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10 CFR 50.75(f)(1)

RS-09-114

August 27, 2009

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Subject: Submittal of LaSalle County Station Site-Specific SAFSTOR Decommissioning Cost Estimate

Reference: Letter from Keith R. Jury (Exelon Generation Company) to U.S. NRC, "Decommissioning Funding Assurance Plan," dated July 29, 2009

In the referenced letter, Exelon Generation Company, LLC (EGC) committed to provide a site-specific SAFSTOR Decommissioning Cost Estimate (DCE) for LaSalle County Station, (LCS), Units 1 and 2. The DCE is provided as Attachment 1, and, in accordance with 10 CFR 50.75(b)(1), is greater than the amount specified in 10 CFR 50.75(c) for both Unit 1 and Unit 2. The DCE has been performed assuming that LCS Units 1 and 2 are granted license extension, since it is intended to reflect the most likely decommissioning scenario for LCS. However, this determination of the minimum funding requirement does not credit the additional 20-year license renewal period.

Attachment 2 shows the radiological decommissioning (license termination) cash flow based on the DCE in Attachment 1, assuming the SAFSTOR scenario, and does not include the costs of dismantling non-radiological systems and structures or the cost of managing and storing spent fuel onsite. EGC has not made a final determination of the decommissioning approach for LCS. For the purpose of choosing a decommissioning option to demonstrate adequacy of funding to meet regulatory requirements, the SAFSTOR option has been selected. EGC may choose a different decommissioning option in the future, recognizing that the chosen option must meet NRC requirements for decommissioning funding.

The costs presented in Attachment 2 occur 20 years earlier than those in the Attachment 1 DCE to model the current license expiration date. No credit is taken for license renewal. The cash flow analysis assumes a 2% annual real rate of return on trust fund dollars until plant shutdown and on remaining trust fund dollars through the decommissioning period. The site-specific estimate is based on a period of safe storage specifically described in the Attachment 1 DCE. The Attachment 1 DCE presents the results in 2009 dollars. These results are escalated to July 31, 2009 by using the latest site-specific escalation factor, which is re-calculated on an annual basis.

For LCS Units 1 and 2, the decommissioning funding assurance is provided by the prepayment method, coupled with an external trust fund, in accordance with 10 CFR 50.75(e)(1)(i). There are no additional amounts to be collected from ratepayers for LCS, nor are there any contracts relied upon to pursuant to 10 CFR 50.75(e)(1)(v).

Attachment 3 presents the calculation of radiological decommissioning funding assurance. The Tables in Attachment 3 compare the funding assurance, calculated using the NRC generic formula, as recently published by the NRC, to the funding assurance calculated using the site-specific DCE methodology, as allowed by 10 CFR 50.75(e)(1)(i). Based on the site-specific methodology, and July 31, 2009 trust fund values, LCS, Units 1 and 2 meet all NRC radiological decommissioning funding assurance requirements.

There are no new regulatory commitments contained in this letter.

If you have any questions about this letter, please contact Patrick Simpson at (630) 657-2823.

Respectfully,

Patrick R. Simpson
Manager – Licensing
Exelon Generation Company, LLC

Attachments:
1. LaSalle County Station, Units 1 and 2, Decommissioning Cost Estimate
2. LaSalle County Station, Units 1 and 2, Radiological Decommissioning Projected SAFSTOR Cash Flow
3. LaSalle County Station, Units 1 and 2, NRC Funding Assurance Calculations

ATTACHMENT 1

LaSalle County Station, Units 1 and 2
Decommissioning Cost Estimate

Document E16-1555-012, Rev. 0

DECOMMISSIONING COST ANALYSIS

for the

LaSALLE COUNTY STATION

UNITS 1 AND 2

prepared for

Exelon Generation Company LLC

prepared by

TLG Services, Inc.
Bridgewater, Connecticut

June 2009

APPROVALS

Project Manager	William A. Cloutier, Jr.	06-05-2009 Date
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No.	CRA No.	Date	Item Revised	Reason for Revision
0		06-08-2009		Original Issue

EXECUTIVE SUMMARY

This report presents estimates of the cost to decommission the LaSalle County Station (LaSalle County) for the identified decommissioning scenarios following a scheduled cessation of plant operations. The analysis relies upon site-specific, technical information, developed in an evaluation in 2004,[1] and updated to reflect current assumptions pertaining to the disposition of the nuclear units and relevant industry experience in undertaking such projects. The updated estimates are designed to provide Exelon Generation Company LLC (Exelon) with sufficient information to assess its financial obligations, as they pertains to the eventual decommissioning of the nuclear station.

The primary goal of the decommissioning is the removal and disposal of the contaminated systems and structures so that the plant's operating licenses can be terminated. The analysis recognizes that spent fuel will be stored at the site in plant's storage pools and/or in an independent spent fuel storage installation (ISFSI) until such time that it can be transferred to a Department of Energy (DOE) facility. Consequently, the estimates also include those costs to manage and subsequently decommission the fuel storage facilities.

The estimates are based on numerous fundamental assumptions, including regulatory requirements, project contingencies, low-level radioactive waste disposal practices, high-level radioactive waste management options, and site restoration requirements. The estimates incorporate a minimum cooling period of approximately five and one-half years for the spent fuel in the storage pools at the cessation of operations. In the DECON and SAFSTOR scenarios, any residual fuel remaining in the pools after the cooling period is relocated to the ISFSI to await transfer to a DOE facility (the fuel is assumed to remain in the storage pools for the Delayed DECON scenario and transferred directly from the pools to DOE). The estimates also include the dismantling of non-essential structures and limited restoration of the site.

Alternatives and Regulations

The Nuclear Regulatory Commission (NRC or Commission) provided initial decommissioning requirements in its rule adopted on June 27, 1988.[2] In this rule,

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1 "Decommissioning Cost Analysis for the LaSalle County Station," Document No. E16-1455-011, Rev. 0, TLG Services, Inc., January 2005

2 U.S. Code of Federal Regulations, Title 10, Parts 30, 40, 50, 51, 70 and 72 "General Requirements for Decommissioning Nuclear Facilities," Nuclear Regulatory Commission, Federal Register Volume 53, Number 123 (p 24018 et seq.), June 27, 1988

the NRC set forth financial criteria for decommissioning licensed nuclear power facilities. The regulations addressed planning needs, timing, funding methods, and environmental review requirements for decommissioning. The rule also defined three decommissioning alternatives as being acceptable to the NRC: DECON, SAFSTOR, and ENTOMB.

> DECON is defined as "the alternative in which the equipment, structures, and portions of a facility and site containing radioactive contaminants are removed or decontaminated to a level that permits the property to be released for unrestricted use shortly after cessation of operations."[3]
>
> SAFSTOR is defined as "the alternative in which the nuclear facility is placed and maintained in a condition that allows the nuclear facility to be safely stored and subsequently decontaminated (deferred decontamination) to levels that permit release for unrestricted use."[4] Decommissioning is to be completed within 60 years, although longer time periods will be considered when necessary to protect public health and safety.
>
> ENTOMB is defined as "the alternative in which radioactive contaminants are encased in a structurally long-lived material, such as concrete; the entombed structure is appropriately maintained and continued surveillance is carried out until the radioactive material decays to a level permitting unrestricted release of the property."[5] As with the SAFSTOR alternative, decommissioning is currently required to be completed within 60 years.
>
> The 60-year restriction has limited the practicality for the ENTOMB alternative at commercial reactors that generate significant amounts of long-lived radioactive material. In 1997, the Commission directed its staff to re-evaluate this alternative and identify the technical requirements and regulatory actions that would be necessary for entombment to become a viable option. The resulting evaluation provided several recommendations, however, rulemaking has been deferred based upon several factors (e.g., no licensee has committed to pursuing the entombment option, the unresolved issues associated with the disposition of greater-than-Class C material (GTCC), and the NRC's current priorities) at least until after the additional research studies are complete. The Commission concurred with the staff's recommendation.

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3 Ibid. Page FR24022, Column 3
4 Ibid.
5 Ibid. Page FR24023, Column 2

In 1996, the NRC amended its decommissioning regulations to clarify ambiguities and codify procedures and terminology as a means of enhancing efficiency and uniformity in the decommissioning process.[6] The amendments allow for greater public participation and better define the transition process from operations to decommissioning. Regulatory Guide 1.184, issued in July 2000, further described the methods and procedures acceptable to the NRC staff for implementing the requirements of the 1996 amendments relating to the initial activities and major phases of the decommissioning process. The costs and schedules presented in this analysis follow the general guidance and processes described in the amended regulations. The format and content of the estimates is also consistent with the recommendations of Regulatory Guide 1.202, issued in February 2005.[7]

Decommissioning Scenarios

The following scenarios were evaluated and are representative of the alternatives available to the owner. The scenarios assume that the units operate for 60 years, followed by a planned and scheduled shutdown.

1. DECON: The first scenario assumes that the two units are promptly decommissioned as an integrated activity. Spent fuel that is not transferred directly to the DOE from the storage pools is relocated to the ISFSI so as to facilitate decontamination and dismantling activities within the reactor buildings. Spent fuel storage operations continue at the site, independent of decommissioning operations, until the transfer of the fuel to the DOE is complete, assumed for purposes of this study to be in the year 2055. At that time, the ISFSI is decommissioned and the site released for alternative use.

2. Delayed DECON: In the second scenario, the units are prepared for an abbreviated period of safe-storage. The spent fuel resident in the reactor building's storage pools, remains in the pools until it can be transferred to the DOE (i.e., the ISFSI is not used to off-load the pools following the cessation of operations). Spent fuel placed at the ISFSI during operations remains in storage until the pools are emptied at which time the ISFSI is also emptied. Decommissioning is scheduled to commence once the transfer of the fuel to the DOE is complete (i.e., in the year 2055).

3. SAFSTOR: The units are also placed into safe-storage in the third scenario. However, decommissioning is deferred beyond the fuel storage period to the

6 U.S. Code of Federal Regulations, Title 10, Parts 2, 50, and 51, "Decommissioning of Nuclear Power Reactors," NRC, Federal Register Volume 61, (p 39278 et seq.), July 29, 1996

7 "Standard Format and Content of Decommissioning Cost Estimates for Nuclear Power Reactors," Regulatory Guide 1.202, U.S. Nuclear Regulatory Commission, February 2005

maximum extent permitted by the current regulations. Similar to the DECON alternative, the spent fuel that cannot be transferred directly to the DOE in the first five and one-half years is relocated to the ISFSI for interim storage. The units remain in protective storage following the removal of spent fuel from the site. Decommissioning operations commence such that license termination is completed within the required 60-year period. As with the first two scenarios, decommissioning activities at the two units are sequenced and integrated so as to minimize the total duration of the physical dismantling process.

