600,360	$21,677,500	$151,178,160	1,299,787		164,323	
		Total 10 CFR 50.54(bb):	$18,119,200		$1,421,806					$613,656	$4,293,116	$26,347,884	$4,094,300	$30,442,184	400,878			
		Unit 1, Unit 2 & Common																
		Total 10 CFR 50.75(c):	$91,768,371	$40,746,714	$20,339,118	$720,890	$18,208,442		$144,944,980	$5,640,807	$7,846,993	$330,206,416	$89,833,300	$419,098,715	1,299,787		767,645	
		Total 10 CFR 50.54(bb):	$18,119,200		$117,206,805					$613,656	$4,293,116	$142,132,884	$33,040,600	$175,173,484	400,878			
		Total Greenfield		$9,710,426	$383,945		$170,105	$878,885				$11,022,701	$2,488,700	$13,911,401		193,911		
		PERIOD 4 DECONTAMINATE BALANCE OF SITE COSTS:																
		SPENT FUEL PERIOD DEPENDENT																
4	PD 50.54(bb)	Utility Staff	$4,779,340									$4,779,340	$719,900	$5,499,240	71,070			
4	PD 50.54(bb)	Security	$2,411,303									$2,411,303	$361,700	$2,773,003	49,274			
4	PD 50.54(bb)	Insurance									$482,970	$482,970	$73,400	$556,370				
4	PD 50.54(bb)	O & M Budget Items																

	Type		Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
4	PD 50.54(bb)	Permits & Fees									$829,799	$829,799	$130,500	$1,060,299			
4	PD 50.54(bb)	Waste Transfer and Loading															
4	PD 50.54(bb)	Energy								$15,173		$15,173	$2,300	$17,473			
4	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$362,228							$362,228	$90,600	$452,828			
4	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$7,190,843		$362,228					$15,173	$1,412,799	$8,980,813	$1,383,400	$10,364,213	131,848		
		DECOMMISSIONING ACTIVITIES															
4	A 50.75(c)	Decon, remove, package, ship and dispose of Unit 2 contaminated systems		$16,556,255	$804,125	$106,557	$800,963		$15,152,481			$33,432,411	$9,890,600	$43,323,011			334,974
4	A Greenfield	Remove, package, ship and dispose of Unit 2 clean systems		$17,827,319	$998,454		$268,891	$1,514,768				$20,604,331	$4,538,500	$25,142,731		356,073	
4	A 50.75(c)	Decon Steam Generator Storage Building		$80,083	$27,810	$409	$6,024		$273,080			$387,433	$129,500	$516,933			1,608
4	A 50.75(c)	Decon Unit 2 Reactor Building		$4,418,224	$583,223	$416,439	$2,872,802		$13,903,464			$21,980,152	$7,023,800	$29,003,952			80,870
4	A 50.75(c)	Remove Spent fuel storage racks		$2,591,493	$50,370	$8,348	$43,305		$1,565,798			$4,240,314	$1,202,000	$5,451,314			49,874
4	A 50.75(c)	Decon Auxiliary Building		$1,086,636	$635,318	$10,980	$150,998		$6,617,858			$8,903,790	$3,011,000	$11,914,790			32,004
4	A 50.75(c)	Perform final radiological survey of all structures		$1,828,560	$34,160							$1,862,720	$427,100	$2,289,820			
4	A 50.75(c)	Perform final survey of the site		$9,631,680	$219,960							$9,851,640	$2,259,900	$12,111,540			
4	A 50.75(c)	Obtain NRC approval															
4	A 50.75(c)	Prepare final report of dismantling program	$49,362									$49,362	$7,400	$56,762	456		
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$49,362	$54,482,529	$3,311,467	$541,763	$3,869,663	$1,514,768	$37,451,480			$101,921,064	$28,489,900	$129,010,964	456	356,073	499,405
		DECOMMISSIONING PERIOD DEPENDENT															
4	PD 50.75(c)	Utility Staff	$24,754,201									$24,754,201	$3,713,100	$28,467,301	391,776		
4	PD 50.75(c)	DOC Staff	$28,356,652									$28,356,652	$4,253,500	$32,610,152	381,732		
4	PD 50.75(c)	Security	$4,044,863									$4,044,863	$606,700	$4,651,563	140,638		
4	PD 50.75(c)	HP Supplies			$6,193,733							$6,193,733	$1,548,400	$7,742,133			
4	PD 50.75(c)	Equipment			$5,042,885							$5,042,885	$1,260,700	$6,303,585			
4	PD 50.75(c)	Unit 1 Insurance									$645,125	$645,125	$96,800	$741,925			
4	PD 50.75(c)	Unit 2 Insurance									$645,125	$645,125	$96,800	$741,925			
4	PD 50.75(c)	O & M Budget Items			$582,817							$582,817	$145,700	$728,517			
4	PD 50.75(c)	Permits & Fees									$4,040,772	$4,040,772	$606,100	$4,646,872			
4	PD 50.75(c)	Waste Transfer and Loading		$6,447,354								$6,447,354	$1,476,000	$7,923,354			126,692
4	PD 50.75(c)	Energy								$4,184,007		$4,184,007	$627,600	$4,811,607			
4	PD 50.75(c)	Severance	$1,633,496									$1,633,496	$245,000	$1,878,496			
4	PD 50.75(c)	Small Tools			$1,218,598							$1,218,598	$304,600	$1,523,198			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$58,789,302	$6,447,354	$13,038,033					$4,184,007	$5,331,023	$87,789,719	$14,981,000	$102,770,719	914,146		126,692
		TOTAL PERIOD 4 DECONTAMINATE BALANCE OF SITE COSTS:	$66,029,307	$60,929,883	$16,711,727	$541,763	$3,869,663	$1,514,768	$37,451,480	$4,199,180	$6,743,792	$198,691,596	$44,854,200	$242,545,795	1,046,453	356,073	624,097

	Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
ACTIVITY															
UNIT 1															
Unit 1 Subtotal 10 CFR 50.75(c):															
Unit 1 Subtotal 10 CFR 50.54(bb):															
Unit 1 Subtotal Greenfield:															
UNIT 2															
Unit 2 Subtotal 10 CFR 50.75(c):		$20,954,478	$1,357,340	$522,027	$3,473,766		$28,104,945			$55,412,562	$16,914,400	$72,326,962			415,850
Unit 2 Subtotal 10 CFR 50.54(bb):															
Unit 2 Subtotal Greenfield:		$17,827,319	$998,454		$298,891	$1,514,768				$20,604,331	$4,538,500	$25,142,731		356,073	
Common															
Common Subtotal 10 CFR 50.75(c):	$49,362	$16,700,733	$967,660	$19,737	$200,227		$9,346,536			$26,304,260	$7,036,900	$33,341,160	456		83,545
Common Subtotal 10 CFR 50.54(bb):															
Common Subtotal Greenfield:															
PERIOD DEPENDENT															
UNIT 1															
Unit 1 Subtotal 10 CFR 50.75(c):															
Unit 1 Subtotal 10 CFR 50.54(bb):															
UNIT 2															
Unit 2 Subtotal 10 CFR 50.75(c):															
Unit 2 Subtotal 10 CFR 50.54(bb):															
Common															
Common Subtotal 10 CFR 50.75(c):	$58,789,302	$6,447,354	$13,038,033					$4,184,007	$5,331,023	$87,789,719	$14,981,000	$102,770,719	914,146		126,692
Common Subtotal 10 CFR 50.54(bb):	$7,190,843		$362,228					$15,173	$1,412,799	$8,580,813	$1,383,400	$10,364,213	131,848		
Unit 1, Unit 2 & Common															
Total 10 CFR 50.75(c):	$58,838,664	$43,102,564	$15,363,045	$541,763	$3,673,993		$37,451,480	$4,184,007	$5,331,023	$169,506,541	$38,932,300	$207,438,841	914,604		624,097
Total 10 CFR 50.54(bb):	$7,190,843		$362,228					$15,173	$1,412,799	$8,580,813	$1,383,400	$10,364,213	131,848		
Total Greenfield		$17,827,319	$998,454		$298,891	$1,514,768				$20,604,331	$4,538,500	$25,142,731		356,073	

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Scenario 1
DECON and Permanent On-Site Dry Storage

	Type		Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
PERIOD 6 - CLEAN STRUCTURE DEMOLITION COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
6	PD 50.54(bb)	Utility Staff	$2,636,932									$2,636,932	$395,800	$3,034,732	39,520		
6	PD 50.54(bb)	Security	$1,331,411									$1,331,411	$199,700	$1,531,111	33,280		
6	PD 50.54(bb)	HP Supplies			$105,207							$105,207	$26,300	$131,507	33,280		
6	PD 50.54(bb)	Equipment															
6	PD 50.54(bb)	Insurance									$266,674	$266,674	$40,000	$306,674			
6	PD 50.54(bb)	O & M Budget Items															
6	PD 50.54(bb)	Permits & Fees									$513,393	$513,393	$77,000	$590,393			
6	PD 50.54(bb)	Waste Transfer and Loading															
6	PD 50.54(bb)	Energy								$8,378		$8,378	$1,300	$9,678			
6	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$200,005							$200,005	$50,000	$250,005			
6	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$3,970,344		$305,272					$8,378	$780,067	$5,064,060	$790,100	$5,854,160	106,081		
		DECOMMISSIONING ACTIVITIES															
6	A Greenfield	Remove Unit 1 reactor building		$1,491,598	$803,412		$541,176	$3,143,736				$5,969,921	$972,100	$6,942,021		24,370	
6	A Greenfield	Remove Unit 2 reactor building		$1,491,598	$803,412		$541,176	$3,143,736				$5,969,921	$972,100	$6,942,021		24,370	
6	A Greenfield	Remove Auxiliary Building		$12,106,653	$4,002,267		$1,604,741	$6,322,088				$27,965,640	$5,285,700	$33,251,340		192,452	
6	A Greenfield	Remove Turbine Building		$6,645,266	$3,503,651		$1,140,934	$6,627,787				$16,917,639	$3,765,800	$23,683,739		137,370	
6	A Greenfield	Remove Steam Generator Storage Building		$198,400	$88,097		$52,467	$304,804				$643,868	$109,300	$753,168		3,181	
6	A Greenfield	Remove Electrical Transformers		$81,963	$2,909		$13,044	$81,000				$178,615	$30,600	$210,415		1,689	
6	A Greenfield	Removal of Unit 1 Turbine Generator		$152,600	$7,899		$7,748	$45,000				$213,245	$43,100	$256,345		2,697	
6	A Greenfield	Removal of Unit 1 Main Condenser		$1,332,969	$7,427		$85,013	$493,846				$1,919,254	$374,900	$2,294,154		21,580	
6	A Greenfield	Removal of Unit 2 Turbine Generator		$152,600	$7,899		$7,748	$45,000				$213,249	$43,100	$256,345		2,697	
6	A Greenfield	Removal of Unit 2 Main Condenser		$1,332,969	$7,427		$85,013	$493,846				$1,919,254	$374,900	$2,294,184		21,580	
6	A Greenfield	Removal of Standby Diesel Generators		$30,412	$6,447		$2,324	$13,500				$52,652	$10,400	$63,062		532	
6	A Greenfield	Remove Administration building		$300,760	$100,702							$401,461	$94,000	$495,461		4,469	
6	A Greenfield	Remove Low Level Radwaste building		$1,107,891	$170,866		$136,848	$794,963				$2,210,569	$406,600	$2,616,169		18,068	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:		$28,406,570	$10,442,613		$4,218,147	$24,508,406				$67,576,736	$12,481,700	$80,058,436		456,046	
		DECOMMISSIONING PERIOD DEPENDENT															
6	PD Greenfield	Utility Staff	$1,109,733									$1,109,733	$166,500	$1,276,233	19,413		
6	PD Greenfield	DOC Staff	$7,469,615									$7,469,615	$1,120,500	$8,590,115	94,294		
6	PD Greenfield	Security	$511,912									$511,912	$76,800	$588,712	16,640		
6	PD Greenfield	HP Supplies															
6	PD Greenfield	Equipment			$2,223,437							$2,223,437	$556,900	$2,779,337			
6	PD Greenfield	Unit 1 Insurance									$261,850	$261,850	$39,300	$301,150			
6	PD Greenfield	Unit 2 Insurance									$261,850	$261,850	$39,300	$301,150			
6	PD Greenfield	O & M Budget Items			$62,408							$62,408	$15,600	$78,008			
6	PD Greenfield	Permits & Fees									$177,566	$177,566	$26,600	$204,166			
6	PD Greenfield	Waste Transfer and Loading		$2,199,733								$2,199,733	$503,600	$2,703,333		41,606	
6	PD Greenfield	Energy								$148,182		$148,182	$22,200	$170,382			
6	PD Greenfield	Severance	$3,155,871									$3,155,871	$473,400	$3,629,271			
6	PD Greenfield	Small Tools			$612,100							$612,100	$153,000	$765,100			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$12,249,330	$2,199,733	$2,897,961					$148,182	$701,265	$18,193,462	$3,192,500	$21,385,962	130,349	41,606	
		TOTAL PERIOD 6 - CLEAN STRUCTURE DEMOLITION COSTS:	$16,219,674	$30,606,303	$13,646,836		$4,219,147	$24,508,404		$156,560	$1,481,332	$90,834,258	$16,464,300	$107,298,558	236,430	494,463	
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):		$2,967,196	$810,758		$633,894	$3,692,682				$8,102,421	$1,390,100	$9,492,521		48,647	
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):		$2,967,196	$810,758		$633,894	$3,692,682				$8,102,421	$1,390,100	$9,492,521		48,647	
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g):		$22,471,287	$8,806,136		$2,951,378	$17,144,242				$51,371,893	$9,701,500	$61,073,393		357,751	
		Common Subtotal 10 CFR 50.54(bb):															
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															

2012 D. C. Cook
Scenario 1
DECON and Permanent On-Site Dry Storage

	Type		Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
		Common															
		Common Subtotal Greenfield (g)	$12,246,330	$2,199,733	$2,897,981					$148,162	$701,286	$18,193,442	$3,192,500	$21,385,962	130,348	41,608	
		Common Subtotal 10 CFR 50.54(bb):	$3,970,344		$505,872					$8,378	$780,087	$5,064,060	$790,100	$6,054,180	108,081		
		Unit 1, Unit 2 & Common															
		Total Greenfield (g):	$12,246,330	$38,404,263	$13,349,864		$4,219,147	$24,609,400		$148,162	$701,286	$85,770,199	$16,674,200	$101,444,399	130,348	486,653	
		Total 10 CFR 50.54(bb):	$3,970,344		$505,872					$8,378	$780,087	$5,064,060	$790,100	$6,054,180	108,081		
												ERROR				ERROR	
PERIOD 6 - RESTORE SITE COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
6	PD 50.54(bb)	Utility Staff	$298,031									$298,031	$44,700	$342,731	4,463		
6	PD 50.54(bb)	Security	$150,365									$150,365	$22,600	$172,965	3,758		
6	PD 50.54(bb)	HP Supplies			$10,690							$10,690	$2,700	$13,390	3,759		
6	PD 50.54(bb)	Insurance									$30,117	$30,117	$4,500	$34,617			
6	PD 50.54(bb)	Equipment															
6	PD 50.54(bb)	O & M Budget Items															
6	PD 50.54(bb)	Permits & Fees									$67,981	$67,981	$8,700	$76,681			
6	PD 50.54(bb)	Waste Transfer and Loading															
6	PD 50.54(bb)	Energy								$940		$940	$100	$1,040			
6	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$22,588							$22,588	$5,600	$28,188			
6	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$448,396		$33,477					$940	$98,098	$570,910	$88,960	$659,810	11,980		
		DECOMMISSIONING ACTIVITIES															
6	A Greenfield	Backfill, grade and landscape site		$166,109								$166,109	$38,000	$204,109		1,757	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:		$166,109								$166,109	$38,000	$204,109		1,757	
		DECOMMISSIONING PERIOD DEPENDENT															
6	PD Greenfield	Utility Staff	$52,051									$52,051	$7,800	$59,851	940		
6	PD Greenfield	DOC Staff	$390,925									$390,925	$58,600	$449,525	4,698		
6	PD Greenfield	Security	$14,516									$14,516	$2,200	$16,716	626		
6	PD Greenfield	HP Supplies															
6	PD Greenfield	Equipment			$74,624							$74,624	$18,700	$93,324			
6	PD Greenfield	Unit 1 Insurance									$29,572	$29,572	$4,400	$33,972			
6	PD Greenfield	Unit 2 Insurance									$29,572	$29,572	$4,400	$33,972			
6	PD Greenfield	O & M Budget Items			$7,046							$7,046	$1,600	$8,646			
6	PD Greenfield	Permits & Fees									$20,054	$20,054	$3,000	$23,054			
6	PD Greenfield	Waste Transfer and Loading		$249,430								$249,430	$55,900	$305,330		4,609	
6	PD Greenfield	Energy								$6,563		$6,563	$1,000	$7,563			
6	PD Greenfield	Severance	$311,142									$311,142	$46,700	$357,842			
6	PD Greenfield	Small Tools			$8,291							$8,291	$2,100	$10,391			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$768,636	$249,430	$89,963					$6,563	$79,198	$1,192,791	$207,600	$1,400,391	6,264	4,609	
		TOTAL PERIOD 6 - RESTORE SITE COSTS:	$1,217,033	$415,539	$123,440					$7,503	$167,296	$1,929,817	$334,500	$2,264,317	18,246	6,366	
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g)		$166,109								$166,109	$38,000	$204,109		1,757	
		Common Subtotal 10 CFR 50.54(bb):															
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g)	$768,636	$249,430	$89,963					$6,563	$79,198	$1,192,791	$207,600	$1,400,391	6,264	4,609	

Type			Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
		Common Subtotal 10 CFR 50.54(bb):	$448,396		$33,477					$848	$88,088	$570,918	$88,900	$659,818	11,980		
		Unit 1, Unit 2 & Common															
		Total Greenfield (g):	$758,636	$414,539	$69,393					$9,563	$79,190	$1,368,033	$236,000	$1,604,499	6,264	6,458	
		Total 10 CFR 50.54(bb):	$448,396		$33,477					$848	$88,088	$570,918	$88,900	$659,818	11,980		
PERIOD 7 - DRY STORAGE COSTS:																	
		SPENT FUEL ACTIVITIES															
7	A 50.54(bb)	Continue to ship fuel to repository															
		SUBTOTAL - SPENT FUEL ACTIVITIES															
		SPENT FUEL PERIOD DEPENDENT															
7	PD 50.54(bb)	Utility Staff	$1,970,145									$1,970,145	$306,000	$2,276,145	29,630		
7	PD 50.54(bb)	Security	$998,531									$998,531	$149,800	$1,148,331	24,960		
7	PD 50.54(bb)	Insurance									$200,000	$200,000	$20,000	$220,000			
7	PD 50.54(bb)	O & M Budget Items			$129,323							$129,323	$12,900	$142,223			
7	PD 50.54(bb)	Permits & Fees									$386,034	$386,034	$38,600	$424,634			
7	PD 50.54(bb)	Waste Transfer and Loading															
7	PD 50.54(bb)	Energy								$6,283		$6,283	$600	$6,883			
7	PD 50.54(bb)	Equipment			$19,748							$19,748	$2,000	$21,748			
7	PD 50.54(bb)	HP Supplies			$67,338							$67,338	$6,700	$74,038			
7	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$150,000							$150,000	$15,000	$165,000			
7	PD 50.54(bb)	Severance															
7	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$2,977,676		$366,409					$6,283	$586,034	$3,936,402	$542,400	$4,477,802	54,590		
		TOTAL, PERIOD 7 - DRY STORAGE COSTS	$2,977,676		$366,409					$6,283	$586,034	$3,936,402	$542,400	$4,477,802	54,590		
		ACTIVITY															
		Common															
		Common Subtotal 10 CFR 50.75(c):															
		Common Subtotal 10 CFR 50.54(bb):															
		PERIOD DEPENDENT															
		Common															
		Common Subtotal 10 CFR 50.75(c):															
		Common Subtotal 10 CFR 50.54(bb):	$2,977,676		$366,409					$6,283	$586,034	$3,936,402	$542,400	$4,477,802	54,590		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):															
		Total 10 CFR 50.54(bb):	$2,977,676		$366,409					$6,283	$586,034	$3,936,402	$542,400	$4,477,802	54,590		
TOTAL ACTIVITY COSTS:																	
UNIT 1																	
		SUBTOTAL UNIT 1 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 6		$27,260,345	$3,856,500	$591,884	$10,923,003		$87,844,996			$130,494,728	$42,749,050	$173,232,778		5,760	481,164
		SUBTOTAL UNIT 1 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 6															
		SUBTOTAL UNIT 1 GREENFIELD COSTS FOR PERIODS 1 - 6		$12,698,482	$1,339,137		$793,162	$4,438,226				$19,197,007	$3,831,300	$23,030,807		240,984	
UNIT 2																	
		SUBTOTAL UNIT 2 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 6	$51,231	$35,091,846	$4,327,635	$940,837	$10,393,878		$94,981,536			$146,995,303	$47,330,650	$193,286,953		5,760	588,767
		SUBTOTAL UNIT 2 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 6															
		SUBTOTAL UNIT 2 GREENFIELD COSTS FOR PERIODS 1 - 6		$20,794,465	$1,185,192		$989,015	$4,107,960				$26,700,053	$6,924,500	$34,635,253		406,021	
COMMON																	
		SUBTOTAL COMMON 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 6	$8,413,409	$17,537,753	$2,168,308	$30,232	$262,955		$8,497,531			$39,368,206	$8,339,300	$47,707,506	100,136	24,960	85,797
		SUBTOTAL COMMON 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 6	$749,497	$26,774,366	$234,889,006							$261,903,884	$64,737,300	$326,641,064	7,004	33,360	
		SUBTOTAL COMMON GREENFIELD COSTS FOR PERIODS 1 - 6		$22,748,447	$9,149,083		$3,862,154	$17,207,493				$51,766,177	$9,794,400	$61,560,677		361,303	
TOTAL PERIOD DEPENDENT COSTS																	
UNIT 1																	
		SUBTOTAL UNIT 1 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 6	$26,177,442		$12,458,197					$1,262,988	$2,367,207	$41,358,232	$7,457,500	$48,815,732	164,735		
		SUBTOTAL UNIT 1 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 6															
		SUBTOTAL UNIT 1 GREENFIELD COSTS FOR PERIODS 1 - 6															
UNIT 2																	
		SUBTOTAL UNIT 2 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 6															
		SUBTOTAL UNIT 2 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 6															
		SUBTOTAL UNIT 2 GREENFIELD COSTS FOR PERIODS 1 - 6															
COMMON																	
		SUBTOTAL COMMON 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 6	$209,849,804	$14,461,007	$30,791,893					$11,817,243	$15,764,554	$285,126,531	$47,022,600	$330,149,632	2,886,420		249,814

2012 D. C. Cook
Scenario 1
DECON and Permanent On-Site Dry Storage

Type	Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
SUBTOTAL COMMON 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 6	$36,443,937		$2,836,998					$788,057	$12,742,173	$81,813,165	$8,058,800	$89,869,965	792,734		
SUBTOTAL COMMON GREENFIELD COSTS FOR PERIODS 1 - 6	$13,014,967	$3,448,103	$2,987,914					$164,748	$790,464	$19,388,289	$3,400,100	$22,788,389	136,612	46,807	
ANNUAL SPENT FUEL STORAGE	$2,977,876		$365,409					$8,283	$585,034	$3,936,402	$542,400	$4,477,802	54,600		
UNIT 1, UNIT 2 & COMMON															
GRAND TOTAL ACTIVITY COSTS FOR PERIODS 1-6	$10,214,127	$162,791,735	$256,972,885	$1,282,763	$26,565,377	$26,903,069	$191,363,101			$676,073,007	$193,712,100	$869,785,107	100,100	1,077,447	1,102,726
GRAND TOTAL PERIOD DEPENDENT COSTS FOR PERIODS 1-6	$280,486,152	$17,331,170	$52,154,932					$14,052,471	$31,658,467	$395,694,182	$55,935,900	$451,630,082	3,950,492	46,307	289,914
ANNUAL SPENT FUEL STORAGE	$2,977,876		$366,404					$8,283	$586,034	$3,936,402	$542,400	$4,477,802	54,699		
GRAND TOTAL	$290,700,279	$183,122,905	$309,127,787	$1,282,763	$28,565,377	$26,903,069	$191,363,101	$14,052,471	$31,658,467	$1,071,767,189	$249,648,000	$1,321,405,189	4,058,592	1,123,754	1,392,642
SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$26,177,442	$27,360,546	$10,492,937	$591,884	$10,823,903		$87,944,066	$1,292,386	$2,352,267	$171,842,960	$50,206,660	$222,049,610	154,736	6,780	431,164
SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):															
SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR GREENFIELD (g):		$12,566,492	$1,339,137		$793,162	$4,498,226				$19,197,007	$3,833,800	$23,030,807		240,864	
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$51,231	$35,601,846	$4,327,836	$640,627	$10,883,673		$94,951,386			$145,966,303	$47,320,660	$193,286,963		6,780	666,767
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):															
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR GREENFIELD (g):		$20,794,486	$1,785,192		$929,625	$5,197,350				$28,706,653	$5,928,600	$34,635,253		405,621	
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$216,263,216	$32,420,758	$36,440,191	$30,232	$282,353		$8,407,641	$11,817,283	$15,784,554	$321,494,618	$56,361,800	$377,856,818	2,996,616	24,960	278,711
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):	$36,193,424	$26,774,988	$236,898,998					$790,057	$12,742,173	$313,397,019	$72,813,000	$386,210,019	770,628	33,280	
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR GREENFIELD (g):	$13,014,987	$25,196,610	$11,835,997		$2,862,164	$17,207,483		$154,746	$790,464	$71,162,430	$13,184,600	$84,336,030	136,612	407,509	
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$241,491,889	$94,790,951	$57,268,463	$1,262,763	$21,990,435		$191,303,101	$13,109,669	$18,136,821	$639,304,081	$153,888,000	$793,192,091	3,151,352	36,480	1,392,642
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):	$36,193,424	$26,774,988	$236,858,998					$798,057	$12,742,173	$313,397,019	$72,813,000	$386,210,019	770,628	33,280	
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR GREENFIELD (g):	$13,014,987	$58,557,587	$14,960,326		$4,584,942	$26,903,069		$154,746	$790,464	$119,066,089	$22,917,000	$142,063,089	136,612	1,053,994	
GRAND TOTAL	$290,700,279	$180,122,905	$309,127,787	$1,262,763	$26,565,377	$26,903,069	$191,363,101	$14,052,471	$31,658,467	$1,071,767,189	$249,648,000	$1,321,465,189	4,058,592	1,123,754	1,392,642

2012 D. C. Cook
Scenario 2
DECON, Permanent Off-Site Dry Storage

	Type		Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	Subtotal without Contingency $	Contingency $	Total with Contingency $	Staff Manhours	Clean Craft Manhours	Contaminated Craft Manhours
PERIOD 1 - U1 & U2 DECOMMISSIONING PLANNING COST:																	
		SPENT FUEL ACTIVITIES															
		Modify spent fuel support systems															
1	A 50.54(bb)	Define systems modification	$62,772									$62,772	$9,400	$72,172	608		
1	A 50.54(bb)	Design systems modification and equipment specifications	$147,693									$147,693	$22,200	$169,893	1,568		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
		Control room relocation															
1	A 50.54(bb)	Define control room equipment	$62,772									$62,772	$9,400	$72,172	608		
1	A 50.54(bb)	Design control room modification and equipment specifications	$178,662									$178,662	$26,800	$205,762	1,896		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
		Design spent fuel storage security modifications															
1	A 50.54(bb)	Define modification	$29,406									$29,406	$4,400	$33,806	288		
1	A 50.54(bb)	Design modification and equipment specifications	$102,741									$102,741	$15,400	$118,141	1,016		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
		SUBTOTAL - SPENT FUEL ACTIVITIES	**$748,487**									**$748,487**	**$112,800**	**$862,287**	**7,712**		
		SPENT FUEL PERIOD DEPENDENT															
1	PD 50.54(bb)	Utility Staff															
1	PD 50.54(bb)	Security															
1	PD 50.54(bb)	Insurance									$2,183,119	$2,183,119	$327,500	$2,510,619			
1	PD 50.54(bb)	O & M Budget Items															
1	PD 50.54(bb)	Permits & Fees															
1	PD 50.54(bb)	Waste Transfer and Loading															
1	PD 50.54(bb)	Energy															
1	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies															
1	PD 50.54(bb)	Offsite spent fuel storage									$41,370,506	$41,370,506	$6,205,600	$47,576,106			
1	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT									$43,553,625	$43,553,625	$6,533,100	$50,086,725			
		DECOMMISSIONING ACTIVITIES															
		Primary system decontamination															
1	A 50.75(c)	Define scope	$41,836									$41,836	$6,200	$47,836	328		
1	A 50.75(c)	Evaluate processes	$53,824									$53,824	$8,000	$61,824	448		
1	A 50.75(c)	Prepare bid specifications and RFP	$52,869									$52,869	$7,900	$60,769	512		
1	A 50.75(c)	Qualify Contractors	$14,104									$14,104	$2,100	$16,204	112		
1	A 50.75(c)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	248		
		Select Decommissioning General Contractor															
1	A 50.75(c)	Define scope	$79,883									$79,883	$11,900	$91,583	736		
1	A 50.75(c)	Prepare bid specifications and RFP	$04,013									$04,013	$12,000	$90,013	776		
1	A 50.75(c)	Qualify Contractors	$21,646									$21,646	$3,200	$24,846	176		
1	A 50.75(c)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	248		
		U1 & U2 cold and dark site repowering															
1	A 50.75(c)	Define scope	$68,277									$68,277	$10,200	$78,477	616		
1	A 50.75(c)	Design modification and equipment specifications	$150,932									$150,932	$22,900	$173,832	1,560		
1	A 50.75(c)	Prepare installation procedures	$212,724									$212,724	$31,900	$244,624	2,060		
1	A 50.75(c)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
		Modify U1 & U2 containment access															
1	A 50.75(c)	Select new access location	$30,251									$30,251	$4,500	$34,751	208		
1	A 50.75(c)	Design access and equipment specifications	$133,533									$133,533	$20,000	$153,533	1,320		
		U1 & U2 Site Characterization															
1	A 50.75(c)	Define scope	$47,761									$47,761	$7,200	$54,961	408		
1	A 50.75(c)	Prepare bid specifications and RFP	$53,465									$53,465	$8,000	$61,465	456		
1	A 50.75(c)	Qualify Contractors	$21,646									$21,646	$3,200	$24,846	176		
1	A 50.75(c)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	248		
1	A 50.75(c)	Prepare procedures	$133,000									$133,000	$19,900	$152,900	1,256		
		ADMINISTRATIVE ACTIVITIES															
1	A 50.75(c)	Develop staff transition plan	$41,532									$41,532	$6,200	$47,732	352		
1	A 50.75(c)	Develop severance and retention policy	$41,532									$41,532	$6,200	$47,732	352		
1	A 50.75(c)	Prepare project administrative procedures	$45,028									$45,028	$6,800	$51,828	456		
1	A 50.75(c)	Develop area based decommissioning cost estimate	$209,036									$209,036	$31,400	$240,436	2,240		
1	A 50.75(c)	Develop project budget and schedule controls	$80,924									$80,924	$9,100	$70,024	648		

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	Type		Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
1	A 50.75(c)	Assemble plant drawings	$24,307									$24,307	$3,600	$27,907	286		
1	A 50.75(c)	Define end product	$38,216									$38,216	$5,400	$43,616	280		
1	A 50.75(c)	Develop technical approach and detailed project plans	$223,654									$223,654	$33,600	$257,404	2,440		
		LICENSING/PERMITTING DOCUMENTATION															
1	A 50.75(c)	Insurance exemption	$46,144									$46,144	$6,900	$53,044	376		
1	A 50.75(c)	Prepare Post-Shutdown Decommissioning Activities Report	$134,589									$134,589	$20,200	$154,789	1,400		
1	A 50.75(c)	Prepare certification of permanent cessation of operations	$6,143									$6,143	$900	$7,043	40		
1	A 50.75(c)	Prepare certification of permanent reactor defueling	$6,143									$6,143	$900	$7,043	40		
1	A 50.75(c)	Prepare post-shutdown technical specification modifications	$335,249									$335,249	$50,300	$385,549	3,800		
1	A 50.75(c)	Update FSAR	$311,424									$311,424	$46,700	$358,124	3,380		
1	A 50.75(c)	Develop certified fuel handler program	$36,166									$36,166	$5,400	$41,566	336		
1	A 50.75(c)	Prepare post-shutdown emergency plan	$162,776									$162,776	$24,400	$187,176	1,460		
1	A 50.75(c)	Prepare post-shutdown QA plan	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare post-shutdown security plan	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare post-shutdown fire protection plan	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare post-shutdown radiation protection manual	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare and submit state and local permits	$95,422									$95,422	$14,300	$109,722	960		
1	A 50.75(c)	Respond to NRC questions on PSDAR	$6,143									$6,143	$900	$7,043	40		
1	A 50.75(c)	Prepare detailed resource loaded project schedule	$256,157									$256,157	$38,400	$294,557	2,460		
1	A 50.75(c)	Perform 50.59 unreviewed safety questions	$92,271									$92,271	$13,800	$106,071	736		
1	A 50.75(c)	Prepare activity specifications	$1,700,771									$1,700,771	$255,100	$1,955,871	16,080		
1	A 50.75(c)	Prepare detailed work procedures	$1,604,383									$1,604,383	$240,700	$1,845,083	15,060		
1	A 50.75(c)	Select shipping casks and obtain permits	$24,032									$24,032	$3,600	$27,632	240		
		LICENSE TERMINATION PLAN															
1	A 50.75(c)	General Information	$1,350									$1,350	$200	$1,550	16		
1	A 50.75(c)	Site Characterization	$33,967									$33,967	$5,100	$39,067	336		
1	A 50.75(c)	Identification of remaining site dismantlement activities	$33,967									$33,967	$5,100	$39,067	336		
1	A 50.75(c)	Remediation Plans	$17,880									$17,880	$2,700	$20,580	176		
1	A 50.75(c)	Final Radiation Survey Plan	$330,813									$330,813	$60,000	$390,813	3,020		
1	A 50.75(c)	Compliance with the radiological criteria for license termination	$227,508									$227,508	$34,100	$261,608	2,440		
1	A 50.75(c)	Update decommissioning cost estimate	$55,404									$55,404	$8,300	$63,704	596		
1	A 50.75(c)	Supplement to the environmental report	$55,404									$55,404	$8,300	$63,704	596		
1	A 50.75(c)	Respond to NRC questions	$25,693									$25,693	$3,900	$29,593	260		
1	A 50.75(c)	Update LTP	$51,042									$51,042	$7,700	$58,742	536		
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$5,089,742									$5,089,742	$1,213,000	$6,302,742	51,340		
		DECOMMISSIONING PERIOD DEPENDENT															
1	PD 50.75(c)	Utility Staff	$4,429,012									$4,429,012	$664,400	$5,093,412	75,575		
1	PD 50.75(c)	DGC Staff	$4,493,843									$4,493,843	$674,100	$5,167,943	58,159		
1	PD 50.75(c)	Security	$892,980									$892,980	$102,400	$795,080	23,001		
1	PD 50.75(c)	HP Supplies			$287,905							$287,905	$72,000	$359,905			
1	PD 50.75(c)	Equipment			$152,797							$152,797	$38,200	$190,997			
1	PD 50.75(c)	Unit 1 Insurance									$844,076	$844,076	$126,800	$970,876			
1	PD 50.75(c)	Unit 2 Insurance															
1	PD 50.75(c)	O & M Budget Items			$12,095,435							$12,095,435	$3,023,900	$15,119,335			
1	PD 50.75(c)	Permits & Fees									$1,508,191	$1,508,191	$226,200	$1,734,391			
1	PD 50.75(c)	Waste Transfer and Loading															
1	PD 50.75(c)	Energy								$1,292,386		$1,292,386	$193,900	$1,486,286			
1	PD 50.75(c)	Severance	$15,571,925									$15,571,925	$2,335,800	$17,907,725			
1	PD 50.75(c)	Small Tools															
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$25,177,442		$12,536,137					$1,292,386	$2,352,267	$41,358,232	$7,457,800	$48,816,732	154,735		
		TOTAL PERIOD 1 - U1 & U2 DECOMMISSIONING PLANNING COST:	$34,016,679		$12,536,137					$1,292,386	$16,096,891	$93,781,006	$16,316,400	$100,097,406	243,782		
		ACTIVITY															
		UNIT 1 - PERIOD 1 COSTS															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Total 10 CFR 50.75(c):	$5,089,742									$5,089,742	$1,213,000	$6,302,742	51,340		
		Total 10 CFR 50.54(bb):	$746,487									$746,487	$112,800	$892,287	7,712		
		PERIOD DEPENDENT															
		UNIT 1 - PERIOD 1 COSTS															
		Unit 1 Subtotal 10 CFR 50.75(c):	$25,177,442		$12,536,137					$1,292,386	$2,352,267	$41,358,232	$7,457,800	$48,816,732	154,735		
		Unit 1 Subtotal 10 CFR 50.54(bb):															

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Type			Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Total 10 CFR 50.75(c):															
		Total 10 CFR 50.54(bb):									$43,653,625	$43,653,625	$6,533,100	$50,086,725			
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$33,267,193		$12,530,137					$1,292,388	$2,352,287	$49,447,973	$8,670,800	$58,118,473	236,676		
		Total 10 CFR 50.54(bb):	$749,467								$43,653,625	$44,303,111	$6,646,900	$50,949,011	7,712		
PERIOD 2 - POST-SHUTDOWN ACTIVITIES COSTS:																	
		SPENT FUEL ACTIVITIES															
2	A 50.54(bb)	Modify Spent Fuel Cooling System		$634,094	$1,165,000							$1,799,094	$434,200	$2,233,294		9,360	
2	A 50.54(bb)	Modify control room		$682,042	$800,000							$1,382,042	$331,300	$1,713,342		8,300	
2	A 50.54(bb)	Modify security system		$455,755	$525,000							$980,755	$234,000	$1,214,755		7,280	
		SUBTOTAL - SPENT FUEL ACTIVITIES		$1,671,891	$2,490,000							$4,161,891	$999,500	$5,161,391		25,000	
		SPENT FUEL PERIOD DEPENDENT															
2	PD 50.54(bb)	Utility Staff	$4,068,995									$4,068,995	$644,800	$4,713,795	68,406		
2	PD 50.54(bb)	Security	$1,616,274									$1,616,274	$242,400	$1,858,674	43,531		
2	PD 50.54(bb)	Insurance									$1,177,898	$1,177,898	$176,700	$1,354,598			
2	PD 50.54(bb)	O & M Budget Items															
2	PD 50.54(bb)	Permits & Fees									$807,106	$807,106	$121,100	$928,206			
2	PD 50.54(bb)	Waste Transfer and Loading															
2	PD 50.54(bb)	Energy								$247,858		$247,858	$37,200	$285,058			
2	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$448,472							$448,472	$112,100	$560,572			
2	PD 50.54(bb)	Offsite spent fuel storage									$30,615,880	$30,615,880	$4,822,400	$35,438,280			
2	PD 50.54(bb)	Small Tools			$16,719							$16,719	$4,200	$20,919			
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$5,718,269		$486,191					$247,858	$32,600,883	$39,229,302	$6,930,900	$46,160,102	111,937		
		DECOMMISSIONING ACTIVITIES															
2	A 50.75(c)	Primary System Decon Unit 1 & 2		$8,546,040	$1,417,080				$8,986,640			$18,929,760	$5,652,500	$24,582,260			
2	A 50.75(c)	Flush & Drain Systems (PERFORMED BY UTILITY STAFF)															
2	A 50.75(c)	Implement cold & dark		$761,035	$1,600,000							$2,361,035	$571,600	$2,932,635		11,520	
2	A 50.75(c)	Modify U1 Containment Access		$346,437	$525,000							$871,437	$209,400	$1,080,837		5,760	
2	A 50.75(c)	Modify U2 Containment Access		$346,437	$525,000							$871,437	$209,400	$1,080,837		5,760	
2	A 50.75(c)	Historical Site Assessment	$375,882									$375,882	$56,400	$432,282	4,680		
2	A 50.75(c)	Vessel and internals activation analysis	$109,335									$109,335	$16,400	$125,735	840		
2	A 50.75(c)	Characterization survey	$769,088									$769,088	$118,400	$907,488	12,880		
2	A 50.75(c)	Test special equipment and training		$939,723								$939,723	$211,900	$1,151,623		13,440	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$1,874,305	$10,939,672	$4,067,080				$8,986,640			$26,247,697	$7,046,900	$33,293,597	18,400	36,480	
		DECOMMISSIONING PERIOD DEPENDENT															
2	PD 50.75(c)	Utility Staff	$18,243,360									$18,243,360	$2,736,500	$20,979,860	306,570		
2	PD 50.75(c)	DGG Staff	$11,702,745									$11,702,745	$1,765,400	$13,468,145	157,540		
2	PD 50.75(c)	Security	$3,206,454									$3,206,454	$481,000	$3,687,454	124,374		
2	PD 50.75(c)	HP Supplies			$756,560							$756,560	$189,600	$946,160			
2	PD 50.75(c)	Equipment			$1,018,766							$1,018,766	$254,700	$1,273,466			
2	PD 50.75(c)	Unit 1 Insurance									$266,242	$266,242	$39,900	$306,142			
2	PD 50.75(c)	Unit 2 Insurance									$266,242	$266,242	$39,900	$306,142			
2	PD 50.75(c)	O & M Budget Items			$2,685,773							$2,685,773	$721,400	$3,807,173			
2	PD 50.75(c)	Permits & Fees									$2,075,053	$2,075,053	$311,300	$2,386,353			
2	PD 50.75(c)	Waste Transfer and Loading															
2	PD 50.75(c)	Energy								$1,992,469		$1,992,469	$298,900	$2,291,369			
2	PD 50.75(c)	Severance	$23,290,806									$23,290,806	$3,480,100	$26,690,906			
2	PD 50.75(c)	Small Tools			$218,793							$218,793	$54,700	$273,493			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$56,363,264		$4,681,893					$1,992,469	$2,607,538	$65,636,264	$10,363,400	$76,199,664	592,484		
		TOTAL PERIOD 2 - POST-SHUTDOWN ACTIVITIES COSTS:	$63,342,838	$12,611,563	$11,894,164				$8,986,640	$2,240,327	$35,408,421	$131,474,954	$24,339,800	$155,813,854	712,821	62,480	
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):		$4,818,457	$1,235,840				$4,453,320			$10,336,617	$2,035,550	$12,371,867		5,760	

Type			Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):		$4,619,467	$1,233,540				$4,483,320			$10,336,317	$3,035,650	$13,371,967		6,790	
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal - 10 CFR 50.75(c):	$1,274,308	$1,700,787	$1,600,000							$4,575,062	$974,700	$5,549,762	18,400	24,990	
		Common Subtotal - 10 CFR 50.54(bb):		$1,671,891	$2,490,000							$4,161,891	$999,500	$5,161,391		26,060	
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal - 10 CFR 50.75(c):	$56,353,364		$4,881,893					$1,992,469	$2,607,638	$65,836,264	$10,363,400	$76,199,664	682,484		
		Common Subtotal - 10 CFR 50.54(bb):	$6,715,269		$466,191					$247,858	$32,800,883	$39,229,202	$6,930,500	$46,160,102	111,837		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$57,627,669	$10,939,672	$8,949,873				$8,966,640	$1,992,469	$2,607,638	$91,082,961	$17,409,400	$108,492,361	690,884	36,480	
		Total 10 CFR 50.54(bb):	$6,715,269	$1,671,891	$2,966,191					$247,858	$32,800,883	$43,391,092	$6,830,400	$50,221,492	111,837	26,060	
PERIOD 3 VESSEL AND INTERNALS REMOVAL COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
3	PD 50.54(bb)	Utility Staff	$12,995,166									$12,995,166	$1,949,300	$14,944,466	216,868		
3	PD 50.54(bb)	Security	$5,124,120									$5,124,120	$768,600	$5,892,720	164,010		
3	PD 50.54(bb)	Insurance									$3,734,324	$3,734,324	$560,100	$4,294,424			
3	PD 50.54(bb)	O & M Budget Items															
3	PD 50.54(bb)	Permits & Fees									$2,558,793	$2,558,793	$383,800	$2,942,593			
3	PD 50.54(bb)	Waste Transfer and Loading															
3	PD 50.54(bb)	Energy								$507,172		$507,172	$76,100	$583,272			
3	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$1,421,805							$1,421,805	$355,500	$1,777,305			
3	PD 50.54(bb)	Offsite spent fuel storage									$128,792,421	$128,792,421	$19,318,900	$148,111,321			
3	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$18,119,286		$1,421,805					$507,172	$136,085,538	$155,133,801	$23,412,300	$178,546,101	400,878		
		DECOMMISSIONING ACTIVITIES															
		UNIT 1															
3	A 50.75(c)	Install all reactor operating floor contamination control envelopes (CCEs), support structures, rigging, internals work platforms and process equipment (BY UTILITY STAFF)															
3	A 50.75(c)	Finalize Residual Radiation Inventory (WITH SITE CHARACTERIZATION)															
3	A 50.75(c)	Finalize Internals and Vessel Segmenting Details (WITH ACTIVATION ANALYSIS)															
3	A 50.75(c)	Remove, pack, ship and bury Unit 1 Pressurizer		$1,018,043		$800	$72,384		$899,362			$1,990,590	$583,500	$2,574,090			18,775
3	A 50.75(c)	Decon, remove, package, ship and bury Unit 1 steam generators		$4,290,772	$1,092,667	$12,800	$633,257		$12,054,598			$18,284,094	$5,955,500	$24,239,594			79,163
3	A 50.75(c)	Remove Unit 1 equipment hatch closure (BY UTILITY STAFF)															
3	A 50.75(c)	Remove Unit 1 control rod drive and reactor cavity missile shields (BY UTILITY STAFF)															
3	A 50.75(c)	Remove Unit 1 CRD mechanisms and cables, air ducts, and reactor vessel head (BY UTILITY															
3	A 50.75(c)	Remove, segment, package and bury Unit 1 vessel & vessel head insulation		$174,720					$350,040			$524,760	$171,000	$695,760			
3	A 50.75(c)	Prepare Unit 1 vessel head for shipment as its own container (WITH VESSEL REMOVAL)															
3	A 50.75(c)	Decontaminate and clean up Unit 1 plant areas (BY UTILITY STAFF)															
3	A 50.75(c)	Process liquid and solid radioactive wastes (BY UTILITY STAFF)															
3	A 50.75(c)	Decon, remove, package, ship and dispose of Unit 1 contaminated systems		$8,905,752	$432,990	$56,855	$431,288		$8,175,182			$18,002,067	$5,290,900	$23,292,967			160,37[illegible]
3	A Greenfield	Remove, package, ship and dispose of Unit 1 clean systems		$9,580,325	$520,398		$159,218		$815,644			$11,094,588	$2,636,100	$13,730,686		192,216	
3	A 50.75(c)	Install Unit 1 water cleanup system in fuel transfer canal (BY UTILITY STAFF)															
3	A 50.75(c)	Segment, package and ship Unit 1 internals as radioactive waste		$2,591,654	$502,630	$81,000	$4,574,890		$33,431,961			$41,182,335	$14,283,700	$55,466,035			47,360
3	A 50.75(c)	Decontaminate internals work platform and store (BY UTILITY STAFF)															
3	A 50.75(c)	Install Unit 1 vessel support structure (WITH VESSEL REMOVAL)															
3	A 50.75(c)	Segment and process Unit 1 reactor vessel and associated equipment as LLW		$1,352,522	$141,451	$24,000	$2,039,282		$14,627,158			$18,164,413	$6,285,800	$24,470,213			24,820
3	A 50.75(c)	Decontaminate reactor vessel platform and store															
3	A 50.75(c)	Decontaminate Unit 1 reactor building		$4,415,224	$553,223	$416,430	$2,672,802		$13,922,464			$21,980,182	$7,001,300	$28,981,462			80,876
		UNIT 2															
3	A 50.75(c)	Finalize Residual Radiation Inventory (WITH SITE CHARACTERIZATION)															

	Type		Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
3	A 50.75(c)	Finalize Internals and Vessel Segmenting Details (WITH ACTIVATION ANALYSIS)															
3	A 50.75(c)	Revise Integrated Work Sequence and Schedule	$51,231									$51,231	$7,700	$58,931			
3	A 50.75(c)	Transfer all reactor operating floor COEs support structures, rigging, internals work platforms and process equipment to position and install (BY UTILITY STAFF)															
3	A 50.75(c)	Remove Unit 2 equipment hatch closure (BY UTILITY STAFF)															
3	A 50.75(c)	Remove Unit 2 CRD missile and reactor cavity missile shields (BY UTILITY STAFF)															
3	A 50.75(c)	Remove Unit 2 CRD mechanisms and cables, air ducts, and reactor vessel head (BY UTILITY															
3	A 50.75(c)	Remove, segment, package and bury Unit 2 vessel & vessel head insulation		$174,720					$350,040			$524,760	$171,000	$695,760			
3	A 50.75(c)	Prepare Unit 2 vessel head for shipment as its own container (WITH VESSEL REMOVAL)															
3	A 50.75(c)	Decontaminate and clean up Unit 2 plant areas (BY UTILITY STAFF)															
3	A 50.75(c)	Process liquid and solid radioactive wastes (BY UTILITY STAFF)															
3	A 50.75(c)	Install Unit 2 water cleanup system in fuel transfer canal (BY UTILITY STAFF)															
3	A 50.75(c)	Segment, package and ship Unit 2 internals as radioactive waste		$2,691,654	$502,630	$81,000	$4,574,690		$33,431,961			$41,132,335	$14,253,700	$55,466,035			47,360
3	A 50.75(c)	Decontaminate internals work platform and process as LLW (BY UTILITY STAFF)															
3	A 50.75(c)	Install Unit 2 vessel support structure (WITH VESSEL REMOVAL)															
3	A 50.75(c)	Segment and process Unit 2 reactor vessel and associated equipment as LLW		$1,362,522	$141,461	$24,000	$2,338,202		$14,627,150			$18,164,413	$6,285,000	$24,470,213			24,620
3	A 50.75(c)	Decon reactor vessel cutting equipment and work platform, package and process as LLW (WI															
3	A 50.75(c)	Decon, remove, package, ship and bury Unit 2 steam generators		$4,290,772	$1,002,687	$12,600	$833,257		$12,054,808			$18,284,094	$5,956,800	$24,239,894			79,103
3	A 50.75(c)	Remove, pack, ship and bury Unit 2 Pressurizer		$1,018,043		$600	$72,984		$889,362			$1,990,590	$583,500	$2,574,090			18,776
3	A 50.75(c)	Decontaminate non-essential structures		$136,262	$88,643	$10,496	$82,726		$121,095			$939,222	$108,400	$607,622			2,242
3	A Greenfield	Remove non-essential structures		$111,101	$42,947		$10,887	$63,241				$228,176	$44,500	$272,676		1,694	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$51,231	$42,423,487	$4,091,896	$720,990	$18,378,647	$63,241	$146,780,826			$212,087,817	$69,042,900	$281,730,717		183,911	603,323
		DECOMMISSIONING PERIOD DEPENDENT															
3	PD 50.75(c)	Utility Staff	$39,955,935									$39,955,935	$5,993,400	$45,949,335	630,880		
3	PD 50.75(c)	DGC Staff	$44,280,951									$44,280,951	$6,642,100	$50,923,051	564,888		
3	PD 50.75(c)	Security	$5,292,258									$5,292,250	$793,000	$6,086,050	104,010		
3	PD 50.75(c)	HP Supplies			$8,005,157							$8,005,157	$2,001,300	$10,006,457			
3	PD 50.75(c)	Equipment			$4,779,061							$4,779,061	$1,194,800	$5,973,861			
3	PD 50.75(c)	Unit 1 Insurance									$844,076	$844,076	$126,600	$970,676			
3	PD 50.75(c)	Unit 2 Insurance									$844,076	$844,076	$126,600	$970,676			
3	PD 50.75(c)	O & M Budget Items			$2,077,376							$2,077,376	$516,300	$2,593,676			
3	PD 50.75(c)	Permits & Fees									$6,157,842	$6,157,842	$923,700	$7,081,642			
3	PD 50.75(c)	Waste Transfer and Loading		$8,435,653								$8,435,653	$1,902,300	$10,337,953			164,323
3	PD 50.75(c)	Energy								$5,640,807		$5,640,807	$846,100	$6,486,907			
3	PD 50.75(c)	Severance	$2,177,995									$2,177,995	$326,700	$2,504,695			
3	PD 50.75(c)	Small Tools			$1,009,163							$1,009,163	$252,300	$1,261,463			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$91,707,140	$8,435,853	$15,870,767					$5,640,807	$7,845,993	$128,800,380	$21,848,000	$161,148,380	1,399,787		164,323
		TOTAL PERIOD 3 VESSEL AND INTERNALS REMOVAL COSTS:	$109,877,667	$50,459,141	$22,384,268	$720,990	$18,376,547	$63,241	$145,760,825	$6,147,979	$142,931,531	$496,721,979	$114,704,200	$611,431,178	1,800,665	193,911	767,846
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):		$22,748,687	$2,722,960	$591,804	$10,623,903		$83,460,706			$120,148,411	$39,571,700	$159,720,111			431,184
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		Unit 1 Subtotal Greenfield:		$9,596,328	$829,398		$109,218		$816,944			$11,094,886	$2,636,100	$13,730,686		182,219	
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):	$51,231	$9,427,611	$1,736,747	$118,800	$7,619,813		$81,363,120			$80,217,423	$27,287,200	$107,504,623			169,917
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Unit 2 Subtotal Greenfield:															
		Common															
		Total 10 CFR 50.75(c):		$136,262	$88,643	$10,496	$82,726		$121,096			$399,222	$108,400	$507,622			2,242
		Total 10 CFR 50.54(bb):															
		Total Greenfield		$111,101	$42,947		$10,887	$63,241				$228,176	$44,500	$272,676		1,694	
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Total 10 CFR 50.75(c):	$91,707,140	$8,436,853	$15,870,767					$5,640,807	$7,846,993	$128,800,380	$21,848,000	$161,148,380	1,399,787		164,323
		Total 10 CFR 50.54(bb):	$18,118,298		$1,421,806					$507,172	$134,084,838	$165,133,801	$23,412,300	$178,546,101	400,878		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$91,768,371	$40,748,714	$20,390,118	$720,990	$18,206,442		$144,944,980	$5,640,807	$7,846,003	$330,285,416	$88,616,300	$418,881,716	1,399,787		767,846

	Type		Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
		Total 10 CFR 50.54(bb):	$18,119,286		$1,421,806					$587,172	$135,086,638	$155,133,801	$23,412,390	$178,546,191	400,878		
		Total Greenfield		$9,710,426	$963,346		$170,106	$63,241	$816,844			$11,322,761	$2,680,680	$14,003,361		163,511	
PERIOD 4 DECONTAMINATE BALANCE OF SITE COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
4	PD 50.54(bb)	Utility Staff	$4,493,129									$4,493,129	$674,000	$5,167,129	165,752		
4	PD 50.54(bb)	Security	$1,771,685									$1,771,885	$265,600	$2,037,486	105,479		
4	PD 50.54(bb)	Insurance									$1,291,157	$1,231,157	$193,700	$1,484,857			
4	PD 50.54(bb)	O & M Budget Items															
4	PD 50.54(bb)	Permits & Fees									$884,713	$884,713	$132,700	$1,017,413			
4	PD 50.54(bb)	Waste Transfer and Loading															
4	PD 50.54(bb)	Energy								$175,357		$175,357	$26,300	$201,657			
4	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$491,595							$491,595	$122,900	$614,495			
4	PD 50.54(bb)	Offsite spent fuel storage									$41,703,394	$41,703,394	$6,255,500	$47,956,894			
4	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$6,264,814		$491,596					$176,367	$43,879,264	$50,811,029	$7,670,900	$58,481,929	271,231		
		DECOMMISSIONING ACTIVITIES															
4	A 50.75(c)	Decon, remove, package, ship and dispose of Unit 2 contaminated systems		$16,539,253	$804,125	$105,587	$800,963		$15,182,461			$33,432,411	$9,826,000	$43,258,411			334,974
4	A Greenfield	Remove, package, ship and dispose of Unit 2 clean systems		$17,827,316	$966,454		$295,691	$1,514,768				$20,604,231	$4,477,600	$25,081,831		356,973	
4	A 50.75(c)	Decon Steam Generator Storage Building		$80,063	$27,858	$409	$6,024		$273,060			$387,433	$129,000	$516,433			1,858
4	A 50.75(c)	Decon Unit 2 Reactor Building		$4,415,224	$653,223	$416,439	$2,672,802		$13,922,464			$21,980,152	$7,001,300	$28,981,452			80,878
4	A 50.75(c)	Remove Spent fuel storage racks		$2,591,493	$50,370	$6,348	$43,305		$1,555,796			$4,249,314	$1,192,400	$5,441,714			49,874
4	A 50.75(c)	Decon Auxiliary Building		$1,568,938	$655,318	$10,980	$150,898		$6,517,658			$8,903,790	$3,002,100	$11,905,890			32,024
4	A 50.75(c)	Perform final radiological survey of all structures		$1,828,560	$34,160							$1,862,720	$420,900	$2,283,620			
4	A 50.75(c)	Perform final survey of the site		$9,831,680	$219,960							$9,851,640	$2,227,000	$12,078,640			
4	A 50.75(c)	Obtain NRC approval															
4	A 50.75(c)	Prepare final report of dismantling program	$49,362									$49,362	$7,400	$56,762	456		
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$49,362	$64,482,629	$3,311,467	$541,783	$3,969,883	$1,514,768	$37,451,480			$101,321,054	$28,283,700	$129,604,754	456	366,973	499,406
		DECOMMISSIONING PERIOD DEPENDENT															
4	PD 50.75(c)	Utility Staff	$24,754,291									$24,754,291	$3,713,100	$28,467,391	391,778		
4	PD 50.75(c)	DGC Staff	$28,356,652									$28,356,652	$4,253,500	$32,610,152	381,732		
4	PD 50.75(c)	Security	$4,044,863									$4,044,863	$606,700	$4,651,563	140,638		
4	PD 50.75(c)	HP Supplies			$6,268,820							$6,268,820	$1,567,200	$7,836,020			
4	PD 50.75(c)	Equipment			$5,042,647							$5,042,647	$1,260,700	$6,303,347			
4	PD 50.75(c)	Unit 1 Insurance									$645,125	$645,125	$96,800	$741,925			
4	PD 50.75(c)	Unit 2 Insurance									$645,125	$645,125	$96,800	$741,925			
4	PD 50.75(c)	O & M Budget Items			$582,817							$582,817	$145,700	$728,517			
4	PD 50.75(c)	Permits & Fees									$4,040,772	$4,040,772	$606,100	$4,646,872			
4	PD 50.75(c)	Waste Transfer and Loading		$6,447,354								$6,447,354	$1,454,000	$7,901,354			125,562
4	PD 50.75(c)	Energy								$4,184,007		$4,184,007	$627,600	$4,811,607			
4	PD 50.75(c)	Severance	$800,080									$800,080	$120,000	$920,080			
4	PD 50.75(c)	Small Tools			$1,218,598							$1,218,598	$304,600	$1,523,198			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$57,955,886	$6,447,364	$13,112,882					$4,184,087	$8,331,023	$87,031,151	$14,881,800	$101,883,861	914,148		125,562
		TOTAL PERIOD 4 DECONTAMINATE BALANCE OF SITE COSTS:	$64,270,082	$60,929,883	$16,916,943	$541,783	$3,969,683	$1,514,768	$37,461,490	$4,359,384	$49,210,286	$239,163,233	$50,807,400	$293,970,633	1,185,835	366,973	624,997
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		Unit 1 Subtotal Greenfield:															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):		$20,884,478	$1,357,348	$522,027	$3,473,786		$26,104,946			$55,412,662	$16,827,306	$72,239,982			416,860
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Unit 2 Subtotal Greenfield:		$17,827,319	$968,464		$295,691	$1,514,768				$20,604,231	$4,477,600	$25,081,831		356,973	
		Common															
		Common Subtotal 10 CFR 50.75(c):	$49,362	$15,700,733	$987,656	$19,737	$200,227		$8,346,536			$25,304,260	$6,978,800	$32,283,060	456		83,585
		Common Subtotal 10 CFR 50.54(bb):															
		Common Subtotal Greenfield:															
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															

2012 D. C. Cook
Scenario 2
DECON, Permanent Off-Site Dry Storage

	Type		Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal 10 CFR 50.75(c):	$67,866,896	$6,447,364	$13,112,862					$4,184,607	$6,351,023	$87,691,161	$14,852,800	$101,883,961	914,148		28,582
		Common Subtotal 10 CFR 50.54(bb):	$8,264,914		$481,665					$176,367	$43,879,284	$50,811,029	$7,670,900	$58,481,929	271,231		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$68,006,248	$43,102,684	$16,487,294	$841,752	$3,873,293		$37,481,660	$4,184,607	$6,351,023	$187,747,875	$38,658,000	$226,406,875	914,604		474,887
		Total 10 CFR 50.54(bb):	$8,264,914		$481,365					$176,367	$43,879,284	$50,811,029	$7,670,900	$58,481,929	271,231		
		Total Greenfield		$17,827,318	$866,464		$206,671	$1,614,768				$20,604,231	$4,477,600	$25,081,831		366,973	
		PERIOD 6 - CLEAN STRUCTURE DEMOLITION COSTS:															
		SPENT FUEL PERIOD DEPENDENT															
5	PD 50.54(bb)	Utility Staff															
5	PD 50.54(bb)	Security															
5	PD 50.54(bb)	HP Supplies															
5	PD 50.54(bb)	Equipment															
5	PD 50.54(bb)	Insurance															
5	PD 50.54(bb)	O & M Budget Items															
5	PD 50.54(bb)	Permits & Fees															
5	PD 50.54(bb)	Waste Transfer and Loading															
5	PD 50.54(bb)	Energy															
5	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies															
5	PD 50.54(bb)	Offsite spent fuel storage										$9,006,740	$9,006,740	$1,351,000	$10,357,740			
5	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT									$9,006,740	$9,006,740	$1,351,000	$10,357,740			
		DECOMMISSIONING ACTIVITIES															
5	A Greenfield	Remove Unit 1 reactor building		$1,461,596	$803,412		$541,175	$3,143,738				$5,949,921	$987,000	$6,936,921		24,370	
5	A Greenfield	Remove Unit 2 reactor building		$1,461,596	$803,412		$541,175	$3,143,738				$5,949,921	$987,000	$6,936,921		24,370	
5	A Greenfield	Remove Auxiliary Building		$12,106,553	$4,092,967		$1,804,741	$9,322,088				$27,965,649	$5,244,400	$33,210,049		192,462	
5	A Greenfield	Remove Turbine Building		$6,645,286	$3,509,651		$1,140,934	$8,627,797				$19,917,839	$3,736,400	$23,654,239		137,370	
5	A Greenfield	Remove Steam Generator Storage Building		$196,400	$88,007		$52,467	$306,904				$643,888	$108,700	$752,588		3,161	
5	A Greenfield	Remove Electrical Transformers		$31,883	$2,908		$13,644	$131,380				$179,815	$30,300	$210,115		1,859	
5	A Greenfield	Removal of Unit 1 Turbine Generator		$152,600	$7,699		$7,746	$45,200				$213,245	$42,600	$255,845		2,867	
5	A Greenfield	Removal of Unit 1 Main Condenser		$1,332,968	$7,427		$85,013	$493,846				$1,919,254	$370,300	$2,289,554		21,580	
5	A Greenfield	Removal of Unit 2 Turbine Generator		$152,600	$7,699		$7,746	$45,200				$213,245	$42,600	$255,845		2,867	
5	A Greenfield	Removal of Unit 2 Main Condenser		$1,332,968	$7,427		$85,013	$493,846				$1,919,254	$370,300	$2,289,554		21,580	
5	A Greenfield	Remove of Standby Diesel Generators		$30,412	$6,447		$2,324	$13,800				$52,982	$10,000	$62,982		532	
5	A Greenfield	Remove Administration building		$300,750	$100,702							$401,451	$93,000	$494,451		4,469	
5	A Greenfield	Remove Low Level Radwaste building		$1,107,881	$170,668		$136,845	$794,903				$2,210,309	$402,000	$2,612,309		10,080	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:		$28,406,473	$10,442,613		$4,219,167	$24,509,404				$67,676,736	$12,284,700	$79,961,436		466,946	
		DECOMMISSIONING PERIOD DEPENDENT															
5	PD Greenfield	Utility Staff	$1,109,733									$1,109,733	$166,500	$1,276,233	18,411		
5	PD Greenfield	DOC Staff	$7,469,815									$7,469,815	$1,120,300	$8,590,115	94,294		
5	PD Greenfield	Security	$511,612									$511,612	$79,100	$590,712	10,640		
5	PD Greenfield	HP Supplies															
5	PD Greenfield	Equipment			$2,223,437							$2,223,437	$555,900	$2,779,337			
5	PD Greenfield	Unit 1 insurance									$261,650	$261,650	$39,500	$301,150			
5	PD Greenfield	Unit 2 insurance									$261,650	$261,650	$39,500	$301,150			
5	PD Greenfield	O & M Budget Items			$82,408							$82,408	$15,600	$98,008			
5	PD Greenfield	Permits & Fees									$177,566	$177,566	$26,600	$204,166			
5	PD Greenfield	Waste Transfer and Loading		$2,199,733								$2,199,733	$496,100	$2,695,833		41,608	
5	PD Greenfield	Energy								$148,182		$148,182	$22,200	$170,382			
5	PD Greenfield	Severance	$4,622,684									$4,622,684	$693,400	$5,316,084			
5	PD Greenfield	Small Tools			$612,106							$612,106	$153,000	$765,106			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$13,713,144	$2,199,733	$2,917,951					$148,182	$700,866	$19,679,876	$3,406,000	$23,085,876	139,348	41,608	
		TOTAL PERIOD 6 - CLEAN STRUCTURE DEMOLITION COSTS:	$13,713,144	$30,606,206	$13,360,564		$4,219,167	$24,509,404		$148,182	$9,707,606	$96,243,760	$17,140,700	$113,384,460	139,348	498,553	
		ACTIVITY															
		UNIT 1															

	Type		Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
		Unit 1 Subtotal Greenfield (g):		$2,967,186	$818,738		$933,934	$3,382,582				$8,102,441	$1,379,880	$9,482,321		48,647	
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):		$2,967,186	$818,738		$933,934	$3,382,582				$8,102,421	$1,379,880	$9,482,321		48,647	
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g)		$22,471,237	$8,805,136		$2,951,279	$17,144,242				$51,371,893	$5,024,900	$56,396,793		357,751	
		Common Subtotal 10 CFR 50.54(bb):															
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g)	$13,713,144	$2,199,733	$2,897,951					$149,182	$701,265	$19,661,275	$3,405,000	$23,066,275	139,348	41,608	
		Common Subtotal 10 CFR 50.54(bb):									$8,006,740	$8,006,740	$1,351,000	$9,357,740			
		Unit 1, Unit 2 & Common															
		Total Greenfield (g):	$13,713,144	$30,605,303	$13,340,664		$4,819,147	$23,909,406		$149,182	$701,265	$87,237,811	$15,788,760	$103,026,711	139,348	496,653	
		Total 10 CFR 50.54(bb):									$8,006,740	$8,006,740	$1,351,000	$9,357,740			
																ERROR	
PERIOD 6 - RESTORE SITE COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
6	PD 50.54(bb)	Utility Staff															
6	PD 50.54(bb)	Security															
6	PD 50.54(bb)	HP Supplies															
6	PD 50.54(bb)	Insurance															
6	PD 50.54(bb)	Equipment															
6	PD 50.54(bb)	O & M Budget Items															
6	PD 50.54(bb)	Permits & Fees															
6	PD 50.54(bb)	Waste Transfer and Loading															
6	PD 50.54(bb)	Energy															
6	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies															
6	PD 50.54(bb)	Offsite spent fuel storage									$1,000,749	$1,000,749	$150,100	$1,150,849			
6	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT									$1,000,749	$1,000,749	$150,100	$1,150,849			
		DECOMMISSIONING ACTIVITIES															
6	A Greenfield	Backfill, grade and landscape site		$166,109								$166,109	$37,500	$203,609		1,757	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:		$166,109								$166,109	$37,500	$203,609		1,757	
		DECOMMISSIONING PERIOD DEPENDENT															
6	PD Greenfield	Utility Staff	$52,051									$52,051	$7,600	$59,651	940		
6	PD Greenfield	DGC Staff	$390,926									$390,926	$58,600	$449,526	4,698		
6	PD Greenfield	Security	$14,516									$14,516	$2,200	$16,716	626		
6	PD Greenfield	HP Supplies															
6	PD Greenfield	Equipment			$74,624							$74,624	$18,700	$93,324			
6	PD Greenfield	Unit 1 Insurance									$29,572	$29,572	$4,400	$33,972			
6	PD Greenfield	Unit 2 Insurance									$29,572	$29,572	$4,400	$33,972			
6	PD Greenfield	O & M Budget Items			$7,046							$7,046	$1,800	$8,846			
6	PD Greenfield	Permits & Fees									$20,054	$20,054	$3,000	$23,054			
6	PD Greenfield	Waste Transfer and Loading		$248,430								$248,430	$56,000	$304,430		4,699	
6	PD Greenfield	Energy								$6,563		$6,563	$1,000	$7,563			
6	PD Greenfield	Severance	$311,142									$311,142	$46,700	$357,842			
6	PD Greenfield	Small Tools			$8,291							$8,291	$2,100	$10,391			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$768,636	$248,430	$89,961					$6,563	$79,198	$1,192,791	$206,700	$1,399,491	6,264	4,699	
		TOTAL PERIOD 6 - RESTORE SITE COSTS:	$768,636	$414,539	$89,961					$6,563	$1,079,947	$2,359,649	$394,300	$2,753,949	6,264	6,456	
		ACTIVITY															

2012 D. C. Cook
Scenario 2
DECON, Permanent Off-Site Dry Storage

Type			Staff Labor,$	Craft Labor,$	Equipment & Materials,$	Packaging,$	Transportation,$	Clean Disposal,$	Contaminated Disposal,$	Energy,$	Other,$	Without Contingency,$	Contingency,$	With Contingency,$	Staff Manhours	Craft Manhours	Craft Manhours
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g)		$166,109								$166,109	$37,500	$203,609		1,767	
		Common Subtotal 10 CFR 50.54(bb):															
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g)	$788,636	$248,430	$89,963					$8,863	$78,198	$1,132,791	$206,700	$1,369,491	6,264	4,698	
		Common Subtotal 10 CFR 50.54(bb):									$1,006,749	$1,006,749	$160,100	$1,160,849			
		Unit 1, Unit 2 & Common															
		Total Greenfield (g):	$788,636	$414,539	$89,963					$8,863	$78,198	$1,359,899	$244,200	$1,603,099	6,264	6,466	
		Total 10 CFR 50.54(bb):									$1,006,749	$1,006,749	$160,100	$1,160,849			
PERIOD 7 - ANNUAL OFF-SITE DRY STORAGE COSTS:																	
		SPENT FUEL ACTIVITIES															
7	A 50.54(bb)	Continue to ship fuel to repository															
		SUBTOTAL - SPENT FUEL ACTIVITIES															
		SPENT FUEL PERIOD DEPENDENT															
7	PD 50.54(bb)	Utility Staff															
7	PD 50.54(bb)	Security															
7	PD 50.54(bb)	Insurance															
7	PD 50.54(bb)	O & M Budget Items															
7	PD 50.54(bb)	Permits & Fees															
7	PD 50.54(bb)	Waste Transfer and Loading															
7	PD 50.54(bb)	Energy															
7	PD 50.54(bb)	Equipment															
7	PD 50.54(bb)	HP Supplies															
7	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies															
7	PD 50.54(bb)	Offsite spent fuel storage									$5,004,493	$5,004,493	$800,400	$5,804,893			
7	PD 50.54(bb)	Severance															
7	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT									$5,004,493	$5,004,493	$800,400	$5,804,893			
		TOTAL PERIOD 7 - DRY STORAGE COSTS:									$5,004,493	$5,004,493	$800,400	$5,804,893			
		ACTIVITY															
		Common															
		Common Subtotal 10 CFR 50.75(c):															
		Common Subtotal 10 CFR 50.54(bb):															
		PERIOD DEPENDENT															
		Common															
		Common Subtotal 10 CFR 50.75(c):															
		Common Subtotal 10 CFR 50.54(bb):									$5,004,493	$5,004,493	$800,400	$5,804,893			
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):															
		Total 10 CFR 50.54(bb):									$5,004,493	$5,004,493	$800,400	$5,804,893			
TOTAL ACTIVITY COSTS:																	

2012 D. C. Cook
Scenario 2
DECON: Permanent Off-Site Dry Storage

Type	Staff Labor $	Craft Labor $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
UNIT 1															
SUBTOTAL UNIT 1 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 6		$27,358,346	$3,958,560	$591,894	$10,623,903		$87,944,086			$130,484,728	$42,667,350	$173,092,078		5,760	431,164
SUBTOTAL UNIT 1 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 6															
SUBTOTAL UNIT 1 GREENFIELD COSTS FOR PERIODS 1 - 6		$12,656,492	$1,339,137		$793,182	$3,682,582	$815,844			$19,197,007	$4,016,000	$23,213,007		240,864	
UNIT 2															
SUBTOTAL UNIT 2 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 6	$51,231	$36,001,846	$4,327,636	$640,627	$10,993,579		$94,951,385			$145,960,303	$47,150,160	$193,116,463		5,760	585,767
SUBTOTAL UNIT 2 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 6															
SUBTOTAL UNIT 2 GREENFIELD COSTS FOR PERIODS 1 - 6		$20,794,485	$1,786,192		$929,626	$5,107,350				$28,706,663	$5,857,500	$34,564,163		406,621	
COMMON															
SUBTOTAL COMMON 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 6	$9,413,409	$17,637,763	$2,666,308	$30,232	$262,963		$8,467,631			$38,388,286	$8,274,900	$47,663,186	100,196	24,960	85,797
SUBTOTAL COMMON 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 6	$749,487	$1,671,891	$2,490,000							$4,911,377	$1,112,300	$6,023,677	7,712	26,000	
SUBTOTAL COMMON GREENFIELD COSTS FOR PERIODS 1 - 6		$22,748,447	$6,848,033		$2,962,164	$17,207,483				$51,766,177	$9,706,900	$61,473,077		381,293	
TOTAL PERIOD DEPENDENT COSTS															
UNIT 1															
SUBTOTAL UNIT 1 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 6	$25,177,442		$12,836,137					$1,292,386	$2,352,267	$41,358,232	$7,487,500	$48,845,732	164,736		
SUBTOTAL UNIT 1 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 6															
SUBTOTAL UNIT 1 GREENFIELD COSTS FOR PERIODS 1 - 6															
UNIT 2															
SUBTOTAL UNIT 2 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 6															
SUBTOTAL UNIT 2 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 6															
SUBTOTAL UNIT 2 GREENFIELD COSTS FOR PERIODS 1 - 6															
COMMON															
SUBTOTAL COMMON 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 6	$206,016,390	$14,883,007	$33,955,642					$11,817,283	$15,784,554	$282,366,776	$46,866,200	$329,231,976	2,896,420		289,914
SUBTOTAL COMMON 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 6	$30,049,368		$2,378,591					$930,387	$266,326,798	$298,735,146	$45,048,300	$343,783,446	784,046		
SUBTOTAL COMMON GREENFIELD COSTS FOR PERIODS 1 - 6	$14,481,780	$2,446,183	$2,997,914					$164,745	$780,464	$20,863,086	$3,611,700	$24,464,786	136,612	46,307	
	$286,989,107												4,079,721		
UNIT 1, UNIT 2 & COMMON															
GRAND TOTAL ACTIVITY COSTS FOR PERIODS 1-6	$10,214,127	$137,889,258	$25,402,856	$1,262,753	$26,565,377	$26,087,415	$192,178,745			$419,400,530	$119,726,100	$539,126,630	107,908	1,070,167	1,102,728
GRAND TOTAL PERIOD DEPENDENT COSTS FOR PERIODS 1-6	$275,774,980	$17,331,170	$51,768,193					$14,194,801	$284,244,063	$643,313,217	$102,982,700	$746,295,917	3,971,813	46,307	289,914
ANNUAL SPENT FUEL STORAGE									$6,004,493	$6,004,493	$900,400	$6,904,893			
GRAND TOTAL	$285,989,107	$155,020,428	$77,171,039	$1,262,753	$26,565,377	$26,087,415	$192,178,745	$14,194,801	$284,244,063	$1,062,713,748	$222,707,800	$1,285,421,548	4,079,721	1,116,474	1,392,642
SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$25,177,442	$27,369,346	$16,492,637	$591,894	$10,823,903		$87,944,086	$1,292,386	$2,352,267	$171,842,960	$50,064,850	$221,907,810	164,736	5,760	431,164
SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):															
SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR GRENNFIELD (g):		$12,656,492	$1,339,137		$793,182	$3,682,582	$815,844			$19,197,007	$4,016,000	$23,213,007		240,864	
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$51,231	$36,001,846	$4,327,636	$640,627	$10,993,579		$94,951,385			$145,966,303	$47,150,150	$193,116,453		5,760	585,767
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):															
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR GRENNFIELD (g):		$20,794,485	$1,786,192		$929,626	$5,107,350				$28,706,663	$5,857,500	$34,564,163		406,621	
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$215,429,799	$32,420,769	$36,621,950	$30,232	$262,963		$8,467,631	$11,817,283	$15,784,554	$320,735,061	$56,140,100	$376,875,161	2,996,616	24,960	375,711
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):	$30,848,855	$1,671,891	$4,868,891					$930,387	$266,326,798	$303,646,622	$46,160,600	$349,807,122	791,757	26,000	
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR GRENNFIELD (g):	$14,481,780	$25,196,610	$11,835,997		$2,962,164	$17,207,483		$164,745	$780,464	$72,619,243	$13,318,600	$85,937,843	136,612	407,508	
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$240,659,472	$94,790,961	$57,342,122	$1,262,753	$21,880,436		$191,363,101	$13,109,669	$18,136,821	$638,644,323	$153,356,100	$791,899,423	3,161,352	36,480	1,392,642
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):	$30,848,855	$1,671,891	$4,868,891					$930,387	$266,326,798	$303,646,622	$46,160,600	$349,807,122	791,757	26,000	
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR GRENNFIELD (g):	$14,481,780	$58,667,587	$14,960,326		$4,684,942	$26,087,415	$815,844	$164,745	$780,464	$120,622,993	$23,192,100	$143,715,093	136,612	1,053,994	
GRAND TOTAL	$285,989,107	$155,020,428	$77,171,039	$1,262,753	$26,565,377	$26,087,415	$192,178,745	$14,194,801	$284,244,063	$1,062,713,748	$222,707,800	$1,285,421,548	4,079,721	1,116,474	1,392,642