Methodology

The methodology used to develop the estimates described within this document follows the basic approach originally presented in the cost estimating guidelines [8] developed by the Atomic Industrial Forum (now Nuclear Energy Institute). This reference describes a unit factor method for determining decommissioning activity costs. The unit factors used in this analysis incorporate site-specific costs and the latest available information on worker productivity in decommissioning.

An activity duration critical path is used to determine the total decommissioning program schedule. The schedule is relied upon in calculating the carrying costs, which include program management, administration, field engineering, equipment rental, and support services such as quality control and security. This systematic approach for assembling decommissioning estimates ensures a high degree of confidence in the reliability of the resulting cost estimate.

Contingency

Consistent with standard cost estimating practice, contingencies are applied to the decontamination and dismantling costs as "specific provision for unforeseeable elements of cost within the defined project scope, particularly important where previous experience relating estimates and actual costs has shown that unforeseeable events which will increase costs are likely to occur."[9] The cost elements in the estimates are based on ideal conditions; therefore, the types of unforeseeable events that are almost certain to occur in decommissioning, based on industry experience, are addressed through a percentage contingency applied on a line-item basis. This contingency factor is a nearly universal element in all large-scale construction and demolition projects. It should be noted that contingency, as

8 T.S. LaGuardia et al., "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates," AIF/NESP-036, May 1986

9 Project and Cost Engineers' Handbook, Second Edition, American Association of Cost Engineers, Marcel Dekker, Inc., New York, New York, p. 239

used in this analysis, does not account for price escalation and inflation in the cost of decommissioning over the remaining operating life of the station.

The use and role of contingency within decommissioning estimates is not a safety factor issue. Safety factors provide additional security and address situations that may never occur. Contingency funds, by contrast, are expected to be fully expended throughout the program. Inclusion of contingency is necessary to provide assurance that sufficient funding will be available to accomplish the intended tasks.

Low-Level Radioactive Waste Disposal

The contaminated and activated material generated in the decontamination and dismantling of a commercial nuclear reactor is classified as low-level (radioactive) waste, although not all of the material is suitable for "shallow-land" disposal. With the passage of the "Low-Level Radioactive Waste Policy Act" in 1980,[10] and its Amendments of 1985,[11] the states became ultimately responsible for the disposition of low-level radioactive waste generated within their own borders.

Until recently, there were two facilities available to Exelon for the disposal of low-level radioactive waste generated by LaSalle County. As of July 1, 2008, however, the facility in Barnwell, South Carolina was closed to generators outside the Atlantic Compact (comprised of the states of Connecticut, New Jersey and South Carolina). This leaves the facility in Clive, Utah, operated by EnergySolutions, as the only available destination for low-level radioactive waste requiring controlled disposal.

EnergySolutions does not have a license to dispose of the more highly radioactive waste (Class B and C as defined by 10 CFR §61) generated in the decontamination and dismantling of the reactor vessel. In the interim (at least until new waste disposal options become available) and for purposes of this analysis, waste disposal costs for this material are based upon Exelon's previously negotiated cost of disposal at the Barnwell site.

Material exceeding Class C limits (limited to material closest to the reactor core and comprising a small percentage of the total waste volume) is generally not suitable for shallow-land disposal. This material is packaged in the same multipurpose canisters used for spent fuel storage/transport and designated for geologic disposal.

10 "Low-Level Radioactive Waste Policy Act of 1980," Public Law 96-573, 1980
11 "Low-Level Radioactive Waste Policy Amendments Act of 1985," Public Law 99-240, 1986

A significant portion of the metallic waste generated during decommissioning may only be potentially contaminated by radioactive materials. This waste can be surveyed on site or shipped off site to licensed facilities for further analysis, for processing and/or for conditioning/recovery. Reduction in the volume of low-level radioactive waste requiring disposal in a licensed low-level radioactive waste disposal facility can be accomplished through a variety of methods, including analyses and surveys or decontamination to eliminate the portion of waste that does not require disposal as radioactive waste, compaction, incineration or metal melt. The estimates reflect the savings from waste recovery/volume reduction.

High-Level Radioactive Waste Management

Congress passed the "Nuclear Waste Policy Act" [12] (NWPA) in 1982, assigning the responsibility for disposal of the spent nuclear fuel created by the commercial nuclear generating plants to the DOE. Two permanent disposal facilities were envisioned, as well as an interim storage facility. To recover the cost, the legislation created a Nuclear Waste Fund through which money is collected from the sale of electricity generated by the power plants. The NWPA, along with the individual disposal contracts with the utilities, specified that the DOE was to begin accepting spent fuel by January 31, 1998.

Since the original legislation, the DOE has announced several delays in the program schedule. By January 1998, the DOE had failed to initiate the disposal of spent nuclear fuel and high level waste, as required by the NWPA and the utility contracts. As a result, utilities initiated legal action against the DOE. While legal actions continue, the DOE has no plans to receive spent fuel prior to completing the construction of its geologic repository.

Operation of DOE's yet-to-be constructed repository is contingent upon the review and approval of the facility's license application by the NRC and the successful resolution of pending litigation. The DOE submitted its license application to the NRC on June 3, 2008, seeking authorization to construct the repository at Yucca Mountain, Nevada. The NRC formally docketed the DOE's license application on September 8, 2008, triggering a three-year deadline, with a possible one-year extension, set by Congress for the NRC to decide on whether to authorize construction.

12 "Nuclear Waste Policy Act of 1982 and Amendments," U.S. Department of Energy's Office of Civilian Radioactive Management, 1982

Construction, if adequately funded, could take five to six years after the DOE receives authorization to proceed. For purposes of this analysis, Exelon has assumed that DOE would begin to receive commercial spent fuel in 2018.

Once the repository is operational, fuel acceptance will be prioritized and spent fuel assemblies will need to meet certain acceptance criteria, including heat output. These conditions require that the fuel discharged upon the cessation of operations be actively cooled and stored for a minimum period at the generating site prior to transfer (a minimum of five years as defined in 10CFR§961 for standard fuel). As such, the NRC requires that licensees establish a program to manage and provide funding for the management of all irradiated fuel at the reactor until title of the fuel is transferred to the Secretary of Energy, pursuant to 10CFR§50.54(bb).[13] This funding requirement is fulfilled through inclusion of certain cost elements in the decommissioning estimates, for example, associated with the isolation and continued operation of the plant's fuel storage pools and/or ISFSI.

At shutdown, the plant's storage pools are expected to contain freshly discharged assemblies (from the most recent refueling cycles) as well as the final reactor core. In the DECON and SAFSTOR scenarios the assemblies are packaged into multipurpose canisters for transfer to an existing ISFSI. A five and one-half year cooling period following the cessation of operations is provided for the final core to meet the conditions for dry storage.

Once the storage pools are emptied, the reactor buildings can be either decontaminated and dismantled or prepared for long-term storage. The ISFSI, which can be operated under the station's general license, will be expanded to accommodate the dry storage casks needed to off-load the wet storage pools. In the Delayed DECON scenario, the storage pools remain operational and used for the interim storage of the fuel. No additional dry storage capacity is assumed to be constructed for decommissioning. The transfer of spent fuel to DOE is performed first from the storage pools and is completed from the ISFSI.

The DOE's generator allocation/receipt schedules are based upon the oldest fuel receiving the highest priority. With a large fleet of reactors, Exelon is able to re-assign allocations between its units to minimize on-site storage costs. Assuming spent fuel from the older units is given priority and with a maximum rate of transfer of 3,000 metric tons of uranium (MTU)/year), the assemblies residing in the LaSalle County storage pools at the time of shutdown would be scheduled for pickup in the years 2049 through 2055 (assuming the cessation of plant operations

13 U.S. Code of Federal Regulations, Title 10, Part 50, "Domestic Licensing of Production and Utilization Facilities," Subpart 54 (bb), "Conditions of Licenses"

in 2042 and 2043 for Units 1 and 2, respectively). This equates to 164 multi-purpose canisters (at 68 assemblies per canister).

Exelon's strongly held position is that the DOE has a contractual obligation to accept LaSalle County's fuel in a timely manner and consistent with its contract commitments. No assumption made in this study should be interpreted to be inconsistent with this claim. However, at this time, including the cost of storing spent fuel in this study is the most reasonable approach because it insures the availability of sufficient decommissioning funds at the end of the station's life if, contrary to its contractual obligation, the DOE has not performed.

Site Restoration

The efficient removal of the contaminated materials at the site will result in damage to many of the site structures. Blasting, coring, drilling, and the other decontamination activities will substantially damage power block structures, potentially weakening the footings and structural supports. Prompt demolition once the license is terminated is clearly the most appropriate and cost-effective option. It is unreasonable to anticipate that these structures would be repaired and preserved after the radiological contamination is removed. The cost to dismantle site structures with a work force already mobilized is more efficient and less costly than if the process were deferred. Experience at shutdown generating stations has shown that plant facilities quickly degrade without maintenance, adding additional expense and creating potential hazards to the public and the demolition work force. Consequently, this analysis assumes that non-essential site structures within the restricted access area are removed to a nominal depth of three feet below the local grade level wherever possible. The site is then graded and stabilized.

Summary

The costs to decommission LaSalle County were evaluated for several decommissioning scenarios, incorporating the attributes of both the DECON and SAFSTOR decommissioning alternatives. Regardless of the timing of the decommissioning activities, the estimates assume the eventual removal of all the contaminated and activated plant components and structural materials, such that the facility operator may then have unrestricted use of the site with no further requirement for an operating license. Delayed decommissioning is initiated after the spent fuel has been removed from the site and is accomplished within the 60-year period required by current NRC regulations. In the interim, the spent fuel remains in storage at the site until such time that the transfer to a DOE facility can be completed. Once the transfer is complete, the storage facilities are also decommissioned.