2012 D. C. Cook
Scenario 3
DECON, On-Site Dry Storage, 2032 Repository and Current Acceptance Rate

	Type		Staff Labor $	Craft Labor $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal $	Contaminated Disposal, $	Energy, $	Other, $	Subtotal without Contingency, $	Contingency, $	Total with Contingency, $	Staff Manhours	Clean Craft Manhours	Contaminated Craft Manhours
PERIOD 1 - U1 & U2 DECOMMISSIONING PLANNING COST:																	
		SPENT FUEL ACTIVITIES															
		Modify spent fuel support systems															
1	A 50.54(bb)	Define systems modification	$62,772									$62,772	$9,400	$72,172	606		
1	A 50.54(bb)	Design systems modification and equipment specifications	$147,683									$147,683	$22,200	$169,883	1,668		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
		Control room relocation															
1	A 50.54(bb)	Define control room equipment	$62,772									$62,772	$9,400	$72,172	606		
1	A 50.54(bb)	Design control room modification and equipment specifications	$178,982									$178,982	$26,800	$205,782	1,896		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
		Design spent fuel storage security modifications															
1	A 50.54(bb)	Define modification	$29,406									$29,406	$4,400	$33,806	288		
1	A 50.54(bb)	Design modification and equipment specifications	$102,741									$102,741	$15,400	$118,141	1,016		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	ISFSI Pad Construction		$17,037,421								$17,037,421	$3,888,000	$20,925,421	192		
		SUBTOTAL - SPENT FUEL ACTIVITIES	$749,497	$17,037,421								$17,786,918	$4,000,000	$21,787,709	7,004		
		SPENT FUEL PERIOD DEPENDENT															
1	PD 50.54(bb)	Utility Staff															
1	PD 50.54(bb)	Security															
1	PD 50.54(bb)	Insurance									$2,183,119	$2,183,119	$327,500	$2,510,619			
1	PD 50.54(bb)	O & M Budget Items															
1	PD 50.54(bb)	Permits & Fees															
1	PD 50.54(bb)	Waste Transfer and Loading															
1	PD 50.54(bb)	Energy															
1	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies															
1	PD 50.54(bb)	Small Tools			$170,374							$170,374	$42,600	$212,974			
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT			$170,374						$2,183,119	$2,353,493	$370,100	$2,723,593			
		DECOMMISSIONING ACTIVITIES															
		Primary system decontamination															
1	A 50.75(c)	Define scope	$41,835									$41,835	$6,200	$47,535	328		
1	A 50.75(c)	Evaluate processes	$53,024									$53,024	$8,000	$61,024	448		
1	A 50.75(c)	Prepare bid specifications and RFP	$52,899									$52,899	$7,900	$60,799	512		
1	A 50.75(c)	Qualify Contractors	$14,104									$14,104	$2,100	$16,204	112		
1	A 50.75(c)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	248		
		Select Decommissioning General Contractor															
1	A 50.75(c)	Define scope	$79,663									$79,663	$11,600	$91,263	736		
1	A 50.75(c)	Prepare bid specifications and RFP	$84,013									$84,013	$12,600	$96,613	776		
1	A 50.75(c)	Qualify Contractors	$21,648									$21,648	$3,200	$24,848	176		
1	A 50.75(c)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	248		
		U1 & U2 cold and dark site repowering															
1	A 50.75(c)	Define scope	$66,277									$66,277	$10,200	$76,477	616		
1	A 50.75(c)	Design modification and equipment specifications	$150,932									$150,932	$22,800	$170,532	1,560		
1	A 50.75(c)	Prepare installation procedures	$212,724									$212,724	$31,900	$244,624	2,080		
1	A 50.75(c)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
		Modify U1 & U2 containment access															
1	A 50.75(c)	Select new access location	$30,261									$30,261	$4,500	$34,761	208		
1	A 50.75(c)	Design access and equipment specifications	$133,823									$133,823	$20,000	$153,823	1,320		
		U1 & U2 Site Characterization															
1	A 50.75(c)	Define scope	$47,781									$47,781	$7,200	$54,981	408		
1	A 50.75(c)	Prepare bid specifications and RFP	$83,465									$83,465	$8,000	$91,466	488		
1	A 50.75(c)	Qualify Contractors	$21,648									$21,648	$3,200	$24,848	176		
1	A 50.75(c)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	248		
1	A 50.75(c)	Prepare procedures	$133,000									$133,000	$19,900	$152,900	1,256		
		ADMINISTRATIVE ACTIVITIES															
1	A 50.75(c)	Develop staff transition plan	$41,832									$41,832	$6,200	$47,732	352		
1	A 50.75(c)	Develop insurance and retention policy	$41,832									$41,832	$6,200	$47,732	352		
1	A 50.75(c)	Prepare project administrative procedures	$40,026									$40,026	$5,800	$51,826	488		
1	A 50.75(c)	Develop site based decommissioning cost estimate	$209,036									$209,036	$31,400	$240,436	2,240		
1	A 50.75(c)	Develop project budget and schedule controls	$60,924									$60,924	$9,100	$70,024	648		
1	A 50.75(c)	Assemble plant drawings	$24,307									$24,307	$3,600	$27,907	256		
1	A 50.75(c)	Define and product	$36,216									$36,216	$5,400	$41,616	280		

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Scenario 3
DECON, On-Site Dry Storage, 2032 Repository and Current Acceptance Rate

	Type		Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	Without Contingency $	Contingency $	With Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
1	A 50.75(c)	Develop technical approach and detailed project plans	$223,864									$223,864	$33,600	$257,464	2,440		
		LICENSING/PERMITTING DOCUMENTATION															
1	A 50.75(c)	Insurance exemption	$46,144									$46,144	$6,900	$53,044	376		
1	A 50.75(c)	Prepare Post-Shutdown Decommissioning Activities Report	$134,589									$134,589	$20,200	$154,789	1,400		
1	A 50.75(c)	Prepare certification of permanent cessation of operations	$6,143									$6,143	$900	$7,043	40		
1	A 50.75(c)	Prepare certification of permanent reactor defueling	$6,143									$6,143	$900	$7,043	40		
1	A 50.75(c)	Prepare post-shutdown technical specification modifications	$335,249									$335,249	$50,300	$385,549	3,600		
1	A 50.75(c)	Update FSAR	$311,424									$311,424	$46,700	$358,124	3,360		
1	A 50.75(c)	Develop certified fuel handler program	$36,168									$36,168	$5,400	$41,568	336		
1	A 50.75(c)	Prepare post-shutdown emergency plan	$162,778									$162,778	$24,400	$187,178	1,460		
1	A 50.75(c)	Prepare post-shutdown QA plan	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare post-shutdown security plan	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare post-shutdown fire protection plan	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare post-shutdown radiation protection manual	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare and submit state and local permits	$95,422									$95,422	$14,300	$109,722	960		
1	A 50.75(c)	Respond to NRC questions on PSDAR	$6,143									$6,143	$900	$7,043	40		
1	A 50.75(c)	Prepare detailed resource loaded project schedule	$256,157									$256,157	$38,400	$294,557	2,480		
1	A 50.75(c)	Perform 50.59 unreviewed safety questions	$92,871									$92,871	$13,900	$106,571	736		
1	A 50.75(c)	Prepare activity specifications	$1,700,771									$1,700,771	$255,100	$1,955,871	18,080		
1	A 50.75(c)	Prepare detailed work procedures	$1,604,363									$1,604,363	$240,700	$1,845,063	16,080		
1	A 50.75(c)	Select shipping casks and obtain permits	$24,032									$24,032	$3,600	$27,632	240		
		LICENSE TERMINATION PLAN															
1	A 50.75(c)	General Information	$1,350									$1,350	$200	$1,550	16		
1	A 50.75(c)	Site Characterization	$33,967									$33,967	$5,100	$39,067	336		
1	A 50.75(c)	Identification of remaining site dismantlement activities	$33,967									$33,967	$5,100	$39,067	336		
1	A 50.75(c)	Remediation Plans	$17,860									$17,860	$2,700	$20,560	176		
1	A 50.75(c)	Final Radiation Survey Plan	$338,813									$338,813	$50,800	$389,613	3,820		
1	A 50.75(c)	Compliance with the radiological criteria for license termination	$227,506									$227,508	$34,100	$261,608	2,440		
1	A 50.75(c)	Update decommissioning cost estimate	$55,404									$55,404	$8,300	$63,704	596		
1	A 50.75(c)	Supplement to the environmental report	$55,404									$55,404	$8,300	$63,704	596		
1	A 50.75(c)	Respond to NRC questions	$25,693									$25,693	$3,900	$29,593	200		
1	A 50.75(c)	Update LTP	$51,042									$51,042	$7,700	$58,742	536		
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	**$8,089,742**									**$8,089,742**	**$1,213,000**	**$9,302,742**	**81,340**		
		DECOMMISSIONING PERIOD DEPENDENT															
1	PD 50.75(c)	Utility Staff	$4,420,012									$4,420,012	$664,400	$5,083,412	75,575		
1	PD 50.75(c)	DOC Staff	$4,493,843									$4,493,843	$674,100	$5,167,943	56,159		
1	PD 50.75(c)	Security	$683,660									$682,660	$102,400	$785,060	33,001		
1	PD 50.75(c)	HP Supplies			$287,905							$287,905	$72,000	$359,905			
1	PD 50.75(c)	Equipment			$152,797							$152,797	$38,200	$190,997			
1	PD 50.75(c)	Unit 1 Insurance									$844,076	$844,076	$126,600	$970,676			
1	PD 50.75(c)	Unit 2 Insurance															
1	PD 50.75(c)	O & M Budget Items			$12,095,435							$12,095,435	$3,023,900	$15,119,335			
1	PD 50.75(c)	Permits & Fees									$1,508,191	$1,508,191	$226,200	$1,734,391			
1	PD 50.75(c)	Waste Transfer and Loading															
1	PD 50.75(c)	Energy								$1,292,386		$1,292,386	$193,900	$1,486,286			
1	PD 50.75(c)	Severance	$15,571,925									$15,571,925	$2,335,800	$17,907,725			
1	PD 50.75(c)	Small Tools															
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	**$25,177,442**		**$12,536,137**					**$1,292,386**	**$2,352,267**	**$41,358,232**	**$7,457,600**	**$48,815,732**	**164,736**		
		TOTAL PERIOD 1 - U1 & U2 DECOMMISSIONING PLANNING COST:	**$34,016,679**	**$17,037,421**	**$12,706,811**					**$1,292,386**	**$4,536,388**	**$69,589,374**	**$13,041,400**	**$82,629,774**	**243,990**		
		ACTIVITY															
		UNIT 1 - PERIOD 1 COSTS															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Total 10 CFR 50.75(c):	**$8,089,742**									**$8,089,742**	**$1,213,000**	**$9,302,742**	**81,340**		
		Total 10 CFR 50.54(bb):	**$740,407**	**$17,037,421**								**$17,706,000**	**$4,000,894**	**$21,707,709**	**7,004**		
		PERIOD DEPENDENT															
		UNIT 1 - PERIOD 1 COSTS															
		Unit 1 Subtotal 10 CFR 50.75(c):	**$25,177,442**		**$12,536,137**					**$1,292,386**	**$2,352,267**	**$41,358,232**	**$7,457,600**	**$48,815,732**	**164,736**		
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															

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	Type		Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Total 10 CFR 50.75(c):															
		Total 10 CFR 50.54(bb):			$170,374						$2,183,119	$2,353,493	$370,100	$2,723,593			
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$37,267,193		$12,856,137					$1,292,386	$2,362,287	$49,447,973	$8,670,500	$58,118,473	230,076		
		Total 10 CFR 50.54(bb):	$749,487	$17,037,421	$170,374						$2,183,119	$20,140,406	$4,370,900	$24,511,306	7,804		
PERIOD 2 - POST-SHUTDOWN ACTIVITIES COSTS:																	
		SPENT FUEL ACTIVITIES															
2	A 50.54(bb)	Modify Spent Fuel Cooling System		$634,094	$1,165,000							$1,799,094	$438,000	$2,238,094		9,360	
2	A 50.54(bb)	Modify control room		$582,042	$800,000							$1,382,042	$332,000	$1,714,042		9,360	
2	A 50.54(bb)	Modify security system		$455,755	$525,000							$980,755	$238,300	$1,218,055		7,280	
2	A 50.54(bb)	Purchase ISFSI casks			$69,471,000							$69,471,000	$17,387,800	$86,858,800		7,280	
		SUBTOTAL - SPENT FUEL ACTIVITIES		$1,671,891	$71,961,000							$73,632,891	$18,371,900	$92,004,791		33,280	
		SPENT FUEL PERIOD DEPENDENT															
2	PD 50.54(bb)	Utility Staff	$4,098,995									$4,098,995	$814,800	$4,713,795	68,406		
2	PD 50.54(bb)	Security	$1,616,274									$1,616,274	$242,400	$1,858,674	43,531		
2	PD 50.54(bb)	Insurance									$1,177,898	$1,177,898	$176,700	$1,354,598			
2	PD 50.54(bb)	O & M Budget Items															
2	PD 50.54(bb)	Permits & Fees									$807,106	$807,106	$121,100	$928,206			
2	PD 50.54(bb)	Waste Transfer and Loading															
2	PD 50.54(bb)	Energy								$249,084		$249,084	$37,400	$286,484			
2	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$448,472							$448,472	$112,100	$560,572			
2	PD 50.54(bb)	Small Tools			$16,719							$16,719	$4,200	$20,919			
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$5,715,269		$465,191					$249,084	$1,985,004	$8,414,548	$1,308,700	$9,723,248	111,937		
		DECONMISSIONING ACTIVITIES															
2	A 50.75(c)	Primary System Decon Unit 1 & 2		$8,546,040	$1,417,060				$8,966,640			$18,929,740	$5,675,500	$24,605,240			
2	A 50.75(c)	Flush & Drain Systems (PERFORMED BY UTILITY STAFF)															
2	A 50.75(c)	Implement cold & dark		$761,036	$1,600,000							$2,361,036	$573,700	$2,934,736		11,520	
2	A 50.75(c)	Modify U1 Containment Access		$346,437	$525,000							$871,437	$210,300	$1,081,737		5,760	
2	A 50.75(c)	ModifyU2 Containment Access		$346,437	$525,000							$871,437	$210,300	$1,081,737		5,760	
2	A 50.75(c)	Historical Site Assessment	$375,882									$375,882	$56,400	$432,282	4,880		
2	A 50.75(c)	Vessel and internals activation analysis	$109,336									$109,336	$16,400	$125,736	640		
2	A 50.75(c)	Characterization survey	$789,088									$789,088	$118,400	$907,488	12,880		
2	A 50.75(c)	Test special equipment and training		$939,723								$939,723	$214,500	$1,154,223		13,440	
		SUBTOTAL - DECONMISSIONING ACTIVITY COSTS:	$1,274,306	$10,939,672	$4,067,060				$8,966,640			$25,247,687	$7,075,500	$32,323,187	18,400	36,480	
		DECONMISSIONING PERIOD DEPENDENT															
2	PD 50.75(c)	Utility Staff	$18,243,360									$18,243,360	$2,736,500	$20,979,860	300,570		
2	PD 50.75(c)	DOC Staff	$11,702,746									$11,702,746	$1,755,400	$13,458,146	157,540		
2	PD 50.75(c)	Security	$3,206,454									$3,206,454	$481,000	$3,687,454	124,374		
2	PD 50.75(c)	HP Supplies			$759,560							$759,560	$189,600	$949,160			
2	PD 50.75(c)	Equipment			$1,018,768							$1,018,768	$254,700	$1,273,468			
2	PD 50.75(c)	Unit 1 Insurance									$268,242	$268,242	$38,900	$306,142			
2	PD 50.75(c)	Unit 2 Insurance									$268,242	$268,242	$38,900	$306,142			
2	PD 50.75(c)	O & M Budget Items			$2,885,773							$2,885,773	$721,400	$3,607,173			
2	PD 50.75(c)	Permits & Fees									$2,075,053	$2,075,053	$311,300	$2,386,353			
2	PD 50.75(c)	Waste Transfer and Loading															
2	PD 50.75(c)	Energy								$1,992,469		$1,992,469	$298,900	$2,291,369			
2	PD 50.75(c)	Severance	$23,200,605									$23,200,605	$3,480,100	$26,680,605			
2	PD 50.75(c)	Small Tools			$218,793							$218,793	$54,700	$273,493			
		SUBTOTAL - DECONMISSIONING PERIOD DEPENDENT	$56,353,164		$4,881,893					$1,992,469	$2,607,638	$65,835,264	$10,363,400	$76,198,664	582,484		
		TOTAL PERIOD 2 - POST-SHUTDOWN ACTIVITIES COSTS:	$63,342,939	$12,611,563	$81,375,104				$8,966,640	$2,241,553	$4,592,642	$173,130,400	$37,119,600	$210,249,900	712,821	69,760	
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):		$4,619,487	$1,235,840				$4,483,320			$10,338,317	$2,946,050	$13,284,367		5,760	
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															

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Scenario 3
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	Type		Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	Without Contingency $	Contingency $	With Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
		Unit 2 Subtotal 10 CFR 50.75(c):		$4,818,487	$1,233,646				$4,433,320			$10,336,317	$3,043,050	$13,384,367		6,760	
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal - 10 CFR 50.75(c):	$1,274,308	$1,290,787	$1,600,000							$4,824,052	$579,400	$5,404,442	18,404	24,960	
		Common Subtotal - 10 CFR 50.54(bb):		$1,871,891	$71,961,000							$73,832,891	$18,171,900	$92,004,791		19,200	
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal - 10 CFR 50.75(c):	$56,303,394		$4,881,003					$1,802,469	$2,847,038	$64,834,294	$10,303,400	$75,198,694	582,484		
		Common Subtotal - 10 CFR 50.54(bb):	$5,716,259		$466,191					$240,904	$1,985,004	$8,414,848	$1,308,700	$9,723,248	111,937		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$67,827,659	$10,309,872	$8,848,973				$8,986,640	$1,882,469	$2,807,838	$91,092,801	$17,438,900	$108,821,651	600,884	36,480	
		Total 10 CFR 50.54(bb):	$8,716,259	$1,871,891	$72,426,191					$240,904	$1,986,004	$82,047,439	$19,680,600	$101,728,039	111,937	19,200	
PERIOD 3 VESSEL AND INTERNALS REMOVAL COSTS:																	
		SPENT FUEL ACTIVITIES															
3	A 50.54(bb)	Purchase ISFSI Casks			$69,471,000							$69,471,000	$17,367,800	$86,838,800			
		SUBTOTAL - SPENT FUEL ACTIVITIES			$69,471,000							$69,471,000	$17,367,800	$86,838,800			
		SPENT FUEL PERIOD DEPENDENT															
3	PD 50.54(bb)	Utility Staff	$12,995,166									$12,995,166	$1,949,300	$14,944,466	219,868		
3	PD 50.54(bb)	Security	$5,124,120									$5,124,120	$768,600	$5,892,720	184,010		
3	PD 50.54(bb)	Insurance									$3,734,324	$3,734,324	$560,100	$4,294,424			
3	PD 50.54(bb)	O & M Budget Items															
3	PD 50.54(bb)	Permits & Fees									$2,558,793	$2,558,793	$383,800	$2,942,593			
3	PD 50.54(bb)	Waste Transfer and Loading															
3	PD 50.54(bb)	Energy								$511,059		$511,059	$76,700	$587,759			
3	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$1,421,605							$1,421,605	$355,500	$1,777,105			
3	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$18,119,286		$1,421,605					$511,059	$6,293,118	$26,346,166	$4,094,000	$30,438,266	403,878		
		DECOMMISSIONING ACTIVITIES															
		UNIT 1															
3	A 50.75(c)	Install of reactor operating floor contamination control envelopes (CCEs), support structures, rigging, internals work platforms and process equipment (BY UTILITY STAFF)															
3	A 50.75(c)	Finalize Residual Radiation Inventory (WITH SITE CHARACTERIZATION)															
3	A 50.75(c)	Finalize Internals and Vessel Segmenting Details (WITH ACTIVATION ANALYSIS)															
3	A 50.75(c)	Remove, pack, ship and bury Unit 1 Pressurizer		$1,018,043		$500	$72,384		$899,352			$1,990,580	$586,300	$2,576,880			19,776
3	A 50.75(c)	Decon, remove, package, ship and bury Unit 1 steam generators		$4,300,772	$1,092,887	$12,800	$883,287		$12,054,598			$18,284,094	$5,967,000	$24,251,094			79,183
3	A 50.75(c)	Remove Unit 1 equipment hatch closure (BY UTILITY STAFF)															
3	A 50.75(c)	Remove Unit 1 control rod drive and reactor cavity missile shields (BY UTILITY STAFF)															
3	A 50.75(c)	Remove Unit 1 CRD mechanisms and cables, air ducts, and reactor vessel head (BY UTILITY															
3	A 50.75(c)	Remove, segment, package and bury Unit 1 vessel & vessel head insulation		$574,720					$360,040			$934,760	$171,600	$896,360			
3	A 50.75(c)	Prepare Unit 1 vessel head for shipment as its own container (WITH VESSEL REMOVAL)															
3	A 50.75(c)	Decontaminate and clean up Unit 1 plant areas (BY UTILITY STAFF)															
3	A 50.75(c)	Process liquid and solid radioactive wastes (BY UTILITY STAFF)															
3	A 50.75(c)	Decon, remove, package, ship and dispose of Unit 1 contaminated systems		$8,005,752	$432,900	$56,355	$431,288		$8,175,182			$18,002,067	$5,314,900	$23,316,967			180,371
3	A Greenfield	Remove, package, ship and dispose of Unit 1 clean systems		$9,999,325	$520,398		$159,218		$615,544			$11,094,886	$2,662,000	$13,756,886		192,216	
3	A 50.75(c)	Install Unit 1 water cleanup system in fuel transfer canal (BY UTILITY STAFF)															
3	A 50.75(c)	Segment, package and ship Unit 1 internals as radioactive waste		$2,991,854	$602,630	$81,000	$4,574,990		$33,431,361			$41,182,335	$14,290,700	$55,473,035			47,360
3	A 50.75(c)	Decontaminate internals work platform and store (BY UTILITY STAFF)															
3	A 50.75(c)	Install Unit 1 vessel support structure (WITH VESSEL REMOVAL)															
3	A 50.75(c)	Segment and process Unit 1 reactor vessel and associated equipment as LLW		$1,352,522	$141,451	$24,000	$2,039,282		$14,627,158			$18,184,413	$6,289,500	$24,473,913			24,820
3	A 50.75(c)	Decontaminate reactor vessel platform and store															
3	A 50.75(c)	Decontaminate Unit 1 reactor building		$4,416,224	$563,223	$416,439	$2,672,802		$13,922,464			$21,990,152	$7,013,200	$28,993,352			80,876
		UNIT 2															

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	Type		Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
3	A 50.75(c)	Finalize Residual Radiation inventory (WITH SITE CHARACTERIZATION)															
3	A 50.75(c)	Finalize Internals and Vessel Segmenting Details (WITH ACTIVATION ANALYSIS)															
3	A 50.75(c)	Revise Integrated Work Sequence and Schedule	$61,231									$61,231	$7,700	$68,931			
3	A 50.75(c)	Transfer all reactor operating floor CCEs support structures, rigging, internals work platforms and process equipment to position and install (BY UTILITY STAFF)															
3	A 50.75(c)	Remove Unit 2 equipment hatch closure (BY UTILITY STAFF)															
3	A 50.75(c)	Remove Unit 2 CRD missile and reactor cavity missile shields (BY UTILITY STAFF)															
3	A 50.75(c)	Remove Unit 2 CRD mechanisms and cables, air ducts, and reactor vessel head (BY UTILITY															
3	A 50.75(c)	Remove, segment, package and bury Unit 2 vessel & vessel head insulation		$174,720					$350,040			$524,760	$171,500	$696,260			
3	A 50.75(c)	Prepare Unit 2 vessel head for shipment as its own container (WITH VESSEL REMOVAL)															
3	A 50.75(c)	Decontaminate and clean up Unit 2 plant areas (BY UTILITY STAFF)															
3	A 50.75(c)	Process liquid and solid radioactive wastes (BY UTILITY STAFF)															
3	A 50.75(c)	Install Unit 2 water clean-up system in fuel transfer canal (BY UTILITY STAFF)															
3	A 50.75(c)	Segment, package and ship Unit 2 internals as radioactive waste		$2,501,854	$603,630	$91,600	$4,574,800		$33,431,961			$41,182,835	$14,290,700	$55,473,035			47,360
3	A 50.75(c)	Decontaminate internals work platform and process as LLW (BY UTILITY STAFF)															
3	A 50.75(c)	Install Unit 2 vessel support structure (WITH VESSEL REMOVAL)															
3	A 50.75(c)	Segment and process Unit 2 reactor vessel and associated equipment as LLW		$1,352,522	$141,451	$24,000	$2,039,282		$14,627,158			$18,184,413	$6,289,500	$24,473,913			24,620
3	A 50.75(c)	Decon reactor vessel cutting equipment and work platform; package and process as LLW (WI															
3	A 50.75(c)	Decon, remove, package, ship and bury Unit 2 steam generators		$4,200,772	$1,092,667	$12,800	$833,257		$12,054,595			$18,284,094	$5,967,000	$24,251,094			70,163
3	A 50.75(c)	Remove, pack, ship and bury Unit 2 Pressurizer		$1,018,043		$800	$72,364		$899,382			$1,990,590	$586,300	$2,576,890			16,775
3	A 50.75(c)	Decontaminate non-essential structures		$136,262	$68,843	$10,496	$62,726		$121,095			$399,222	$106,700	$507,922			2,242
3	A Greenfield	Remove non-essential structures		$111,101	$42,947		$10,867	$63,241				$228,175	$44,800	$272,975		1,694	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$51,231	$42,023,487	$8,091,896	$720,990	$18,376,647	$63,241	$146,760,628			$212,097,817	$69,761,300	$281,849,117		193,811	603,323
		DECOMMISSIONING PERIOD DEPENDENT															
3	PD 50.75(c)	Utility Staff	$39,955,935									$39,955,935	$5,093,400	$45,049,335	630,890		
3	PD 50.75(c)	DOC Staff	$44,280,951									$44,280,951	$6,642,100	$50,923,051	564,858		
3	PD 50.75(c)	Security	$5,292,258									$5,292,258	$793,800	$6,086,058	164,010		
3	PD 50.75(c)	HP Supplies			$8,005,157							$8,005,157	$2,001,300	$10,006,457			
3	PD 50.75(c)	Equipment			$4,779,051							$4,779,051	$1,194,800	$5,973,851			
3	PD 50.75(c)	Unit 1 Insurance									$844,076	$844,076	$126,600	$970,676			
3	PD 50.75(c)	Unit 2 Insurance									$844,076	$844,076	$126,600	$970,676			
3	PD 50.75(c)	O & M Budget Items			$2,077,376							$2,077,376	$518,300	$2,596,676			
3	PD 50.75(c)	Permits & Fees									$6,157,842	$6,157,842	$923,700	$7,081,542			
3	PD 50.75(c)	Waste Transfer and Loading		$8,435,653								$8,435,653	$1,925,100	$10,360,753			184,323
3	PD 50.75(c)	Energy								$5,640,807		$5,640,807	$846,100	$6,486,907			
3	PD 50.75(c)	Severance	$2,177,895									$2,177,895	$326,700	$2,504,595			
3	PD 50.75(c)	Small Tools			$1,009,183							$1,009,183	$252,300	$1,261,483			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$91,707,149	$8,435,653	$15,870,767					$5,640,807	$7,845,993	$129,500,360	$21,671,620	$151,172,180	1,359,757		184,323
		TOTAL PERIOD 3 VESSEL AND INTERNALS REMOVAL COSTS:	$109,877,587	$50,459,141	$11,868,268	$720,899	$18,378,647	$63,241	$146,760,829	$6,161,890	$14,109,110	$437,494,443	$112,894,900	$550,299,343	1,886,665	193,811	787,845
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):		$22,145,597	$2,722,900	$591,894	$10,623,893		$53,400,788			$120,146,411	$39,632,100	$159,781,811			431,164
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		Unit 1 Subtotal Greenfield:		$9,599,328	$820,398		$169,218		$616,844			$11,094,885	$2,662,000	$13,756,885		192,215	
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):	$61,231	$9,427,911	$1,714,747	$119,400	$7,610,813		$61,361,120			$80,217,433	$27,312,700	$107,530,123			169,917
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Unit 2 Subtotal Greenfield:															
		Common															
		Total 10 CFR 50.75(c):		$136,262	$68,643	$10,496	$62,726		$121,095			$399,222	$108,700	$507,922			2,242
		Total 10 CFR 50.54(bb):			$69,471,000							$69,471,000	$17,367,800	$86,838,800			
		Total Greenfield		$111,101	$42,947		$10,867	$63,241				$228,175	$44,800	$272,975		1,694	
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Total 10 CFR 50.75(c):	$91,707,146	$8,435,653	$15,870,767					$5,640,807	$7,845,893	$129,500,380	$21,671,800	$151,172,180	1,359,787		184,323
		Total 10 CFR 50.54(bb):	$18,119,286		$1,421,846					$511,089	$6,293,114	$26,345,266	$4,094,004	$30,439,266	490,878		
		Unit 1, Unit 2 & Common															

2017 D. C. Cook
Scenario 3
DECON, On-Site Dry Storage, 2032 Repository and Current Acceptance Rate

Type			Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
		Total 10 CFR 50.75(c):	$91,786,371	$40,748,714	$26,399,118	$720,990	$18,209,443		$144,944,880	$5,680,807	$7,845,893	$336,268,415	$88,723,300	$418,991,716	1,398,787		767,446
		Total 10 CFR 50.54(bb):	$19,119,286		$79,892,806					$511,069	$6,293,116	$95,816,266	$21,461,800	$117,279,866	406,870		
		Total Greenfield		$9,710,426	$893,345		$179,106	$83,241	$815,644			$11,322,761	$2,706,800	$14,029,561		193,811	
PERIOD 4 DECONTAMINATE BALANCE OF SITE COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
4	PD 50.54(bb)	Utility Staff	$4,779,340									$4,779,340	$716,900	$5,496,240	71,576		
4	PD 50.54(bb)	Security	$2,411,303									$2,411,303	$361,700	$2,773,003	60,274		
4	PD 50.54(bb)	Insurance									$482,970	$482,970	$72,400	$555,370			
4	PD 50.54(bb)	O & M Budget Items															
4	PD 50.54(bb)	Permits & Fees									$929,799	$929,799	$139,500	$1,069,299			
4	PD 50.54(bb)	Waste Transfer and Loading															
4	PD 50.54(bb)	Energy								$13,167		$13,167	$2,000	$15,167			
4	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$362,228							$362,228	$40,500	$402,828			
4	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$7,190,643		$362,228					$13,137	$1,412,769	$8,976,827	$1,383,100	$10,361,927	131,848		
		DECOMMISSIONING ACTIVITIES															
4	A 50.75(c)	Decon, remove, package, ship and dispose of Unit 2 contaminated systems		$16,536,253	$806,126	$105,567	$803,963		$15,182,481			$33,432,411	$9,870,600	$43,303,011			334,974
4	A Greenfield	Remove, package, ship and dispose of Unit 2 clean systems		$17,627,319	$966,454		$295,691	$1,614,799				$20,604,231	$4,525,700	$25,129,931		356,973	
4	A 50.75(c)	Decon Steam Generator Storage Building		$80,063	$27,886	$409	$6,024		$273,060			$387,433	$129,300	$516,733			1,858
4	A 50.75(c)	Decon Unit 2 Reactor Building		$4,418,224	$553,223	$418,439	$2,672,802		$13,922,464			$21,960,152	$7,013,200	$28,969,352			80,876
4	A 50.75(c)	Remove Spent fuel storage racks		$2,591,493	$50,370	$6,948	$43,306		$1,865,798			$4,249,314	$1,199,300	$5,448,314		49,874	
4	A 50.75(c)	Decon Auxiliary Building		$1,568,936	$655,316	$10,980	$150,898		$6,517,658			$8,903,790	$3,006,400	$11,910,190			32,024
4	A 50.75(c)	Perform final radiological survey of all structures		$1,828,560	$34,160							$1,862,720	$426,800	$2,266,520			
4	A 50.75(c)	Perform final survey of the site		$9,631,680	$219,960							$9,851,640	$2,253,000	$12,104,640			
4	A 50.75(c)	Obtain NRC approval															
4	A 50.75(c)	Prepare final report of dismantling program	$49,362									$49,362	$7,400	$56,762	456		
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$49,362	$54,482,629	$3,311,467	$641,763	$3,909,683	$1,614,798	$37,461,480			$101,321,064	$28,430,700	$129,751,764	456	406,847	449,631
		DECOMMISSIONING PERIOD DEPENDENT															
4	PD 50.75(c)	Utility Staff	$24,754,291									$24,754,291	$3,713,100	$28,467,391	391,778		
4	PD 50.75(c)	DOC Staff	$28,356,652									$28,356,652	$4,253,500	$32,610,152	381,732		
4	PD 50.75(c)	Security	$4,044,663									$4,044,663	$606,700	$4,651,563	140,636		
4	PD 50.75(c)	HP Supplies			$5,796,093							$5,796,093	$1,449,000	$7,245,093			
4	PD 50.75(c)	Equipment			$5,042,647							$5,042,647	$1,260,700	$6,303,347			
4	PD 50.75(c)	Unit 1 Insurance									$645,125	$645,125	$96,800	$741,925			
4	PD 50.75(c)	Unit 2 Insurance									$645,125	$645,125	$96,800	$741,926			
4	PD 50.75(c)	O & M Budget Items			$582,817							$582,817	$145,700	$728,517			
4	PD 50.75(c)	Permits & Fees									$4,040,772	$4,040,772	$606,100	$4,646,872			
4	PD 50.75(c)	Waste Transfer and Loading		$6,447,354								$6,447,354	$1,471,300	$7,918,654			125,592
4	PD 50.75(c)	Energy								$4,184,007		$4,184,007	$627,600	$4,811,607			
4	PD 50.75(c)	Severance	$1,633,496									$1,633,496	$245,000	$1,878,496			
4	PD 50.75(c)	Small Tools			$1,218,588							$1,218,588	$304,600	$1,523,188			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$58,788,302	$6,447,354	$12,640,155					$4,184,007	$5,331,022	$87,391,841	$14,876,900	$102,268,741	914,146		125,592
		TOTAL PERIOD 4 DECONTAMINATE BALANCE OF SITE COSTS:	$66,028,307	$60,929,983	$16,313,850	$641,763	$3,909,683	$1,614,798	$37,461,480	$4,197,196	$6,743,792	$197,691,722	$44,690,700	$242,382,422	1,046,463	406,847	575,123
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		Unit 1 Subtotal Greenfield:															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):		$20,364,478	$1,357,348	$522,027	$3,473,765		$26,104,844			$56,412,862	$16,883,800	$72,296,362			415,840
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Unit 2 Subtotal Greenfield:		$17,327,319	$966,454		$295,691	$1,514,768				$20,604,231	$4,526,700	$25,129,931		356,973	
		Common															
		Common Subtotal 10 CFR 50.75(c):	$49,362	$15,700,733	$987,665	$19,737	$280,227		$8,346,836			$25,304,260	$7,021,200	$32,325,460	456	49,874	33,882
		Common Subtotal 10 CFR 50.54(bb):															
		Common Subtotal Greenfield:															
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															

2012 D. C. Cook
Scenario 3
DECON, On-Site Dry Storage, 2032 Repository and Current Acceptance Rate

	Type		Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal 10 CFR 50.75(c):	$68,739,302	$8,447,384	$12,840,156					$4,184,607	$6,331,023	$97,301,841	$14,878,900	$102,269,741	814,148		128,892
		Common Subtotal 10 CFR 50.54(bb):	$7,190,643		$362,223					$13,187	$1,412,769	$8,978,827	$1,383,100	$10,361,927	131,848		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$68,838,694	$43,102,884	$14,986,168	$641,763	$3,873,963		$37,461,480	$4,184,667	$6,331,023	$169,108,463	$36,781,900	$206,890,083	814,604	40,874	876,193
		Total 10 CFR 50.54(bb):	$7,190,643		$362,223					$13,187	$1,412,763	$8,978,827	$1,383,100	$10,361,927	131,848		
		Total Greenfield		$17,827,318	$966,454		$296,891	$1,014,768				$20,094,231	$4,026,700	$26,120,931		366,973	
PERIOD 5 - CLEAN STRUCTURE DEMOLITION COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
5	PD 50.54(bb)	Utility Staff	$2,638,932									$2,638,932	$395,800	$3,034,732	39,530		
5	PD 50.54(bb)	Security	$1,331,411									$1,331,411	$199,700	$1,531,111	33,880		
5	PD 50.54(bb)	HP Supplies			$105,267							$105,267	$26,300	$131,567	33,280		
5	PD 50.54(bb)	Equipment															
5	PD 50.54(bb)	Insurance									$266,674	$266,674	$40,000	$306,674			
5	PD 50.54(bb)	O & M Budget Items															
5	PD 50.54(bb)	Permits & Fees									$613,393	$613,393	$77,000	$690,393			
5	PD 50.54(bb)	Waste Transfer and Loading															
5	PD 50.54(bb)	Energy								$7,281		$7,281	$1,100	$8,381			
5	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$200,005							$200,005	$50,000	$250,005			
5	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$3,970,344		$305,272					$7,281	$730,067	$5,062,964	$790,000	$5,852,964	106,691		
		DECOMMISSIONING ACTIVITIES															
5	A Greenfield	Remove Unit 1 reactor building		$1,401,598	$503,412		$641,175	$3,143,736				$5,969,921	$871,000	$6,840,921		24,370	
5	A Greenfield	Remove Unit 2 reactor building		$1,481,598	$503,412		$641,175	$3,143,736				$5,969,921	$871,000	$6,840,921		24,370	
5	A Greenfield	Remove Auxiliary Building		$12,106,563	$4,932,267		$1,604,741	$9,322,088				$27,965,649	$5,277,000	$33,242,649		192,452	
5	A Greenfield	Remove Turbine Building		$8,645,268	$3,503,851		$1,140,934	$6,627,787				$19,917,839	$3,760,700	$23,677,530		137,370	
5	A Greenfield	Remove Steam Generator Storage Building		$199,400	$88,097		$62,467	$304,004				$643,866	$109,200	$753,066		3,191	
5	A Greenfield	Remove Electrical Transformers		$81,963	$2,908		$13,944	$81,000				$179,815	$30,600	$210,415		1,659	
5	A Greenfield	Removal of Unit 1 Turbine Generator		$152,600	$7,899		$7,746	$45,000				$213,245	$43,000	$256,245		2,897	
5	A Greenfield	Removal of Unit 1 Main Condenser		$1,332,969	$7,427		$86,013	$493,846				$1,919,254	$373,900	$2,293,154		21,580	
5	A Greenfield	Removal of Unit 2 Turbine Generator		$152,600	$7,899		$7,746	$45,000				$213,245	$43,000	$256,245		2,897	
5	A Greenfield	Removal of Unit 2 Main Condenser		$1,332,069	$7,427		$86,013	$493,846				$1,919,254	$373,900	$2,293,154		21,580	
5	A Greenfield	Remove of Standby Diesel Generators		$30,412	$6,447		$2,324	$13,800				$52,682	$10,400	$63,082		532	
5	A Greenfield	Remove Administration building		$300,789	$100,702							$401,491	$93,800	$495,291		4,489	
5	A Greenfield	Remove Low Level Radwaste building		$1,107,801	$170,866		$136,646	$794,063				$2,210,569	$404,800	$2,615,369		18,089	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:		$28,405,670	$10,442,613		$4,219,147	$24,608,404				$67,670,735	$12,461,300	$80,030,035		455,646	
		DECOMMISSIONING PERIOD DEPENDENT															
5	PD Greenfield	Utility Staff	$1,109,733									$1,109,733	$166,500	$1,276,233	19,413		
5	PD Greenfield	DGC Staff	$7,468,815									$7,468,815	$1,120,300	$8,589,115	94,294		
5	PD Greenfield	Security	$511,912									$511,912	$76,800	$588,712	10,640		
5	PD Greenfield	HP Supplies															
5	PD Greenfield	Equipment			$2,223,437							$2,223,437	$555,900	$2,779,337			
5	PD Greenfield	Unit 1 Insurance									$261,850	$261,850	$39,300	$301,150			
5	PD Greenfield	Unit 2 Insurance									$261,850	$261,850	$39,300	$301,150			
5	PD Greenfield	O & M Budget Items			$62,408							$62,408	$15,600	$78,008			
5	PD Greenfield	Permits & Fees									$177,566	$177,566	$26,600	$204,166			
5	PD Greenfield	Waste Transfer and Loading		$2,199,733								$2,199,733	$502,000	$2,701,733		41,008	
5	PD Greenfield	Energy								$148,182		$148,182	$22,200	$170,382			
5	PD Greenfield	Severance	$3,155,871									$3,155,871	$473,400	$3,629,271			
5	PD Greenfield	Small Tools			$612,108							$612,108	$153,000	$765,108			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$12,246,330	$2,199,733	$2,897,961					$148,182	$701,266	$18,193,462	$3,190,900	$21,384,362	130,348	41,008	
		TOTAL PERIOD 5 - CLEAN STRUCTURE DEMOLITION COSTS:	$16,216,674	$30,605,303	$13,645,836		$4,219,147	$24,609,498		$155,463	$1,491,332	$90,833,161	$16,442,100	$107,275,261	236,420	496,653	
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):		$2,067,168	$948,738		$803,834	$3,692,582				$8,102,421	$1,387,900	$9,490,321		48,847	
		Unit 1 Subtotal 10 CFR 50.54(bb):															