The scenarios analyzed for the purpose of generating the estimates are described in Section 2. The assumptions are presented in Section 3, along with schedules of annual expenditures. The major cost contributors are identified in Section 6, with detailed activity costs, waste volumes, and associated manpower requirements delineated in Appendices C, D, and E. Cost summaries for the various scenarios are provided at the end of this section for the major cost components.

SUMMARY OF DECOMMISSIONING COST ELEMENTS
DECON
(thousands of 2009 dollars)

Cost Element	Unit 1	Unit 2	Total
Decontamination	19,620	23,201	42,821
Removal	119,520	144,680	264,200
Packaging	20,310	20,599	40,909
Transportation	12,225	13,067	25,293
Waste Disposal	79,110	81,244	160,354
Off-site Waste Processing	12,637	13,822	26,459
Program Management [1]	273,542	294,665	568,207
Spent Fuel Pool Isolation	11,143	7,429	18,572
Spent Fuel Management [2]	86,859	92,345	179,204
Insurance and Regulatory Fees	12,117	9,442	21,558
Energy	9,375	9,368	18,743
Characterization and Licensing Surveys	22,864	20,006	42,870
Property Taxes	13,808	12,893	26,701
Miscellaneous Equipment	6,449	6,443	12,892
Site O&M	1,501	1,261	2,762
Total [3]	701,080	750,464	1,451,544

Cost Element			
NRC License Termination	546,754	573,472	1,120,226
Spent Fuel Management	106,181	112,415	218,596
Site Restoration	48,145	64,578	112,723
Total [3]	701,080	750,464	1,451,544

[1] Includes security and engineering costs
[2] Excludes program management costs (staffing) but includes costs for spent fuel loading/transfer/spent fuel pool O&M and EP fees
[3] Columns may not add due to rounding

SUMMARY OF DECOMMISSIONING COST ELEMENTS
DELAYED DECON
(thousands of 2009 dollars)

Cost Element	Unit 1	Unit 2	Total
Decontamination	21,930	26,550	48,480
Removal	113,775	138,744	252,519
Packaging	15,783	15,997	31,780
Transportation	8,035	8,586	16,621
Waste Disposal	43,290	44,773	88,063
Off-site Waste Processing	14,976	16,142	31,118
Program Management [1]	293,233	332,458	625,690
Spent Fuel Pool Isolation	11,143	7,429	18,572
Spent Fuel Management [2]	31,681	32,108	63,789
Insurance and Regulatory Fees	16,309	14,004	30,313
Energy	13,196	13,252	26,448
Characterization and Licensing Surveys	24,334	21,476	45,810
Property Taxes	21,418	20,917	42,334
Miscellaneous Equipment	9,564	10,897	20,461
Site O&M	3,125	2,886	6,011
Total [3]	641,791	706,219	1,348,009

Cost Element			
NRC License Termination	495,902	515,918	1,011,820
Spent Fuel Management	96,292	124,292	220,584
Site Restoration	49,597	66,009	115,606
Total [3]	641,791	706,219	1,348,009

[1] Includes security and engineering costs
[2] Excludes program management costs (staffing) but includes costs for spent fuel loading/transfer/spent fuel pool O&M and EP fees
[3] Columns may not add due to rounding

SUMMARY OF DECOMMISSIONING COST ELEMENTS
SAFSTOR
(thousands of 2009 dollars)

Cost Element	Unit 1	Unit 2	Total
Decontamination	21,505	26,114	47,619
Removal	115,369	140,127	255,496
Packaging	14,538	14,748	29,285
Transportation	6,791	7,325	14,116
Waste Disposal	35,042	36,511	71,553
Off-site Waste Processing	15,058	16,224	31,282
Program Management [1]	379,941	353,240	733,181
Spent Fuel Pool Isolation	11,143	7,429	18,572
Spent Fuel Management [2]	85,776	91,261	177,037
Insurance and Regulatory Fees	41,049	38,140	79,189
Energy	18,589	18,491	37,080
Characterization and Licensing Surveys	24,334	21,476	45,810
Property Taxes	40,094	39,179	79,273
Miscellaneous Equipment	17,443	24,170	41,613
Site O&M	8,911	8,672	17,584
Total [3]	835,583	843,106	1,678,689

Cost Element			
NRC License Termination	665,300	652,162	1,317,462
Spent Fuel Management	120,674	124,923	245,597
Site Restoration	49,609	66,021	115,630
Total [3]	835,583	843,106	1,678,689

[1] Includes security and engineering costs
[2] Excludes program management costs (staffing) but includes costs for spent fuel loading/transfer/spent fuel pool O&M and EP fees
[3] Columns may not add due to rounding

1. INTRODUCTION

This report presents estimates of the cost to decommission the LaSalle County Station (LaSalle County), for the scenarios described in Section 2, following a scheduled cessation of plant operations. The analysis relies upon site-specific, technical information from an earlier evaluation prepared in 2004,[1] updated to reflect current assumptions pertaining to the disposition of the nuclear units and relevant industry experience in undertaking such projects. The current estimates are designed to provide Exelon Generation Company LLC (Exelon), with sufficient information to assess their financial obligations, as they pertain to the eventual decommissioning of the nuclear units. It is not a detailed engineering document, but a financial analysis prepared in advance of the detailed engineering that will be required to carry out the decommissioning

1.1 OBJECTIVES OF STUDY

The objectives of this study are to prepare comprehensive estimates of the cost to decommission LaSalle County, to provide a sequence or schedule for the associated activities, and to develop waste stream projections from the decontamination and dismantling activities. Operating licenses were issued on April 17, 1982 for Unit 1 and on December 16, 1983 for Unit 2. A sixty year operating lifetime has been assumed for the purpose of this study. As such, the cessation of operations would then be April 17, 2042 and December 16, 2043, for Units 1 and 2, respectively. These dates were used to schedule the decommissioning activities.

1.2 SITE DESCRIPTION

LaSalle County is located approximately 55 miles southwest of Chicago, Illinois, and 20 miles west of the Dresden Nuclear Power Station. The station is comprised of two essentially identical boiling water reactors with supporting facilities.

The primary coolant system consists of a boiling water reactor system designed by General Electric. The reactor recirculation system is comprised of the reactor vessel and two recirculation pump loops external to the reactor vessel which provide the driving flow of water to the reactor vessel jet pumps. Each external loop contains one high-capacity, motor driven recirculation pump and three motor-operated gate valves for pump maintenance. The recirculation loops are part of the reactor coolant pressure boundary and are located inside the containment structure. The design reactor thermal power level is 3489

Megawatts thermal (MWth). The corresponding electrical output is approximately 1,154 Megawatts electric (MWe).

The containment system at LaSalle County is comprised of a primary containment and a secondary containment. Primary containment is a Mark II type containment, comprised of a steel dome head and post-tensioned concrete wall standing on a base mat of reinforced concrete. The inner surface of containment is lined with steel plate which acts as a leaktight membrane. The suppression system is of the over-and-under configuration. The drywell, in the form of a frustum of a cone, is located directly above the suppression chamber. The suppression pool chamber is cylindrical and separated from the drywell by a reinforced concrete slab. The drywell is topped by an elliptical steel dome called the drywell head. The drywell atmosphere is vented into the suppression chamber through a series of downcomer pipes penetrating and supported by the drywell floor.

Heat produced in the reactor is converted to electrical energy by the power conversion system. A turbine-generator system converts the thermal energy of steam produced in the reactor into mechanical shaft power and then into electrical energy. The main turbine consists of one double-flow, high-pressure turbine and three double-flow, low-pressure turbines. The generator is driven at 1800 rpm and rated at 1300 MVA. The exhaust steam from the turbine is condensed and deaerated in the main condenser. The heat rejected to the main condenser is removed by the circulating water system.

The circulating water system provides the heat sink required for removal of waste heat in the power plant's thermal cycle. The system has the principal function of removing heat by absorbing this energy in the main condenser. Water is withdrawn from the cooling lake via the intake pipes by the circulating water pumps. After passing through the plant condensers, the discharge is routed back to the cooling lake.

1.3 REGULATORY GUIDANCE

The Nuclear Regulatory Commission (NRC or Commission) provided initial decommissioning requirements in its rule "General Requirements for Decommissioning Nuclear Facilities," issued in June 1988.[2]* This rule set forth financial criteria for decommissioning licensed nuclear power facilities. The regulation addressed decommissioning planning needs, timing, funding methods, and environmental review requirements. The intent of the rule was

* Annotated references for citations in Sections 1-6 are provided in Section 7.

to ensure that decommissioning would be accomplished in a safe and timely manner and that adequate funds would be available for this purpose. Subsequent to the rule, the NRC issued Regulatory Guide 1.159, "Assuring the Availability of Funds for Decommissioning Nuclear Reactors,[3]" which provided additional guidance to the licensees of nuclear facilities on the financial methods acceptable to the NRC staff for complying with the requirements of the rule. The regulatory guide addressed the funding requirements and provided guidance on the content and form of the financial assurance mechanisms indicated in the rule.

The rule defined three decommissioning alternatives as being acceptable to the NRC: DECON, SAFSTOR, and ENTOMB. The DECON alternative assumes that any contaminated or activated portion of the plant's systems, structures, and facilities are removed or decontaminated to levels that permit the site to be released for unrestricted use shortly after the cessation of plant operations. The rule also placed limits on the time allowed to complete the decommissioning process. For SAFSTOR, the process is restricted in overall duration to 60 years, unless it can be shown that a longer duration is necessary to protect public health and safety. The guidelines for ENTOMB are similar, providing the NRC with both sufficient leverage and flexibility to ensure that these deferred options are only used in situations where it is reasonable and consistent with the definition of decommissioning. At the conclusion of a 60-year dormancy period (or longer for ENTOMB if the NRC approves such a case), the site would still require significant remediation to meet the unrestricted release limits for license termination.

The ENTOMB alternative has not been viewed as a viable option for power reactors due to the significant time required to isolate the long-lived radionuclides for decay to permissible levels. However, with recent rulemaking permitting the controlled release of a site, the NRC has re-evaluated this alternative.[4] The resulting feasibility study, based upon an assessment by Pacific Northwest National Laboratory, concluded that the method did have conditional merit for some, if not most, reactors. However, the staff also found that additional rulemaking would be needed before this option could be treated as a generic alternative. The NRC had considered rulemaking to alter the 60-year time for completing decommissioning and to clarify the use of engineered barriers for reactor entombments.[5] However, the NRC's staff has recommended that rulemaking be deferred, based upon several factors, e.g., no licensee has committed to pursuing the entombment option, the unresolved issues associated with the disposition of greater-than-Class C material (GTCC), and the NRC's current priorities, at least until after the additional

research studies are complete. The Commission concurred with the staff's recommendation.

The NRC published amendments to its decommissioning regulations in 1996.[6] When the regulations were originally adopted in 1988, it was assumed that the majority of licensees would decommission at the end of the facility's operating licensed life. Since that time, several licensees permanently and prematurely ceased operations. Exemptions from certain operating requirements were required once the reactor was defueled to facilitate the decommissioning. Each case was handled individually, without clearly defined generic requirements. The NRC amended the decommissioning regulations in 1996 to clarify ambiguities and codify procedures and terminology as a means of enhancing efficiency and uniformity in the decommissioning process. The new amendments allow for greater public participation and better define the transition process from operations to decommissioning.

Under the revised regulations, licensees will submit written certification to the NRC within 30 days after the decision to cease operations. Certification will also be required once the fuel is permanently removed from the reactor vessel. Submittal of these notices will entitle the licensee to a fee reduction and eliminate the obligation to follow certain requirements needed only during operation of the reactor. Within two years of submitting notice of permanent cessation of operations, the licensee is required to submit a Post-Shutdown Decommissioning Activities Report (PSDAR) to the NRC. The PSDAR describes the planned decommissioning activities, the associated sequence and schedule, and an estimate of expected costs. Prior to completing decommissioning, the licensee is required to submit applications to the NRC to terminate the license, which will include a License Termination Plan (LTP).

1.3.1 Nuclear Waste Policy Act

Congress passed the "Nuclear Waste Policy Act"[7] (NWPA) in 1982, assigning the responsibility for disposal of the spent nuclear fuel created by the commercial nuclear generating plants to the DOE. Two permanent disposal facilities were envisioned, as well as an interim storage facility. To recover the cost, the legislation created a Nuclear Waste Fund through which money is collected from the sale of electricity generated by the power plants. NWPA, along with the individual disposal contracts with the utilities, specified that the DOE was to begin accepting spent fuel by January 31, 1998.

Since the original legislation, the DOE has announced several delays in the program schedule. By January 1998, the DOE had failed to initiate the disposal of spent nuclear fuel and high level waste, as required by the NWPA and utility contracts. Delays continue and, as a result, generators have initiated legal action against the DOE in an attempt to resolve the impasse.[8]

Operation of DOE's yet-to-be constructed repository is contingent upon the review and approval of the facility's license application by the NRC and the successful resolution of pending litigation. The DOE submitted its license application to the NRC on June 3, 2008, seeking authorization to construct the repository at Yucca Mountain, Nevada. The NRC formally docketed the DOE's license application on September 8, 2008, triggering a three-year deadline, with a possible one-year extension, set by Congress for the NRC to decide on whether to authorize construction.

Construction, if adequately funded, could take five to six years after the DOE receives authorization to proceed. For purposes of this analysis, Exelon has assumed that DOE would begin to receive commercial spent fuel in 2018.

Once the repository is operational, fuel acceptance will be prioritized and spent fuel assemblies will need to meet certain acceptance criteria, including heat output. These conditions require that the fuel discharged upon the cessation of operations be actively cooled and stored for a minimum period at the generating site prior to transfer (five years as defined in 10CFR§961 for standard fuel). As such, the NRC requires that licensees establish a program to manage and provide funding for the management of all irradiated fuel at the reactor until title of the fuel is transferred to the Secretary of Energy, pursuant to 10CFR§50.54(bb).[9] This funding requirement is fulfilled through inclusion of certain cost elements in the decommissioning estimate, for example, associated with the isolation and continued operation of the spent fuel pools and ISFSI.

At shutdown, the fuel storage pools are expected to contain freshly discharged assemblies (from the most recent refueling cycles) as well as the final reactor core. Over the next five and one-half years the assemblies are packaged into multipurpose canisters for transfer to the repository or to the ISFSI. It is assumed that this period provides the necessary cooling for the final core to meet on site storage or DOE's transport system requirements for decay heat.

An independent spent fuel storage installation (ISFSI) is being constructed to support plant operations. It is expected that this facility will also be available to support decommissioning operations. In two of the scenarios evaluated, the ISFSI is expanded to accommodate the inventory of spent fuel residing in the plant's storage pools at the conclusion of the required cooling period. Once emptied, the reactor buildings can be either decontaminated and dismantled or prepared for long-term storage. In the Delayed DECON scenario, the storage pools remain operational and are used for the interim storage of the fuel, concurrent with the ISFSI operations.

The DOE's generator allocation/receipt schedules are based upon the oldest fuel receiving the highest priority. For purposes of this analysis, the acceptance of commercial spent fuel by the DOE is expected to begin in 2018. Given this scenario and an anticipated rate of transfer, spent fuel is projected to remain at the LaSalle County site for approximately 12 years after the cessation of operations at Unit 2. Consequently, costs are included within the analysis for the continued operation of the storage pools and the expansion of the ISFSI, as required, and for the long-term caretaking of the spent fuel at the site until the year 2055.

Exelon's strongly held position is that the DOE has a contractual obligation to accept LaSalle County's fuel in a timely manner and consistent with its contract commitments. No assumption made in this study should be interpreted to be inconsistent with this claim. However, at this time, including the cost of storing spent fuel in this study is the most reasonable approach because it insures the availability of sufficient decommissioning funds at the end of the station's life if, contrary to its contractual obligation, the DOE has not performed.

1.3.2 Low-Level Radioactive Waste Acts

The contaminated and activated material generated in the decontamination and dismantling of a commercial nuclear reactor is classified as low-level (radioactive) waste, although not all of the material is suitable for "shallow-land" disposal. Congress passed the "Low-Level Radioactive Waste Policy Act" in 1980,[10] declaring the states as being ultimately responsible for the disposition of low-level radioactive waste generated within their own borders. The federal law encouraged the formation of regional groups or compacts to implement this objective safely, efficiently, and economically, and set a target date of 1986 for implementation. After little progress, the "Low-Level

Radioactive Waste Policy Amendments Act of 1985,"[11] extended the implementation schedule, with specific milestones and stiff sanctions for non-compliance. However, to date, no new compact facilities have been successfully sited, licensed, and constructed.

Until recently, there were two facilities available to Exelon for the disposal of low-level radioactive waste generated by LaSalle County. As of July 1, 2008, however, the facility in Barnwell, South Carolina was closed to generators outside the Atlantic Compact (comprised of the states of Connecticut, New Jersey and South Carolina). This leaves the facility in Clive, Utah, operated by EnergySolutions, as the only available destination for low-level radioactive waste requiring controlled disposal.

EnergySolutions does not have a license to dispose of the more highly radioactive waste (Class B and C as defined by 10 CFR §61) generated in the dismantling of the reactor vessel. In the interim (at least until new waste disposal options become available) and for purposes of this analysis, waste disposal costs for this material are based upon Exelon's previously negotiated cost of disposal at the Barnwell site.

Material exceeding Class C limits (limited to material closest to the reactor core and comprising a small percentage of the total waste volume) is generally not suitable for shallow-land disposal. This material is packaged in the same multipurpose canisters used for spent fuel storage/transport and designated for geologic disposal.

A significant portion of the metallic waste generated during decommissioning may only be potentially contaminated by radioactive materials. This waste can be surveyed on site or shipped off site to licensed facilities for further analysis, for processing and/or for conditioning/recovery. Reduction in the volume of low-level radioactive waste requiring disposal in a licensed low-level radioactive waste disposal facility can be accomplished through a variety of methods, including analyses and surveys or decontamination to eliminate the portion of waste that does not require disposal as radioactive waste, compaction, incineration or metal melt. The estimates reflect the savings from waste recovery/volume reduction.

1.3.3 Radiological Criteria for License Termination

In 1997, the NRC published Subpart E, "Radiological Criteria for License Termination,"[12] amending 10 CFR §20. This subpart provides radiological criteria for releasing a facility for unrestricted use. The regulation states that the site can be released for unrestricted use if radioactivity levels are such that the average member of a critical group would not receive a Total Effective Dose Equivalent (TEDE) in excess of 25 millirem per year, and provided that residual radioactivity has been reduced to levels that are As Low As Reasonably Achievable (ALARA). The decommissioning estimates for LaSalle County assume that the site will be remediated to a residual level consistent with the NRC-prescribed level.

It should be noted that the NRC and the Environmental Protection Agency (EPA) differ on the amount of residual radioactivity considered acceptable in site remediation. The EPA has two limits that apply to radioactive materials. An EPA limit of 15 millirem per year is derived from criteria established by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund).[13] An additional limit of 4 millirem per year, as defined in 40 CFR §141.16, is applied to drinking water.[14]

On October 9, 2002, the NRC signed an agreement with the EPA on the radiological decommissioning and decontamination of NRC-licensed sites. The Memorandum of Understanding (MOU)[15] provides that EPA will defer exercise of authority under CERCLA for the majority of facilities decommissioned under NRC authority. The MOU also includes provisions for NRC and EPA consultation for certain sites when, at the time of license termination, (1) groundwater contamination exceeds EPA-permitted levels; (2) NRC contemplates restricted release of the site; and/or (3) residual radioactive soil concentrations exceed levels defined in the MOU.

The MOU does not impose any new requirements on NRC licensees and should reduce the involvement of the EPA with NRC licensees who are decommissioning. Most sites are expected to meet the NRC criteria for unrestricted use, and the NRC believes that only a few sites will have groundwater or soil contamination in excess of the levels specified in the MOU that trigger consultation with the EPA. However, if there are other hazardous materials on the site, the EPA may be involved in the cleanup. As such, the possibility of dual regulation remains for certain

licensees. The present study does not include any costs for this occurrence.

2. DECOMMISSIONING ALTERNATIVES

Detailed cost estimates were developed to decommission LaSalle County for three variations of the approved decommissioning alternatives: DECON and SAFSTOR. Although the scenarios differ with respect to technique, process, cost, and schedule, they attain the same result: the ultimate release of the site for unrestricted use.