Type			Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):		$2,967,186	$818,734		$633,834	$1,682,882				$6,102,421	$1,387,960	$6,490,321		48,647	
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g)		$22,471,237	$8,805,134		$2,981,278	$17,144,242				$51,371,883	$9,686,440	$61,067,393		367,761	
		Common Subtotal 10 CFR 50.54(bb):															
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g)	$12,346,330	$2,194,735	$2,307,951					$140,102	$701,246	$19,103,462	$3,190,900	$21,984,362	100,348	41,608	
		Common Subtotal 10 CFR 50.54(bb):	$3,970,344		$305,272					$7,281	$780,067	$5,062,964	$789,900	$5,852,864	106,001		
		Unit 1, Unit 2 & Common															
		Total Greenfield (g):	$12,346,330	$34,605,303	$13,340,504		$4,219,147	$24,609,404		$140,102	$701,246	$85,770,198	$15,652,200	$101,422,399	100,348	404,883	
		Total 10 CFR 50.54(bb):	$3,970,344		$305,272					$7,281	$780,067	$5,062,964	$789,900	$5,852,864	106,001		
PERIOD 6 - RESTORE SITE COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
6	PD 50.54(bb)	Utility Staff	$298,031									$298,031	$44,700	$342,731	4,463		
6	PD 50.54(bb)	Security	$150,365									$150,365	$22,600	$172,965	6,759		
6	PD 50.54(bb)	HP Supplies			$10,800							$10,800	$2,700	$13,560	6,759		
6	PD 50.54(bb)	Insurance									$30,117	$30,117	$4,500	$34,617			
6	PD 50.54(bb)	Equipment															
6	PD 50.54(bb)	O & M Budget Items															
6	PD 50.54(bb)	Permits & Fees									$57,981	$57,981	$8,700	$66,681			
6	PD 50.54(bb)	Waste Transfer and Loading															
6	PD 50.54(bb)	Energy								$822		$822	$100	$922			
6	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$22,566							$22,566	$5,600	$28,166			
6	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$448,396		$33,477					$822	$88,098	$570,794	$85,800	$659,994	11,080		
		DECOMMISSIONING ACTIVITIES															
6	A Greenfield	Backfill, grade and landscape site		$166,109								$166,109	$37,900	$204,009		1,767	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:		$166,109								$166,109	$37,900	$204,009		1,767	
		DECOMMISSIONING PERIOD DEPENDENT															
6	PD Greenfield	Utility Staff	$52,051									$52,051	$7,800	$59,851	940		
6	PD Greenfield	DOC Staff	$390,928									$393,928	$56,600	$449,528	4,686		
6	PD Greenfield	Security	$14,518									$14,516	$2,200	$16,716	626		
6	PD Greenfield	HP Supplies															
6	PD Greenfield	Equipment			$74,624							$74,624	$18,700	$93,324			
6	PD Greenfield	Unit 1 Insurance									$29,572	$29,572	$4,400	$33,972			
6	PD Greenfield	Unit 2 Insurance									$29,572	$29,572	$4,400	$33,972			
6	PD Greenfield	O & M Budget Items			$7,048							$7,048	$1,800	$8,848			
6	PD Greenfield	Permits & Fees									$20,054	$20,054	$3,000	$23,054			
6	PD Greenfield	Waste Transfer and Loading		$248,430								$248,430	$56,700	$305,130		4,699	
6	PD Greenfield	Energy								$6,063		$6,063	$1,000	$7,063			
6	PD Greenfield	Severance	$177,796									$177,796	$26,700	$204,496			
6	PD Greenfield	Small Tools			$8,291							$8,291	$2,100	$10,391			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$635,290	$248,430	$89,963					$6,063	$79,198	$1,058,444	$187,400	$1,245,844	6,264	4,699	
		TOTAL PERIOD 6 - RESTORE SITE COSTS:	$1,083,686	$414,539	$123,440					$7,385	$167,296	$1,796,346	$314,200	$2,110,546	18,246	6,466	
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															

Type			Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g):		$186,100								$186,100	$37,900	$224,000		1,767	
		Common Subtotal 10 CFR 50.54(bb):															
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g)	$635,290	$248,430	$89,963					$5,563	$79,198	$1,059,444	$187,400	$1,246,844	4,564	4,699	
		Common Subtotal 10 CFR 50.54(bb):	$448,395		$33,477					$822	$188,099	$670,794	$88,900	$758,694	11,880		
		Unit 1, Unit 2 & Common															
		Total Greenfield (g):	$635,290	$414,539	$89,963					$5,563	$79,198	$1,225,553	$226,300	$1,450,853	6,284	6,466	
		Total 10 CFR 50.54(bb):	$448,395		$33,477					$822	$188,099	$670,794	$88,900	$758,694	11,880		
PERIOD 7 - DRY STORAGE COSTS:																	
		SPENT FUEL ACTIVITIES															
7	A 50.54(bb)	Continue to ship fuel to repository															
		SUBTOTAL - SPENT FUEL ACTIVITIES															
		SPENT FUEL PERIOD DEPENDENT															
7	PD 50.54(bb)	Utility Staff	$72,177,780									$72,177,780	$10,826,700	$83,004,480	1,080,925		
7	PD 50.54(bb)	Security	$36,415,603									$36,415,603	$5,462,300	$41,877,903	910,253		
7	PD 50.54(bb)	Insurance									$7,293,834	$7,293,834	$729,400	$8,023,234			
7	PD 50.54(bb)	O & M Budget Items			$4,718,319							$4,718,319	$471,600	$5,189,919			
7	PD 50.54(bb)	Permits & Fees									$14,041,868	$14,041,868	$1,404,200	$15,446,068			
7	PD 50.54(bb)	Waste Transfer and Loading															
7	PD 50.54(bb)	Energy								$199,157		$199,157	$19,900	$219,057			
7	PD 50.54(bb)	Equipment			$720,120							$720,120	$72,000	$792,120			
7	PD 50.54(bb)	HP Supplies			$2,455,815							$2,455,815	$245,600	$2,701,415			
7	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$5,470,376							$5,470,376	$547,000	$6,017,376			
7	PD 50.54(bb)	Severance	$133,347									$133,347	$20,000	$153,347			
7	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$108,726,730		$13,362,630					$199,157	$21,335,702	$143,624,219	$19,798,700	$163,422,919	1,991,178		
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT															
		TOTAL PERIOD 7 - DRY STORAGE COSTS:	$108,726,730		$13,362,630					$199,157	$21,335,702	$143,624,219	$19,798,700	$163,422,919	1,991,178		
		ACTIVITY															
		Common															
		Common Subtotal 10 CFR 50.75(c):															
		Common Subtotal 10 CFR 50.54(bb):															
		PERIOD DEPENDENT															
		Common															
		Common Subtotal 10 CFR 50.75(c):															
		Common Subtotal 10 CFR 50.54(bb):	$108,726,730		$13,362,630					$199,157	$21,335,702	$143,624,219	$19,798,700	$163,422,919	1,991,178		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):															
		Total 10 CFR 50.54(bb):	$108,726,730		$13,362,630					$199,157	$21,335,702	$143,624,219	$19,798,700	$163,422,919	1,991,178		
PERIOD 8 - ISFSI REMOVAL COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
8	PD 50.54(bb)	Utility Staff	$296,011									$296,011	$44,400	$340,411	4,727		
8	PD 50.54(bb)	DOC Staff	$454,344									$454,344	$68,300	$522,644	5,189		
8	PD 50.54(bb)	Security	$118,142									$118,142	$17,700	$135,842	2,936		

	Type		Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
8	PD 50.54(bb)	HP Supplies			$21,992							$21,992	$5,500	$27,492	2,836		
8	PD 50.54(bb)	Insurance									$44,627	$44,627	$6,700	$51,327			
8	PD 50.54(bb)	Equipment			$106,615							$106,615	$10,700	$117,315			
8	PD 50.54(bb)	O & M Budget Items			$29,398							$29,398	$7,300	$36,598			
8	PD 50.54(bb)	Permits & Fees									$5,527	$5,527	$800	$6,327			
8	PD 50.54(bb)	Waste Transfer and Loading															
8	PD 50.54(bb)	Energy								$1,241		$1,241	$200	$1,441			
8	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies															
8	PD 50.54(bb)	Severance	$633,397									$633,397	$95,000	$728,397			
8	PD 50.54(bb)	Small Tools			$21,308							$21,308	$5,300	$26,608			
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$1,501,893		$179,303					$1,241	$50,164	$1,732,601	$261,800	$1,994,361	15,698		
		TOTAL PERIOD 8 - ISFSI REMOVAL COSTS:	$1,501,893	$2,130,786	$179,303					$1,241	$50,164	$3,863,347	$748,100	$4,611,447	15,698	22,624	
		ACTIVITY															
		Common															
		Total 10 CFR 50.75(c):															
		Common Subtotal Greenfield (g)															
		Common Subtotal 50.54 (bb)		$2,130,786								$2,130,786	$486,300	$2,617,086		22,624	
		PERIOD DEPENDENT															
		Common															
		Total 10 CFR 50.75(c):															
		Common Subtotal Greenfield (g)															
		Common Subtotal 50.54 (bb)	$1,501,893		$179,303					$1,241	$50,164	$1,732,601	$261,800	$1,994,361	15,698		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):															
		Total Greenfield (g):															
		Total 50.54(bb)	$1,501,893	$2,130,786	$179,303					$1,241	$50,164	$3,863,347	$748,100	$4,611,447	15,698	22,624	
		TOTAL ACTIVITY COSTS:															
		UNIT 1															
		SUBTOTAL UNIT 1 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 8		$27,353,346	$3,988,600	$591,894	$10,623,903		$87,944,666			$130,494,728	$42,691,150	$173,185,878		5,760	431,184
		SUBTOTAL UNIT 1 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 8															
		SUBTOTAL UNIT 1 GREENFIELD COSTS FOR PERIODS 1 - 8		$12,666,492	$1,339,137		$793,162	$3,622,582	$815,644			$19,197,007	$4,049,900	$23,246,907		240,864	
		UNIT 2															
		SUBTOTAL UNIT 2 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 8	$61,231	$38,001,946	$4,327,836	$640,827	$10,993,679		$94,961,385			$145,966,303	$47,244,550	$193,210,853		5,760	588,707
		SUBTOTAL UNIT 2 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 8															
		SUBTOTAL UNIT 2 GREENFIELD COSTS FOR PERIODS 1 - 8		$20,794,496	$1,785,102		$929,626	$6,197,350				$28,706,663	$5,913,600	$34,620,263		405,621	
		COMMON															
		SUBTOTAL COMMON 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 8	$6,413,401	$17,837,763	$2,066,308	$30,232	$282,943		$6,467,631			$38,368,286	$9,322,300	$47,690,686	100,196	74,834	35,023
		SUBTOTAL COMMON 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 8	$749,487	$20,840,068	$141,432,000							$163,021,555	$40,226,800	$203,248,355	7,904	65,904	
		SUBTOTAL COMMON GREENFIELD COSTS FOR PERIODS 1 - 8		$22,749,447	$8,848,083		$2,962,164	$17,207,483				$51,766,177	$9,768,200	$61,534,377		301,293	
		TOTAL PERIOD DEPENDENT COSTS															
		UNIT 1															
		SUBTOTAL UNIT 1 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 8	$25,177,442		$12,536,107					$1,292,386	$2,352,287	$41,348,232	$7,467,500	$48,815,732	164,735		
		SUBTOTAL UNIT 1 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 8															
		SUBTOTAL UNIT 1 GREENFIELD COSTS FOR PERIODS 1 - 8															
		UNIT 2															
		SUBTOTAL UNIT 2 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 8															
		SUBTOTAL UNIT 2 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 8															
		SUBTOTAL UNIT 2 GREENFIELD COSTS FOR PERIODS 1 - 8															
		COMMON															
		SUBTOTAL COMMON 10 CF FOR PERIODS 1-10:	$209,849,806	$14,983,007	$33,392,815					$11,817,283	$15,784,864	$282,727,446	$46,912,100	$329,639,556	2,886,420		289,314
		SUBTOTAL COMMON 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 8	$145,073,861		$16,300,390					$901,953	$34,190,024	$197,062,702	$28,605,250	$225,177,902	2,760,501		
		SUBTOTAL COMMON GREENFIELD COSTS FOR PERIODS 1 - 8	$12,981,920	$2,449,183	$2,987,914					$164,745	$780,464	$19,282,066	$3,378,300	$22,631,206	136,812	46,307	
															6,065,368		
		UNIT 1, UNIT 2 & COMMON															
		GRAND TOTAL ACTIVITY COSTS FOR PERIODS 1-8	$10,314,127	$166,857,438	$164,344,855	$1,262,753	$26,608,377	$26,087,415	$193,178,746			$577,816,768	$169,200,500	$736,717,298	108,100	1,149,946	1,052,954
		GRAND TOTAL PERIOD DEPENDENT COSTS FOR PERIODS 1-8	$390,501,429	$17,331,170	$66,217,147					$14,249,246	$53,046,313	$540,421,395	$86,843,100	$626,264,436	5,957,268	46,307	289,314
		GRAND TOTAL	$400,758,856	$174,189,606	$229,562,002	$1,262,753	$26,608,377	$26,087,415	$193,178,746	$14,249,246	$53,046,313	$1,117,932,613	$246,049,650	$1,363,981,613	6,066,369	1,196,261	1,342,768
		SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$25,177,442	$27,353,346	$16,492,837	$591,894	$10,623,903		$87,944,666	$1,292,386	$2,352,287	$171,842,960	$50,138,650	$221,981,610	164,735	5,760	431,184
		SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):															
		SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR GREENFIELD (g):		$12,666,492	$1,339,137		$793,162	$3,622,582	$815,644			$19,197,007	$4,049,900	$23,246,907		240,864	

2012 D. C. Cook
Scenario 3
DECON, On-Site Dry Storage, 2032 Repository and Current Acceptance Rate

Type	Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$51,231	$35,001,844	$4,527,835	$840,477	$10,893,479		$94,851,385			$145,866,393	$47,344,550	$193,210,843		5,760	885,767
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):															
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR GREENFIELD (g):		$20,794,485	$1,785,192		$829,625	$4,197,356				$28,706,663	$5,913,600	$34,620,263		405,521	
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$316,283,215	$33,420,764	$36,048,123	$39,272	$282,953		$8,487,831	$11,817,283	$15,794,654	$321,096,761	$66,234,400	$377,330,161	2,996,416	74,834	335,838
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):	$144,422,047	$20,846,045	$157,732,285					$981,933	$34,129,029	$380,104,357	$69,322,000	$429,426,357	2,777,456	55,964	
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR GREENFIELD (g):	$12,891,820	$25,198,610	$11,936,997		$2,882,184	$17,207,483		$154,745	$780,454	$71,016,093	$13,146,500	$84,165,693	136,612	487,598	
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$341,491,880	$54,700,041	$59,868,309	$1,282,753	$21,889,438		$191,362,101	$13,100,000	$18,136,811	$638,808,043	$153,617,800	$792,522,613	3,161,182	86,364	1,342,768
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):	$146,422,047	$20,840,063	$157,732,280					$981,833	$34,128,019	$380,104,257	$69,322,000	$429,426,257	2,777,406	55,304	
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR GREENFIELD (g):	$12,881,820	$58,887,827	$14,980,328		$4,894,543	$26,087,415	$816,644	$154,745	$780,444	$118,922,743	$23,110,000	$142,032,743	136,612	1,053,984	
GRAND TOTAL	$400,795,854	$174,188,620	$229,582,602	$1,282,753	$26,865,377	$26,087,415	$192,178,746	$14,246,248	$53,045,313	$1,117,832,013	$246,049,800	$1,362,981,613	6,065,369	1,196,251	1,342,768

2012 D.C. Cook
Scenario 4
SAFSTOR, Permanent On-Site Dry Storage

	Type		Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	Subtotal without Contingency, $	Contingency, $	Total with Contingency, $	Staff Manhours	Clean Craft Manhours	Contaminated Craft Manhours
PERIOD 1 - U1 & U2 DECOMMISSIONING PLANNING COST:																	
		SPENT FUEL ACTIVITIES															
		Modify spent fuel support systems															
1	A 50.54(bb)	Define systems modification	$62,772									$62,772	$9,400	$72,172	608		
1	A 50.54(bo)	Design systems modification and equipment specifications	$147,693									$147,693	$22,200	$169,893	1,568		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
		Control room relocation															
1	A 50.54(bz)	Define control room equipment	$62,772									$62,772	$9,400	$72,172	608		
1	A 50.54(bz)	Design control room modification and equipment specifications	$176,962									$176,962	$26,600	$203,782	1,696		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
		Design spent fuel storage security modifications															
1	A 50.54(bb)	Define modification	$29,406									$29,406	$4,400	$33,805	288		
1	A 50.54(bb)	Design modification and equipment specifications	$102,741									$102,741	$15,400	$118,141	1,016		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	ISFSI Pad Construction		$25,102,477								$25,102,477	$5,763,400	$30,865,877	192		
		SUBTOTAL - SPENT FUEL ACTIVITIES	$748,487	$25,102,477								$25,851,964	$5,870,200	$31,722,164	7,904		
		SPENT FUEL PERIOD DEPENDENT															
1	PD 50.54(bb)	Utility Staff															
1	PD 50.54(bb)	Security															
1	PD 50.54(bb)	Insurance									$2,179,335	$2,179,335	$326,900	$2,506,235			
1	PD 50.54(bb)	O & M Budget Items															
1	PD 50.54(bb)	Permits & Fees															
1	PD 50.54(ee)	Waste Transfer and Loading															
1	PD 50.54(ee)	Energy															
1	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies															
1	PD 50.54(bb)	Small Tools			$251,025							$251,025	$62,800	$313,825			
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT			$251,025						$2,179,335	$2,430,360	$389,700	$2,820,060			
		DECOMMISSIONING ACTIVITIES															
		Primary system decontamination															
1	A 50.75(a)	Define scope	$41,836									$41,836	$6,200	$47,836	328		
1	A 50.75(b)	Evaluate processes	$53,024									$53,024	$8,000	$61,024	448		
1	A 50.75(b)	Prepare bid specifications and RFP	$52,869									$52,869	$7,900	$60,769	512		
1	A 50.75(c)	Qualify Contractors	$14,104									$14,104	$2,100	$16,204	112		
1	A 50.75(d)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	248		
		Select SAFSTOR General Contractor															
1	A 50.75(b)	Define scope	$70,063									$70,063	$11,900	$81,963	736		
1	A 50.75(b)	Prepare bid specifications and RFP	$84,013									$84,013	$12,600	$96,613	776		
1	A 50.75(c)	Qualify Contractors	$21,646									$21,646	$3,200	$24,846	176		
1	A 50.75(d)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	248		
		U1 & U2 Site Characterization															
1	A 50.75(a)	Define scope	$47,761									$47,761	$7,200	$54,961	408		
1	A 50.75(a)	Prepare bid specifications and RFP	$63,495									$63,495	$8,000	$61,495	496		
1	A 50.75(c)	Qualify Contractors	$21,646									$21,646	$3,200	$24,846	176		
1	A 50.75(d)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	248		
1	A 50.75(c)	Prepare procedures	$133,000									$133,000	$19,900	$152,900	1,256		
		ADMINISTRATIVE ACTIVITIES															
1	A 50.75(d)	Develop staff transition plan	$41,532									$41,532	$6,200	$47,732	352		
1	A 50.75(e)	Develop severance and retention policy	$41,532									$41,532	$6,200	$47,732	352		
1	A 50.75(d)	Prepare project administrative procedures	$45,026									$45,026	$6,800	$51,826	408		
1	A 50.75(d)	Develop area based decommissioning cost estimate	$209,030									$209,030	$31,400	$240,430	2,240		
1	A 50.75(d)	Develop project budget and schedule controls	$60,924									$60,924	$9,100	$70,024	648		
1	A 50.75(d)	Assemble plant drawings	$24,907									$24,907	$3,000	$27,907	256		
1	A 50.75(c)	Define end product	$36,216									$36,216	$5,400	$41,616	280		
1	A 50.75(d)	Develop technical approach and detailed project plans	$223,664									$223,664	$33,800	$257,464	2,440		
		LICENSING/PERMITTING DOCUMENTATION															
1	A 50.75(c)	Insurance exemption	$40,144									$40,144	$6,900	$53,044	376		
1	A 50.75(c)	Prepare Post-Shutdown Decommissioning Activities Report	$134,589									$134,589	$20,200	$154,789	1,400		
1	A 50.75(c)	Prepare certification of permanent cessation of operations	$6,143									$6,143	$900	$7,043	40		
1	A 50.75(c)	Prepare certification of permanent reactor defueling	$6,143									$6,143	$900	$7,043	40		
1	A 50.75(o)	Prepare post-shutdown technical specification modifications	$339,249									$339,249	$50,800	$365,549	3,600		
1	A 50.75(c)	Update FSAR	$311,424									$311,424	$48,700	$358,124	3,360		
1	A 50.75(c)	Develop certified fuel handler program	$36,166									$36,166	$5,400	$41,566	336		
1	A 50.75(c)	Prepare post-shutdown emergency plan	$162,778									$162,778	$24,400	$187,178	1,480		

1	A 50.75(c)	Prepare post-shutdown QA plan	$104,139					$104,139	$15,600	$119,739	1,000	
1	A 50.75(c)	Prepare post-shutdown security plan	$104,139					$104,139	$15,600	$119,739	1,000	
1	A 50.75(c)	Prepare post-shutdown fire protection plan	$104,139					$104,139	$15,600	$119,739	1,000	
1	A 50.75(c)	Prepare post-shutdown radiation protection manual	$104,139					$104,139	$15,600	$119,739	1,000	
1	A 50.75(c)	Prepare and submit state and local permits	$95,422					$95,422	$14,300	$109,722	960	
1	A 50.75(c)	Respond to NRC questions on PSDAR	$6,143					$6,143	$900	$7,043	40	
1	A 50.75(c)	Prepare detailed resource loaded project schedule	$266,157					$266,157	$28,400	$294,557	2,480	
1	A 50.75(c)	Perform 50.59 unreviewed safety questions	$92,271					$92,271	$13,800	$106,071	738	
1	A 50.75(c)	Prepare activity specifications	$170,077					$170,077	$25,500	$195,577	15,000	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	**$3,475,638**					**$3,475,638**	**$520,840**	**$3,996,438**	**60,192**	
		DECOMMISSIONING PERIOD DEPENDENT										
1	PD 50.75(c)	Utility Staff	$4,421,337					$4,421,337	$663,200	$5,084,537	75,444	
1	PD 50.75(c)	DOC Staff	$4,493,843					$4,493,843	$674,100	$5,167,943	53,158	
1	PD 50.75(c)	Security	$681,477					$681,477	$102,200	$783,677	23,881	
1	PD 50.75(c)	HP Supplies			$287,561			$287,561	$71,900	$359,461		
1	PD 50.75(c)	Equipment			$152,532			$152,532	$38,100	$190,632		
1	PD 50.75(c)	Unit 1 Insurance					$842,613	$842,613	$126,400	$969,013		
1	PD 50.75(c)	Unit 2 Insurance										
1	PD 50.75(c)	O & M Budget Items			$12,078,778			$12,078,778	$2,019,700	$15,060,478		
1	PD 50.75(c)	Permits & Fees					$1,505,577	$1,505,577	$225,800	$1,731,377		
1	PD 50.75(c)	Waste Transfer and Loading										
1	PD 50.75(c)	Energy				$4,026,160		$4,026,160	$603,900	$4,630,060		
1	PD 50.75(c)	Severance	$15,571,925					$15,571,925	$2,335,800	$17,907,725		
1	PD 50.75(c)	Small Tools										
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	**$25,168,583**		**$12,518,871**	**$4,026,160**	**$2,348,190**	**$44,061,812**	**$7,861,100**	**$51,922,912**	**164,885**	
		TOTAL PERIOD 1 - U1 & U2 DECOMMISSIONING PLANNING COST:	**$29,393,607**	**$25,102,477**	**$12,769,898**	**$4,026,160**	**$4,527,526**	**$76,819,674**	**$14,647,900**	**$90,467,574**	**212,661**	
		ACTIVITY										
		UNIT 1 - PERIOD 1 COSTS										
		Unit 1 Subtotal 10 CFR 50.75(c):										
		Unit 1 Subtotal 10 CFR 50.54(bb):										
		UNIT 2										
		Unit 2 Subtotal 10 CFR 50.75(c):										
		Unit 2 Subtotal 10 CFR 50.54(bb):										
		Common										
		Total 10 CFR 50.75(c):	**$3,475,638**					**$3,475,638**	**$520,830**	**$3,996,438**	**60,192**	
		Total 10 CFR 50.54(bb):	**$749,487**	**$25,102,477**				**$25,851,964**	**$5,876,230**	**$31,728,194**	**7,904**	
		PERIOD DEPENDENT										
		UNIT 1 - PERIOD 1 COSTS										
		Unit 1 Subtotal 10 CFR 50.75(c):	**$25,168,583**		**$12,518,871**	**$4,026,160**	**$2,348,190**	**$44,061,812**	**$7,861,100**	**$51,922,912**	**164,885**	
		Unit 1 Subtotal 10 CFR 50.54(bb):										
		UNIT 2										
		Unit 2 Subtotal 10 CFR 50.75(c):										
		Unit 2 Subtotal 10 CFR 50.54(bb):										
		Common										
		Total 10 CFR 50.75(c):										
		Total 10 CFR 50.54(bb):			**$251,025**		**$2,179,336**	**$2,430,360**	**$393,700**	**$2,824,060**		
		Unit 1, Unit 2 & Common										
		Total 10 CFR 50.75(c):	**$28,644,221**		**$12,518,871**	**$4,026,160**	**$2,348,190**	**$47,537,381**	**$8,382,000**	**$55,919,381**	**204,757**	
		Total 10 CFR 50.54(bb):	**$749,487**	**$25,102,477**	**$251,025**		**$2,179,336**	**$28,282,325**	**$6,265,900**	**$34,548,225**	**7,904**	
PERIOD 2 - POST-SHUTDOWN ACTIVITIES COSTS:												
		SPENT FUEL ACTIVITIES										
2	A 50.54(bb)	Modify Spent Fuel Cooling System		$634,094	$1,165,000			$1,799,094	$436,800	$2,235,894		8,300
2	A 50.54(bb)	Modify control room		$582,042	$800,000			$1,382,042	$333,800	$1,715,842		9,900
2	A 50.54(bb)	Modify security system		$455,755	$525,000			$980,755	$235,900	$1,216,655		7,260
2	A 50.54(bb)	Purchase ISFSI casks			$115,785,000			$115,785,000	$28,946,300	$144,731,300		7,260
		SUBTOTAL - SPENT FUEL ACTIVITIES		**$1,671,891**	**$118,275,000**			**$119,946,891**	**$29,952,600**	**$149,899,491**		**33,280**
		SPENT FUEL PERIOD DEPENDENT										
2	PD 50.54(bb)	Utility Staff	$3,468,380					$3,468,380	$520,300	$3,988,680	57,882	
2	PD 50.54(bb)	Security	$1,367,616					$1,367,616	$205,100	$1,572,716	36,834	
2	PD 50.54(bb)	Insurance					$996,683	$996,683	$149,500	$1,146,183		
2	PD 50.54(bb)	O & M Budget Items										

2	PD 50.54(bb)	Permits & Fees						$882,936	$882,936	$102,400	$735,336		
2	PD 50.54(bb)	Waste Transfer and Loading											
2	PD 50.54(bb)	Energy					$832,582		$832,582	$124,900	$957,482		
2	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$379,477				$379,477	$94,900	$474,377		
2	PD 50.54(bb)	Small Tools			$16,719				$16,719	$4,200	$20,919		
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$4,836,997		$396,196		$832,582	$1,679,619	$7,744,375	$1,201,300	$8,945,673	84,716	
		DECOMMISSIONING ACTIVITIES											
2	A 50.75(c)	Primary System Decon Unit 1 & 2		$8,546,040	$1,417,080	$6,966,640			$16,929,760	$5,170,600	$24,100,960		
2	A 50.75(c)	Flush & Drain Systems (Performed by Utility Staff)											
2	A 50.75(c)	Decontaminate & clean up Reactor Buildings (Performed by Utility Staff)											
2	A 50.75(c)	Install environmental monitors		$30,103	$43,780				$73,883	$17,900	$91,783		450
2	A 50.75(c)	Perform quarterly inspections		$38,522					$38,522	$8,800	$47,322		360
2	A 50.75(c)	Perform semi-annual environmental surveys		$38,522					$38,522	$8,800	$47,322		360
2	A 50.75(c)	Prepare SAFSTOR report		$12,627					$12,627	$2,900	$15,527		90
2	A 50.75(c)	Historical Site Assessment	$375,882						$375,882	$56,400	$432,282	4,900	
2	A 50.75(c)	Characterization survey	$789,088						$789,088	$118,400	$907,488	12,880	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$1,164,969	$8,665,813	$1,460,860	$6,966,640			$20,258,282	$6,384,000	$26,642,282	17,780	1,260
		DECOMMISSIONING PERIOD DEPENDENT											
2	PD 50.75(c)	Utility Staff	$15,436,660						$15,436,660	$2,315,500	$17,752,160	254,329	
2	PD 50.75(c)	DGC Staff	$3,789,573						$3,789,573	$568,400	$4,357,973	47,388	
2	PD 50.75(c)	Security	$2,713,153						$2,713,153	$407,000	$3,120,153	105,230	
2	PD 50.75(c)	HP Supplies			$361,296				$361,296	$90,300	$451,596		
2	PD 50.75(c)	Equipment			$285,376				$285,376	$71,300	$356,676		
2	PD 50.75(c)	Unit 1 Insurance						$225,282	$225,282	$33,800	$259,082		
2	PD 50.75(c)	Unit 2 Insurance						$225,282	$225,282	$33,800	$259,082		
2	PD 50.75(c)	O & M Budget Items			$2,441,808				$2,441,808	$610,500	$3,052,308		
2	PD 50.75(c)	Permits & Fees						$1,755,814	$1,755,814	$263,400	$2,019,214		
2	PD 50.75(c)	Waste Transfer and Loading											
2	PD 50.75(c)	Energy					$4,115,229		$4,115,229	$617,300	$4,732,529		
2	PD 50.75(c)	Severance	$22,920,511						$22,920,511	$3,438,100	$26,358,611		
2	PD 50.75(c)	Small Tools			$173,316				$173,316	$43,300	$216,616		
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$44,859,927		$3,261,799		$4,115,229	$2,206,378	$54,443,333	$8,492,700	$62,936,033	406,926	
		TOTAL PERIOD 2 - POST-SHUTDOWN ACTIVITIES COSTS:	$50,860,893	$10,537,704	$123,393,864	$6,966,640	$4,947,791	$3,886,997	$202,392,878	$45,039,600	$247,432,478	510,401	34,576
		ACTIVITY											
		UNIT 1											
		Unit 1 Subtotal 10 CFR 50.75(c):		$4,273,020	$709,540	$4,483,320			$9,464,880	$2,584,400	$12,050,280		
		Unit 1 Subtotal 10 CFR 50.54(bb):											
		UNIT 2											
		Unit 2 Subtotal 10 CFR 50.75(c):		$4,273,020	$709,540	$4,483,320			$9,464,880	$2,585,400	$12,050,280		
		Unit 2 Subtotal 10 CFR 50.54(bb):											
		Common											
		Common Subtotal - 10 CFR 50.75(c):	$1,164,969	$119,773	$43,780				$1,328,522	$213,200	$1,541,722	17,780	1,296
		Common Subtotal - 10 CFR 50.54(bb):		$1,871,891	$118,275,000				$119,946,891	$20,853,600	$140,800,491		33,280
		PERIOD DEPENDENT											
		UNIT 1											
		Unit 1 Subtotal 10 CFR 50.75(c):											
		Unit 1 Subtotal 10 CFR 50.54(bb):											
		UNIT 2											
		Unit 2 Subtotal 10 CFR 50.75(c):											
		Unit 2 Subtotal 10 CFR 50.54(bb):											
		Common											
		Common Subtotal - 10 CFR 50.75(c):	$44,859,927		$3,261,799		$4,115,229	$2,206,378	$54,443,333	$8,492,700	$62,936,033	406,926	
		Common Subtotal - 10 CFR 50.54(bb):	$4,836,997		$396,196		$832,582	$1,679,619	$7,744,373 $202,392,878	$1,201,300	$8,945,673	84,716	
		Unit 1, Unit 2 & Common											
		Total 10 CFR 50.75(c):	$46,024,896	$8,665,813	$4,722,659	$8,966,640	$4,115,229	$2,206,378	$74,701,615	$13,876,700	$88,578,315	424,696	1,296
		Total 10 CFR 50.54(bb):	$4,836,997	$1,871,891	$118,671,196		$832,582	$1,679,619	$127,691,283 $202,392,878	$31,163,900	$168,845,183	84,716	33,280
		PERIOD 3 - DORMANCY WITH WET & DRY SPENT FUEL STORAGE:											
		SPENT FUEL ACTIVITIES											
3	A 50.54(bb)	Purchase ISFSI casks			$115,785,000				$115,785,000	$28,946,300	$144,731,300		7,280
		SUBTOTAL - SPENT FUEL ACTIVITIES			$115,785,000				$115,785,000	$28,946,300	$144,731,300		7,280

		SPENT FUEL PERIOD DEPENDENT										
3	PD 50.54(bb)	Utility Staff	$18,118,910					$18,118,910	$2,717,800	$20,836,710	302,376	
3	PD 50.54(bb)	Security	$7,144,482					$7,144,482	$1,071,700	$8,216,163	102,421	
3	PD 50.54(bb)	Insurance					$5,206,696	$5,206,696	$781,000	$5,987,696		
3	PD 50.54(bb)	HP Supplies			$433,631			$433,631	$108,400	$542,031		
3	PD 50.54(bb)	Permits & Fees					$3,567,675	$3,567,675	$535,200	$4,102,875		
3	PD 50.54(bb)	O & M Budget Items			$2,896,446			$2,896,446	$724,100	$3,620,546		
3	PD 50.54(bb)	Waste Transfer and Loading										
3	PD 50.54(bb)	Energy				$2,812,716		$2,812,716	$421,900	$3,234,616		
3	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$1,982,395			$1,982,395	$495,600	$2,477,995		
3	PD 50.54(bb)	Small Tools										
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$25,263,372		$5,312,472	$2,812,716	$8,774,371	$42,162,929	$6,855,700	$49,018,629	404,796	
		DECOMMISSIONING ACTIVITIES										
3	A 50.75(c)	Perform quarterly inspections		$231,131				$231,131	$53,100	$264,231		2,160
3	A 50.75(c)	Perform semi-annual environmental surveys		$231,131				$231,131	$53,100	$264,231		2,160
3	A 50.75(c)	Prepare SAFSTOP reports		$75,760				$75,760	$17,400	$93,160		576
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:		$538,022				$538,022	$123,600	$661,622		4,896
		DECOMMISSIONING PERIOD DEPENDENT										
3	PD 50.75(c)	Utility Staff										
3	PD 50.75(c)	DOC Staff										
3	PD 50.75(c)	Security	$1,691,306					$1,691,306	$253,700	$1,945,006	54,977	
3	PD 50.75(c)	HP Supplies										
3	PD 50.75(c)	Equipment			$126,873			$126,873	$31,700	$158,573		
3	PD 50.75(c)	Unit 1 Insurance					$1,176,878	$1,176,878	$176,500	$1,353,378		
3	PD 50.75(c)	Unit 2 Insurance					$1,176,878	$1,176,878	$176,500	$1,353,378		
3	PD 50.75(c)	O & M Budget Items										
3	PD 50.75(c)	Permits & Fees					$6,784,772	$6,784,772	$1,017,700	$7,802,472		
3	PD 50.75(c)	Waste Transfer and Loading										
3	PD 50.75(c)	Energy				$646,600		$646,600	$97,000	$743,600		
3	PD 50.75(c)	Severance	$6,445,088					$6,445,088	$966,800	$7,411,888		
3	PD 50.75(c)	Small Tools			$10,760			$10,760	$2,700	$13,460		
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$8,136,394		$137,634	$646,600	$9,138,528	$18,059,157	$2,722,600	$20,781,757	54,977	
		TOTAL PERIOD 3 - DORMANCY WITH WET & DRY SPENT FUEL STORAGE COSTS:	$33,399,766	$538,022	$121,236,106	$3,459,316	$17,912,900	$176,546,108	$35,646,200	$216,193,308	549,774	12,176
		ACTIVITY										
		UNIT 1										
		Unit 1 Subtotal 10 CFR 50.75(c):										
		Unit 1 Subtotal 10 CFR 50.54(bb):										
		UNIT 2										
		Unit 2 Subtotal 10 CFR 50.75(c):										
		Unit 2 Subtotal 10 CFR 50.54(bb):										
		Common										
		Common Subtotal - 10 CFR 50.75(c):		$538,022				$538,022	$123,600	$661,622		4,896
		Common Subtotal - 10 CFR 50.54(bb):			$116,786,000			$116,786,000	$28,046,300	$144,731,800		7,280
		PERIOD DEPENDENT										
		UNIT 1										
		Unit 1 Subtotal 10 CFR 50.75(c):										
		Unit 1 Subtotal 10 CFR 50.54(bb):										
		UNIT 2										
		Unit 2 Subtotal 10 CFR 50.75(c):										
		Unit 2 Subtotal 10 CFR 50.54(bb):										
		Common										
		Common Subtotal - 10 CFR 50.75(c):	$8,136,394		$137,634	$646,600	$9,138,528	$18,059,157	$2,722,600	$20,781,757	54,977	
		Common Subtotal - 10 CFR 50.54(bb):	$25,263,372		$5,312,472	$2,812,716	$8,774,371	$42,162,929	$6,856,700	$49,018,629	404,796	
PERIOD 4 - DORMANCY WITH DRY SPENT FUEL STORAGE:												
		SPENT FUEL ACTIVITIES										
		SPENT FUEL PERIOD DEPENDENT										
4	PD 50.54(bb)	Utility Staff	$88,618,275					$88,618,275	$13,292,700	$101,910,975	1,327,130	
4	PD 50.54(bb)	Security	$44,710,289					$44,710,289	$6,706,500	$51,416,789	1,117,580	
4	PD 50.54(bb)	Insurance					$8,966,209	$8,966,209	$1,343,300	$10,309,508		
4	PD 50.54(bb)	HP Supplies			$3,015,195			$3,015,195	$753,800	$3,768,995		

4	PD 50.54(bb)	O & M Budget Items			$5,790,592			$5,790,592	$1,447,600	$7,238,192		
4	PD 50.54(bb)	Permits & Fees					$17,240,293	$17,240,293	$2,586,000	$19,826,293		
4	PD 50.54(bb)	Waste Transfer and Loading										
4	PD 50.54(bb)	Energy				$908,123		$908,123	$136,200	$1,044,323		
4	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$8,716,406			$8,716,406	$1,679,100	$10,395,506		
4	PD 50.54(bb)	Small Tools										
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$133,328,544		$15,622,193	$908,123	$26,195,501	$176,054,360	$27,945,200	$203,999,560	2,444,725	
		DECOMMISSIONING ACTIVITIES										
4	A 50.75(c)	Perform quarterly inspections		$2,298,467				$2,298,467	$527,700	$2,826,167		21,400
4	A 50.75(c)	Perform semi-annual environmental surveys		$2,298,467				$2,298,467	$527,700	$2,826,167		21,400
4	A 50.75(c)	Prepare SAFSTOR reports		$783,393				$783,393	$173,000	$956,393		5,728
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:		$5,380,327				$5,380,327	$1,228,400	$6,608,727		48,528
		DECOMMISSIONING PERIOD DEPENDENT										
4	PD 50.75(c)	Utility Staff										
4	PD 50.75(c)	DOC Staff										
4	PD 50.75(c)	Security	$17,190,567					$17,190,567	$2,578,600	$19,769,167	558,794	
4	PD 50.75(c)	HP Supplies										
4	PD 50.75(c)	Equipment			$644,775			$644,775	$161,200	$805,975		
4	PD 50.75(c)	Unit 1 Insurance					$11,961,883	$11,961,883	$1,794,300	$13,756,183		
4	PD 50.75(c)	Unit 2 Insurance					$11,961,883	$11,961,883	$1,794,300	$13,756,183		
4	PD 50.75(c)	O & M Budget Items										
4	PD 50.75(c)	Permits & Fees					$60,029,379	$60,029,379	$9,004,400	$69,033,779		
4	PD 50.75(c)	Waste Transfer and Loading										
4	PD 50.75(c)	Energy				$6,672,091		$6,672,091	$985,800	$7,657,891		
4	PD 50.75(c)	Severance	$833,417					$833,417	$125,000	$958,417		
4	PD 50.75(c)	Small Tools			$107,007			$107,007	$26,800	$133,807		
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$18,023,983		$751,781	$6,672,091	$83,953,144	$109,401,000	$16,470,400	$125,871,400	558,794	
		TOTAL PERIOD 4 - DORMANCY WITH DRY SPENT FUEL STORAGE COSTS:	$151,352,527	$5,380,327	$16,373,974	$7,580,214	$110,148,645	$290,835,687	$45,644,000	$336,479,687	3,003,519	48,528
		ACTIVITY										
		UNIT 1										
		Unit 1 Subtotal 10 CFR 50.75(c):										
		Unit 1 Subtotal 10 CFR 50.54(bb):										
		UNIT 2										
		Unit 2 Subtotal 10 CFR 50.75(c):										
		Unit 2 Subtotal 10 CFR 50.54(bb):										
		Common										
		Common Subtotal - 10 CFR 50.75(c):		$5,380,327				$5,380,327	$1,228,400	$6,608,727		48,528
		Common Subtotal - 10 CFR 50.54(bb):										
		PERIOD DEPENDENT										
		UNIT 1										
		Unit 1 Subtotal 10 CFR 50.75(c):										
		Unit 1 Subtotal 10 CFR 50.54(bb):										
		UNIT 2										
		Unit 2 Subtotal 10 CFR 50.75(c):										
		Unit 2 Subtotal 10 CFR 50.54(bb):										
		Common										
		Common Subtotal - 10 CFR 50.75(c):	$18,023,983		$751,781	$6,672,091	$83,953,144	$109,401,000	$16,470,400	$125,871,400	558,794	
		Common Subtotal - 10 CFR 50.54(bb):	$133,328,544		$15,622,193	$908,123	$26,195,501	$176,054,360	$27,945,200	$203,999,560	2,444,725	
		Unit 1, Unit 2 & Common										
		Total 10 CFR 50.75(c):	$18,023,983	$5,380,327	$751,781	$6,672,091	$83,953,144	$114,781,327	$17,698,800	$132,480,127	558,794	48,528
		Total 10 CFR 50.54(bb):	$133,328,544		$15,622,193	$908,123	$26,195,501	$176,054,360	$27,945,200	$203,999,560	2,444,725	
		Check										
PERIOD 5 - DORMANCY WITH DECOMMISSIONING PLANNING COST:												
		SPENT FUEL PERIOD DEPENDENT										
5	PD 50.54(bb)	Utility Staff	$8,670,004					$8,670,004	$1,300,500	$9,970,504	128,841	
5	PD 50.54(bb)	Security	$4,374,247					$4,374,247	$656,100	$5,030,347	109,340	
5	PD 50.54(bb)	Insurance					$876,135	$876,135	$131,400	$1,007,535		
5	PD 50.54(bb)	HP Supplies										

5	PD 50.54(bb)	O & M Budget Items										
5	PD 50.54(bb)	Permits & Fees					$1,686,711	$1,686,711	$253,000	$1,939,711		
5	PD 50.54(bb)	Waste Transfer and Loading										
5	PD 50.54(bb)	Energy				$88,847		$88,847	$13,300	$102,147		
5	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$657,102			$657,102	$164,300	$821,402		
5	PD 50.54(bb)	Small Tools										
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$13,044,280		$657,102	$88,847	$2,662,847	$16,353,046	$2,318,800	$18,671,846	239,181	
		DECOMMISSIONING ACTIVITIES										
		Select Decommissioning General Contractor										
5	A 50.75(c)	Define scope	$79,683					$79,663	$11,900	$91,563	736	
5	A 50.75(c)	Prepare bid specifications and RFP	$84,013					$84,013	$12,600	$96,613	776	
5	A 50.75(c)	Qualify Contractors	$21,846					$21,846	$3,200	$24,846	176	
5	A 50.75(c)	Evaluate Proposals	$38,339					$38,339	$5,800	$44,139	248	
		U1 & U2 cold and dark site repowering										
5	A 50.75(c)	Define scope	$68,277					$68,277	$10,200	$78,477	618	
5	A 50.75(c)	Design modification and equipment specifications	$150,932					$150,932	$22,600	$173,532	1,560	
5	A 50.75(c)	Prepare installation procedures	$212,724					$212,724	$31,900	$244,624	2,080	
5	A 50.75(c)	Prepare test procedures	$18,349					$18,349	$2,800	$21,149	192	
		Modify U1 & U2 containment access										
5	A 50.75(c)	Select new access location	$30,251					$30,251	$4,500	$34,751	208	
5	A 50.75(c)	Design access and equipment specifications	$133,533					$133,533	$20,000	$153,533	1,320	
		U1 & U2 Site Characterization										
5	A 50.75(c)	Define scope	$47,781					$47,781	$7,200	$54,981	408	
5	A 50.75(c)	Prepare bid specifications and RFP	$53,405					$53,405	$8,000	$61,405	496	
5	A 50.75(c)	Qualify Contractors	$21,646					$21,646	$3,200	$24,846	176	
5	A 50.75(c)	Evaluate Proposals	$38,339					$38,339	$5,800	$44,139	248	
5	A 50.75(c)	Prepare procedures	$133,000					$133,000	$19,900	$152,900	1,256	
		ADMINISTRATIVE ACTIVITIES										
5	A 50.75(c)	Prepare project administrative procedures	$45,026					$45,026	$6,800	$51,826	480	
5	A 50.75(c)	Develop area based decommissioning cost estimate	$209,036					$209,036	$31,400	$240,436	2,240	
5	A 50.75(c)	Develop project budget and schedule controls	$60,924					$60,924	$9,100	$70,024	648	
5	A 50.75(c)	Assemble plant drawings	$24,307					$24,307	$3,600	$27,907	296	
5	A 50.75(c)	Define end product	$36,216					$36,216	$5,400	$41,616	280	
5	A 50.75(c)	Develop technical approach and detailed project plans	$223,854					$223,854	$33,600	$257,454	2,440	
		LICENSING/PERMITTING DOCUMENTATION										
5	A 50.75(c)	Prepare post-shutdown emergency plan	$162,776					$162,776	$24,400	$187,176	1,480	
5	A 50.75(c)	Prepare post-shutdown QA plan	$104,139					$104,139	$15,600	$119,739	1,000	
5	A 50.75(c)	Prepare post-shutdown security plan	$104,139					$104,139	$15,600	$119,739	1,000	
5	A 50.75(c)	Prepare post-shutdown fire protection plan	$104,139					$104,139	$15,600	$119,739	1,000	
5	A 50.75(c)	Prepare post-shutdown radiation protection manual	$104,139					$104,139	$15,600	$119,739	1,000	
5	A 50.75(c)	Prepare and submit state and local permits	$95,422					$95,422	$14,300	$109,722	960	
5	A 50.75(c)	Prepare detailed resource loaded project schedule	$256,157					$256,157	$38,400	$294,557	2,480	
5	A 50.75(c)	Prepare activity specifications	$1,700,771					$1,700,771	$255,100	$1,955,871	16,080	
5	A 50.75(c)	Prepare detailed work procedures	$1,604,383					$1,604,383	$240,700	$1,845,083	16,080	
5	A 50.75(c)	Select shipping casks and obtain permits	$24,032					$24,032	$3,600	$27,632	240	
5	A 50.75(c)	Implement cold & dark		$761,035	$1,600,000			$2,361,035	$574,700	$2,935,735		11,520
5	A 50.75(c)	Modify U1 Containment Access		$346,437	$525,000			$871,437	$210,800	$1,082,237		5,760
5	A 50.75(c)	Modify U2 Containment Access		$346,437	$525,000			$871,437	$210,800	$1,082,237		5,760
5	A 50.75(c)	Vessel and internals activation analysis	$109,336					$109,336	$16,400	$125,736	640	
5	A 50.75(c)	Characterization survey	$789,088					$789,088	$118,400	$907,488	12,680	
5	A 50.75(c)	Test special equipment and training		$939,723				$939,723	$216,800	$1,156,523		13,440
		LICENSE TERMINATION PLAN										
5	A 50.75(c)	General information	$1,350					$1,350	$200	$1,550	16	
5	A 50.75(c)	Site Characterization	$33,967					$33,967	$5,100	$39,067	336	
5	A 50.75(c)	Identification of remaining site dismantlement activities	$33,967					$33,967	$5,100	$39,067	336	
5	A 50.75(c)	Remediation Plans	$17,880					$17,880	$2,700	$20,580	176	
5	A 50.75(c)	Final Radiation Survey Plan	$338,813					$338,813	$50,800	$389,613	3,620	
5	A 50.75(c)	Compliance with the radiological criteria for license termination	$227,508					$227,508	$34,100	$261,608	2,440	
5	A 50.75(c)	Update decommissioning cost estimate	$55,404					$55,404	$8,300	$63,704	596	
5	A 50.75(c)	Supplement to the environmental report	$55,404					$55,404	$8,300	$63,704	596	
5	A 50.75(c)	Respond to NRC questions	$25,693					$25,693	$3,900	$29,593	200	
5	A 50.75(c)	Update LTP	$51,042					$51,042	$7,700	$58,742	536	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$7,730,882	$2,393,632	$2,650,000			$12,774,494	$2,371,590	$15,146,094	82,080	36,480
		DECOMMISSIONING PERIOD DEPENDENT										
5	PD 50.75(c)	Utility Staff	$28,377,410					$28,377,410	$4,250,000	$32,634,010	451,026	
5	PD 50.75(c)	DGC Staff	$3,503,721					$3,503,721	$525,600	$4,029,321		
5	PD 50.75(c)	Security	$1,681,846					$1,681,846	$252,300	$1,934,146	54,670	
5	PD 50.75(c)	HP Supplies			$824,199			$824,199	$206,000	$1,030,199		
5	PD 50.75(c)	Equipment			$2,383,985			$2,383,985	$596,000	$2,979,985		
5	PD 50.75(c)	Unit 1 Insurance					$1,170,295	$1,170,295	$175,500	$1,345,795		
5	PD 50.75(c)	Unit 2 Insurance					$1,170,295	$1,170,295	$175,500	$1,345,795		
5	PD 50.75(c)	O & M Budget Items			$566,525			$566,525	$141,600	$708,125		
5	PD 50.75(c)	Permits & Fees					$5,872,995	$5,872,995	$880,900	$6,753,895		

5	PD 50.75(c)	Waste Transfer and Loading															
5	PD 50.75(c)	Energy								$1,398,176		$1,398,176	$209,700	$1,607,875			
5	PD 50.75(c)	Severance															
5	PD 50.75(c)	Small Tools			$47,873							$47,873	$12,000	$59,873			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$33,502,977		$3,822,592					$1,398,176	$8,213,580	$46,937,323	$7,431,700	$54,429,023	504,696		
		TOTAL PERIOD 5 - DORMANCY WITH DECOMMISSIONING PLANNING COST:	$54,338,079	$2,393,632	$7,128,894					$1,487,823	$10,776,438	$76,124,863	$12,321,800	$88,446,653	627,487	38,480	
		ACTIVITY															
		UNIT 1 - PERIOD 5 COSTS															
		Unit 1 Subtotal 10 CFR 50.75(c):		$346,437	$525,000							$871,437	$210,800	$1,082,237		6,760	
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):		$346,437	$524,000							$871,437	$210,800	$1,082,237		6,760	
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Total 10 CFR 50.75(c):	$7,730,682	$1,700,757	$1,600,000							$11,031,604	$1,849,900	$12,881,560	82,680	24,960	
		Common Subtotal - 10 CFR 50.54(bb):															
		PERIOD DEPENDENT															
		UNIT 1 - PERIOD 1 COSTS															
		Unit 1 Subtotal 10 CFR 50.75(c):	$33,502,977		$3,822,592					$1,398,176	$8,213,580	$46,937,323	$7,431,700	$54,429,023	504,696		
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal - 10 CFR 50.75(c):															
		Common Subtotal - 10 CFR 50.54(bb):	$13,044,200		$667,102					$89,647	$2,562,847	$16,363,046	$2,508,800	$18,871,846	139,181		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$41,233,328	$2,393,632	$6,472,592					$1,398,176	$8,213,580	$58,771,507	$9,803,200	$68,576,007	589,277	38,480	
		Total 10 CFR 50.54(bb):	$13,044,200		$667,102					$89,647	$2,562,847	$16,363,046	$2,508,800	$18,871,846	139,181		
PERIOD 6 VESSEL AND INTERNALS REMOVAL COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
6	PD 50.54(bb)	Utility Staff	$6,236,984									$6,236,984	$935,500	$7,172,484	93,404		
6	PD 50.54(bb)	Security	$3,146,724									$3,146,724	$472,000	$3,618,724	79,656		
6	PD 50.54(bb)	Insurance									$630,271	$630,271	$94,500	$724,771			
6	PD 50.54(bb)	HP Supplies															
6	PD 50.54(bb)	O & M Budget Items															
6	PD 50.54(bb)	Permits & Fees									$1,213,376	$1,213,376	$182,000	$1,395,376			
6	PD 50.54(bb)	Waste Transfer and Loading															
6	PD 50.54(bb)	Energy								$63,914		$63,914	$9,600	$73,514			
6	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$472,703							$472,703	$116,200	$588,903			
6	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$9,383,708		$472,703					$63,914	$1,843,647	$11,763,973	$1,811,800	$13,575,773	172,061		
		DECOMMISSIONING ACTIVITIES															
		UNIT 1															
6	A 50.75(c)	Install all reactor operating floor contamination control envelopes (CCEs), support structures, rigging, internals work platforms and process equipment (BY UTILITY STAFF)															
6	A 50.75(c)	Finalize Residual Radiation Inventory (WITH SITE CHARACTERIZATION)															
6	A 50.75(c)	Finalize Internals and Vessel Segmenting Details (WITH ACTIVATION ANALYSIS)															
6	A 50.75(c)	Remove, pack, ship and bury Unit 1 Pressurizer		$1,018,043		$800	$72,394		$880,342			$1,990,580	$534,900	$2,525,480			19,776
6	A 50.75(c)	Decon, remove, package, ship and bury Unit 1 steam generators		$4,290,772	$1,092,867	$12,800	$833,257		$12,054,596			$18,284,094	$5,207,300	$23,491,394			79,169
6	A 50.75(c)	Remove Unit 1 equipment hatch closure (BY UTILITY STAFF)															
6	A 50.75(c)	Remove Unit 1 control rod drive and reactor cavity missile shields (BY UTILITY STAFF)															
6	A 50.75(c)	Remove Unit 1 CRD mechanisms and cables, air ducts, and reactor vessel head (BY UTILI															
6	A 50.75(c)	Remove, segment, package and bury Unit 1 vessel & vessel head insulation		$174,720					$350,040			$524,760	$151,600	$676,360			
6	A 50.75(c)	Prepare Unit 1 vessel head for shipment as its own container (WITH VESSEL REMOVAL)															
6	A 50.75(c)	Decontaminate and clean up Unit 1 plant areas (BY UTILITY STAFF)															
6	A 50.75(c)	Process liquid and solid radioactive wastes (BY UTILITY STAFF)															
6	A 50.75(c)	Decon, remove, package, ship and dispose of Unit 1 contaminated systems		$3,905,752	$432,900	$56,635	$431,269		$8,175,153			$16,032,067	$4,550,300	$22,632,367			160,371
6	A Greenfield	Remove, package, ship and dispose of Unit 1 clean systems		$9,569,325	$520,398		$159,218	$815,944				$11,094,686	$2,446,100	$13,542,886		192,216	
6	A 50.75(c)	Install Unit 1 water cleanup system in fuel transfer canal (BY UTILITY STAFF)															
6	A 50.75(c)	Segment, package and ship Unit 1 internals as radioactive waste		$2,591,854	$502,930	$14,400	$1,836,236		$12,517,290			$17,462,411	$5,081,500	$22,544,311			47,360

6	A 50.75(c)	Decontaminate internals work platform and store (BY UTILITY STAFF)															
6	A 50.75(c)	Install Unit 1 vessel support structure (WITH VESSEL REMOVAL)															
6	A 50.75(c)	Segment and process Unit 1 reactor vessel and associated equipment as LLW		$1,392,522	$141,451	$74,000	$919,387		$4,913,892			$7,401,251	$2,105,800	$9,508,051			24,620
6	A 50.75(c)	Decontaminate reactor vessel platform and store (BY UTILITY STAFF)															
6	A 50.75(c)	Decontaminate Unit 1 reactor building		$4,415,224	$565,223	$416,409	$2,672,802		$13,022,404			$21,080,152	$8,180,100	$29,160,252			80,378
		UNIT 2															
6	A 50.75(c)	Finalize Residual Radiation Inventory (WITH SITE CHARACTERIZATION)															
6	A 50.75(c)	Finalize Internals and Vessel Segmenting Details (WITH ACTIVATION ANALYSIS)															
6	A 50.75(c)	Revise Integrated Work Sequence and Schedule	$51,231									$51,231	$7,700	$58,931			
6	A 50.75(c)	Transfer all reactor operating floor OCEs support structures, rigging, internals work platforms and process equipment to position and install (BY UTILITY STAFF)															
6	A 50.75(c)	Remove Unit 2 equipment hatch closure (BY UTILITY STAFF)															
6	A 50.75(c)	Remove Unit 2 CRD missile and reactor cavity missile shields (BY UTILITY STAFF)															
6	A 50.75(c)	Remove Unit 2 CRD mechanisms and cables, air ducts, and reactor vessel head (BY UTILIT															
6	A 50.75(c)	Remove, segment, package and bury Unit 2 vessel & vessel head insulator		$174,720					$350,040			$524,760	$151,500	$676,260			
6	A 50.75(c)	Prepare Unit 2 vessel head for shipment as its own container (WITH VESSEL REMOVAL)															
6	A 50.75(c)	Decontaminate and clean up Unit 2 shield (BY UTILITY STAFF)															
6	A 50.75(c)	Process liquid and solid radioactive wastes (BY UTILITY STAFF)															
6	A 50.75(c)	Install Unit 2 water cleanup system in fuel transfer canal (BY UTILITY STAFF)															
6	A 50.75(c)	Segment, package and ship Unit 2 internals as radioactive waste		$2,691,854	$502,830	$14,400	$1,555,238		$12,517,290			$17,482,411	$5,081,900	$22,564,311			47,380
6	A 50.75(c)	Decontaminate internals workplatform and process as LLW (BY UTILITY STAFF)															
6	A 50.75(c)	Install Unit 2 vessel support structure (WITH VESSEL REMOVAL)															
6	A 50.75(c)	Segment and process Unit 2 reactor vessel and associated equipment as LLW		$1,392,522	$141,451	$74,000	$919,387		$4,913,892			$7,401,251	$2,105,800	$9,508,051			24,820
6	A 50.75(c)	Decon reactor vessel cutting equipment and work platform; package and process as LLW (V															
6	A 50.75(c)	Decon, remove, package, ship and bury Unit 2 steam generators		$4,290,772	$1,092,667	$12,800	$633,257		$12,054,598			$16,284,094	$5,267,300	$23,551,394			79,183
6	A 50.75(c)	Remove, pack, ship and bury Unit 2 Pressurizer		$1,016,043		$800	$79,384		$800,367			$1,890,590	$534,900	$2,525,490			18,778
6	A 50.75(c)	Decontaminate non-essential structures		$136,262	$98,843	$10,466	$82,726		$121,095			$399,222	$101,100	$500,322			2,242
6	A Greenfield	Remove non-essential structures		$111,101	$42,847		$10,887	$63,241				$229,170	$44,800	$272,970		1,694	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$51,231	$42,913,487	$6,081,694	$887,719	$10,888,448	$878,886	$65,880,107			$143,081,846	$39,916,900	$182,998,646		193,911	603,323
		DECOMMISSIONING PERIOD DEPENDENT															
6	PD 50.75(c)	Utility Staff	$40,927,999									$40,927,999	$8,124,200	$49,052,199	548,914		
6	PD 50.75(c)	DOC Staff	$44,166,836									$44,166,836	$6,624,000	$50,790,736	92,550		
6	PD 50.75(c)	Security	$5,278,500									$5,278,500	$791,800	$6,070,300	183,531		
6	PD 50.75(c)	HP Supplies			$7,101,900							$7,101,900	$1,788,000	$8,914,008			
6	PD 50.75(c)	Equipment			$4,766,098							$4,766,098	$1,191,500	$5,957,598			
6	PD 50.75(c)	Unit 1 Insurance									$841,661	$841,661	$126,300	$968,151			
6	PD 50.75(c)	Unit 2 Insurance									$841,661	$841,661	$126,300	$968,151			
6	PD 50.75(c)	O & M Budget Items			$2,071,875							$2,071,875	$518,000	$2,589,875			
6	PD 50.75(c)	Permits & Fees									$5,992,829	$5,992,829	$853,900	$6,846,729			
6	PD 50.75(c)	Waste Transfer and Loading		$8,413,723								$8,413,723	$1,931,800	$10,345,523			163,896
6	PD 50.75(c)	Energy								$12,711,794		$12,711,794	$1,906,800	$14,618,594			
6	PD 50.75(c)	Severance															
6	PD 50.75(c)	Small Tools			$1,008,744							$1,008,744	$252,200	$1,260,944			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$90,272,335	$8,413,723	$14,978,721					$12,711,794	$7,376,582	$133,753,166	$22,230,700	$155,983,866	826,093		163,896
		TOTAL PERIOD 6 VESSEL AND INTERNALS REMOVAL COSTS:	$90,797,274	$50,437,211	$20,443,129	$887,719	$10,881,448	$878,886	$63,688,107	$12,775,700	$8,220,240	$308,884,794	$63,859,400	$382,658,194	1,087,094	193,911	757,219
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):		$23,748,837	$2,722,880	$575,294	$5,785,364		$52,832,825			$88,645,325	$24,172,800	$108,818,128			451,164
		Unit 1 Subtotal Greenfield:		$9,889,225	$520,352		$169,218	$316,644				$11,094,556	$2,448,100	$13,542,656		192,216	
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):	$51,231	$9,427,811	$1,738,747	$102,050	$3,601,284		$30,738,183			$46,314,337	$13,186,100	$59,594,437			199,917
		Unit 2 Subtotal Greenfield:															
		Common															
		Total 10 CFR 50.75(c):		$136,262	$98,843	$10,466	$82,726		$121,095			$399,222	$101,100	$500,322			2,242
		Total Greenfield		$111,101	$42,847		$10,887	$63,241				$229,170	$44,800	$272,970		1,694	
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal - 10 CFR 50.75(c):	$90,272,335	$8,413,723	$14,978,721					$12,711,794	$7,376,582	$133,753,166	$22,230,700	$155,983,866	826,093		163,896
		Common Subtotal - 10 CFR 50.54(bb):	$8,383,708		$472,703					$63,914	$1,843,646	$11,763,971	$1,911,800	$13,674,773	172,041		

2012 D. C. Cook
Scenario 4
SAFSTOR, Permanent On-Site Dry Storage

		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$90,123,898	$40,726,784	$19,607,072	$827,790	$10,489,348		$53,883,107	$12,711,784	$7,376,892	$286,512,950	$39,644,700	$326,156,750	926,033		787,218
		Total 10 CFR 50.54(bb):	$9,389,799		$472,203					$89,814	$1,843,648	$11,763,973	$1,811,800	$13,575,773	172,051		
		Total Greenfield:		$9,710,420	$583,344		$170,100	$578,966				$11,022,761	$2,492,300	$13,515,061		193,911	
PERIOD 7 DECONTAMINATE BALANCE OF SITE COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
7	PD 50.54(bb)	Utility Staff	$4,692,639									$4,692,639	$703,900	$5,396,539	70,270		
7	PD 50.54(bb)	Security	$2,367,561									$2,367,561	$355,100	$2,722,661	59,190		
7	PD 50.54(bb)	Insurance									$474,209	$474,209	$71,100	$545,309			
7	PD 50.54(bb)	HP Supplies															
7	PD 50.54(bb)	O & M Budget Items															
7	PD 50.54(bb)	Permits & Fees									$912,932	$912,932	$136,900	$1,049,832			
7	PD 50.54(bb)	Waste Transfer and Loading															
7	PD 50.54(bb)	Energy								$48,088		$48,088	$7,200	$55,288			
7	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$356,657							$356,657	$88,000	$444,557			
7	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$7,060,200		$356,657					$48,088	$1,387,141	$8,851,086	$1,363,100	$10,214,186	129,460		
		DECOMMISSIONING ACTIVITIES															
7	A 50.75(c)	Decon, remove, package, ship and dispose of Unit 2 contaminated systems		$16,530,253	$904,125	$105,567	$800,063		$15,102,461			$33,432,411	$9,007,800	$42,440,211			334,974
7	A Greenfield	Remove, package, ship and dispose of Unit 2 clean systems		$17,827,319	$965,454		$295,691	$1,514,768				$20,604,231	$4,546,500	$25,150,731		356,973	
7	A 50.75(c)	Decon Steam Generator Storage Building		$80,053	$27,858	$409	$6,024		$273,060			$387,433	$113,600	$501,033			1,080
7	A 50.75(c)	Decon Unit 2 Reactor Building		$4,415,224	$659,223	$416,439	$2,672,602		$13,822,464			$21,980,162	$6,180,100	$28,160,262			80,876
7	A 50.75(c)	Remove Spent fuel storage racks		$2,591,493	$50,370	$8,348	$43,305		$1,086,798			$4,249,314	$1,112,700	$5,362,014			
7	A 50.75(c)	Decon Auxiliary Building		$1,868,990	$605,310	$10,960	$109,694		$6,812,656			$8,903,790	$2,631,000	$11,534,790			32,024
7	A 50.75(c)	Perform final radiological survey of all structures		$1,828,530	$34,160							$1,862,720	$428,400	$2,291,120			
7	A 50.75(c)	Perform final survey of the site		$9,631,660	$210,980							$9,851,640	$2,266,400	$12,118,040			
7	A 50.75(c)	Obtain NRC approval															
7	A 50.75(c)	Prepare final report of dismantling program	$49,362									$49,352	$7,400	$56,762	456		
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$49,362	$54,482,629	$3,311,487	$541,763	$3,909,683	$1,514,768	$37,461,460			$101,321,054	$26,293,900	$127,614,954	456	356,973	449,631
		DECOMMISSIONING PERIOD DEPENDENT															
7	PD 50.75(c)	Utility Staff	$24,663,033									$24,663,033	$3,699,500	$28,362,533	389,602		
7	PD 50.75(c)	DGC Staff	$27,842,245									$27,842,245	$4,176,300	$32,018,545	374,807		
7	PD 50.75(c)	Security	$3,971,467									$3,971,467	$595,700	$4,567,167	138,047		
7	PD 50.75(c)	HP Supplies			$5,760,287							$5,760,287	$1,440,100	$7,200,387			
7	PD 50.75(c)	Equipment			$4,951,663							$4,951,663	$1,237,900	$6,189,563			
7	PD 50.75(c)	Unit 1 Insurance									$633,422	$633,422	$95,000	$728,422			
7	PD 50.75(c)	Unit 2 Insurance									$633,422	$633,422	$95,000	$728,422			
7	PD 50.75(c)	O & M Budget Items			$572,245							$572,245	$143,100	$715,345			
7	PD 50.75(c)	Permits & Fees									$3,967,470	$3,967,470	$595,100	$4,562,570			
7	PD 50.75(c)	Waste Transfer and Loading		$6,330,306								$6,330,306	$1,453,400	$7,783,706			123,313
7	PD 50.75(c)	Energy								$9,070,009		$9,070,009	$1,360,500	$10,430,509			
7	PD 50.75(c)	Severance	$888,975									$888,976	$133,300	$1,022,276			
7	PD 50.75(c)	Small Tools			$1,216,258							$1,216,258	$304,100	$1,520,358			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$57,366,742	$6,330,306	$12,500,453					$9,070,009	$5,234,316	$90,500,914	$13,328,800	$103,829,914	902,457		123,313
		TOTAL PERIOD 7 DECONTAMINATE BALANCE OF SITE COSTS:	$64,476,305	$60,812,924	$16,167,677	$541,763	$3,909,683	$1,514,768	$37,461,460	$9,118,098	$6,621,464	$200,673,054	$42,086,000	$243,459,054	1,031,409	356,973	572,944
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal Greenfield:															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):		$28,964,478	$1,357,348	$522,027	$3,473,745		$29,104,945			$63,412,567	$16,167,900	$79,580,462			416.859
		Unit 2 Subtotal Greenfield:		$17,827,319	$966,464		$295,691	$1,514,768				$20,604,231	$4,546,500	$25,150,731		356,973	
		Common															
		Common Subtotal 10 CFR 50.75(c):	$49,362	$15,700,733	$987,986	$19,737	$200,227		$8,346,535			$25,304,260	$6,559,600	$31,863,700	456		33,092
		Common Subtotal Greenfield:															
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															

			C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15
		Common															
		Common Subtotal - 10 CFR 50.75(c):	$87,365,742	$6,330,395	$12,509,453					$9,874,869	$6,234,316	$90,600,914	$15,329,000	$105,929,914	902,487		122,313
		Common Subtotal - 10 CFR 50.54(bb):	$7,060,300		$388,457					$40,008	$1,387,141	$8,851,086	$1,363,100	$10,214,186	128,466		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$87,415,106	$42,998,608	$14,848,466	$641,763	$3,673,993		$37,451,490	$9,870,869	$6,234,316	$171,217,716	$17,676,400	$206,894,134	902,963		572,848
		Total 10 CFR 50.54(bb):	$7,060,300		$388,457					$40,008	$1,387,141	$8,851,086	$1,363,100	$10,214,186	128,466		
		Total Greenfield		$17,627,310	$902,464		$206,091	$1,514,768				$30,664,211	$4,648,860	$35,160,731		356,973	
PERIOD 8 - CLEAN STRUCTURE DEMOLITION COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
8	PD 50.54(bb)	Utility Staff	$2,622,676									$2,622,676	$393,400	$3,016,076	39,277		
8	PD 50.54(bb)	Security	$1,323,210									$1,323,210	$198,500	$1,521,710	33,075		
8	PD 50.54(bb)	Insurance									$265,031	$265,031	$39,800	$304,831			
8	PD 50.54(bb)	HP Supplies			$89,235							$89,235	$22,300	$111,535			
8	PD 50.54(bb)	O & M Budget Items															
8	PD 50.54(bb)	Permits & Fees									$510,230	$510,230	$76,500	$586,730			
8	PD 50.54(bb)	Waste Transfer and Loading															
8	PD 50.54(bb)	Energy								$20,876		$20,876	$4,000	$30,876			
8	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$198,773							$198,773	$49,700	$248,473			
8	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$3,945,886		$288,009					$20,876	$775,261	$5,030,032	$784,200	$5,820,232	72,352		
		DECOMMISSIONING ACTIVITIES															
8	A Greenfield	Remove Unit 1 reactor building		$1,461,596	$303,412		$541,175	$3,143,736				$5,969,921	$965,800	$6,935,721		24,370	
8	A Greenfield	Remove Unit 2 reactor building		$1,461,596	$303,412		$541,175	$3,143,736				$5,969,921	$965,800	$6,935,721		24,370	
8	A Greenfield	Remove Auxiliary Building		$13,106,653	$4,332,287		$1,604,741	$8,922,008				$27,966,049	$5,272,400	$33,238,049		192,452	
8	A Greenfield	Remove Turbine Building		$6,645,258	$3,503,981		$1,140,934	$8,627,767				$19,917,839	$3,756,500	$23,674,339		137,370	
8	A Greenfield	Remove Steam Generator Storage Building		$198,400	$60,387		$82,467	$304,904				$643,686	$105,800	$752,688		3,191	
8	A Greenfield	Remove Electrical Transformers		$61,865	$2,006		$10,944	$81,000				$176,815	$33,500	$210,315		1,658	
8	A Greenfield	Removal of Unit 1 Turbine Generator		$152,600	$7,899		$7,746	$45,000				$213,245	$43,100	$256,345		2,097	
8	A Greenfield	Removal of Unit 1 Main Condenser		$1,332,969	$7,427		$85,013	$493,846				$1,919,254	$374,600	$2,293,854		21,590	
8	A Greenfield	Removal of Unit 2 Turbine Generator		$152,600	$7,899		$7,746	$45,000				$213,245	$43,100	$256,345		2,097	
8	A Greenfield	Removal of Unit 2 Main Condenser		$1,332,969	$7,427		$85,013	$493,846				$1,919,254	$374,600	$2,293,854		21,590	
8	A Greenfield	Remove of Standby Diesel Generators		$30,412	$8,447		$2,324	$13,500				$52,662	$10,400	$63,062		532	
8	A Greenfield	Remove Administration building		$300,750	$100,702							$401,451	$94,200	$495,651		4,409	
8	A Greenfield	Remove Low Level Radwaste building		$1,107,891	$170,666		$136,848	$794,963				$2,210,668	$404,600	$2,615,069		18,026	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:		$28,405,870	$10,443,613		$4,219,147	$24,809,406				$87,876,735	$12,444,300	$80,321,936		458,044	
		DECOMMISSIONING PERIOD DEPENDENT															
8	PD Greenfield	Utility Staff	$1,760,173									$1,760,173	$264,000	$2,024,173	27,563		
8	PD Greenfield	DGC Staff	$7,422,806									$7,422,806	$1,113,400	$8,536,206	93,713		
8	PD Greenfield	Security	$752,795									$752,796	$112,900	$865,696	19,294		
8	PD Greenfield	HP Supplies			$89,235							$89,235	$22,300	$111,535			
8	PD Greenfield	Equipment			$2,209,140							$2,209,740	$552,400	$2,762,140			
8	PD Greenfield	Unit 1 Insurance									$260,237	$260,237	$36,000	$299,237			
8	PD Greenfield	Unit 2 Insurance									$260,237	$260,237	$36,000	$299,237			
8	PD Greenfield	O & M Budget Items			$62,024							$62,024	$15,600	$77,524			
8	PD Greenfield	Permits & Fees									$176,472	$176,472	$26,500	$202,972			
8	PD Greenfield	Waste Transfer and Loading		$2,186,183								$2,186,183	$501,900	$2,686,083		41,361	
8	PD Greenfield	Energy								$324,673		$324,673	$48,700	$373,373			
8	PD Greenfield	Severance	$3,066,973									$3,066,973	$460,000	$3,526,973			
8	PD Greenfield	Small Tools			$611,835							$611,835	$153,000	$764,835			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$13,032,748	$2,186,183	$2,972,234					$324,673	$896,946	$19,193,383	$3,346,600	$22,531,983	140,470	41,361	
		TOTAL PERIOD 8 - CLEAN STRUCTURE DEMOLITION COSTS:	$16,948,633	$30,591,752	$13,703,456		$4,219,147	$24,809,406		$361,649	$1,472,107	$91,798,164	$16,577,100	$108,373,264	218,922	498,397	
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):		$2,967,166	$818,738		$533,934	$3,682,682				$8,102,421	$1,383,500	$9,485,921		48,647	
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):		$2,967,166	$818,738		$533,934	$3,682,682				$8,102,421	$1,383,500	$9,485,921		48,647	
		Common															
		Common Subtotal Greenfield (g)		$22,471,237	$8,806,134		$2,651,278	$17,144,243				$51,371,893	$9,677,300	$61,049,193		367,761	
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):															

		Unit 1 Subtotal 10 CFR 50.54(bb):												
		UNIT 2												
		Unit 2 Subtotal Greenfield (g):												
		Unit 2 Subtotal 10 CFR 50.54(bb):												
		Common												
		Common Subtotal Greenfield (g)	$13,002,748	$2,186,183	$2,972,834			$324,073	$886,946	$19,183,383	$3,348,600	$22,531,983	140,870	41,361
		Common Subtotal - 10 CFR 50.54(bb):	$3,946,886		$228,000			$26,878	$775,261	$5,036,032	$784,200	$5,820,232	72,362	
		Unit 1, Unit 2 & Common												
		Total Greenfield (g):	$13,002,748	$30,091,762	$13,416,447	$4,219,147	$24,599,606	$324,073	$886,946	$86,760,119	$15,702,300	$102,463,018	140,870	468,397
		Total 10 CFR 50.54(bb):	$3,946,886		$228,000			$26,878	$775,261	$5,036,032	$784,200	$5,820,232	72,362	
PERIOD 9 - RESTORE SITE COSTS:														
		SPENT FUEL PERIOD DEPENDENT												
9	PD 50.54(bb)	Utility Staff	$298,031							$298,031	$44,700	$342,731	4,463	
9	PD 50.54(bb)	Security	$150,365							$150,365	$22,600	$172,965	3,759	
9	PD 50.54(bb)	Insurance							$30,117	$30,117	$4,500	$34,617		
9	PD 50.54(bb)	HP Supplies			$10,140					$10,140	$2,500	$12,640		
9	PD 50.54(bb)	O & M Budget Items												
9	PD 50.54(bb)	Permits & Fees							$57,981	$57,981	$8,700	$66,681		
9	PD 50.54(bb)	Waste Transfer and Loading												
9	PD 50.54(bb)	Energy						$3,054		$3,054	$500	$3,554		
9	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$22,588					$22,588	$5,600	$28,188		
9	PD 50.54(bb)	Small Tools												
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$448,396		$32,728			$3,054	$88,098	$572,276	$89,100	$661,376	8,222	
		DECOMMISSIONING ACTIVITIES												
9	A Greenfield	Backfill, grade and landscape site		$166,100						$166,100	$38,100	$204,200		1,757
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:		$166,100						$166,100	$38,100	$204,200		1,757
		DECOMMISSIONING PERIOD DEPENDENT												
9	PD Greenfield	Utility Staff	$112,771							$112,771	$16,900	$129,671	1,056	
9	PD Greenfield	OGC Staff	$390,926							$390,926	$58,600	$449,526	4,698	
9	PD Greenfield	Security	$42,246							$42,246	$6,300	$48,546	940	
9	PD Greenfield	HP Supplies			$10,140					$10,140	$2,500	$12,640		
9	PD Greenfield	Equipment			$74,624					$74,624	$18,700	$93,324		
9	PD Greenfield	Unit 1 Insurance							$29,672	$29,672	$4,400	$33,972		
9	PD Greenfield	Unit 2 Insurance							$29,672	$29,672	$4,400	$33,972		
9	PD Greenfield	O & M Budget Items			$7,046					$7,046	$1,800	$8,846		
9	PD Greenfield	Permits & Fees							$20,054	$20,054	$3,000	$23,054		
9	PD Greenfield	Waste Transfer and Loading		$246,430						$246,430	$57,000	$303,430		4,699
9	PD Greenfield	Energy						$25,980		$25,980	$3,900	$29,880		
9	PD Greenfield	Severance	$444,459							$444,459	$66,700	$511,159		
9	PD Greenfield	Small Tools			$8,291					$8,291	$2,100	$10,391		
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$990,434	$246,430	$100,103			$25,980	$79,398	$1,444,125	$246,300	$1,690,425	7,204	4,699
		TOTAL PERIOD 9 - RESTORE SITE COSTS:	$1,438,830	$412,530	$132,831			$29,034	$167,496	$2,182,510	$373,500	$2,556,010	15,426	6,456
		ACTIVITY												
		UNIT 1												
		Unit 1 Subtotal Greenfield (g):												
		UNIT 2												
		Unit 2 Subtotal Greenfield (g):												
		Common												
		Common Subtotal Greenfield (g)		$166,100						$166,100	$38,100	$204,200		1,757
		PERIOD DEPENDENT												
		UNIT 1												
		Unit 1 Subtotal Greenfield (g):												
		Unit 1 Subtotal 10 CFR 50.54(bb):												
		UNIT 2												
		Unit 2 Subtotal Greenfield (g):												
		Unit 2 Subtotal 10 CFR 50.54(bb):												
		Common												
		Common Subtotal Greenfield (g)	$990,434	$246,430	$100,103			$25,980	$79,398	$1,444,125	$246,300	$1,690,425	7,204	4,699