The following scenarios were evaluated and are representative of the alternatives available to the owner. The scenarios assume that the units operate for 60 years, followed by a planned and scheduled shutdown.

1. DECON: The first scenario assumes that the two units are promptly decommissioned as an integrated activity. Spent fuel that is not transferred directly to the DOE from the storage pools is relocated to the ISFSI so as to facilitate decontamination and dismantling activities within the reactor buildings. Spent fuel storage operations continue at the site, independent of decommissioning operations, until the transfer of the fuel to the DOE is complete, assumed for purposes of this study to be in the year 2055. At that time, the ISFSI is decommissioned and the site released for alternative use.

2. Delayed DECON: In the second scenario, the units are prepared for an abbreviated period of safe-storage. The spent fuel resident in the reactor building's storage pools, remains in the pools until it can be transferred to the DOE (i.e., the ISFSI is not used to off-load the pools following the cessation of operations). Spent fuel placed at the ISFSI during operations remains in storage until the pools are emptied at which time the ISFSI is also emptied. Decommissioning is scheduled to commence once the transfer of the fuel to the DOE is complete (i.e., in the year 2055).

3. SAFSTOR: The units are also placed into safe-storage in the third scenario. However, decommissioning is deferred beyond the fuel storage period to the maximum extent permitted by the current regulations. Similar to the DECON alternative, the spent fuel that cannot be transferred directly to the DOE in the first five and one-half years is relocated to the ISFSI for interim storage. The units remain in protective storage following the removal of spent fuel from the site. Decommissioning operations commence such that license termination is completed within the required 60-year period. As with the first two scenarios, decommissioning activities at the two units are sequenced and integrated so as to minimize the total duration of the physical dismantling process.

The following sections describe the basic activities associated with each alternative. Although detailed procedures for each activity identified are not provided, and the actual sequence of work may vary, the activity descriptions provide a basis not only for estimating but also for the expected scope of work (i.e., engineering and planning at the time of decommissioning).

The conceptual approach that the NRC has described in its regulations divides decommissioning into three phases. The initial phase commences with the effective date of permanent cessation of operations and involves the transition of both plant and licensee from reactor operations (i.e., power production) to facilitate de-activation and closure. During the first phase, notification is to be provided to the NRC certifying the permanent cessation of operations and the removal of fuel from the reactor vessel. The licensee would then be prohibited from reactor operation.

The second phase encompasses activities during the storage period or during major decommissioning activities, or a combination of the two. The third phase pertains to the activities involved in license termination. The decommissioning estimates developed for LaSalle County are also divided into phases or periods; however, demarcation of the phases is based upon major milestones within the project or significant changes in the projected expenditures.

2.1 DECON

The DECON alternative, as defined by the NRC, is "the alternative in which the equipment, structures, and portions of a facility and site containing radioactive contaminants are removed or decontaminated to a level that permits the property to be released for unrestricted use shortly after cessation of operations." This study does not address the cost to dispose of the spent fuel residing at the site; such costs are funded through a surcharge on electrical generation. However, the study does estimate the costs incurred with the interim on-site storage of the fuel pending shipment by the DOE to an off-site disposal facility.

2.1.1 Period 1 - Preparations

In anticipation of the cessation of plant operations, detailed preparations are undertaken to provide a smooth transition from plant operations to site decommissioning. Through implementation of a staffing transition plan, the organization required to manage the intended decommissioning activities is assembled from available plant staff and outside resources. Preparations include the planning for permanent defueling of the reactor, revision of technical specifications

applicable to the operating conditions and requirements, a characterization of the facility and major components, and the development of the PSDAR.

Engineering and Planning

The PSDAR, required within two years of the notice to cease operations, provides a description of the licensee's planned decommissioning activities, a timetable, and the associated financial requirements of the intended decommissioning program. Upon receipt of the PSDAR, the NRC will make the document available to the public for comment in a local meeting to be held in the vicinity of the reactor site. Ninety days following submittal and NRC receipt of the PSDAR, the licensee may begin to perform major decommissioning activities under a modified 10 CFR §50.59 procedure, i.e., without specific NRC approval. Major activities are defined as any activity that results in permanent removal of major radioactive components, permanently modifies the structure of the containment, or results in dismantling components (for shipment) containing GTCC, as defined by 10 CFR §61. Major components are further defined as comprising the reactor vessel and internals, large bore reactor recirculation system piping, and other large components that are radioactive. The NRC includes the following additional criteria for use of the §50.59 process in decommissioning. The proposed activity must not:

- foreclose release of the site for possible unrestricted use,
- significantly increase decommissioning costs,
- cause any significant environmental impact, or
- violate the terms of the licensee's existing license.

Existing operational technical specifications are reviewed and modified to reflect plant conditions and the safety concerns associated with permanent cessation of operations. The environmental impact associated with the planned decommissioning activities is also considered. Typically, a licensee will not be allowed to proceed if the consequences of a particular decommissioning activity are greater than that bounded by previously evaluated environmental assessments or impact statements. In this instance, the licensee would have to submit a license amendment for the specific activity and update the environmental report.

The decommissioning program outlined in the PSDAR will be designed to accomplish the required tasks within the ALARA guidelines (as defined in 10 CFR §20) for protection of personnel from exposure to radiation hazards. It will also address the continued protection of the health and safety of the public and the environment during the dismantling activity. Consequently, with the development of the PSDAR, activity specifications, cost-benefit and safety analyses, and work packages and procedures, would be assembled to support the proposed decontamination and dismantling activities.

Site Preparations

Following final plant shutdown, and in preparation for actual decommissioning activities, the following activities are initiated:

- Characterization of the site and surrounding environs. This includes radiation surveys of work areas, major components (including the reactor vessel and its internals), internal piping, and primary shield cores.
- Isolation of the spent fuel storage pools and fuel handling systems, such that decommissioning operations can commence on the balance of the plant. Decommissioning operations are scheduled around the fuel handling areas to optimize the overall project schedule. The fuel is transferred to the ISFSI as it decays to the point that it meets the heat load criteria of the containers. Consequently, it is assumed that the fuel pools remain operational for approximately five and one-half years following the cessation of operations.
- Specification of transport and disposal requirements for activated materials and/or hazardous materials, including shielding and waste stabilization.
- Development of procedures for occupational exposure control, control and release of liquid and gaseous effluent, processing of radwaste (including dry-active waste, resins, filter media, metallic and non-metallic components generated in decommissioning), site security and emergency programs, and industrial safety.

2.1.2 Period 2 - Decommissioning Operations

This period includes the physical decommissioning activities associated with the removal and disposal of contaminated and activated components and structures, including the successful termination of the

10 CFR §50 operating license. Significant decommissioning activities in this phase include:

- Construction of temporary facilities and/or modification of existing facilities to support dismantling activities. This may include a centralized processing area to facilitate equipment removal and component preparations for off-site disposal.
- Reconfiguration and modification of site structures and facilities as needed to support decommissioning operations. This may include the upgrading of roads (on- and off-site) to facilitate hauling and transport. Modifications may be required to the containment structure to facilitate access of large/heavy equipment. Modifications may also be required to the refueling area of the reactor buildings to support the segmentation of the reactor vessel internals and component extraction.
- Design and fabrication of temporary and permanent shielding to support removal and transportation activities, construction of contamination control envelopes, and the procurement of specialty tooling.
- Procurement (lease or purchase) of shipping canisters, cask liners, and industrial packages.
- Decontamination of components and piping systems as required to control (minimize) worker exposure.
- Removal of piping and components no longer essential to support decommissioning operations.
- Transfer of the steam separator and dryer assemblies to the dryer-separator pool for segmentation. Segmentation by weight and activity maximizes the loading of the shielded transport casks. The operations are conducted under water using remotely operated tooling and contamination controls.
- Disconnection of the control blades from the drives on the vessel lower head. Blades are transferred to the spent fuel pools for packaging.
- Disassembly, segmentation, and packaging of the core shroud and in-core guide tubes. Some of the material is expected to exceed Class C disposal requirements. As such, those segments are packaged in a modified fuel storage canister for geologic disposal.

- Removal and segmentation of the remaining internals including the jet pump assemblies, fuel support castings, and core plate assembly.
- Draining and decontamination of the reactor well and the permanent sealing of the spent fuel transfer gate. Install a shielded platform for segmentation of the reactor vessel. Cutting operations are performed in air using remotely operated equipment within a contamination control envelope, with the water level maintained just below the cut to minimize the working area dose rates. Sections are transferred to the dryer-separator pool for packaging and interim storage.
- Disconnection of the control rod drives and instrumentation tubes from reactor vessel lower head. The lower reactor head and vessel supporting structure are then segmented.
- Removal of the reactor recirculation pumps. Exterior surfaces are decontaminated and openings covered. Components can serve as their own burial containers provided that all penetrations are properly sealed.
- Demolition of the reactor shield activated concrete by controlled demolition.
- Expansion of the ISFSI and transfer of the spent fuel from the storage pools to the ISFSI pad for interim storage. Spent fuel storage operations continue throughout the active decommissioning period. Fuel transfer is expected to begin in 2049 and to be completed by the end of the year 2055.

At least two years prior to the anticipated date of license termination, an LTP is required. Submitted as a supplement to the Final Safety Analysis Report (FSAR) or its equivalent, the plan must include: a site characterization, description of the remaining dismantling activities, plans for site remediation, procedures for the final radiation survey, designation of the end use of the site, an updated cost estimate to complete the decommissioning, and any associated environmental concerns. The NRC will notice the receipt of the plan, make the plan available for public comment, and schedule a local meeting. LTP approval will be subject to any conditions and limitations as deemed appropriate by the Commission. The licensee may then commence with the final remediation of site facilities and services, including:

- Removal of remaining plant systems and associated components as they become nonessential to the decommissioning program or worker

health and safety (e.g., waste collection and treatment systems, electrical power and ventilation systems).

- Removal of the steel liners from the drywell, disposing of the activated and contaminated sections as radioactive waste. Removal of any activated/contaminated concrete.
- Removal of the steel liners from the steam separator and dryer pool, reactor well and spent fuel storage pools.
- Surveys of the decontaminated areas of the containment structures.
- Removal of the contaminated equipment and material from the turbine and radwaste buildings, and any other contaminated facility. Use radiation and contamination control techniques until radiation surveys indicate that the structures can be released for unrestricted access and conventional demolition. This activity may necessitate the dismantling and disposition of most of the systems and components (both clean and contaminated) located within these buildings. This activity will facilitate surface decontamination and subsequent verification surveys required prior to obtaining release for demolition.
- Removal of the remaining components, equipment, and plant services in support of the area release survey(s).
- Routing of material removed in the decontamination and dismantling to a central processing area. Material certified to be free of contamination is released for unrestricted disposition, e.g., as scrap, recycle, or general disposal. Contaminated material is characterized and segregated for additional off-site processing (disassembly, chemical cleaning, volume reduction, and waste treatment), and/or packaged for controlled disposal at a low-level radioactive waste disposal facility.

Incorporated into the LTP is the Final Survey Plan. This plan identifies the radiological surveys to be performed once the decontamination activities are completed and is developed using the guidance provided in the "Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)."[16] This document incorporates the statistical approaches to survey design and data interpretation used by the EPA. It also identifies commercially available instrumentation and procedures for conducting radiological surveys. Use of this guidance ensures that the surveys are conducted in a manner that provides a high degree of confidence that applicable NRC criteria are satisfied. Once the survey is

complete, the results are provided to the NRC in a format that can be verified. The NRC then reviews and evaluates the information, performs an independent confirmation of radiological site conditions, and makes a determination on final termination of the license.

The NRC will terminate the operating license when it determines that site remediation has been performed in accordance with the LTP, and that the terminal radiation survey and associated documentation demonstrate that the facility is suitable for release.

2.1.3 Period 3 - Site Restoration

Following completion of decommissioning operations, site restoration activities will begin. Efficient removal of the contaminated materials and verification that residual radionuclide concentrations are below the NRC limits will result in substantial damage to many of the structures. Although performed in a controlled, safe manner, blasting, coring, drilling, scarification (surface removal), and the other decontamination activities will substantially degrade power block structures including the reactor, turbine and radwaste buildings. Under certain circumstances, verifying that subsurface radionuclide concentrations meet NRC site release requirements will require removal of grade slabs and lower floors, potentially weakening footings and structural supports. This removal activity will be necessary for those facilities and plant areas where historical records, when available, indicate the potential for radionuclides having been present in the soil, where system failures have been recorded, or where it is required to confirm that subsurface process and drain lines were not breached over the operating life of the station.

Prompt dismantling of site structures is clearly the most appropriate and cost-effective option. It is unreasonable to anticipate that these structures would be repaired and preserved after the radiological contamination is removed. The cost to dismantle site structures with a work force already mobilized on site is more efficient than if the process were deferred. Site facilities quickly degrade without maintenance, adding additional expense and creating potential hazards to the public as well as to future workers. Abandonment creates a breeding ground for vermin infestation as well as other biological hazards.

This cost study presumes that non-essential structures and site facilities are dismantled as a continuation of the decommissioning activity.

Foundations and exterior walls are removed to a nominal depth of three feet below grade. The three-foot depth allows for the placement of gravel for drainage, as well as topsoil, so that vegetation can be established for erosion control. Site areas affected by the dismantling activities are restored and the plant area graded as required to prevent ponding and inhibit the refloating of subsurface materials.

Concrete rubble produced by demolition activities is processed to remove rebar and miscellaneous embedments. The processed material is then used on site to backfill voids. Excess materials are trucked to an off-site area for disposal as construction debris.

2.1.4 ISFSI Operations and Decommissioning

The ISFSI will continue to operate under the general license provisions of 10 CFR §72 following the termination of the §50 operating license. Assuming the DOE starts accepting fuel in 2018, transfer of spent fuel from LaSalle County is anticipated to begin in 2049 and continue through the year 2055.

At the conclusion of the spent fuel transfer process, the ISFSI will be decommissioned. The Commission will terminate the §72 license when it determines that the remediation of the ISFSI has been performed in accordance with an ISFSI license termination plan and that the final radiation survey and associated documentation demonstrate that the facility is suitable for release. Once the requirements are satisfied, the NRC can terminate the license for the ISFSI.

The assumed design for the ISFSI is based upon the use of a multi-purpose canister and a concrete overpack for pad storage. For purposes of this cost analysis, it is assumed that once the inner canisters containing the spent fuel assemblies have been removed, any required decontamination performed, and the license for the facility terminated, the modules can be dismantled using conventional techniques for the demolition of reinforced concrete. The concrete storage pad will then be removed, and the area graded and landscaped to conform to the surrounding environment.

2.2 SAFSTOR and DELAYED DECON

The NRC defines SAFSTOR as "the alternative in which the nuclear facility is placed and maintained in a condition that allows the nuclear facility to be

safely stored and subsequently decontaminated (deferred decontamination) to levels that permit release for unrestricted use." The facility is left intact (during the dormancy period), with structures maintained in a sound condition. Systems not required to operate in support of the spent fuel pools or site surveillance and security are drained, de-energized, and secured. Minimal cleaning/removal of loose contamination and/or fixation and sealing of remaining contamination are performed. Access to contaminated areas is secured to provide controlled access for inspection and maintenance.

The engineering and planning requirements are similar to those for the DECON alternative. Site preparations are also similar to those for the DECON alternative. However, with the exception of the required radiation surveys and site characterizations, the mobilization and preparation of site facilities is less extensive.

The following discussion is appropriate for both the SAFSTOR and Delayed DECON scenarios, the primary differences being in the length of the dormancy period. In the Delayed DECON scenario, the fuel remains in the reactor building's storage pools until such time that the transfer to a DOE facility is complete. Decommissioning operations are assumed to begin once fuel is off site. By contrast, in the SAFSTOR scenario, the spent fuel is relocated to a newly constructed ISFSI. The plant remains in safe-storage after the fuel is removed from site. Decommissioning operations are initiated such that the license is terminated within the required 60-year time period.

2.2.1 Period 1 - Preparations

Preparations for long-term storage include the planning for permanent defueling of the reactors, revision of technical specifications appropriate to the operating conditions and requirements, a characterization of the facility and major components, and the development of the PSDAR.

The process of placing the plant in safe-storage includes, but is not limited to, the following activities:

- Isolation of the spent fuel storage services and fuel handling systems located in the reactor buildings so that safe-storage operations may commence on the balance of the plant. This activity may be carried out by plant personnel in accordance with existing operating technical specifications. Activities are scheduled around the fuel handling systems to the greatest extent possible.

- Draining and de-energizing of the non-contaminated systems not required to support continued site operations or maintenance.
- Disposing of contaminated filter elements and resin beds not required for processing wastes from layup activities for future operations.
- Draining of the reactor vessel, with the internals left in place and the vessel head secured.
- Draining and de-energizing non-essential, contaminated systems with decontamination as required for future maintenance and inspection.
- Preparing lighting and alarm systems whose continued use is required; de-energizing portions of fire protection, electric power, and HVAC systems whose continued use is not required.
- Cleaning of the loose surface contamination from building access pathways.
- Performing an interim radiation survey of plant, posting warning signs where appropriate.
- Erecting physical barriers and/or securing all access to radioactive or contaminated areas, except as required for inspection and maintenance.
- Installing security and surveillance monitoring equipment and relocating security fence around secured structures, as required.

2.2.2 Period 2 - Dormancy

The second phase identified by the NRC in its rule addresses licensed activities during a storage period and is applicable to the dormancy phases of the deferred decommissioning alternatives. Dormancy activities include a 24-hour security force, preventive and corrective maintenance on security systems, area lighting, general building maintenance, heating and ventilation of buildings, routine radiological inspections of contaminated structures, maintenance of structural integrity, and a site environmental and radiation monitoring program. Resident maintenance personnel perform equipment maintenance, inspection activities, routine services to maintain safe conditions, adequate lighting, heating, and ventilation, and periodic preventive maintenance on essential site services.

An environmental surveillance program is carried out during the dormancy period to ensure that releases of radioactive material to the environment are prevented and/or detected and controlled. Appropriate emergency procedures are established and initiated for potential releases that exceed prescribed limits. The environmental surveillance program constitutes an abbreviated version of the program in effect during normal plant operations.

Security during the dormancy period is conducted primarily to prevent unauthorized entry and to protect the public from the consequences of their own actions. The security fence, sensors, alarms, and other surveillance equipment provide security. Fire and radiation alarms are also monitored and maintained. While remote surveillance is an option, it does not offer the immediate response time of a physical presence.

The transfer of the spent fuel to a DOE facility continues during this period until complete. Fuel is shipped exclusively from the ISFSI in the SAFSTOR scenario and from both the pools and the ISFSI in the Delayed DECON scenario.

After an optional period of storage (such that license terminations are accomplished within 60 years of final shutdown), it is required that the licensee submit applications to terminate the license, along with an LTP (described in Section 2.1.2), thereby initiating the third phase.

2.2.3 Periods 3 and 4 - Delayed Decommissioning

Prior to the commencement of decommissioning operations, preparations are undertaken to reactivate site services and prepare for decommissioning. Preparations include engineering and planning, a detailed site characterization, and the assembly of a decommissioning management organization. Final planning for activities and the writing of activity specifications and detailed procedures are also initiated at this time.

Much of the work in developing a termination plan is relevant to the development of the detailed engineering plans and procedures. The activities associated with this phase and the follow-on decontamination and dismantling processes are detailed in Sections 2.1.1 and 2.1.2. The primary difference between the sequences anticipated for the DECON and deferred scenarios is the absence, in the latter, of any constraint on

the availability of the fuel storage facilities located within the reactor buildings for decommissioning.

Variations in the length of the dormancy period are expected to have little effect upon the quantities of radioactive wastes generated from system and structure removal operations. Given the levels of radioactivity and spectrum of radionuclides expected from sixty years of plant operation, no plant process system identified as being contaminated upon final shutdown will become releasable due to the decay period alone, i.e., there is no significant reduction in the waste generated from the decommissioning activities. However, due to the lower activity levels, a greater percentage of the waste volume can be designated for off-site processing and recovery.

The delay in decommissioning also yields lower working area radiation levels. As such, the estimates for the delayed scenarios incorporate reduced ALARA controls for the lower occupational exposure potential.