		Common Subtotal - 10 CFR 50.54(bb):	$448,398		$32,729					$3,064	$88,098	$672,276	$89,100	$861,376	8,222		
		Unit 1, Unit 2 & Common															
		Total Greenfield (g):	$990,434	$414,538	$100,103					$25,960	$73,198	$1,610,334	$284,400	$1,894,834	7,204	6,486	
		Total 10 CFR 50.54(bb):	$448,398		$32,729					$3,064	$88,098	$672,276	$89,100	$861,376	8,222		
PERIOD 10 COSTS:		**SPENT FUEL ACTIVITIES**															
		SPENT FUEL PERIOD DEPENDENT															
10	PD 50.54(bb)	Utility Staff	$1,979,145									$1,979,145	$296,900	$2,276,045	29,639		
10	PD 50.54(bb)	Security	$996,531									$996,531	$149,800	$1,146,331	24,960		
10	PD 50.54(bb)	Insurance									$200,000	$200,000	$20,000	$220,000			
10	PD 50.54(bb)	O & M Budget Items			$129,323							$129,323	$12,900	$142,223			
10	PD 50.54(bb)	Permits & Fees									$385,034	$385,034	$38,500	$423,534			
10	PD 50.54(bb)	Waste Transfer and Loading															
10	PD 50.54(bb)	Energy								$20,281		$20,281	$2,000	$22,281			
10	PD 50.54(bb)	Equipment			$19,746							$19,746	$2,000	$21,746			
10	PD 50.54(bb)	HP Supplies			$67,339							$67,339	$6,700	$74,039			
10	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$150,000							$150,000	$15,000	$165,000			
10	PD 50.54(bb)	Small Tools															
10	PD 50.54(bb)	Severance															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$2,977,676		$366,408					$20,281	$585,034	$3,949,401	$543,800	$4,493,201	54,599		
		TOTAL PERIOD 10 COSTS:	$2,977,676		$366,408					$20,281	$585,034	$3,949,401	$543,800	$4,493,201	54,599		
		ACTIVITY															
		Commons															
		Total 50.54(bb)															
		PERIOD DEPENDENT															
		Commons															
		Total 50.54(bb)	$2,977,676		$366,408					$20,281	$585,034	$3,949,401	$543,800	$4,493,201	54,599		
TOTAL ACTIVITY COSTS:																	
UNIT 1																	
		SUBTOTAL UNIT 1 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 10		$27,363,348	$3,885,404	$576,294	$8,785,354		$57,318,149			$98,301,842	$26,358,000	$122,958,842		6,760	401,164
		SUBTOTAL UNIT 1 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 10															
		SUBTOTAL UNIT 1 GREENFIELD COSTS FOR PERIODS 1 - 10		$12,666,492	$1,339,137		$793,152	$4,488,226				$19,187,007	$3,831,000	$23,018,007		240,884	
UNIT 2																	
		SUBTOTAL UNIT 2 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 10	$51,331	$36,001,944	$4,327,436	$824,027	$7,138,030		$64,333,440			$111,463,217	$31,134,200	$142,597,417		8,760	486,787
		SUBTOTAL UNIT 2 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 10															
		SUBTOTAL UNIT 2 GREENFIELD COSTS FOR PERIODS 1 - 10		$36,784,496	$1,785,192		$929,626	$5,137,350				$28,709,653	$2,330,000	$34,036,653		406,021	
COMMON																	
		SUBTOTAL COMMON 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 10	$12,420,722	$23,845,878	$2,700,009	$10,232	$262,863		$8,467,631			$47,427,501	$10,696,630	$58,124,131	180,886	78,840	38,523
		SUBTOTAL COMMON 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 10	$749,487	$26,774,368	$234,060,000							$261,583,854	$64,776,100	$326,359,954	7,964	40,560	
		SUBTOTAL COMMON GREENFIELD COSTS FOR PERIODS 1 - 10		$21,748,447	$8,848,083		$1,962,164	$17,207,485				$51,766,177	$9,760,200	$61,526,377		381,203	
TOTAL PERIOD DEPENDENT COSTS																	
UNIT 1																	
		SUBTOTAL UNIT 1 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 10	$68,731,653		$16,341,452					$6,424,345	$10,841,779	$91,049,136	$15,292,800	$106,351,936	880,291		
		SUBTOTAL UNIT 1 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 10															
		SUBTOTAL UNIT 1 GREENFIELD COSTS FOR PERIODS 1 - 10															
UNIT 2																	
		SUBTOTAL UNIT 2 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 10															
		SUBTOTAL UNIT 2 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 10															
		SUBTOTAL UNIT 2 GREENFIELD COSTS FOR PERIODS 1 - 10															
COMMON																	
		SUBTOTAL COMMON 10 C FOR PERIODS 1-10:	$219,686,301	$14,744,118	$31,630,388					$33,116,724	$167,908,888	$466,087,609	$66,245,400	$471,303,969	2,849,168		287,209
		SUBTOTAL COMMON 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 10	$197,310,352		$33,280,083					$4,784,179	$48,486,821	$270,868,436	$41,868,700	$313,827,136	3,666,008		
		SUBTOTAL COMMON GREENFIELD COSTS FOR PERIODS 1 - 10	$13,963,102	$2,434,813	$3,072,939					$350,832	$776,144	$20,627,608	$3,594,800	$24,222,408	147,774	46,050	
			$501,914,914														
UNIT 1, UNIT 2 & COMMON																	
		GRAND TOTAL ACTIVITY COSTS FOR PERIODS 1-9	$13,221,440	$168,799,857	$257,016,636	$1,220,653	$19,949,270	$28,983,059	$130,187,228			$616,126,061	$153,096,700	$769,222,761	189,892	1,139,687	1,052,866
		GRAND TOTAL PERIOD DEPENDENT COSTS FOR PERIODS 1-9	$488,693,474	$17,179,731	$74,332,891					$43,674,881	$194,732,701	$788,612,847	$127,091,800	$915,704,447	7,311,740	46,050	227,208
ANNUAL SPENT FUEL STORAGE			$2,977,676		$366,408					$20,281	$585,034	$3,949,401	$543,800	$4,493,201	54,599		
GRAND TOTAL			$501,914,914	$185,979,583	$331,349,497	$1,220,653	$19,849,273	$28,983,059	$130,187,228	$43,674,881	$194,732,701	$1,404,738,898	$280,188,500	$1,684,927,198	7,470,633	1,185,957	1,340,063

2012 D. C. Cook
Scenario 4
SAFSTOR, Permanent On-Site Dry Storage

SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$66,731,559	$27,346,345	$30,297,883	$875,204	$6,766,364		$67,316,149	$6,424,346	$10,861,779	$187,040,779	$42,261,200	$229,302,679	580,261	5,760	431,164
SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):															
SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR GRENNFIELD (g):		$12,566,482	$1,339,137		$799,152	$4,409,220				$19,197,907	$3,831,200	$23,029,807		240,864	
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$61,231	$35,001,846	$4,327,036	$884,027	$7,135,036		$64,320,448			$111,463,217	$31,104,200	$142,567,417		5,760	686,767
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):															
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR GRENNFIELD (g):		$20,794,466	$1,798,192		$929,626	$5,197,260				$28,706,853	$6,930,000	$34,636,853		406,821	
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$231,079,160	$38,286,893	$34,330,476	$30,232	$262,902		$8,467,631	$33,115,724	$107,309,966	$453,486,070	$75,942,000	$529,427,070	2,896,186	79,840	323,132
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):	$196,060,939	$26,774,369	$267,348,063					$4,794,179	$46,485,821	$532,452,289	$107,733,900	$640,186,089	3,663,412	50,666	
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR GRENNFIELD (g):	$13,993,162	$26,183,058	$11,821,021		$2,962,164	$17,207,483		$360,632	$779,144	$72,393,686	$13,355,100	$85,748,786	147,774	437,263	
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$289,891,964	$100,660,104	$69,956,064	$1,220,663	$14,163,337		$139,107,228	$39,540,060	$118,170,739	$751,989,066	$149,338,000	$901,327,066	3,456,447	91,360	1,340,063
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):	$196,060,939	$26,774,369	$267,348,063					$4,794,179	$46,485,821	$532,452,289	$107,733,900	$640,186,089	3,663,412	50,666	
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR GRENNFIELD (g):	$13,993,162	$59,544,036	$14,946,360		$4,694,942	$26,803,966		$360,632	$779,144	$120,297,346	$23,119,700	$143,414,046	147,774	1,053,737	
GRAND TOTAL	$501,914,914	$185,978,598	$351,248,497	$1,220,663	$18,858,279	$26,803,966	$139,107,222	$43,674,851	$164,732,701	$1,404,718,698	$280,186,600	$1,684,927,198	7,470,633	1,195,867	1,340,063

2012 D. C. Cook
Scenario 6
DSFOM, Wet Storage Modified Systems, 2032 Repository and Current DOE Acceptance Rate

Type			Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	Subtotal without Contingency, $	Contingency, $	Total with Contingency, $	Staff Manhours	Clean Craft Manhours	Contaminated Craft Manhours
PERIOD 1 - U1 & U2 DECOMMISSIONING PLANNING COST:																	
		SPENT FUEL ACTIVITIES															
		Modify spent fuel support systems															
1	A 50.54(bb)	Define systems modification	$62,772									$62,772	$9,400	$72,172	606		
1	A 50.54(bb)	Design systems modification and equipment specifications	$147,893									$147,893	$22,200	$169,693	1,896		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
		Control room relocation															
1	A 50.54(bb)	Define control room equipment	$62,772									$62,772	$9,400	$72,172	606		
1	A 50.54(bb)	Design control room modification and equipment specifications	$178,962									$178,962	$26,809	$205,782	1,806		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
		Design spent fuel storage security modifications															
1	A 50.54(bb)	Define modification	$29,406									$29,406	$4,400	$33,806	266		
1	A 50.54(bb)	Design modification and equipment specifications	$102,741									$102,741	$15,400	$118,141	1,016		
1	A 50.54(bb)	Prepare installation procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
1	A 50.54(bb)	Prepare maintenance procedures	$18,349									$18,349	$2,800	$21,149	192		
		SUBTOTAL - SPENT FUEL ACTIVITIES	**$740,487**									**$740,487**	**$112,800**	**$853,287**	**7,713**		
		SPENT FUEL PERIOD DEPENDENT															
1	PD 50.54(bb)	Utility Staff															
1	PD 50.54(bb)	Security															
1	PD 50.54(bb)	Insurance									$2,183,119	$2,183,119	$327,500	$2,510,619			
1	PD 50.54(bb)	O & M Budget Items															
1	PD 50.54(bb)	Permits & Fees															
1	PD 50.54(bb)	Waste Transfer and Loading															
1	PD 50.54(bb)	Energy															
1	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies															
1	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT									**$2,183,119**	**$2,183,119**	**$327,500**	**$2,510,619**			
		DECOMMISSIONING ACTIVITIES															
		Primary system decontamination															
1	A 50.75(c)	Define scope	$41,838									$41,838	$6,200	$47,838	326		
1	A 50.75(c)	Evaluate processes	$53,024									$53,024	$8,000	$61,024	446		
1	A 50.75(c)	Prepare bid specifications and RFP	$52,869									$52,869	$7,900	$60,769	512		
1	A 50.75(c)	Qualify Contractors	$14,104									$14,104	$2,100	$16,204	112		
1	A 50.75(c)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	249		
		Select Decommissioning General Contractor															
1	A 50.75(c)	Define scope	$79,983									$79,983	$11,800	$91,883	736		
1	A 50.75(c)	Prepare bid specifications and RFP	$84,013									$84,013	$12,600	$96,613	776		
1	A 50.75(c)	Qualify Contractors	$21,646									$21,646	$3,200	$24,846	176		
1	A 50.75(c)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	248		
		U1 & U2 cold and dark site repowering															
1	A 50.75(c)	Define scope	$68,277									$68,277	$10,200	$78,477	616		
1	A 50.75(c)	Design modification and equipment specifications	$150,932									$150,932	$22,600	$173,532	1,560		
1	A 50.75(c)	Prepare installation procedures	$212,724									$212,724	$31,900	$244,624	2,000		
1	A 50.75(c)	Prepare test procedures	$18,349									$18,349	$2,800	$21,149	192		
		Modify U1 & U2 containment access															
1	A 50.75(c)	Select new access location	$30,251									$30,251	$4,500	$34,751	208		
1	A 50.75(c)	Design access and equipment specifications	$133,533									$133,533	$20,000	$153,533	1,320		
		U1 & U2 Site Characterization															
1	A 50.75(c)	Define scope	$47,761									$47,761	$7,200	$54,961	408		
1	A 50.75(c)	Prepare bid specifications and RFP	$53,465									$53,465	$8,000	$61,465	496		
1	A 50.75(c)	Qualify Contractors	$21,646									$21,646	$3,200	$24,846	176		
1	A 50.75(c)	Evaluate Proposals	$38,339									$38,339	$5,800	$44,139	248		
1	A 50.75(c)	Prepare procedures	$133,000									$133,000	$19,900	$152,900	1,256		
		ADMINISTRATIVE ACTIVITIES															
1	A 50.75(c)	Develop staff transition plan	$41,532									$41,532	$6,200	$47,732	352		
1	A 50.75(c)	Develop severance and retention policy	$41,532									$41,532	$6,200	$47,732	352		
1	A 50.75(c)	Prepare project administrative procedures	$45,028									$45,028	$6,900	$51,928	488		
1	A 50.75(c)	Develop area based decommissioning cost estimate	$209,038									$209,038	$31,400	$240,438	2,240		
1	A 50.75(c)	Develop project budget and schedule controls	$60,924									$60,924	$9,100	$70,024	648		
1	A 50.75(c)	Assemble plant drawings	$24,307									$24,307	$3,600	$27,907	256		
1	A 50.75(c)	Define end product	$36,216									$36,216	$5,400	$41,616	280		

	Type		Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
1	A 50.75(c)	Develop technical approach and detailed project plans	$223,854									$223,854	$33,600	$257,454	2,440		
		LICENSING/PERMITTING DOCUMENTATION															
1	A 50.75(c)	Insurance exemption	$46,144									$46,144	$6,900	$53,044	376		
1	A 50.75(c)	Prepare Post-Shutdown Decommissioning Activities Report	$134,589									$134,589	$20,200	$154,789	1,400		
1	A 50.75(c)	Prepare certification of permanent cessation of operations	$6,143									$6,143	$900	$7,043	40		
1	A 50.75(c)	Prepare certification of permanent reactor defueling	$6,143									$6,143	$900	$7,043	40		
1	A 50.75(c)	Prepare post-shutdown technical specification modifications	$335,249									$335,249	$50,300	$385,549	3,600		
1	A 50.75(c)	Update FSAR	$311,424									$311,424	$46,700	$358,124	3,360		
1	A 50.75(c)	Develop certified fuel handler program	$36,168									$36,168	$5,400	$41,568	336		
1	A 50.75(c)	Prepare post-shutdown emergency plan	$162,776									$162,776	$24,400	$187,176	1,480		
1	A 50.75(c)	Prepare post-shutdown QA plan	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare post-shutdown security plan	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare post-shutdown fire protection plan	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare post-shutdown radiation protection manual	$104,139									$104,139	$15,600	$119,739	1,000		
1	A 50.75(c)	Prepare and submit state and local permits	$95,422									$95,422	$14,300	$109,722	960		
1	A 50.75(c)	Respond to NRC questions on PSDAR	$6,143									$6,143	$900	$7,043	40		
1	A 50.75(c)	Prepare detailed resource loaded project schedule	$256,157									$256,157	$38,400	$294,557	2,480		
1	A 50.75(c)	Perform 50.59 unreviewed safety questions	$92,271									$92,271	$13,800	$106,071	736		
1	A 50.75(c)	Prepare activity specifications	$1,700,771									$1,700,771	$255,300	$1,956,071	16,080		
1	A 50.75(c)	Prepare detailed work procedures	$1,604,383									$1,604,383	$240,700	$1,845,083	16,080		
1	A 50.75(c)	Select shipping casks and obtain permits	$24,032									$24,032	$3,600	$27,632	240		
		LICENSE TERMINATION PLAN															
1	A 50.75(c)	General information	$1,350									$1,350	$200	$1,550	16		
1	A 50.75(c)	Site Characterization	$33,967									$33,967	$5,100	$39,067	336		
1	A 50.75(c)	Identification of remaining site dismantlement activities	$33,967									$33,967	$5,100	$39,067	336		
1	A 50.75(c)	Remediation Plans	$17,880									$17,880	$2,700	$20,580	176		
1	A 50.75(c)	Final Radiation Survey Plan	$330,813									$330,813	$50,000	$380,813	3,620		
1	A 50.75(c)	Compliance with the radiological criteria for license termination	$227,808									$227,808	$34,100	$261,808	2,440		
1	A 50.75(c)	Update decommissioning cost estimate	$55,404									$55,404	$8,300	$63,704	696		
1	A 50.75(c)	Supplement to the environmental report	$55,404									$55,404	$8,300	$63,704	696		
1	A 50.75(c)	Respond to NRC questions	$25,693									$25,693	$3,900	$29,593	200		
1	A 50.75(c)	Update LTP	$51,042									$51,042	$7,700	$58,742	536		
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	**$8,089,742**									**$8,089,742**	**$1,213,000**	**$9,302,742**	**61,340**		
		DECOMMISSIONING PERIOD DEPENDENT															
1	PD 50.75(c)	Utility Staff	$4,429,012									$4,429,012	$664,400	$5,093,412	75,076		
1	PD 50.75(c)	DOC Staff	$4,483,843									$4,483,843	$674,100	$5,157,943	56,159		
1	PD 50.75(c)	Security	$682,660									$682,660	$102,400	$785,060	23,001		
1	PD 50.75(c)	HP Supplies			$287,905							$287,905	$72,000	$359,905			
1	PD 50.75(c)	Equipment			$152,797							$152,797	$38,200	$190,997			
1	PD 50.75(c)	Unit 1 Insurance									$844,076	$844,076	$126,600	$970,676			
1	PD 50.75(c)	Unit 2 Insurance															
1	PD 50.75(c)	O & M Budget Items			$12,095,435							$12,095,435	$3,023,900	$15,119,335			
1	PD 50.75(c)	Permits & Fees									$1,508,191	$1,508,191	$226,200	$1,734,391			
1	PD 50.75(c)	Waste Transfer and Loading															
1	PD 50.75(c)	Energy								$1,785,868		$1,785,868	$267,900	$2,053,768			
1	PD 50.75(c)	Severance	$15,571,925									$15,571,925	$2,335,800	$17,907,725			
1	PD 50.75(c)	Small Tools															
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	**$25,177,442**		**$12,536,137**					**$1,785,868**	**$2,352,267**	**$41,851,713**	**$7,531,500**	**$49,383,213**	**154,738**		
		TOTAL PERIOD 1 - U1 & U2 DECOMMISSIONING PLANNING COST:	**$34,016,670**		**$12,536,137**					**$1,785,868**	**$4,535,365**	**$52,874,040**	**$9,164,800**	**$62,038,840**	**223,790**		
		ACTIVITY															
		UNIT 1 - PERIOD 1 COSTS															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Total 10 CFR 50.75(c):	**$8,089,742**									**$8,089,742**	**$1,213,000**	**$9,302,742**	**61,340**		
		Total 10 CFR 50.54(bb):	**$749,487**									**$749,487**	**$112,800**	**$862,287**	**7,712**		
		PERIOD DEPENDENT															
		UNIT 1 - PERIOD 1 COSTS															
		Unit 1 Subtotal 10 CFR 50.75(c):	**$25,177,442**		**$12,536,137**					**$1,785,868**	**$2,352,267**	**$41,851,713**	**$7,531,500**	**$49,383,213**	**154,738**		
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															

2012 D. C. Cook
Scenario 5
DECON, Wet Storage, Modified Systems, 2032 Repository and Current DOE Acceptance Rate

Type			Staff Labor,$	Craft Labor,$	Equipment & Materials,$	Packaging,$	Transportation,$	Clean Disposal,$	Contaminated Disposal,$	Energy,$	Other,$	without Contingency,$	Contingency,$	with Contingency,$	Staff Manhours	Craft Manhours	Craft Manhours
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Total 10 CFR 50.75(c):															
		Total 10 CFR 50.54(bb):									$2,163,119	$2,163,119	$327,500	$2,510,619			
			$34,016,879														
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$33,297,163		$12,536,137					$1,785,866	$2,352,267	$49,941,455	$6,744,600	$56,686,055	236,078		
		Total 10 CFR 50.54(bb):	$740,487								$2,163,119	$2,903,605	$449,300	$3,372,905	7,712		
PERIOD 2 - POST-SHUTDOWN ACTIVITIES COSTS:																	
		SPENT FUEL ACTIVITIES															
2	A 50.54(bb)	Modify Spent Fuel Cooling System		$634,094	$1,098,300							$1,732,394	$417,800	$2,150,194		9,350	
2	A 50.54(bb)	Modify control room		$582,042	$750,000							$1,332,042	$319,000	$1,651,042		9,360	
2	A 50.54(bb)	Modify security system		$455,755	$500,000							$955,755	$228,000	$1,183,755		7,280	
		SUBTOTAL - SPENT FUEL ACTIVITIES		$1,671,891	$2,348,300							$4,020,191	$964,800	$4,984,991		26,000	
		SPENT FUEL PERIOD DEPENDENT															
2	PD 50.54(bb)	Utility Staff	$4,087,734									$4,087,734	$613,200	$4,700,934	65,218		
2	PD 50.54(bb)	Security	$1,611,833									$1,611,833	$241,800	$1,853,633	43,411		
2	PD 50.54(bb)	Insurance									$1,174,662	$1,174,662	$176,200	$1,350,862			
2	PD 50.54(bb)	O & M Budget Items															
2	PD 50.54(bb)	Permits & Fees									$804,689	$804,689	$120,700	$925,589			
2	PD 50.54(bb)	Waste Transfer and Loading															
2	PD 50.54(bb)	Energy								$243,401		$243,401	$36,500	$279,901			
2	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$447,240							$447,240	$111,800	$559,040			
2	PD 50.54(bb)	Small Tools			$16,719							$16,719	$4,200	$20,919			
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$5,699,567		$463,959					$243,401	$1,979,350	$8,386,476	$1,304,400	$9,690,876	111,629		
		DECOMMISSIONING ACTIVITIES															
2	A 50.75(c)	Primary System Decon Unit 1 & 2		$8,546,040	$1,417,000				$8,966,640			$18,929,760	$5,680,900	$24,590,660			
2	A 50.75(c)	Flush & Drain Systems (PERFORMED BY UTILITY STAFF)															
2	A 50.75(c)	Implement cold & dark		$761,035	$1,900,000							$2,661,035	$646,900	$2,807,935		11,690	
2	A 50.75(c)	Modify U1 Containment Access		$346,437	$900,000							$846,437	$203,300	$1,049,737		5,760	
2	A 50.75(c)	ModifyU2 Containment Access		$346,437	$900,000							$846,437	$203,300	$1,049,737		5,760	
2	A 50.75(c)	Historical Site Assessment	$376,882									$376,882	$56,400	$432,282	4,680		
2	A 50.75(c)	Vessel and Internals activation analysis	$108,336									$108,336	$16,400	$126,736	840		
2	A 50.75(c)	Characterization survey	$788,068									$788,068	$119,400	$907,468	12,600		
2	A 50.75(c)	Test special equipment and training		$930,723								$930,723	$212,300	$1,152,023		13,440	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$1,274,305	$10,930,672	$5,017,000				$8,966,640			$26,097,697	$7,017,900	$33,115,597	18,400	30,480	
		DECOMMISSIONING PERIOD DEPENDENT															
2	PD 50.75(c)	Utility Staff	$18,193,241									$18,193,241	$2,729,000	$20,922,241	292,746		
2	PD 50.75(c)	D&C Staff	$11,670,595									$11,670,595	$1,750,600	$13,421,195	167,107		
2	PD 50.75(c)	Security	$3,197,645									$3,197,645	$479,600	$3,677,245	124,032		
2	PD 50.75(c)	HP Supplies			$756,942							$756,942	$189,200	$946,142			
2	PD 50.75(c)	Equipment			$1,017,840							$1,017,840	$254,500	$1,272,340			
2	PD 50.75(c)	Unit 1 Insurance									$265,511	$265,511	$39,800	$305,311			
2	PD 50.75(c)	Unit 2 Insurance									$265,511	$265,511	$39,800	$305,311			
2	PD 50.75(c)	O & M Budget Items			$2,677,845							$2,677,845	$719,500	$3,397,345			
2	PD 50.75(c)	Permits & Fees									$2,069,353	$2,069,353	$310,400	$2,379,753			
2	PD 50.75(c)	Waste Transfer and Loading															
2	PD 50.75(c)	Energy								$3,363,552		$3,363,552	$504,500	$3,868,052			
2	PD 50.75(c)	Severance	$23,200,806									$23,200,806	$3,460,100	$26,660,906			
2	PD 50.75(c)	Small Tools			$218,793							$218,793	$54,700	$273,493			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$56,262,288		$4,671,420					$3,363,552	$2,600,374	$67,897,632	$10,551,700	$77,649,332	583,884		
		TOTAL PERIOD 2 - POST-SHUTDOWN ACTIVITIES COSTS:	$63,236,158	$12,611,563	$11,606,780				$8,966,640	$3,606,952	$4,579,525	$104,601,005	$19,538,000	$124,440,705	710,913	62,440	
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):		$4,819,467	$1,208,640				$4,483,320			$10,511,317	$3,033,750	$13,545,067		5,760	
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):		$4,819,467	$1,208,640				$4,483,320			$10,511,317	$3,033,750	$13,545,067		5,760	

Task			Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal - 10 CFR 50.75(c):	$1,274,305	$1,700,767	$1,500,000							$4,475,062	$950,400	$5,425,462	14,400	26,960	
		Common Subtotal - 10 CFR 50.54(bb):		$1,671,891	$2,346,300							$4,020,191	$964,800	$4,984,991		26,000	
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal - 10 CFR 50.75(c):	$58,262,285		$4,871,420					$3,363,562	$2,600,374	$67,097,432	$10,551,700	$77,649,132	$80,884		
		Common Subtotal - 10 CFR 50.54(bb):	$5,899,567		$463,959					$243,401	$1,979,550	$8,586,476	$1,304,400	$9,890,876	111,629		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$59,536,591	$10,939,472	$8,738,500				$8,965,640	$3,363,562	$2,600,374	$92,185,330	$17,569,600	$109,754,930	98,284	38,480	
		Total 10 CFR 50.54(bb):	$5,899,567	$1,621,391	$2,812,259					$243,401	$1,979,550	$12,406,666	$2,269,206	$14,675,866	111,629	28,000	
PERIOD 3 VESSEL AND INTERNALS REMOVAL COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
3	PD 50.54(bb)	Utility Staff	$12,995,166									$12,995,166	$1,949,300	$14,944,466	216,868		
3	PD 50.54(bb)	Security	$5,124,120									$5,124,120	$768,600	$5,892,720	184,010		
3	PD 50.54(bb)	Insurance									$3,734,324	$3,734,324	$560,100	$4,294,424			
3	PD 50.54(bb)	O & M Budget Items															
3	PD 50.54(bb)	Permits & Fees									$2,558,793	$2,558,793	$383,800	$2,942,593			
3	PD 50.54(bb)	Waste Transfer and Loading															
3	PD 50.54(bb)	Energy								$495,166		$495,166	$74,300	$569,466			
3	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$1,421,605							$1,421,605	$355,700	$1,777,305			
3	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$18,119,286		$1,421,605					$495,166	$6,293,118	$26,329,173	$4,091,800	$30,420,973	400,878		
		DECOMMISSIONING ACTIVITIES															
		UNIT 1															
3	A 50.75(c)	Install all reactor operating floor contamination control envelopes (CCEs), support structures, rigging, internals work platforms and process equipment (BY UTILITY STAFF)															
3	A 50.75(c)	Finalize Residual Radiation Inventory (WITH SITE CHARACTERIZATION)															
3	A 50.75(c)	Finalize Internals and Vessel Segmenting Details (WITH ACTIVATION ANALYSIS)															
3	A 50.75(c)	Remove, pack, ship and bury Unit 1 Pressurizer		$1,016,043		$600	$72,384		$889,582			$1,990,890	$584,400	$2,574,990			18,776
3	A 50.75(c)	Decon remove, package, ship and bury Unit 1 steam generators		$4,200,772	$1,092,887	$12,600	$855,287		$12,054,598			$18,284,094	$5,963,700	$24,247,794			79,163
3	A 50.75(c)	Remove Unit 1 equipment hatch closure (BY UTILITY STAFF)															
3	A 50.75(c)	Remove Unit 1 control rod drive and reactor cavity missile shields (BY UTILITY STAFF)															
3	A 50.75(c)	Remove Unit 1 CRD mechanisms and cables, air ducts, and reactor vessel head (BY UTILITY															
3	A 50.75(c)	Remove, segment, package and bury Unit 1 vessel & vessel head insulation		$174,720					$350,040			$524,760	$171,300	$696,060			
3	A 50.75(c)	Prepare Unit 1 vessel head for shipment as its own container (WITH VESSEL REMOVAL)															
3	A 50.75(c)	Decontaminate and clean up Unit 1 plant areas (BY UTILITY STAFF)															
3	A 50.75(c)	Process liquid and solid radioactive wastes (BY UTILITY STAFF)															
3	A 50.75(c)	Decon remove, package, ship and dispose of Unit 1 contaminated systems		$5,905,752	$432,990	$55,585	$431,284		$8,175,182			$16,002,067	$5,299,100	$21,301,167			160,371
3	A Greenfield	Remove, package, ship and dispose of Unit 1 clean systems		$9,508,326	$620,398		$159,218	$815,644				$11,094,586	$2,416,100	$13,509,896		192,216	
3	A 50.75(c)	Install Unit 1 water cleanup system in fuel transfer canal (BY UTILITY STAFF)															
3	A 50.75(c)	Segment, package and ship Unit 1 internals as radioactive waste		$2,581,864	$802,830	$61,000	$4,574,890		$33,431,981			$41,182,335	$14,302,700	$55,485,035			47,960
3	A 50.75(c)	Decontaminate internals work platform and store (BY UTILITY STAFF)															
3	A 50.75(c)	Install Unit 1 vessel support structure (WITH VESSEL REMOVAL)															
3	A 50.75(c)	Segment and process Unit 1 reactor vessel and associated equipment as LLW		$1,352,572	$141,461	$24,000	$2,030,252		$14,627,158			$18,184,413	$6,294,300	$24,478,713			24,820
3	A 50.75(c)	Decontaminate reactor vessel platform and store (BY UTILITY STAFF)															
3	A 50.75(c)	Decontaminate Unit 1 reactor building		$4,416,224	$553,223	$416,439	$2,672,602		$13,922,464			$21,980,152	$7,010,600	$28,990,752			80,876
		UNIT 2															
3	A 50.75(c)	Finalize Residual Radiation Inventory (WITH SITE CHARACTERIZATION)															
3	A 50.75(c)	Finalize Internals and Vessel Segmenting Details (WITH ACTIVATION ANALYSIS)															
3	A 50.75(c)	Revise Integrated Work Sequence and Schedule	$51,231									$51,231	$7,700	$58,931			
3	A 50.75(c)	Transfer all reactor operating floor CCEs support structures, rigging, internals work platforms and process equipment to position and install (BY UTILITY STAFF)															

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Scenario 5
DECON: Wet Storage, Modified Systems, 2032 Repository and Current DOE Acceptance Rate

	Type		Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
3	A 50.75(c)	Remove Unit 2 equipment hatch closure (BY UTILITY STAFF)															
3	A 50.75(c)	Remove Unit 2 CRD missile and reactor cavity missile shields (BY UTILITY STAFF)															
3	A 50.75(c)	Remove Unit 2 CRD mechanisms and cables, air ducts, and reactor vessel head (BY UTILITY															
3	A 50.75(c)	Remove, segment, package and bury Unit 2 vessel & vessel head insulation		$174,720					$350,040			$524,760	$171,300	$696,060			
3	A 50.75(c)	Prepare Unit 2 vessel head for shipment as its own container (WITH VESSEL REMOVAL)															
3	A 50.75(c)	Decontaminate and clean up Unit 2 plant drains (BY UTILITY STAFF)															
3	A 50.75(c)	Process liquid and solid radioactive wastes (BY UTILITY STAFF)															
3	A 50.75(c)	Install Unit 2 water cleanup system in fuel transfer canal (BY UTILITY STAFF)															
3	A 50.75(c)	Segment, package and ship Unit 2 internals as radioactive waste		$2,591,854	$502,830	$81,000	$4,674,880		$33,431,981			$41,182,336	$14,302,700	$55,485,036			47,300
3	A 50.75(c)	Decontaminate internals work platform and process as LLW (BY UTILITY STAFF)															
3	A 50.75(c)	Install Unit 2 vessel support structure (WITH VESSEL REMOVAL)															
3	A 50.75(c)	Segment and process Unit 2 reactor vessel and associated equipment as LLW		$1,362,872	$141,451	$24,000	$2,039,382		$14,627,158			$18,194,413	$6,284,300	$24,478,713			24,820
3	A 50.75(c)	Decon reactor vessel cutting equipment and work platform; package and process as LLW (W/															
3	A 50.75(c)	Decon, remove, package, ship and bury Unit 2 steam generators		$4,290,772	$1,092,667	$12,800	$633,257		$12,054,598			$18,284,094	$5,963,700	$24,247,794			79,163
3	A 50.75(c)	Remove, pack, ship and bury Unit 2 Pressurizer		$1,018,043		$800	$72,364		$899,362			$1,990,560	$584,400	$2,574,960			16,775
3	A 50.75(c)	Decontaminate non-essential structures		$136,262	$88,643	$10,496	$82,726		$121,095			$399,222	$108,500	$507,722			2,242
3	A Greenfield	Remove non-essential structures		$111,101	$42,947		$10,887	$63,241				$228,175	$44,500	$272,675		1,694	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	$51,231	$42,023,487	$5,091,698	$720,990	$18,376,047	$878,885	$144,944,980			$212,087,817	$69,518,300	$281,606,117		193,911	903,323
		DECOMMISSIONING PERIOD DEPENDENT															
3	PD 50.75(c)	Utility Staff	$39,955,935									$39,955,935	$5,993,400	$45,949,335	630,890		
3	PD 50.75(c)	DOC Staff	$44,280,951									$44,280,951	$6,642,100	$50,923,051	584,858		
3	PD 50.75(c)	Security	$5,292,258									$5,292,258	$799,800	$6,086,058	184,010		
3	PD 50.75(c)	HP Supplies			$8,005,157							$8,005,157	$2,001,300	$10,006,457			
3	PD 50.75(c)	Equipment			$4,779,061							$4,779,061	$1,194,800	$5,973,861			
3	PD 50.75(c)	Unit 1 Insurance									$844,076	$844,076	$126,600	$970,676			
3	PD 50.75(c)	Unit 2 Insurance									$844,076	$844,076	$126,600	$970,676			
3	PD 50.75(c)	O & M Budget Items			$2,077,376							$2,077,376	$519,300	$2,596,676			
3	PD 50.75(c)	Permits & Fees									$6,157,842	$6,157,842	$923,700	$7,081,542			
3	PD 50.75(c)	Waste Transfer and Loading		$8,435,653								$8,435,653	$1,905,900	$10,341,553			164,323
3	PD 50.75(c)	Energy								$10,016,968		$10,016,968	$1,502,500	$11,519,468			
3	PD 50.75(c)	Severance	$2,177,005									$2,177,005	$326,700	$2,504,605			
3	PD 50.75(c)	Small Tools			$1,009,183							$1,009,183	$252,300	$1,261,483			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$91,707,140	$8,435,653	$18,870,787					$10,016,968	$7,845,993	$133,876,521	$22,309,400	$156,185,921	1,399,767		164,323
		TOTAL PERIOD 3 VESSEL AND INTERNALS REMOVAL COSTS:	$109,877,867	$50,459,141	$22,384,286	$720,990	$18,376,047	$878,885	$144,944,980	$10,512,133	$14,139,110	$372,293,710	$95,816,300	$468,212,010	1,800,665	193,911	767,648
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):		$22,746,867	$2,722,866	$591,384	$10,623,903		$83,460,766			$120,146,411	$39,626,100	$159,774,511			431,164
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		Unit 1 Subtotal Greenfield:		$8,894,326	$520,396		$159,218	$815,644				$11,094,586	$2,415,100	$13,509,486		192,216	
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):	$51,231	$8,427,011	$1,736,747	$118,500	$7,619,813		$61,363,120			$80,217,423	$27,324,100	$107,541,523			160,917
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Unit 2 Subtotal Greenfield:															
		Common															
		Total 10 CFR 50.75(c):		$136,262	$88,643	$10,496	$82,726		$121,095			$399,222	$108,500	$507,722			2,242
		Total 10 CFR 50.54(bb):															
		Total Greenfield		$111,101	$42,947		$10,887	$63,241				$228,175	$44,500	$272,675		1,694	
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Total 10 CFR 50.75(c):	$91,707,140	$8,435,653	$18,870,787					$10,016,968	$7,845,993	$133,876,521	$22,309,000	$156,185,521	1,399,767		164,323
		Total 10 CFR 50.54(bb):	$18,119,266		$1,421,895					$495,165	$6,293,116	$26,329,373	$4,091,500	$30,420,873	400,878		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$91,758,371	$40,746,714	$20,399,118	$720,990	$18,206,442		$144,944,980	$10,016,968	$7,845,993	$334,641,676	$89,367,700	$424,009,276	1,399,767		767,645
		Total 10 CFR 50.54(bb):	$18,119,266		$1,421,895					$495,165	$6,293,116	$26,329,373	$4,091,500	$30,420,873	400,878		
		Total Greenfield		$9,710,424	$563,345		$170,105	$878,885				$11,322,761	$2,459,600	$13,782,361		193,911	

PERIOD 4 DECONTAMINATE BALANCE OF SITE COSTS:

2012 D. C. Cook
Scenario 5
DECON, Wet Storage, Modified Systems, 2032 Repository and Current DOE Acceptance Rate

	Type		Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
		SPENT FUEL PERIOD DEPENDENT															
4	PD 50.54(bb)	Utility Staff	$9,132,651									$9,132,651	$1,369,000	$10,502,651	152,400		
4	PD 50.54(bb)	Security	$3,601,093									$3,601,093	$540,200	$4,141,293	36,066		
4	PD 50.54(bb)	Insurance									$2,024,382	$2,024,382	$303,700	$2,328,082			
4	PD 50.54(bb)	O & M Budget Items															
4	PD 50.54(bb)	Permits & Fees									$1,798,250	$1,798,250	$269,700	$2,067,950			
4	PD 50.54(bb)	Waste Transfer and Loading															
4	PD 50.54(bb)	Energy								$347,988		$347,988	$52,200	$400,188			
4	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$909,208							$909,208	$240,800	$1,249,008			
4	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	**$12,733,744**		**$909,208**					**$347,988**	**$4,422,632**	**$18,583,571**	**$2,875,500**	**$21,379,071**	**248,397**		
		DECOMMISSIONING ACTIVITIES															
4	A 50.75(c)	Decon, remove, package, ship and dispose of Unit 2 contaminated systems		$16,836,252	$804,125	$105,587	$800,983		$15,132,461			$33,432,411	$6,841,100	$40,273,511			334,974
4	A Greenfield	Remove, stockpile, ship and dispose of Unit 2 clean systems		$17,627,319	$966,454		$295,691	$1,514,766				$20,604,231	$4,485,200	$25,089,431		356,973	
4	A 50.75(c)	Decon Steam Generator Storage Building		$80,083	$27,855	$409	$6,024		$273,050			$387,433	$129,200	$516,633			1,658
4	A 50.75(c)	Decon Unit 2 Reactor Building		$4,415,224	$553,223	$416,439	$2,672,802		$13,322,464			$21,380,152	$7,010,600	$28,390,752			80,676
4	A 50.75(c)	Perform final radiological survey of all structures		$1,626,560	$34,160							$1,662,720	$421,700	$2,284,420			
4	A 50.75(c)	Perform final survey of the site		$9,631,680	$219,960							$9,851,640	$2,231,100	$12,082,740			
4	A 50.75(c)	Obtain NRC approval															
4	A 50.75(c)	Prepare final report of dismantling program	$49,362									$49,362	$7,400	$56,762	456		
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:	**$49,362**	**$50,322,106**	**$2,606,780**	**$522,435**	**$3,775,499**	**$1,514,766**	**$29,378,025**			**$88,167,950**	**$24,126,300**	**$112,294,250**	**456**	**356,973**	**417,608**
		DECOMMISSIONING PERIOD DEPENDENT															
4	PD 50.75(c)	Utility Staff	$22,219,030									$22,219,030	$3,332,900	$25,551,930	346,366		
4	PD 50.75(c)	DGO Staff	$26,073,973									$26,073,973	$3,911,100	$29,985,073	351,003		
4	PD 50.75(c)	Security	$3,719,256									$3,719,256	$557,900	$4,277,156	129,317		
4	PD 50.75(c)	HP Supplies			$5,422,429							$5,422,429	$1,356,600	$6,779,029			
4	PD 50.75(c)	Equipment			$4,640,421							$4,640,421	$1,160,100	$5,800,521			
4	PD 50.75(c)	Unit 1 Insurance									$693,194	$693,194	$69,000	$662,194			
4	PD 50.75(c)	Unit 2 Insurance									$693,194	$693,194	$69,000	$662,194			
4	PD 50.75(c)	O & M Budget Items			$535,801							$535,801	$134,000	$669,801			
4	PD 50.75(c)	Permits & Fees									$3,715,496	$3,715,496	$557,300	$4,272,796			
4	PD 50.75(c)	Waste Transfer and Loading		$5,926,349								$5,926,349	$1,339,400	$7,267,748			115,462
4	PD 50.75(c)	Energy								$6,922,647		$6,922,647	$1,038,400	$7,961,047			
4	PD 50.75(c)	Severance	$933,427									$933,427	$140,000	$1,073,427			
4	PD 50.75(c)	Small Tools			$1,125,009							$1,125,009	$281,300	$1,406,309			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	**$52,945,686**	**$5,926,349**	**$11,723,759**					**$6,922,647**	**$4,901,882**	**$82,422,323**	**$13,996,000**	**$96,418,323**	**826,786**		**115,462**
		TOTAL PERIOD 4 DECONTAMINATE BALANCE OF SITE COSTS:	**$66,728,792**	**$56,258,449**	**$16,328,745**	**$522,435**	**$3,775,499**	**$1,514,766**	**$29,378,025**	**$7,270,635**	**$9,324,514**	**$189,093,844**	**$40,997,800**	**$230,091,644**	**1,975,158**	**356,973**	**632,998**
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		Unit 1 Subtotal Greenfield:															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):		**$20,864,476**	**$1,367,348**	**$522,027**	**$3,473,786**		**$29,104,946**			**$55,412,582**	**$16,551,700**	**$72,264,282**			**415,850**
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Unit 2 Subtotal Greenfield:		**$17,627,319**	**$966,454**		**$295,691**	**$1,514,766**				**$20,604,231**	**$4,485,200**	**$25,089,431**		**356,973**	
		Common															
		Common Subtotal 10 CFR 50.75(c):	**$49,362**	**$11,449,303**	**$291,978**	**$409**	**$6,024**		**$273,050**			**$12,161,166**	**$2,759,400**	**$14,940,566**	**456**		**1,658**
		Common Subtotal 10 CFR 50.54(bb):															
		Common Subtotal Greenfield:															
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal 10 CFR 50.75(c):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal 10 CFR 50.75(c):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal 10 CFR 50.75(c):	**$52,945,686**	**$5,926,349**	**$11,723,759**					**$6,922,647**	**$4,901,882**	**$82,422,323**	**$13,996,000**	**$96,418,323**	**826,786**		**115,462**

2012 D. C. Cook
Scenario 5
DECON, Wet Storage, Modified Systems, 2032 Repository and Current DOE Acceptance Rate

Type			Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
		Common Subtotal 10 CFR 50.54(bb):	$12,733,744		$999,206					$347,959	$4,422,832	$18,503,571	$2,875,500	$21,378,071	249,387		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$62,994,048	$38,423,130	$13,353,085	$522,435	$3,479,750		$26,378,025	$6,022,847	$4,901,882	$149,986,041	$33,627,100	$183,513,141	837,161		32,980
		Total 10 CFR 50.54(bb):	$12,733,744		$999,206					$347,959	$4,422,832	$18,503,571	$2,875,500	$21,378,071	249,387		
		Total Greenfield		$17,827,319	$968,454		$284,601	$1,514,769				$20,604,231	$4,435,200	$25,089,431		356,570	
PERIOD 5 - CLEAN STRUCTURE DEMOLITION COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
5	PD 50.54(bb)	Utility Staff	$5,912,340									$5,912,340	$886,900	$6,799,240	93,807		
5	PD 50.54(bb)	Security	$2,153,551									$2,153,551	$323,000	$2,476,551	58,001		
5	PD 50.54(bb)	Insurance									$1,569,452	$1,569,452	$235,400	$1,804,852			
5	PD 50.54(bb)	O & M Budget Items															
5	PD 50.54(bb)	Permits & Fees									$1,075,402	$1,075,402	$161,300	$1,236,702			
5	PD 50.54(bb)	Waste Transfer and Loading															
5	PD 50.54(bb)	Energy								$208,107		$208,107	$31,200	$239,307			
5	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$597,552							$597,552	$149,400	$746,952			
5	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$8,065,891		$597,552					$208,107	$2,644,854	$11,515,404	$1,787,200	$13,303,604	151,808		
		DECOMMISSIONING ACTIVITIES															
5	A Greenfield	Remove Unit 1 reactor building		$1,481,598	$803,412		$541,175	$3,143,736				$5,969,921	$967,600	$6,937,521		24,370	
5	A Greenfield	Remove Unit 2 reactor building		$1,481,598	$803,412		$541,175	$3,143,736				$5,969,921	$967,600	$6,937,521		24,370	
5	A Greenfield	Remove Turbine Building		$8,045,268	$3,803,851		$1,140,934	$8,827,787				$19,817,839	$3,740,100	$23,557,939		137,370	
5	A Greenfield	Remove Steam Generator Storage Building		$198,400	$88,097		$52,487	$304,904				$643,889	$108,600	$752,988		3,181	
5	A Greenfield	Remove Electrical Transformers		$81,963	$2,908		$13,644	$61,300				$178,815	$30,430	$210,215		1,659	
5	A Greenfield	Removal of Unit 1 Turbine Generator		$152,600	$7,699		$7,746	$45,300				$213,345	$42,500	$255,845		2,697	
5	A Greenfield	Removal of Unit 1 Main Condenser		$1,332,989	$7,427		$85,013	$493,846				$1,919,254	$370,900	$2,290,154		21,580	
5	A Greenfield	Removal of Unit 2 Turbine Generator		$152,600	$7,699		$7,746	$45,300				$213,245	$42,600	$255,845		2,697	
5	A Greenfield	Removal of Unit 2 Main Condenser		$1,332,989	$7,427		$85,013	$493,846				$1,919,254	$370,900	$2,290,154		21,580	
5	A Greenfield	Removal of Standby Diesel Generators		$30,412	$5,447		$2,324	$18,800				$52,682	$10,300	$62,982		632	
5	A Greenfield	Remove Administration building		$300,750	$100,702							$401,451	$93,100	$494,551		4,469	
5	A Greenfield	Remove Low Level Radwaste building		$1,167,691	$170,898		$138,649	$734,963				$2,210,659	$402,300	$2,612,959		18,088	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:		$16,289,916	$5,810,346		$2,614,405	$16,167,319				$39,611,987	$7,147,200	$46,758,287		262,494	
		DECOMMISSIONING PERIOD DEPENDENT															
5	PD Greenfield	Utility Staff	$965,682									$965,682	$144,900	$1,110,762	15,571		
5	PD Greenfield	DOC Staff	$7,438,142									$7,438,142	$1,115,700	$8,553,842	93,807		
5	PD Greenfield	Security	$509,810									$509,810	$76,500	$586,310	15,572		
5	PD Greenfield	HP Supplies			$295,867							$295,867	$74,000	$369,867			
5	PD Greenfield	Equipment			$2,249,402							$2,249,402	$562,400	$2,811,802			
5	PD Greenfield	Unit 1 Insurance									$354,746	$354,746	$53,200	$407,946			
5	PD Greenfield	Unit 2 Insurance									$354,746	$354,746	$53,200	$407,946			
5	PD Greenfield	O & M Budget Items			$62,152							$62,152	$15,500	$77,652			
5	PD Greenfield	Permits & Fees									$175,836	$175,836	$26,500	$202,336			
5	PD Greenfield	Waste Transfer and Loading		$2,190,700								$2,190,700	$495,000	$2,685,700		41,437	
5	PD Greenfield	Energy								$705,466		$705,466	$105,800	$811,266			
5	PD Greenfield	Severance	$3,022,524									$3,022,524	$453,400	$3,475,924			
5	PD Greenfield	Small Tools			$369,794							$369,794	$92,400	$462,194			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$11,936,358	$2,190,700	$2,977,215					$705,466	$885,328	$18,696,066	$3,268,600	$21,964,566	127,050	41,437	
		TOTAL PERIOD 5 - CLEAN STRUCTURE DEMOLITION COSTS:	$20,002,249	$18,480,716	$9,085,113		$2,614,405	$16,167,319		$913,573	$3,531,182	$69,823,557	$12,202,900	$82,026,457	278,958	304,031	
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):		$2,987,160	$816,736		$633,934	$3,662,582				$8,102,421	$1,381,100	$9,483,521		48,647	
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):		$2,987,160	$816,736		$633,934	$3,662,582				$8,102,421	$1,381,100	$9,483,521		48,647	
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g)		$10,364,884	$3,477,575		$1,346,437	$7,632,154				$23,406,244	$4,385,000	$27,791,244		165,300	
		Common Subtotal 10 CFR 50.54(bb):															
		PERIOD DEPENDENT															

	Type		Staff Labor $	Craft Labor $	Equipment & Materials $	Packaging $	Transportation $	Clean Disposal $	Contaminated Disposal $	Energy $	Other $	without Contingency $	Contingency $	with Contingency $	Staff Manhours	Craft Manhours	Craft Manhours
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g)	$11,036,358	$2,100,700	$2,977,210					$705,466	$346,328	$18,606,566	$3,258,800	$21,964,666	127,060	41,437	
		Common Subtotal 10 CFR 50.54(bb):	$8,006,991		$687,612					$208,167	$2,444,884	$11,616,404	$1,787,200	$13,303,604	151,008		
		Unit 1, Unit 2 & Common															
		Total Greenfield (g):	$11,836,358	$13,486,716	$3,487,561		$2,814,406	$15,187,319		$705,465	$356,328	$88,307,152	$10,418,760	$98,722,852	127,050	304,031	
		Total 10 CFR 50.54(bb):	$8,005,391		$587,652					$208,197	$2,644,854	$11,516,404	$1,787,200	$13,303,604	151,068		
PERIOD 6 - RESTORE SITE COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
6	PD 50.54(bb)	Utility Staff	$646,091									$646,091	$96,900	$742,991	10,262		
6	PD 50.54(bb)	Security	$235,337									$235,337	$35,300	$270,637	6,338		
6	PD 50.54(bb)	Insurance									$171,507	$171,507	$25,700	$197,207			
6	PD 50.54(bb)	O & M Budget Items															
6	PD 50.54(bb)	Permits & Fees									$117,518	$117,516	$17,600	$135,118			
6	PD 50.54(bb)	Waste Transfer and Loading															
6	PD 50.54(bb)	Energy								$22,742		$22,742	$3,400	$26,142			
6	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$65,300							$65,300	$16,300	$81,600			
6	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$881,427		$65,300					$22,742	$289,025	$1,258,494	$195,200	$1,453,694	16,600		
		DECOMMISSIONING ACTIVITIES															
6	A Greenfield	Backfill, grade and landscape site		$166,109								$166,109	$37,500	$203,609		1,757	
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:		$166,109								$166,109	$37,500	$203,609		1,757	
		DECOMMISSIONING PERIOD DEPENDENT															
6	PD Greenfield	Utility Staff	$34,937									$34,937	$5,200	$40,137	604		
6	PD Greenfield	DOC Staff	$376,711									$376,711	$56,500	$433,211	4,627		
6	PD Greenfield	Security	$13,988									$13,988	$2,100	$16,088	604		
6	PD Greenfield	HP Supplies			$22,225							$22,225	$5,600	$27,828			
6	PD Greenfield	Equipment			$75,222							$75,222	$18,800	$94,022			
6	PD Greenfield	Unit 1 Insurance									$38,766	$38,766	$5,800	$44,566			
6	PD Greenfield	Unit 2 Insurance									$38,766	$38,766	$5,800	$44,566			
6	PD Greenfield	O & M Budget Items			$6,792							$6,792	$1,700	$8,492			
6	PD Greenfield	Permits & Fees									$19,324	$19,324	$2,900	$22,224			
6	PD Greenfield	Waste Transfer and Loading		$239,396								$239,396	$54,100	$293,496		4,528	
6	PD Greenfield	Energy								$77,092		$77,092	$11,600	$88,692			
6	PD Greenfield	Severance	$177,796									$177,796	$26,700	$204,496			
6	PD Greenfield	Small Tools			$8,110							$8,110	$2,000	$10,110			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$603,432	$239,396	$112,349					$77,092	$96,856	$1,129,126	$198,900	$1,327,926	5,735	4,528	
		TOTAL PERIOD 6 - RESTORE SITE COSTS:	$1,484,859	$405,505	$177,649					$99,834	$385,882	$2,553,729	$431,600	$2,985,329	22,335	6,285	
		ACTIVITY															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g)		$166,109								$166,109	$37,500	$203,609		1,757	
		Common Subtotal 10 CFR 50.54(bb):															
		PERIOD DEPENDENT															
		UNIT 1															
		Unit 1 Subtotal Greenfield (g):															
		Unit 1 Subtotal 10 CFR 50.54(bb):															

	Type		Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	Without Contingency, $	Contingency, $	With Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
		UNIT 2															
		Unit 2 Subtotal Greenfield (g):															
		Unit 2 Subtotal 10 CFR 50.54(bb):															
		Common															
		Common Subtotal Greenfield (g)	$803,432	$259,396	$112,349					$77,692	$96,856	$1,129,120	$196,800	$1,327,920	6,735	4,629	
		Common Subtotal 10 CFR 50.54(bb):	$861,427		$88,300					$22,742	$269,025	$1,288,494	$195,200	$1,483,694	16,800		
		Unit 1, Unit 2 & Common															
		Total Greenfield (g):	$803,432	$405,665	$112,349					$77,092	$96,856	$1,294,250	$239,300	$1,531,535	6,735	8,265	
		Total 10 CFR 50.54(bb):	$861,427		$88,300					$22,742	$289,025	$1,288,494	$195,200	$1,483,694	16,800		
PERIOD 7 - DRY STORAGE COSTS:																	
		SPENT FUEL ACTIVITIES															
7	A 50.54(bb)	Continue to ship fuel to repository															
		SUBTOTAL - SPENT FUEL ACTIVITIES															
		SPENT FUEL PERIOD DEPENDENT															
7	PD 50.54(bb)	Utility Staff	$69,741,231									$69,741,231	$10,461,200	$80,202,431	1,107,714		
7	PD 50.54(bb)	Security	$26,403,026									$26,403,026	$3,810,500	$23,213,526	684,176		
7	PD 50.54(bb)	Insurance									$26,882,131	$26,882,131	$2,688,200	$29,570,331			
7	PD 50.54(bb)	O & M Budget Items			$2,026,680							$2,026,680	$202,600	$2,229,280			
7	PD 50.54(bb)	Permits & Fees									$12,685,314	$12,685,314	$1,268,500	$13,953,814			
7	PD 50.54(bb)	Waste Transfer and Loading															
7	PD 50.54(bb)	Energy								$10,093,722		$10,093,722	$1,009,400	$11,103,122			
7	PD 50.54(bb)	Equipment			$1,152,691							$1,152,691	$115,300	$1,267,991			
7	PD 50.54(bb)	HP Supplies			$1,590,191							$1,590,191	$159,000	$1,749,191			
7	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$7,048,653							$7,048,653	$704,900	$7,753,553			
7	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$96,144,257		$11,817,215					$10,093,722	$39,567,446	$156,622,640	$20,419,600	$177,042,240	1,791,890		
		DECOMMISSIONING ACTIVITIES															
7	A 50.75(c)	Planning for PAB Decon and Demolition (Occurs in last six months of Period 7)															
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:															
		DECOMMISSIONING PERIOD DEPENDENT															
7	PD 50.75(c)	DOC Staff	$1,123,461									$1,123,461	$168,500	$1,291,961	14,040		
7	PD 50.75(c)	Severance	$88,898									$88,898	$13,300	$102,198			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	$1,212,359									$1,212,359	$181,800	$1,394,159	14,040		
		TOTAL PERIOD 7 - DRY STORAGE COSTS:	$98,356,616		$11,817,215					$10,093,722	$39,567,446	$157,834,999	$20,601,400	$178,436,399	1,805,929		
		ACTIVITY															
		Common															
		Common Subtotal 10 CFR 50.75(c):															
		Common Subtotal 10 CFR 50.54(bb):															
		PERIOD DEPENDENT															
		Common															
		Common Subtotal 10 CFR 50.75(c):	$1,212,359									$1,212,359	$181,800	$1,394,159	14,040		
		Common Subtotal 10 CFR 50.54(bb):	$96,144,257		$11,817,215					$10,093,722	$39,567,446	$156,622,640	$20,419,600	$177,042,240	1,791,890		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	$1,212,359									$1,212,359	$181,800	$1,394,159	14,040		
		Total 10 CFR 50.54(bb):	$96,144,257		$11,817,215					$10,093,722	$39,567,446	$156,622,640	$20,419,600	$177,042,240	1,791,890		
PERIOD 8 - AUXILIARY BUILDING REMOVAL COSTS:																	
		SPENT FUEL PERIOD DEPENDENT															
8	PD 50.54(bb)	Utility Staff	$1,616,161									$1,616,161	$242,400	$1,858,561	27,164		
8	PD 50.54(bb)	Security	$984,205									$984,205	$147,600	$1,131,805	24,601		
8	PD 50.54(bb)	Insurance									$197,131	$197,131	$29,600	$226,731			
8	PD 50.54(bb)	O & M Budget Items															
8	PD 50.54(bb)	Permits & Fees									$503,105	$503,105	$75,500	$578,605			

2012 D.C. Cook
Scenario 5
DECON, Wet Storage, Modified Systems, 2032 Repository and Current DOE Acceptance Rate

	Type		Staff Labor,$	Craft Labor,$	Equipment & Materials, $	Packaging, $	Transportation, $	Class C Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
8	PD 50.54(bb)	Waste Transfer and Loading															
8	PD 50.54(bb)	Energy								$425		$425	$100	$525			
8	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$147,848							$147,848	$37,000	$184,848			
8	PD 50.54(bb)	Small Tools															
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	**$2,600,306**		**$147,848**					**$425**	**$700,236**	**$3,448,875**	**$832,200**	**$3,981,075**	**51,706**		
		DECOMMISSIONING ACTIVITIES															
8	A 50.75(c)	Remove Spent fuel storage racks		$2,591,493	$50,370	$6,348	$43,305		$1,556,796			$4,249,314	$1,194,300	$5,443,614			40,874
8	A 50.75(c)	Decon Auxiliary Building		$1,568,936	$655,318	$10,980	$150,898		$5,517,858			$8,933,790	$3,006,300	$11,910,090			32,024
8	A Greenfield	Remove Auxiliary Building		$12,106,553	$4,932,267		$1,804,741	$9,322,086				$27,965,649	$5,249,500	$33,215,149		192,462	
8	A 50.75(c)	Final Survey		$1,146,024	$25,412							$1,171,436	$265,300	$1,436,736			
		SUBTOTAL - DECOMMISSIONING ACTIVITY COSTS:		**$17,413,007**	**$5,663,368**	**$18,328**	**$1,798,945**	**$9,322,086**	**$8,073,455**			**$42,290,189**	**$9,716,400**	**$52,005,589**		**192,462**	**51,897**
		DECOMMISSIONING PERIOD DEPENDENT															
8	PD 50.75(c)	Utility Staff	$2,993,931									$2,993,931	$449,100	$3,443,031	48,690		
8	PD 50.75(c)	DGC Staff	$6,114,297									$6,114,297	$917,100	$7,031,397	82,005		
8	PD 50.75(c)	Security	$1,175,885									$1,175,885	$176,400	$1,352,285	36,902		
8	PD 50.75(c)	HP Supplies			$1,091,640							$1,091,640	$272,900	$1,364,540			
8	PD 50.75(c)	Equipment			$1,535,442							$1,535,442	$383,900	$1,919,342			
8	PD 50.75(c)	Unit 1 Insurance									$263,316	$263,316	$39,500	$302,816			
8	PD 50.75(c)	Unit 2 Insurance									$263,316	$263,316	$39,500	$302,816			
8	PD 50.75(c)	O & M Budget Items			$127,488							$127,488	$31,900	$159,388			
8	PD 50.75(c)	Permits & Fees															
8	PD 50.75(c)	Waste Transfer and Loading		$1,315,786								$1,315,786	$297,300	$1,613,086			25,631
8	PD 50.75(c)	Energy								$523,645		$523,645	$78,500	$602,145			
8	PD 50.75(c)	Severance															
8	PD 50.75(c)	Small Tools			$374,576							$374,576	$93,600	$468,176			
		SUBTOTAL - DECOMMISSIONING PERIOD DEPENDENT	**$10,284,114**	**$1,315,786**	**$3,129,125**					**$523,645**	**$526,633**	**$15,779,303**	**$2,779,700**	**$18,559,003**	**167,597**		**25,631**
		TOTAL PERIOD 8 - AUXILIARY BUILDING REMOVAL COSTS:	**$12,884,420**	**$18,728,793**	**$8,940,339**	**$18,328**	**$1,798,945**	**$9,322,086**	**$8,073,455**	**$524,069**	**$1,226,868**	**$61,518,365**	**$13,027,300**	**$74,545,666**	**219,363**	**192,462**	**107,528**
		ACTIVITY															
		Common															
		Total 10 CFR 50.75(c):		**$5,306,484**	**$731,809**	**$18,328**	**$194,204**		**$8,073,455**			**$14,324,840**	**$4,468,800**	**$18,790,440**			**51,897**
		Common Subtotal Greenfield (g)		**$12,106,553**	**$4,932,267**		**$1,804,741**	**$9,322,086**				**$27,965,649**	**$5,249,500**	**$33,215,149**		**192,462**	
		Common Subtotal 50.54 (bb)															
		PERIOD DEPENDENT															
		Common															
		Total 10 CFR 50.75(c):	**$10,284,114**	**$1,315,786**	**$3,129,125**					**$523,645**	**$526,633**	**$15,779,303**	**$2,779,700**	**$18,559,003**	**167,597**		**25,631**
		Common Subtotal Greenfield (g)															
		Common Subtotal 50.54 (bb)	**$2,600,306**		**$147,848**					**$425**	**$700,236**	**$3,448,875**	**$832,200**	**$3,981,075**	**51,706**		
		Unit 1, Unit 2 & Common															
		Total 10 CFR 50.75(c):	**$10,284,114**	**$6,622,240**	**$3,860,225**	**$18,328**	**$194,204**		**$8,073,455**	**$523,645**	**$526,633**	**$30,103,843**	**$7,248,500**	**$37,349,443**	**167,597**		**107,528**
		Total Greenfield (g):		**$12,106,553**	**$4,932,267**		**$1,804,741**	**$9,322,086**				**$27,965,649**	**$5,249,500**	**$33,215,149**		**192,462**	
		Total 50.54(bb)	**$2,600,306**		**$147,848**					**$425**	**$700,236**	**$3,448,875**	**$832,200**	**$3,981,075**	**51,706**		
PERIOD 9 COSTS:																	
		SPENT FUEL ACTIVITIES															
9	A 50.54(bb)	Continue to ship fuel to repository															
		SPENT FUEL PERIOD DEPENDENT															
9	PD 50.54(bb)	Utility Staff	$39,567,729									$39,567,729	$5,935,200	$45,502,929	592,561		
9	PD 50.54(bb)	Security	$19,982,968									$19,982,968	$2,994,400	$22,957,368	498,959		
9	PD 50.54(bb)	Insurance									$3,998,467	$3,998,467	$399,800	$4,398,267			
9	PD 50.54(bb)	O & M Budget Items			$2,585,478							$2,585,478	$258,500	$2,843,978			
9	PD 50.54(bb)	Permits & Fees									$7,697,727	$7,697,727	$769,800	$8,467,527			
9	PD 50.54(bb)	Waste Transfer and Loading															
9	PD 50.54(bb)	Energy								$101,139		$101,139	$10,100	$111,239			
9	PD 50.54(bb)	Equipment			$394,769							$394,769	$39,500	$434,269			
9	PD 50.54(bb)	HP Supplies			$1,346,273							$1,346,273	$134,600	$1,480,873			
9	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies			$2,998,850							$2,998,850	$299,900	$3,298,750			
9	PD 50.54(bb)	Small Tools															
8	PD 50.54(bb)	Severance	$1,011,212									$1,011,212	$151,700	$1,162,912			
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	**$60,841,909**		**$7,325,370**					**$101,139**	**$11,696,193**	**$79,664,611**	**$10,893,500**	**$90,558,111**	**1,091,560**		

2012 D. C. Cook
Scenario 5
DECON, Wet Storage, Modified Systems, 2032 Repository and Current DOE Acceptance Rate

Period	Type	Description	Staff Labor, $	Craft Labor, $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
		TOTAL PERIOD 9 COSTS:	$80,541,909		$7,328,370					$101,139	$11,686,193	$79,664,811	$10,993,600	$90,658,111	1,391,580		
		ACTIVITY															
		Common															
		Total 50.54(bb)															
		PERIOD DEPENDENT															
		Common															
		Total 50.54(bb)	$80,541,909		$7,328,370					$101,139	$11,686,193	$79,664,811	$10,993,600	$90,658,111	1,391,580		
PERIOD 10 COSTS:																	
		SPENT FUEL ACTIVITIES															
10	A 50.54(bb)	Remove casks, canisters and storage pads		$529,766								$529,766	$119,700	$649,466		5,625	
		SUBTOTAL - SPENT FUEL ACTIVITIES		$529,766								$529,766	$119,700	$649,466		5,625	
		SPENT FUEL PERIOD DEPENDENT															
10	PD 50.54(bb)	Utility Staff	$296,011									$296,011	$44,400	$340,411	4,727		
10	PD 50.54(bb)	DOC Staff	$454,344									$454,344	$68,200	$522,544	8,199		
10	PD 50.54(bb)	Security	$118,142									$118,142	$17,700	$135,842	2,836		
10	PD 50.54(bb)	Insurance									$89,255	$89,255	$13,400	$102,655			
10	PD 50.54(bb)	O & M Budget Items															
10	PD 50.54(bb)	Permits & Fees									$5,527	$5,527	$800	$6,327			
10	PD 50.54(bb)	Waste Transfer and Loading		$187,452								$187,452	$42,400	$229,852			3,646
10	PD 50.54(bb)	Energy								$1,150		$1,150	$200	$1,350			
10	PD 50.54(bb)	Equipment			$106,616							$106,616	$26,700	$133,316			
10	PD 50.54(bb)	HP Supplies			$50,261							$50,261	$12,600	$62,861			
10	PD 50.54(bb)	Spent Fuel Storage Maintenance Supplies															
10	PD 50.54(bb)	Small Tools			$7,172							$7,172	$1,800	$8,972			
10	PD 50.54(bb)	Severance	$633,387									$633,387	$95,000	$728,387			
		SUBTOTAL - SPENT FUEL PERIOD DEPENDENT	$1,501,893	$187,452	$164,048					$1,150	$94,781	$1,949,324	$323,200	$2,272,524	12,762		3,646
		TOTAL PERIOD 10 COSTS:	$1,501,893	$717,218	$164,048					$1,150	$94,781	$2,479,090	$442,900	$2,921,990	12,762	5,625	3,646
		ACTIVITY															
		Common															
		Total 50.54(bb)		$529,766								$529,766	$119,700	$649,466		5,625	
		PERIOD DEPENDENT															
		Common															
		Total 50.54(bb)	$1,501,893	$187,452	$164,048					$1,150	$94,781	$1,949,324	$323,200	$2,272,524	12,762		3,646
TOTAL ACTIVITY COSTS:																	
UNIT 1																	
		SUBTOTAL UNIT 1 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 10		$27,368,346	$3,931,500	$691,994	$10,823,903		$87,344,068			$130,459,728	$42,659,856	$173,119,578		5,760	431,164
		SUBTOTAL UNIT 1 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 10															
		SUBTOTAL UNIT 1 GREENFIELD COSTS FOR PERIODS 1 - 10		$12,666,482	$1,339,137		$783,152	$4,498,228				$19,197,007	$3,796,200	$22,993,207		240,664	
UNIT 2																	
		SUBTOTAL UNIT 2 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 10	$41,221	$36,041,646	$4,302,635	$440,627	$10,193,879		$95,061,455			$145,941,303	$47,209,580	$193,150,653		5,760	645,767
		SUBTOTAL UNIT 2 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 10															
		SUBTOTAL UNIT 2 GREENFIELD COSTS FOR PERIODS 1 - 10		$20,794,486	$1,784,182		$929,025	$6,197,360				$29,708,653	$4,864,300	$34,572,953		405,621	
COMMON																	
		SUBTOTAL COMMON 10 CF FOR PERIODS 1-10:	$8,413,409	$18,683,777	$2,681,720	$30,232	$362,953		$8,467,631			$39,439,722	$9,627,200	$48,066,922	100,190	24,960	65,787
		SUBTOTAL COMMON 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 10	$749,467	$2,201,667	$2,348,300							$5,299,444	$1,197,300	$6,496,744	7,712	31,020	
		SUBTOTAL COMMON GREENFIELD COSTS FOR PERIODS 1 - 10		$22,748,447	$8,848,083		$2,962,164	$17,207,483				$51,766,177	$9,716,500	$61,482,677		361,203	
TOTAL PERIOD DEPENDENT COSTS																	
UNIT 1																	
		SUBTOTAL UNIT 1 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 10	$25,177,442		$12,636,137					$1,765,868	$2,362,267	$41,941,713	$7,431,500	$49,393,213	164,735		
		SUBTOTAL UNIT 1 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 10															
		SUBTOTAL UNIT 1 GREENFIELD COSTS FOR PERIODS 1 - 10															
UNIT 2																	
		SUBTOTAL UNIT 2 10 CFR 50.75(C) COSTS FOR PERIODS 1 - 10															
		SUBTOTAL UNIT 2 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 10															
		SUBTOTAL UNIT 2 GREENFIELD COSTS FOR PERIODS 1 - 10															
COMMON																	
		SUBTOTAL COMMON 10 CF FOR PERIODS 1-10:	$212,411,384	$15,873,786	$36,595,073					$20,620,011	$18,874,882	$300,360,136	$49,800,200	$350,196,336	2,990,014		304,435
		SUBTOTAL COMMON 10 CFR 50.54(bb) COSTS FOR PERIODS 1 - 10	$205,286,342	$187,452	$23,802,303					$11,813,838	$89,870,965	$309,862,889	$42,849,900	$352,712,789	3,678,390		3,646

2012 D. C. Cook
Scenario 5
DECON, Wet Storage, Modified Systems, 2032 Repository and Current DOE Acceptance Rate

Type	Staff Labor $	Craft Labor $	Equipment & Materials, $	Packaging, $	Transportation, $	Clean Disposal, $	Contaminated Disposal, $	Energy, $	Other, $	without Contingency, $	Contingency, $	with Contingency, $	Staff Manhours	Craft Manhours	Craft Manhours
SUBTOTAL COMMON GREENFIELD COSTS FOR PERIODS 1 - 10	$12,639,769	$2,430,098	$3,089,884					$782,558	$983,186	$19,825,191	$3,467,300	$23,292,491	132,786	45,965	
													7,262,833		
UNIT 1, UNIT 2 & COMMON															
GRAND TOTAL ACTIVITY COSTS FOR PERIODS 1-10:	$10,214,127	$139,368,049	$25,136,867	$1,262,753	$26,566,377	$26,903,059	$191,363,101			$420,810,033	$119,972,900	$540,782,933	107,908	1,076,792	1,102,728
GRAND TOTAL PERIOD DEPENDENT COSTS FOR PERIODS 1-10:	$486,417,167	$18,297,336	$74,223,076					$34,909,076	$89,081,286	$671,927,931	$103,866,900	$775,584,931	7,154,924	45,965	308,981
GRAND TOTAL	$496,631,284	$157,662,385	$99,359,844	$1,262,753	$26,566,377	$26,903,059	$191,363,101	$34,909,076	$89,081,286	$1,092,737,963	$223,629,800	$1,316,367,763	7,262,833	1,121,757	1,411,768
SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$26,177,442	$27,388,346	$16,467,637	$601,604	$10,623,903		$87,944,088	$1,786,868	$2,352,267	$172,311,441	$50,191,360	$222,502,791	164,735	6,760	431,164
SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):															
SUBTOTAL UNIT 1 DECON PROGRAM FINANCIAL PLANNING COST FOR GRENNFIELD (g):		$12,886,492	$1,339,137		$793,182	$4,498,228				$19,107,007	$3,796,200	$22,893,207		240,864	
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$61,231	$36,001,846	$4,302,836	$640,627	$10,893,879		$94,981,388			$146,941,303	$47,209,650	$193,160,853		6,760	585,767
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):															
SUBTOTAL UNIT 2 DECON PROGRAM FINANCIAL PLANNING COST FOR GRENNFIELD (g):		$20,794,486	$1,785,192		$929,626	$5,197,350				$28,706,653	$5,866,300	$34,572,953		405,621	
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$221,824,993	$34,363,665	$38,176,793	$30,232	$262,953		$8,467,631	$20,826,811	$16,674,882	$338,827,880	$59,335,400	$399,163,280	3,089,210	24,960	391,232
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):	$206,037,829	$2,389,169	$25,368,803					$11,613,839	$89,870,953	$315,162,332	$44,047,200	$359,209,532	3,886,102	31,625	3,646
SUBTOTAL COMMON DECON PROGRAM FINANCIAL PLANNING COST FOR GRENNFIELD (g):	$12,836,789	$28,176,842	$11,937,047		$2,942,164	$17,207,480		$782,586	$983,165	$71,891,368	$13,183,800	$84,775,168	132,785	407,168	
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.75(c):	$247,053,666	$96,733,766	$58,947,085	$1,262,763	$21,880,435		$191,363,101	$22,612,679	$18,227,149	$656,080,864	$156,736,300	$814,816,904	3,243,945	36,480	1,408,163
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR 10 CFR 50.54(bb):	$206,037,829	$2,389,169	$25,360,603					$11,813,839	$89,870,953	$315,162,332	$44,047,200	$359,209,532	3,886,102	31,625	3,646
TOTAL UNIT 1 & 2 DECON PROGRAM FINANCIAL PLANNING COST FOR GRENNFIELD (g):	$12,839,788	$58,539,619	$15,061,976		$4,664,942	$26,903,059		$782,558	$983,165	$119,495,028	$22,846,300	$142,341,328	132,785	1,053,652	
GRAND TOTAL	$465,931,284	$157,662,385	$99,369,644	$1,262,763	$26,566,377	$26,903,059	$191,363,101	$34,909,076	$89,081,286	$1,092,737,963	$223,629,800	$1,316,367,763	7,262,833	1,121,767	1,411,798

APPENDIX C

CASH FLOW TABLES

2012 D. C. Cook
Scenario 1
DECON and Permanent On-Site Dry Storage

Scenario 1 - Yearly costs:

UNIT 1

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$1,461,800	$727,800	$0	$75,000	$136,600	$433,000	$2,834,200
2035	$7,968,600	$3,967,700	$0	$409,000	$744,500	$2,360,300	$15,450,100
2036	$7,968,600	$3,967,700	$0	$409,000	$744,500	$2,360,300	$15,450,100
2037	$7,889,100	$3,902,500	$107,400	$399,300	$726,700	$2,377,100	$15,402,100
2038	$4,788,000	$1,232,000	$5,201,500	$0	$0	$3,344,400	$14,565,900
2039	$10,238,200	$1,026,500	$30,273,500	$0	$0	$13,336,600	$54,874,900
2040	$10,238,200	$1,026,500	$30,273,500	$0	$0	$13,336,600	$54,874,900
2041	$10,238,200	$1,026,500	$30,273,600	$0	$0	$13,336,600	$54,874,900
2042	$1,354,500	$135,800	$4,005,100	$0	$0	$1,764,400	$7,259,800
2043	$0	$0	$0	$0	$0	$0	$0
2044	$1,007,700	$278,100	$1,466,000	$0	$0	$472,100	$3,223,900
2045	$1,959,400	$540,700	$2,850,500	$0	$0	$918,000	$6,268,600
2046	$0	$0	$0	$0	$0	$0	$0
	$65,112,300	$17,831,800	$104,451,300	$1,292,300	$2,352,300	$54,039,400	$245,079,400
						Rounding Allowance:	$17
							$245,079,417
Annual Storage:	$0	$0	$0	$0	$0	$0	$0

UNIT 2

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$0	$0	$0	$0	$0	$0	$0
2035	$0	$0	$0	$0	$0	$0	$0
2036	$0	$0	$0	$0	$0	$0	$0
2037	$110,700	$29,600	$107,400	$0	$0	$73,200	$320,900
2038	$4,590,600	$1,219,000	$4,971,500	$0	$0	$3,216,800	$13,997,900
2039	$3,000,100	$549,700	$21,838,900	$0	$0	$8,657,000	$34,045,700
2040	$3,000,100	$549,700	$21,838,900	$0	$0	$8,657,000	$34,045,700
2041	$3,000,100	$549,700	$21,838,900	$0	$0	$8,657,000	$34,045,700
2042	$14,332,000	$907,700	$15,433,500	$0	$0	$8,853,700	$39,526,900
2043	$16,059,700	$962,300	$14,456,900	$0	$0	$8,883,700	$40,362,600
2044	$9,794,800	$804,600	$9,376,100	$0	$0	$5,332,800	$25,308,300
2045	$1,959,400	$540,700	$2,850,500	$0	$0	$918,000	$6,268,600
2046	$0	$0	$0	$0	$0	$0	$0
	$55,947,500	$6,113,000	$112,712,600	$0	$0	$53,249,200	$227,922,300
						Rounding Allowance:	($95)
							$227,922,205
Annual Storage:	$0	$0	$0	$0	$0	$0	$0