Although the initial radiation levels due to ^{60}Co will decrease during the dormancy period, the internal components of the reactor vessel will still exhibit sufficiently high radiation dose rates to require remote sectioning under water due to the presence of long-lived radionuclides such as ^{94}Nb, ^{59}Ni, and ^{63}Ni. Therefore, the dismantling procedures described for the DECON alternative would still be employed during deferred scenarios. Portions of the reactor shield will still be radioactive due to the presence of activated trace elements with long half-lives (^{152}Eu and ^{154}Eu). Decontamination will require controlled removal and disposal. It is assumed that radioactive corrosion products on inner surfaces of piping and components will not have decayed to levels that will permit unrestricted use or allow conventional removal. These systems and components will be surveyed as they are removed and disposed of in accordance with the existing radioactive release criteria.

2.2.4 Period 5 - Site Restoration

Following completion of decommissioning operations, site-restoration activities can begin. If the site structures are to be dismantled, dismantling as a continuation of the decommissioning process is clearly the most appropriate and cost-effective option, as described in Section 2.1.3. The basis for the dismantling cost in the deferred scenarios is consistent with that described for DECON, removal of structures and

site facilities to a nominal depth of three feet below grade and limited restoration of the site.

3. COST ESTIMATE

The cost estimates prepared for decommissioning LaSalle County consider the unique features of the site, including the NSSS, power generation systems, support services, site buildings, and ancillary facilities. The basis of the estimates, including the sources of information relied upon, the estimating methodology employed, site-specific considerations, and other pertinent assumptions, is described in this section.

3.1 BASIS OF ESTIMATE

The estimates were developed with site-specific, technical information developed in an evaluation prepared for Exelon in 2004. The information was reviewed for the current analysis and updated as deemed appropriate. The site-specific considerations and assumptions used in the previous evaluation were also revisited. Modifications were incorporated where new information was available or experience from ongoing decommissioning programs provided viable alternatives or improved processes.

3.2 METHODOLOGY

The methodology used to develop the estimates follows the basic approach originally presented in the AIF/NESP-036 study report, "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates,"[17] and the DOE "Decommissioning Handbook."[18] These documents present a unit factor method for estimating decommissioning activity costs, which simplifies the estimating calculations. Unit factors for concrete removal ($/cubic yard), steel removal ($/ton), and cutting costs ($/inch) were developed using local labor rates. The activity-dependent costs were estimated with the item quantities (cubic yards and tons), developed from plant drawings and inventory documents. Removal rates and material costs for the conventional disposition of components and structures relied upon information available in the industry publication, "Building Construction Cost Data," published by R.S. Means.[19]

This analysis reflects lessons learned from TLG's involvement in the Shippingport Station Decommissioning Project, completed in 1989, as well as the decommissioning of the Cintichem reactor, hot cells, and associated facilities, completed in 1997. In addition, the planning and engineering for the Pathfinder, Shoreham, Rancho Seco, Trojan, Yankee Rowe, Big Rock Point, Maine Yankee, Humboldt Bay-3, Oyster Creek, Connecticut Yankee, and San

Onofre-1 nuclear units have provided additional insight into the process, the regulatory aspects, and the technical challenges of decommissioning commercial nuclear units.

The unit factor method provides a demonstrable basis for establishing reliable cost estimates. The detail provided in the unit factors, including activity duration, labor costs (by craft), and equipment and consumable costs, ensures that essential elements have not been omitted. Appendix A presents the detailed development of a typical unit factor. Appendix B provides the values contained within one set of factors developed for this analysis.

Work Difficulty Factors

TLG has historically applied work difficulty adjustment factors (WDFs) to account for the inefficiencies in working in a power plant environment. WDFs were assigned to each unique set of unit factors, commensurate with the inefficiencies associated with working in confined, hazardous environments. The ranges used for the WDFs are as follows:

- Access Factor 10% to 20%
- Respiratory Protection Factor 10% to 50%
- Radiation/ALARA Factor 10% to 40%
- Protective Clothing Factor 10% to 30%
- Work Break Factor 8.33%

The factors and their associated range of values were developed in conjunction with the AIF/NESP-036 study. The application of the factors is discussed in more detail in that publication.

Scheduling Program Durations

The unit factors, adjusted by the WDFs as described above, are applied against the inventory of materials to be removed in the radiologically controlled areas. The resulting man-hours, or crew-hours, are used in the development of the decommissioning program schedule, using resource loading and event sequencing considerations. The scheduling of conventional removal and dismantling activities are based upon productivity information available from the "Building Construction Cost Data" publication.

An activity duration critical path is used to determine the total decommissioning program schedule. The schedule is relied upon in calculating the carrying costs, which include program management, administration, field

engineering, equipment rental, and support services such as quality control and security. This systematic approach for assembling decommissioning estimates ensures a high degree of confidence in the reliability of the resulting cost estimate.

3.3 IMPACT OF DECOMMISSIONING MULTIPLE REACTOR UNITS

In estimating the near simultaneous decommissioning of two co-located reactor units there can be opportunities to achieve economies of scale, by sharing costs between units, and coordinating the sequence of work activities. There will also be schedule constraints, particularly where there are requirements for specialty equipment and staff, or practical limitations on when final status surveys can take place. For purposes of the estimate, Units 1 and 2 are assumed to be essentially identical. Common facilities have been assigned to Unit 2. A summary of the principal impacts are listed below.

- The sequence of work generally follows the principal that the work is done at Unit 1 first, followed by similar work at Unit 2. This permits the experience gained at Unit 1 to be applied by the workforce at the second unit. It should be noted however, that the estimate does not consider productivity improvements at the second unit, since there is little documented experience with decommissioning two units simultaneously The work associated with developing activity specifications and procedures can be considered essentially identical between the two units, therefore the second unit costs are assumed to be a fraction of the first unit (~ 42%).
- Segmenting the reactor vessel and internals will require the use of special equipment. The decommissioning project will be scheduled such that Unit 2's reactor internals and vessel are segmented immediately after the activities at Unit 1 have been completed.
- Some program management and support costs, particularly costs associated with the more senior positions, can be avoided with two reactors undergoing decommissioning simultaneously. As a result, the estimate is based on a "lead" unit that includes these senior positions, and a "second" unit that excludes these positions. The designation as lead is based on the unit undertaking the most complex tasks (for instance vessel segmentation) or performing tasks for the first time.
- The final radiological survey schedule is also affected by a two-unit decommissioning schedule. It would be considered impractical to try to complete the final status survey of Unit 1, while Unit 2 still has ongoing radiological remediation work and waste handling in process. As such, the transfer of the spent fuel from the storage pools and subsequent

decontamination of the reactor buildings is coordinated so as to synchronize the final status survey for the station.

- The final demolition of buildings at Units 1 and 2 are considered to take place concurrently. This is considered a reasonable assumption since access to the buildings is considered good at the station.
- Unit 1, as the first unit to enter decommissioning, incurs the majority of site characterization costs.
- Shared systems and structures are generally assigned to Unit 2.
- Station costs such as emergency response fees, regulatory agency fees, corporate overhead, and insurance are generally allocated on an equal basis between the two units.

3.4 FINANCIAL COMPONENTS OF THE COST MODEL

TLG's proprietary decommissioning cost model, DECCER, produces a number of distinct cost elements. These direct expenditures, however, do not comprise the total cost to accomplish the project goal, i.e., license termination and site restoration.

Inherent in any cost estimate that does not rely on historical data is the inability to specify the precise source of costs imposed by factors such as tool breakage, accidents, illnesses, weather delays, and labor stoppages. In the DECCER cost model, contingency fulfills this role. Contingency is added to each line item to account for costs that are difficult or impossible to develop analytically. Such costs are historically inevitable over the duration of a job of this magnitude; therefore, this cost analysis includes funds to cover these types of expenses.

3.4.1 Contingency

The activity- and period-dependent costs are combined to develop the total decommissioning cost. A contingency is then applied on a line-item basis, using one or more of the contingency types listed in the AIF/NESP-036 study. "Contingencies" are defined in the American Association of Cost Engineers "Project and Cost Engineers' Handbook[20] as "specific provision for unforeseeable elements of cost within the defined project scope; particularly important where previous experience relating estimates and actual costs has shown that unforeseeable events which will increase costs are likely to occur." The cost elements in this analysis are based upon ideal conditions and maximum efficiency;

therefore, consistent with industry practice, a contingency factor has been applied. In the AIF/NESP-036 study, the types of unforeseeable events that are likely to occur in decommissioning are discussed and guidelines are provided for percentage contingency in each category. It should be noted that contingency, as used in this analysis, does not account for price escalation and inflation in the cost of decommissioning over the remaining operating life of the station.

The use and role of contingency within decommissioning estimates is not a "safety factor issue." Safety factors provide additional security and address situations that may never occur. Contingency funds are expected to be fully expended throughout the program. They also provide assurance that sufficient funding is available to accomplish the intended tasks. An estimate without contingency, or from which contingency has been removed, can disrupt the orderly progression of events and jeopardize a successful conclusion to the decommissioning process.

For example, the most technologically challenging task in decommissioning a commercial nuclear station is the disposition of the reactor vessel and internal components, now highly radioactive after a lifetime of exposure to core activity. The disposition of these components forms the basis of the critical path (schedule) for decommissioning operations. Cost and schedule are interdependent, and any deviation in schedule has a significant impact on cost for performing a specific activity.

Disposition of the reactor vessel internals involves the underwater cutting of complex components that are highly radioactive. Costs are based upon optimum segmentation, handling, and packaging scenarios. The schedule is primarily dependent upon the turnaround time for the heavily shielded shipping casks, including preparation, loading, and decontamination of the containers for transport. The number of casks required is a function of the pieces generated in the segmentation activity, a value calculated on optimum performance of the tooling employed in cutting the various subassemblies. The expected optimization, however, may not be achieved, resulting in delays and additional program costs. For this reason, contingency must be included to mitigate the consequences of the expected inefficiencies inherent in this complex activity, along with related concerns associated with the operation of highly specialized tooling, field conditions, and water clarity.