Common

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$1,970,600	$14,600	$0	$0	$126,700	$433,300	$2,545,200
2035	$10,742,500	$79,400	$0	$0	$691,000	$2,361,900	$13,874,800
2036	$10,742,500	$79,400	$0	$0	$691,000	$2,361,900	$13,874,800
2037	$12,084,300	$3,077,400	$0	$53,700	$784,500	$3,326,200	$19,326,100
2038	$66,140,200	$123,373,000	$2,300	$2,241,900	$4,604,600	$42,057,500	$238,419,400
2039	$37,508,100	$42,154,300	$85,000	$1,947,900	$4,475,000	$17,367,000	$103,537,300
2040	$37,508,100	$42,154,300	$85,000	$1,947,900	$4,475,000	$17,367,000	$103,537,300
2041	$37,508,100	$42,154,300	$85,000	$1,947,900	$4,475,000	$17,367,000	$103,537,300
2042	$36,646,100	$10,746,700	$3,089,400	$1,766,500	$3,015,200	$10,706,100	$65,970,000
2043	$36,514,600	$5,958,100	$3,547,400	$1,738,900	$2,792,600	$9,690,600	$60,242,200
2044	$33,865,600	$7,338,400	$8,766,000	$1,004,600	$2,031,100	$9,943,700	$62,955,400
2045	$28,295,500	$8,027,900	$13,270,500	$109,300	$1,111,000	$9,302,000	$60,116,200
2046	$337,000	$25,500	$0	$1,600	$34,600	$69,100	$467,800
	$349,865,200	$285,183,300	$28,950,600	$12,760,100	$29,307,300	$142,359,300	$848,405,800
						Rounding Allowance:	($233)
							$848,403,567
Annual Storage:	$2,977,700	$366,400	$0	$6,300	$585,000	$542,400	$4,477,800

	$470,823,000	**$309,128,100**	**$246,094,500**	**$14,052,400**	**$31,659,600**	**$249,647,900**	**$1,321,405,189**
Annual Storage:	**$2,977,700**	**$366,400**	**$0**	**$6,300**	**$585,000**	**$542,400**	**$4,477,800**

2012 D. C. Cook
Scenario 2
DECON, Off Site Permanent Dry Storage

Scenario 2 - Yearly costs:

UNIT 1

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$1,461,800	$727,800	$0	$75,000	$136,600	$433,000	$2,834,200
2035	$7,968,600	$3,967,700	$0	$409,000	$744,500	$2,360,300	$15,450,100
2036	$7,968,600	$3,967,700	$0	$409,000	$744,500	$2,360,300	$15,450,100
2037	$7,889,100	$3,902,500	$107,400	$399,300	$726,700	$2,376,700	$15,401,700
2038	$4,788,000	$1,232,000	$5,201,500	$0	$0	$3,327,200	$14,548,700
2039	$10,238,200	$1,026,500	$30,273,600	$0	$0	$13,358,700	$54,897,000
2040	$10,238,200	$1,026,500	$30,273,600	$0	$0	$13,358,700	$54,897,000
2041	$10,238,200	$1,026,500	$30,273,600	$0	$0	$13,358,700	$54,897,000
2042	$1,354,500	$135,800	$4,005,100	$0	$0	$1,757,300	$7,252,700
2043	$0	$0	$0	$0	$0	$0	$0
2044	$1,007,700	$278,100	$1,466,000	$0	$0	$468,700	$3,220,500
2045	$1,959,400	$540,700	$2,850,500	$0	$0	$911,200	$6,261,800
2046	$0	$0	$0	$0	$0	$0	$0
	$65,112,300	$17,831,800	$104,451,300	$1,292,300	$2,352,300	$54,080,800	$245,120,800

Rounding Allowance: $17

$245,120,817

UNIT 2

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$0	$0	$0	$0	$0	$0	$0
2035	$0	$0	$0	$0	$0	$0	$0
2036	$0	$0	$0	$0	$0	$0	$0
2037	$110,700	$29,600	$107,400	$0	$0	$72,700	$320,400
2038	$4,590,600	$1,219,000	$4,971,500	$0	$0	$3,198,400	$13,979,500
2039	$3,000,100	$549,700	$21,838,900	$0	$0	$8,636,400	$34,025,100
2040	$3,000,100	$549,700	$21,838,900	$0	$0	$8,636,400	$34,025,100
2041	$3,000,100	$549,700	$21,838,900	$0	$0	$8,636,400	$34,025,100
2042	$14,332,000	$907,700	$15,433,500	$0	$0	$8,797,800	$39,471,000
2043	$16,059,700	$962,300	$14,456,900	$0	$0	$8,822,500	$40,301,400
2044	$9,794,800	$804,600	$9,376,100	$0	$0	$5,295,800	$25,271,300
2045	$1,959,400	$540,700	$2,850,500	$0	$0	$911,200	$6,261,800
2046	$0	$0	$0	$0	$0	$0	$0
	$55,847,500	$6,113,000	$112,712,600	$0	$0	$53,007,600	$227,680,700

Rounding Allowance: ($95)

$227,680,605

Common

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$513,200	$0	$0	$0	$2,528,700	$456,300	$3,498,200
2035	$2,797,600	$0	$0	$0	$13,784,700	$2,487,300	$19,069,600
2036	$2,797,600	$0	$0	$0	$13,784,700	$2,487,300	$19,069,600
2037	$4,329,100	$226,100	$0	$53,700	$14,303,800	$2,865,600	$21,778,300
2038	$66,140,200	$9,361,200	$2,300	$2,239,700	$35,793,800	$18,221,100	$131,758,300
2039	$37,508,100	$5,508,400	$85,000	$1,945,800	$45,237,700	$14,310,300	$104,595,300
2040	$37,508,100	$5,508,400	$85,000	$1,945,800	$45,237,700	$14,310,300	$104,595,300
2041	$37,508,100	$5,508,400	$85,000	$1,945,800	$45,237,700	$14,310,300	$104,595,300
2042	$36,013,900	$5,972,000	$3,089,400	$1,823,800	$23,667,000	$12,494,000	$83,060,100
2043	$35,786,100	$6,042,700	$3,547,400	$1,805,200	$20,378,200	$12,217,100	$79,776,700
2044	$32,616,700	$7,281,000	$8,766,000	$1,038,100	$14,647,000	$11,568,700	$75,717,500
2045	$26,786,500	$7,799,700	$13,270,500	$103,100	$7,267,800	$9,809,600	$64,537,200
2046	$244,400	$18,600	$0	$1,400	$223,100	$81,400	$568,900
	$320,049,600	$53,226,500	$28,930,600	$12,902,400	$281,891,900	$115,619,300	$812,620,300

Rounding Allowance: ($175)

$812,620,125

Annual Storage:	**$0**	**$0**	**$0**	**$0**	**$6,004,500**	**$600,400**	**$6,604,900**
	$441,009,400	**$77,171,300**	**$246,094,500**	**$14,194,700**	**$284,244,200**	**$222,707,700**	**$1,285,421,548**

2012 D. C. Cook
Scenario 3
DECON, On-Site Dry Storage, Modified Systems, 2032 Repository and Current Acceptance Rate

Scenario 3 - Yearly costs:

UNIT 1

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$1,461,800	$727,800	$0	$75,000	$136,600	$433,000	$2,834,200
2035	$7,968,600	$3,967,700	$0	$409,000	$744,500	$2,360,300	$15,450,100
2036	$7,968,600	$3,967,700	$0	$409,000	$744,500	$2,360,300	$15,450,100
2037	$7,889,100	$3,902,500	$107,400	$399,300	$726,700	$2,377,000	$15,402,000
2038	$4,788,000	$1,232,000	$5,201,500	$0	$0	$3,340,100	$14,561,600
2039	$10,238,200	$1,026,500	$30,273,600	$0	$0	$13,386,400	$54,924,700
2040	$10,238,200	$1,026,500	$30,273,600	$0	$0	$13,386,400	$54,924,700
2041	$10,238,200	$1,026,500	$30,273,600	$0	$0	$13,386,400	$54,924,700
2042	$1,354,500	$135,800	$4,005,100	$0	$0	$1,771,000	$7,266,400
2043	$0	$0	$0	$0	$0	$0	$0
2044	$1,007,700	$278,100	$1,466,000	$0	$0	$471,400	$3,223,200
2045	$1,959,400	$540,700	$2,850,500	$0	$0	$916,500	$6,267,100
2046	$0	$0	$0	$0	$0	$0	$0
2047	$0	$0	$0	$0	$0	$0	$0
2048	$0	$0	$0	$0	$0	$0	$0
2049	$0	$0	$0	$0	$0	$0	$0
2050	$0	$0	$0	$0	$0	$0	$0
2051	$0	$0	$0	$0	$0	$0	$0
2052	$0	$0	$0	$0	$0	$0	$0
2053	$0	$0	$0	$0	$0	$0	$0
2054	$0	$0	$0	$0	$0	$0	$0
2055	$0	$0	$0	$0	$0	$0	$0
2056	$0	$0	$0	$0	$0	$0	$0
2057	$0	$0	$0	$0	$0	$0	$0
2058	$0	$0	$0	$0	$0	$0	$0
2059	$0	$0	$0	$0	$0	$0	$0
2060	$0	$0	$0	$0	$0	$0	$0
2061	$0	$0	$0	$0	$0	$0	$0
2062	$0	$0	$0	$0	$0	$0	$0
2063	$0	$0	$0	$0	$0	$0	$0
2064	$0	$0	$0	$0	$0	$0	$0
2065	$0	$0	$0	$0	$0	$0	$0
2066	$0	$0	$0	$0	$0	$0	$0
2067	$0	$0	$0	$0	$0	$0	$0
2068	$0	$0	$0	$0	$0	$0	$0
2069	$0	$0	$0	$0	$0	$0	$0
2070	$0	$0	$0	$0	$0	$0	$0
2071	$0	$0	$0	$0	$0	$0	$0
2072	$0	$0	$0	$0	$0	$0	$0
2073	$0	$0	$0	$0	$0	$0	$0
2074	$0	$0	$0	$0	$0	$0	$0
2075	$0	$0	$0	$0	$0	$0	$0
2076	$0	$0	$0	$0	$0	$0	$0
2077	$0	$0	$0	$0	$0	$0	$0
2078	$0	$0	$0	$0	$0	$0	$0
2079	$0	$0	$0	$0	$0	$0	$0
2080	$0	$0	$0	$0	$0	$0	$0
2081	$0	$0	$0	$0	$0	$0	$0
2082	$0	$0	$0	$0	$0	$0	$0
	$65,112,300	$17,831,800	$104,451,300	$1,292,300	$2,352,300	$54,188,800	$245,228,800

Rounding Allowance: ($283)

$245,228,517

2012 D. C. Cook
Scenario 3
DECON, On-Site Dry Storage, Modified Systems, 2032 Repository and Current Acceptance Rate

UNIT 2

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$0	$0	$0	$0	$0	$0	$0
2035	$0	$0	$0	$0	$0	$0	$0
2036	$0	$0	$0	$0	$0	$0	$0
2037	$110,700	$29,600	$107,400	$0	$0	$73,000	$320,700
2038	$4,590,600	$1,219,000	$4,971,500	$0	$0	$3,210,800	$13,991,900
2039	$3,000,100	$549,700	$21,838,900	$0	$0	$8,644,400	$34,033,100
2040	$3,000,100	$549,700	$21,838,900	$0	$0	$8,644,400	$34,033,100
2041	$3,000,100	$549,700	$21,838,900	$0	$0	$8,644,400	$34,033,100
2042	$14,332,000	$907,700	$15,433,500	$0	$0	$8,836,500	$39,509,700
2043	$16,059,700	$962,300	$14,456,900	$0	$0	$8,865,800	$40,344,700
2044	$9,794,800	$804,600	$9,376,100	$0	$0	$5,322,300	$25,297,800
2045	$1,959,400	$540,700	$2,850,500	$0	$0	$916,500	$6,267,100
2046	$0	$0	$0	$0	$0	$0	$0
2047	$0	$0	$0	$0	$0	$0	$0
2048	$0	$0	$0	$0	$0	$0	$0
2049	$0	$0	$0	$0	$0	$0	$0
2050	$0	$0	$0	$0	$0	$0	$0
2051	$0	$0	$0	$0	$0	$0	$0
2052	$0	$0	$0	$0	$0	$0	$0
2053	$0	$0	$0	$0	$0	$0	$0
2054	$0	$0	$0	$0	$0	$0	$0
2055	$0	$0	$0	$0	$0	$0	$0
2056	$0	$0	$0	$0	$0	$0	$0
2057	$0	$0	$0	$0	$0	$0	$0
2058	$0	$0	$0	$0	$0	$0	$0
2059	$0	$0	$0	$0	$0	$0	$0
2060	$0	$0	$0	$0	$0	$0	$0
2061	$0	$0	$0	$0	$0	$0	$0
2062	$0	$0	$0	$0	$0	$0	$0
2063	$0	$0	$0	$0	$0	$0	$0
2064	$0	$0	$0	$0	$0	$0	$0
2065	$0	$0	$0	$0	$0	$0	$0
2066	$0	$0	$0	$0	$0	$0	$0
2067	$0	$0	$0	$0	$0	$0	$0
2068	$0	$0	$0	$0	$0	$0	$0
2069	$0	$0	$0	$0	$0	$0	$0
2070	$0	$0	$0	$0	$0	$0	$0
2071	$0	$0	$0	$0	$0	$0	$0
2072	$0	$0	$0	$0	$0	$0	$0
2073	$0	$0	$0	$0	$0	$0	$0
2074	$0	$0	$0	$0	$0	$0	$0
2075	$0	$0	$0	$0	$0	$0	$0
2076	$0	$0	$0	$0	$0	$0	$0
2077	$0	$0	$0	$0	$0	$0	$0
2078	$0	$0	$0	$0	$0	$0	$0
2079	$0	$0	$0	$0	$0	$0	$0
2080	$0	$0	$0	$0	$0	$0	$0
2081	$0	$0	$0	$0	$0	$0	$0
2082	$0	$0	$0	$0	$0	$0	$0
	$55,847,500	$6,113,000	$112,712,600	$0	$0	$53,158,100	$227,831,200

Rounding Allowance: ($95)

$227,831,105

2012 D. C. Cook
Scenario 3
DECON, On-Site Dry Storage, Modified Systems, 2032 Repository and Current Acceptance Rate

Common

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$1,502,400	$9,900	$0	$0	$126,700	$324,200	$1,963,200
2035	$8,189,900	$53,900	$0	$0	$691,000	$1,767,300	$10,702,100
2036	$8,189,900	$53,900	$0	$0	$691,000	$1,767,300	$10,702,100
2037	$9,592,600	$1,943,000	$0	$53,700	$784,500	$2,468,300	$14,842,100
2038	$66,140,200	$77,767,600	$2,300	$2,241,000	$4,604,600	$30,653,800	$181,409,500
2039	$37,508,100	$27,495,900	$85,000	$1,947,100	$4,475,000	$13,700,300	$85,211,400
2040	$37,508,100	$27,495,900	$85,000	$1,947,100	$4,475,000	$13,700,300	$85,211,400
2041	$37,508,100	$27,495,900	$85,000	$1,947,100	$4,475,000	$13,700,300	$85,211,400
2042	$36,646,100	$8,664,500	$3,089,400	$1,765,700	$3,015,200	$10,177,900	$63,358,800
2043	$36,514,600	$5,793,300	$3,547,400	$1,738,100	$2,792,600	$9,640,800	$60,026,800
2044	$33,865,600	$7,248,200	$8,766,000	$1,003,800	$2,031,100	$9,916,500	$62,831,200
2045	$28,189,700	$8,027,900	$13,270,500	$108,500	$1,111,000	$9,274,100	$59,981,700
2046	$3,198,100	$380,500	$0	$6,800	$601,400	$590,900	$4,777,700
2047	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2048	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2049	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2050	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2051	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2052	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2053	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2054	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2055	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2056	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2057	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2058	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2059	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2060	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2061	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2062	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2063	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2064	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2065	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2066	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2067	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2068	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2069	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2070	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2071	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2072	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2073	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2074	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2075	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2076	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2077	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2078	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2079	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2080	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2081	$2,981,300	$366,400	$0	$5,500	$585,000	$542,900	$4,481,100
2082	$5,124,100	$362,600	$0	$4,000	$342,800	$1,019,700	$6,853,200
	$454,023,000	$205,617,000	$28,930,600	$12,955,400	$50,691,900	$137,703,200	$889,921,100
						Rounding Allowance:	$891
							$889,921,991
	$574,982,800	**$229,561,800**	**$246,094,600**	**$14,247,700**	**$53,044,200**	**$245,050,100**	**$1,362,981,613**

2012 D. C. Cook
Scenario 4
SAFSTOR, Permanent On-Site Dry Storage

Scenario 4 - Yearly costs:

UNIT 1

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$1,420,100	$706,400	$0	$227,200	$132,500	$443,600	$2,929,800
2035	$7,979,700	$3,969,100	$0	$1,276,500	$744,500	$2,492,400	$16,462,200
2036	$7,979,700	$3,969,100	$0	$1,276,500	$744,500	$2,492,400	$16,462,200
2037	$7,910,100	$3,894,400	$126,900	$1,246,000	$726,700	$2,506,000	$16,410,100
2038	$4,152,000	$688,500	$4,356,400	$0	$0	$2,512,200	$11,709,100
2039	$0	$0	$0	$0	$0	$0	$0
2040	$0	$0	$0	$0	$0	$0	$0
2041	$0	$0	$0	$0	$0	$0	$0
2042	$0	$0	$0	$0	$0	$0	$0
2043	$0	$0	$0	$0	$0	$0	$0
2044	$0	$0	$0	$0	$0	$0	$0
2045	$0	$0	$0	$0	$0	$0	$0
2046	$0	$0	$0	$0	$0	$0	$0
2047	$0	$0	$0	$0	$0	$0	$0
2048	$0	$0	$0	$0	$0	$0	$0
2049	$0	$0	$0	$0	$0	$0	$0
2050	$0	$0	$0	$0	$0	$0	$0
2051	$0	$0	$0	$0	$0	$0	$0
2052	$0	$0	$0	$0	$0	$0	$0
2053	$0	$0	$0	$0	$0	$0	$0
2054	$0	$0	$0	$0	$0	$0	$0
2055	$0	$0	$0	$0	$0	$0	$0
2056	$0	$0	$0	$0	$0	$0	$0
2057	$0	$0	$0	$0	$0	$0	$0
2058	$0	$0	$0	$0	$0	$0	$0
2059	$0	$0	$0	$0	$0	$0	$0
2060	$0	$0	$0	$0	$0	$0	$0
2061	$0	$0	$0	$0	$0	$0	$0
2062	$0	$0	$0	$0	$0	$0	$0
2063	$0	$0	$0	$0	$0	$0	$0
2064	$0	$0	$0	$0	$0	$0	$0
2065	$0	$0	$0	$0	$0	$0	$0
2066	$0	$0	$0	$0	$0	$0	$0
2067	$0	$0	$0	$0	$0	$0	$0
2068	$0	$0	$0	$0	$0	$0	$0
2069	$0	$0	$0	$0	$0	$0	$0
2070	$0	$0	$0	$0	$0	$0	$0
2071	$0	$0	$0	$0	$0	$0	$0
2072	$0	$0	$0	$0	$0	$0	$0
2073	$0	$0	$0	$0	$0	$0	$0
2074	$0	$0	$0	$0	$0	$0	$0
2075	$0	$0	$0	$0	$0	$0	$0
2076	$0	$0	$0	$0	$0	$0	$0
2077	$0	$0	$0	$0	$0	$0	$0
2078	$0	$0	$0	$0	$0	$0	$0
2079	$0	$0	$0	$0	$0	$0	$0
2080	$0	$0	$0	$0	$0	$0	$0
2081	$0	$0	$0	$0	$0	$0	$0
2082	$0	$0	$0	$0	$0	$0	$0
2083	$0	$0	$0	$0	$0	$0	$0
2084	$0	$0	$0	$0	$0	$0	$0
2085	$0	$0	$0	$0	$0	$0	$0
2086	$0	$0	$0	$0	$0	$0	$0
2087	$0	$0	$0	$0	$0	$0	$0
2088	$7,734,700	$991,700	$0	$318,900	$1,873,500	$1,743,300	$12,662,100
2089	$7,740,700	$992,400	$0	$319,200	$1,875,000	$1,744,600	$12,671,900
2090	$7,740,700	$992,400	$0	$319,200	$1,875,000	$1,744,600	$12,671,900
2091	$7,740,700	$992,400	$0	$319,200	$1,875,000	$1,744,600	$12,671,900
2092	$9,307,000	$1,015,200	$12,002,300	$121,700	$715,200	$5,890,700	$29,047,100
2093	$10,264,900	$1,029,200	$19,403,800	$0	$0	$8,447,500	$39,145,400
2094	$10,264,900	$1,029,200	$19,403,800	$0	$0	$8,447,500	$39,145,400
2095	$5,469,100	$548,400	$10,338,400	$0	$0	$4,500,800	$20,856,700
2096	$0	$0	$0	$0	$0	$0	$0
2097	$215,300	$59,400	$313,200	$0	$0	$100,400	$688,300
2098	$2,239,100	$617,800	$3,257,400	$0	$0	$1,044,000	$7,158,300
2099	$512,800	$141,500	$745,900	$0	$0	$239,100	$1,639,300
	$98,666,500	$21,637,100	$69,948,100	$5,424,400	$10,561,900	$46,093,700	$252,331,700

Rounding Allowance: ($515)

$252,331,185

2012 D. C. Cook
Scenario 4
SAFSTOR, Permanent On-Site Dry Storage

UNIT 2

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$0	$0	$0	$0	$0	$0	$0
2035	$0	$0	$0	$0	$0	$0	$0
2036	$0	$0	$0	$0	$0	$0	$0
2037	$121,000	$20,100	$126,900	$0	$0	$73,200	$341,200
2038	$4,152,000	$688,500	$4,356,400	$0	$0	$2,512,200	$11,709,100
2039	$0	$0	$0	$0	$0	$0	$0
2040	$0	$0	$0	$0	$0	$0	$0
2041	$0	$0	$0	$0	$0	$0	$0
2042	$0	$0	$0	$0	$0	$0	$0
2043	$0	$0	$0	$0	$0	$0	$0
2044	$0	$0	$0	$0	$0	$0	$0
2045	$0	$0	$0	$0	$0	$0	$0
2046	$0	$0	$0	$0	$0	$0	$0
2047	$0	$0	$0	$0	$0	$0	$0
2048	$0	$0	$0	$0	$0	$0	$0
2049	$0	$0	$0	$0	$0	$0	$0
2050	$0	$0	$0	$0	$0	$0	$0
2051	$0	$0	$0	$0	$0	$0	$0
2052	$0	$0	$0	$0	$0	$0	$0
2053	$0	$0	$0	$0	$0	$0	$0
2054	$0	$0	$0	$0	$0	$0	$0
2055	$0	$0	$0	$0	$0	$0	$0
2056	$0	$0	$0	$0	$0	$0	$0
2057	$0	$0	$0	$0	$0	$0	$0
2058	$0	$0	$0	$0	$0	$0	$0
2059	$0	$0	$0	$0	$0	$0	$0
2060	$0	$0	$0	$0	$0	$0	$0
2061	$0	$0	$0	$0	$0	$0	$0
2062	$0	$0	$0	$0	$0	$0	$0
2063	$0	$0	$0	$0	$0	$0	$0
2064	$0	$0	$0	$0	$0	$0	$0
2065	$0	$0	$0	$0	$0	$0	$0
2066	$0	$0	$0	$0	$0	$0	$0
2067	$0	$0	$0	$0	$0	$0	$0
2068	$0	$0	$0	$0	$0	$0	$0
2069	$0	$0	$0	$0	$0	$0	$0
2070	$0	$0	$0	$0	$0	$0	$0
2071	$0	$0	$0	$0	$0	$0	$0
2072	$0	$0	$0	$0	$0	$0	$0
2073	$0	$0	$0	$0	$0	$0	$0
2074	$0	$0	$0	$0	$0	$0	$0
2075	$0	$0	$0	$0	$0	$0	$0
2076	$0	$0	$0	$0	$0	$0	$0
2077	$0	$0	$0	$0	$0	$0	$0
2078	$0	$0	$0	$0	$0	$0	$0
2079	$0	$0	$0	$0	$0	$0	$0
2080	$0	$0	$0	$0	$0	$0	$0
2081	$0	$0	$0	$0	$0	$0	$0
2082	$0	$0	$0	$0	$0	$0	$0
2083	$0	$0	$0	$0	$0	$0	$0
2084	$0	$0	$0	$0	$0	$0	$0
2085	$0	$0	$0	$0	$0	$0	$0
2086	$0	$0	$0	$0	$0	$0	$0
2087	$0	$0	$0	$0	$0	$0	$0
2088	$79,000	$119,800	$0	$0	$0	$48,100	$246,900
2089	$79,100	$119,800	$0	$0	$0	$48,100	$247,000
2090	$79,100	$119,800	$0	$0	$0	$48,100	$247,000
2091	$79,100	$119,800	$0	$0	$0	$48,100	$247,000
2092	$1,890,700	$386,600	$6,771,400	$0	$0	$2,599,500	$11,648,200
2093	$3,008,000	$551,100	$10,947,200	$0	$0	$4,172,800	$18,679,100
2094	$3,008,000	$551,100	$10,947,200	$0	$0	$4,172,800	$18,679,100
2095	$9,244,400	$751,500	$12,711,700	$0	$0	$6,111,800	$28,819,400
2096	$16,356,400	$980,100	$14,724,000	$0	$0	$8,323,100	$40,383,600
2097	$14,999,000	$945,200	$13,621,400	$0	$0	$7,623,200	$37,188,800
2098	$2,239,100	$617,800	$3,257,400	$0	$0	$1,044,000	$7,158,300
2099	$512,800	$141,500	$745,900	$0	$0	$239,100	$1,639,300
	$55,847,700	$6,112,700	$78,209,500	$0	$0	$37,064,100	$177,234,000

Rounding Allowance: $70

$177,234,070

2012 D. C. Cook
Scenario 4
SAFSTOR; Permanent On-Site Dry Storage

Common

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$1,654,800	$14,200	$0	$0	$123,000	$382,900	$2,174,900
2035	$9,298,200	$79,600	$0	$0	$691,000	$2,151,700	$12,220,500
2036	$9,298,200	$79,600	$0	$0	$691,000	$2,151,700	$12,220,500
2037	$10,566,900	$3,531,100	$0	$140,100	$784,500	$3,228,900	$18,251,500
2038	$52,553,100	$123,493,400	$0	$4,949,500	$4,510,300	$40,315,700	$225,822,000
2039	$7,703,800	$27,520,100	$0	$785,300	$4,066,200	$8,773,100	$48,848,500
2040	$7,703,800	$27,520,100	$0	$785,300	$4,066,200	$8,773,100	$48,848,500
2041	$7,703,800	$27,520,100	$0	$785,300	$4,066,200	$8,773,100	$48,848,500
2042	$7,703,800	$27,520,100	$0	$785,300	$4,066,200	$8,773,100	$48,848,500
2043	$4,444,500	$6,466,300	$0	$306,000	$2,821,000	$2,761,900	$16,799,700
2044	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2045	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2046	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2047	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2048	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2049	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2050	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2051	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2052	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2053	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2054	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2055	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2056	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2057	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2058	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2059	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2060	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2061	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2062	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2063	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2064	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2065	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2066	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2067	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2068	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2069	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2070	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2071	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2072	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2073	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2074	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2075	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2076	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2077	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2078	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2079	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2080	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2081	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2082	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2083	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2084	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2085	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2086	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2087	$3,499,700	$363,500	$0	$167,100	$2,460,000	$1,019,400	$7,509,700
2088	$5,129,400	$515,100	$0	$20,400	$586,500	$1,020,000	$7,271,400
2089	$5,130,700	$515,200	$0	$20,300	$585,000	$1,020,000	$7,271,200
2090	$5,130,700	$515,200	$0	$20,300	$585,000	$1,020,000	$7,271,200
2091	$5,130,700	$515,200	$0	$20,300	$585,000	$1,020,000	$7,271,200
2092	$23,217,700	$3,251,300	$52,700	$2,515,400	$2,032,900	$5,136,800	$36,206,800
2093	$34,371,600	$4,938,500	$85,200	$4,054,000	$2,925,800	$7,675,600	$54,050,700
2094	$34,371,600	$4,938,500	$85,200	$4,054,000	$2,925,800	$7,675,600	$54,050,700
2095	$35,358,800	$5,359,100	$1,733,400	$3,956,700	$2,863,600	$8,671,100	$57,942,700
2096	$36,484,500	$5,838,700	$3,613,000	$3,845,600	$2,792,600	$9,806,500	$62,380,900
2097	$35,995,300	$6,152,800	$4,723,700	$3,501,300	$2,630,900	$9,865,600	$62,869,600
2098	$31,397,100	$9,105,300	$15,164,600	$265,300	$1,111,000	$10,421,500	$67,464,800
2099	$9,043,300	$2,218,000	$3,472,700	$89,800	$421,700	$2,760,000	$18,005,500
	$533,379,100	$303,601,500	$28,930,500	$38,252,600	$154,171,400	$197,031,500	$1,255,366,600
						Rounding Allowance:	($4,656)
							$1,255,361,944
	$687,893,300	$331,351,300	$177,088,100	$43,677,000	$164,733,300	$280,189,300	$1,684,927,198
Annual Cost:	$2,977,676	$366,409	$0	$20,281	$585,034	$543,800	$4,493,201

2012 D. C. Cook
Scenario 5
DECON, Wet Storage, Modified Systems, 2032 Repository and Current DOE Acceptance Rate

Scenario 5 - Yearly costs:

UNIT 1

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$1,461,800	$727,800	$0	$103,700	$136,600	$437,300	$2,867,200
2035	$7,968,600	$3,967,700	$0	$565,200	$744,500	$2,383,700	$15,629,700
2036	$7,968,600	$3,967,700	$0	$565,200	$744,500	$2,383,700	$15,629,700
2037	$7,889,400	$3,902,000	$107,700	$551,700	$726,700	$2,399,700	$15,577,200
2038	$4,815,700	$1,210,300	$5,284,100	$0	$0	$3,360,200	$14,670,300
2039	$10,238,200	$1,026,500	$30,273,600	$0	$0	$13,306,000	$54,844,300
2040	$10,238,200	$1,026,500	$30,273,600	$0	$0	$13,306,000	$54,844,300
2041	$10,238,200	$1,026,500	$30,273,600	$0	$0	$13,306,000	$54,844,300
2042	$1,326,400	$133,000	$3,922,200	$0	$0	$1,723,900	$7,105,500
2043	$0	$0	$0	$0	$0	$0	$0
2044	$1,452,400	$400,800	$2,112,900	$0	$0	$676,000	$4,642,100
2045	$1,514,800	$418,000	$2,203,600	$0	$0	$705,100	$4,841,500
2046	$0	$0	$0	$0	$0	$0	$0
2047	$0	$0	$0	$0	$0	$0	$0
2048	$0	$0	$0	$0	$0	$0	$0
2049	$0	$0	$0	$0	$0	$0	$0
2050	$0	$0	$0	$0	$0	$0	$0
2051	$0	$0	$0	$0	$0	$0	$0
2052	$0	$0	$0	$0	$0	$0	$0
2053	$0	$0	$0	$0	$0	$0	$0
2054	$0	$0	$0	$0	$0	$0	$0
2055	$0	$0	$0	$0	$0	$0	$0
2056	$0	$0	$0	$0	$0	$0	$0
2057	$0	$0	$0	$0	$0	$0	$0
2058	$0	$0	$0	$0	$0	$0	$0
2059	$0	$0	$0	$0	$0	$0	$0
2060	$0	$0	$0	$0	$0	$0	$0
2061	$0	$0	$0	$0	$0	$0	$0
2062	$0	$0	$0	$0	$0	$0	$0
2063	$0	$0	$0	$0	$0	$0	$0
2064	$0	$0	$0	$0	$0	$0	$0
2065	$0	$0	$0	$0	$0	$0	$0
2066	$0	$0	$0	$0	$0	$0	$0
2067	$0	$0	$0	$0	$0	$0	$0
2068	$0	$0	$0	$0	$0	$0	$0
2069	$0	$0	$0	$0	$0	$0	$0
2070	$0	$0	$0	$0	$0	$0	$0
2071	$0	$0	$0	$0	$0	$0	$0
2072	$0	$0	$0	$0	$0	$0	$0
2073	$0	$0	$0	$0	$0	$0	$0
2074	$0	$0	$0	$0	$0	$0	$0
2075	$0	$0	$0	$0	$0	$0	$0
2076	$0	$0	$0	$0	$0	$0	$0
2077	$0	$0	$0	$0	$0	$0	$0
2078	$0	$0	$0	$0	$0	$0	$0
2079	$0	$0	$0	$0	$0	$0	$0
2080	$0	$0	$0	$0	$0	$0	$0
2081	$0	$0	$0	$0	$0	$0	$0
2082	$0	$0	$0	$0	$0	$0	$0
	$65,112,300	$17,806,800	$104,451,300	$1,785,800	$2,352,300	$53,987,600	$245,496,100

Rounding Allowance: ($101)

$245,495,999

2012 D. C. Cook
Scenario 5
DECON, Wet Storage, Modified Systems, 2032 Repository and Current DOE Acceptance Rate

UNIT 2

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$0	$0	$0	$0	$0	$0	$0
2035	$0	$0	$0	$0	$0	$0	$0
2036	$0	$0	$0	$0	$0	$0	$0
2037	$111,000	$29,000	$107,700	$0	$0	$72,900	$320,600
2038	$4,598,500	$1,196,000	$5,031,000	$0	$0	$3,220,400	$14,045,900
2039	$3,000,100	$549,700	$21,838,900	$0	$0	$8,648,100	$34,036,800
2040	$3,000,100	$549,700	$21,838,900	$0	$0	$8,648,100	$34,036,800
2041	$3,000,100	$549,700	$21,838,900	$0	$0	$8,648,100	$34,036,800
2042	$15,591,500	$982,200	$16,515,000	$0	$0	$9,484,700	$42,573,400
2043	$17,465,700	$1,046,500	$15,722,500	$0	$0	$9,609,200	$43,843,900
2044	$7,565,700	$767,100	$7,616,000	$0	$0	$4,039,400	$19,988,200
2045	$1,514,800	$418,000	$2,203,600	$0	$0	$705,100	$4,841,500
2046	$0	$0	$0	$0	$0	$0	$0
2047	$0	$0	$0	$0	$0	$0	$0
2048	$0	$0	$0	$0	$0	$0	$0
2049	$0	$0	$0	$0	$0	$0	$0
2050	$0	$0	$0	$0	$0	$0	$0
2051	$0	$0	$0	$0	$0	$0	$0
2052	$0	$0	$0	$0	$0	$0	$0
2053	$0	$0	$0	$0	$0	$0	$0
2054	$0	$0	$0	$0	$0	$0	$0
2055	$0	$0	$0	$0	$0	$0	$0
2056	$0	$0	$0	$0	$0	$0	$0
2057	$0	$0	$0	$0	$0	$0	$0
2058	$0	$0	$0	$0	$0	$0	$0
2059	$0	$0	$0	$0	$0	$0	$0
2060	$0	$0	$0	$0	$0	$0	$0
2061	$0	$0	$0	$0	$0	$0	$0
2062	$0	$0	$0	$0	$0	$0	$0
2063	$0	$0	$0	$0	$0	$0	$0
2064	$0	$0	$0	$0	$0	$0	$0
2065	$0	$0	$0	$0	$0	$0	$0
2066	$0	$0	$0	$0	$0	$0	$0
2067	$0	$0	$0	$0	$0	$0	$0
2068	$0	$0	$0	$0	$0	$0	$0
2069	$0	$0	$0	$0	$0	$0	$0
2070	$0	$0	$0	$0	$0	$0	$0
2071	$0	$0	$0	$0	$0	$0	$0
2072	$0	$0	$0	$0	$0	$0	$0
2073	$0	$0	$0	$0	$0	$0	$0
2074	$0	$0	$0	$0	$0	$0	$0
2075	$0	$0	$0	$0	$0	$0	$0
2076	$0	$0	$0	$0	$0	$0	$0
2077	$0	$0	$0	$0	$0	$0	$0
2078	$0	$0	$0	$0	$0	$0	$0
2079	$0	$0	$0	$0	$0	$0	$0
2080	$0	$0	$0	$0	$0	$0	$0
2081	$0	$0	$0	$0	$0	$0	$0
2082	$0	$0	$0	$0	$0	$0	$0
	$55,847,500	$6,087,900	$112,712,500	$0	$0	$53,076,000	$227,723,900

Rounding Allowance: ($95)

$227,723,805

2012 D. C. Cook
Scenario 5
DECON, Wet Storage, Modified Systems, 2032 Repository and Current DOE Acceptance Rate

Common

Year	Labor	Material & Equipment	Packaging Transportation & Disposal	Energy	Other	Contingency	Total
2034	$513,200	$0	$0	$0	$126,700	$96,000	$735,900
2035	$2,797,600	$0	$0	$0	$691,000	$523,300	$4,011,900
2036	$2,797,600	$0	$0	$0	$691,000	$523,300	$4,011,900
2037	$4,330,900	$220,600	$0	$86,600	$784,500	$841,600	$6,264,200
2038	$66,134,300	$9,128,400	$2,500	$3,620,100	$4,604,200	$13,692,700	$97,182,200
2039	$37,508,100	$5,508,400	$85,000	$3,327,100	$4,475,000	$8,404,200	$59,307,800
2040	$37,508,100	$5,508,400	$85,000	$3,327,100	$4,475,000	$8,404,200	$59,307,800
2041	$37,508,100	$5,508,400	$85,000	$3,327,100	$4,475,000	$8,404,200	$59,307,800
2042	$37,473,700	$5,811,700	$120,600	$3,281,200	$4,235,100	$8,792,200	$59,714,500
2043	$37,468,600	$5,856,900	$125,900	$3,274,400	$4,199,400	$8,849,900	$59,775,100
2044	$29,051,100	$5,695,500	$4,532,000	$1,593,300	$3,198,300	$7,718,700	$51,788,900
2045	$19,600,200	$4,113,300	$4,680,800	$680,300	$2,635,700	$5,483,900	$37,194,200
2046	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2047	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2048	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2049	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2050	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2051	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2052	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2053	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2054	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2055	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2056	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2057	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2058	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2059	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2060	$6,151,600	$754,400	$0	$644,400	$2,526,100	$1,315,200	$11,391,700
2061	$19,457,400	$5,023,100	$10,006,100	$586,600	$1,868,300	$7,424,400	$44,365,900
2062	$16,747,700	$4,477,700	$9,207,700	$253,800	$896,600	$6,533,100	$38,116,600
2063	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2064	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2065	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2066	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2067	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2068	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2069	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2070	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2071	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2072	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2073	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2074	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2075	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2076	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2077	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2078	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2079	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2080	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2081	$3,028,300	$366,400	$0	$5,100	$585,000	$549,900	$4,534,700
2082	$3,626,300	$334,300	$0	$3,500	$366,600	$698,400	$5,029,100
	$502,334,600	$75,464,300	$28,930,600	$33,124,000	$86,728,900	$116,566,200	$843,148,600
						Rounding Allowance:	($640)
							$843,147,960
	$623,294,400	**$99,359,000**	**$246,094,400**	**$34,909,800**	**$89,081,200**	**$223,629,800**	**$1,316,367,763**