Contingency funds are an integral part of the total cost to complete the decommissioning process. Exclusion of this component puts at risk a successful completion of the intended tasks and, potentially, subsequent related activities. For this study, TLG examined the major activity-related problems (decontamination, segmentation, equipment handling, packaging, transport, and waste disposal) that necessitate a contingency. Individual activity contingencies ranged from 10% to 75%, depending on the degree of difficulty judged to be appropriate from TLG's actual decommissioning experience. The contingency values used in this study are as follows:

Decontamination	50%
Contaminated Component Removal	25%
Contaminated Component Packaging	10%
Contaminated Component Transport	15%
Low-Level Radioactive Waste Disposal	25%
Reactor Segmentation	75%
NSSS Component Removal	25%
Reactor Waste Packaging	25%
Reactor Waste Transport	25%
Reactor Vessel Component Disposal	50%
GTCC Disposal	15%
Non-Radioactive Component Removal	15%
Heavy Equipment and Tooling	15%
Supplies	25%
Engineering	15%
Energy	15%
Characterization and Termination Surveys	30%
Construction	15%
Taxes and Fees	10%
Insurance	10%
Staffing	15%

The contingency values are applied to the appropriate components of the estimates on a line item basis. A composite value is then reported at the end of each estimate. For example, the composite contingency values reported for the DECON alternative are 19.7% and 19.6% for Units 1 and 2, respectively. Values for the other alternatives are delineated within the detailed cost tables in Appendices D and E.

3.4.2 Financial Risk

In addition to the routine uncertainties addressed by contingency, another cost element that is sometimes necessary to consider when bounding decommissioning costs relates to uncertainty, or risk. Examples can include changes in work scope, pricing, job performance, and other variations that could conceivably, but not necessarily, occur. Consideration is sometimes necessary to generate a level of confidence in the estimate, within a range of probabilities. TLG considers these types of costs under the broad term "financial risk." Included within the category of financial risk are:

- Transition activities and costs: ancillary expenses associated with eliminating 50% to 80% of the site labor force shortly after the cessation of plant operations, added cost for worker separation packages throughout the decommissioning program, national or company-mandated retraining, and retention incentives for key personnel.
- Delays in approval of the decommissioning plan due to intervention, public participation in local community meetings, legal challenges, and national and local hearings.
- Changes in the project work scope from the baseline estimate, involving the discovery of unexpected levels of contaminants, contamination in places not previously expected, contaminated soil previously undiscovered (either radioactive or hazardous material contamination), variations in plant inventory or configuration not indicated by the as-built drawings.
- Regulatory changes (e.g., affecting worker health and safety, site release criteria, waste transportation, and disposal).
- Policy decisions altering national commitments (e.g., in the ability to accommodate certain waste forms for disposition or in the timetable for such, for example, in the start and rate of acceptance of spent fuel by the DOE).
- Pricing changes for basic inputs, such as labor, energy, materials, and burial.

This cost study does not add any additional cost to the estimate for financial risk since there is insufficient historical data from which to project future liabilities. Consequently, the areas of uncertainty or risk

are revisited periodically and addressed through repeated revisions or updates of the base estimate.

3.5 SITE-SPECIFIC CONSIDERATIONS

There are a number of site-specific considerations that affect the method for dismantling and removal of equipment from the site and the degree of restoration required. The cost impacts of the considerations identified below are included in this cost study.

3.5.1 Spent Fuel Management

The cost to dispose of spent fuel generated from plant operations is not reflected within the estimates to decommission the LaSalle County site. Ultimate disposition of the spent fuel is within the province of the DOE's Waste Management System, as defined by the NWPA. As such, the disposal cost is financed by a 1 mill/kWhr surcharge paid into the DOE's waste fund during operations. However, the NRC requires licensees to establish a program to manage and provide funding for the management of all irradiated fuel at the reactors until title of the fuel is transferred to the Secretary of Energy. This funding requirement is fulfilled through inclusion of certain high-level waste cost elements within the estimate, as described below.

The total inventory of assemblies that will require handling during decommissioning is based upon several assumptions. The pickup of commercial fuel is assumed to begin in the year 2018. The maximum rate at which the fuel is removed from the commercial sites is based upon an annual capacity at the geologic repository of 3,000 metric tons of uranium (MTU). Any delay in the startup of the repository or decrease in the rate of acceptance will correspondingly prolong the transfer process and result in the fuel remaining at the site longer.

In all three scenarios, the ISFSI will continue to operate until such time that the transfer of spent fuel to the DOE can be completed. Assuming that the DOE commences repository operation in 2018, fuel is projected to be removed from the LaSalle County site by the year 2055. In the Delayed DECON scenario, the ISFSI is only used to store fuel placed during plant operations. Spent fuel off-loaded from the pools after operations cease, remains in the pools during the transfer period. The inventory of fuel assemblies located in the spent fuel pools is preferentially off-loaded as the allocations permit.

Operation and maintenance costs for the storage facilities (the ISFSI and the pools for the Delayed DECON scenario) are included within the estimates and address the cost for staffing the facilities, as well as security, insurance, and licensing fees. The estimates include the costs to purchase (DECON and SAFSTOR scenarios), load, and transfer the fuel storage canisters. Costs are also provided for the final disposition of the facilities once the transfer is complete.

Repository Startup

Operation of the DOE's yet-to-be constructed geologic repository is contingent upon the review and approval of the facility's license application by the NRC, the successful resolution of pending litigation, and the development of a national transportation system. The DOE submitted its license application to the NRC on June 3, 2008, seeking authorization to construct the repository at Yucca Mountain, Nevada. The NRC formally docketed the DOE's license application on September 8, 2008, triggering a three-year deadline, with a possible one-year extension, set by Congress for the NRC to decide on whether to grant a construction authorization.

Construction, if adequately funded, could take five to six years after the DOE receives authorization to proceed. As such, the spent fuel management plan described in this section is predicated upon the DOE initiating the pickup of commercial fuel in the year 2018.

Spent Fuel Management Model

The Exelon nuclear fleet consists of 21 units at 11 sites in Illinois, Pennsylvania, and New Jersey, including the inactive units at Dresden, Peach Bottom, and Zion. The ability to complete the decommissioning of these units, particularly for the DECON and Delayed DECON alternatives, is highly dependent upon when the DOE is assumed to remove spent fuel from the sites.

The DOE's repository program assumes that spent fuel will be accepted for disposal from the nation's commercial nuclear plants in the order (the "queue") in which it was removed from service ("oldest fuel first").[21] A computer model developed by Exelon Nuclear was used to determine when the DOE would provide allocations in the queue for removal of spent fuel from the individual sites. Repository operations were based upon annual industry-wide receipt of 400 Metric Tons Heavy Metal

(MTHM) in the first year of operation, a total of 3,800 MTHM in years 2 through 4 and 3,000 MTHM for year 5 and beyond.[22]

ISFSIs are constructed as necessary to maintain full-core discharge capability at the individual sites. Once the DOE begins repository operations, queue allocations are used to ship spent fuel from Exelon's operating sites. Spent fuel shipments are then made from decommissioning sites in the order of retirement.

Canister Design

The design and capacity of the ISFSI is based upon a vertical cask system, with a 68-fuel assemblies capacity, is assumed for future cask acquisitions. A unit cost of $500,000 is used for pricing the internal multi-purpose canister (MPC), with an additional cost of $250,000 for the concrete storage module. The DOE is assumed to provide the MPC for fuel transferred directly from the pools to the DOE at no cost to the owner.

Canister Loading and Transfer

An average cost of $250,000 is used for the labor to load/transport the spent fuel from the pools to the ISFSI pad, based upon Exelon experience. For estimating purposes, 50% of this cost is used to estimate the cost to transfer the fuel from the ISFSI to the DOE.

Operations and Maintenance

Annual costs (excluding labor) of approximately $763,000 and $88,000 are used for operation and maintenance of each spent fuel pool and the ISFSI, respectively.

ISFSI Design Considerations

A multi-purpose (storage and transport) dry shielded storage canister with a vertcal, reinforced concrete storage module is used as a basis for the cost analysis. The final core off load from each unit, equivalent to 12 modules, are assumed to have some level of neutron-induced activation as a result of the long-term storage of the fuel (i.e., to levels exceeding free-release limits). The steel support structure is assumed to be removed from these modules for controlled disposal. The cost of the

disposition of this material, as well as the demolition of the ISFSI facility, is included in the estimate.

3.5.2 Reactor Vessel and Internal Components

The NSSS (reactor vessel and reactor recirculation system components) will be decontaminated using chemical agents prior to the start of cutting operations (for DECON alternative only). A decontamination factor (average reduction) of 10 is assumed for the process.

The reactor pressure vessel and internal components are segmented for disposal in shielded, reusable transportation casks. Segmentation is performed in the dryer-separator pool, where a turntable and remote cutter are installed. The vessel is segmented in place, using a mast-mounted cutter supported off the lower head and directed from a shielded work platform installed overhead in the reactor cavity. Transportation cask specifications and transportation regulations will dictate segmentation and packaging methodology.

The dismantling of the reactor internals will generate radioactive waste considered unsuitable for shallow land disposal (i.e., GTCC). Although the material is not classified as high-level waste, the DOE has indicated it will accept this waste for disposal at the future high-level waste repository.[23] However, the DOE has not been forthcoming with an acceptance criteria or disposition schedule for this material, and numerous questions remain as to the ultimate disposal cost and waste form requirements. As such, for purposes of this study, the GTCC has been packaged and disposed of as high-level waste, at a cost equivalent to that envisioned for the spent fuel. It is not anticipated that the DOE would accept this waste prior to completing the transfer of spent fuel. Therefore, until such time the DOE is ready to accept GTCC waste, it is reasonable to assume that this material would remain in storage at the LaSalle County site.

Intact disposal of the reactor vessel and internal components can provide savings in cost and worker exposure by eliminating the complex segmentation requirements, isolation of the GTCC material, and transport/storage of the resulting waste packages. Portland General Electric (PGE) was able to dispose of the Trojan reactor as an intact package. However, its location on the Columbia River simplified the transportation analysis since:

- the reactor package could be secured to the transport vehicle for the entire journey, i.e., the package was not lifted during transport,
- there were no man-made or natural terrain features between the plant site and the disposal location that could produce a large drop, and
- transport speeds were very low, limited by the overland transport vehicle and the river barge.

As a member of the Northwest Compact, PGE had a site available for disposal of the package - the US Ecology facility in Washington State. The characteristics of this arid site proved favorable in demonstrating compliance with land disposal regulations.

It is not known whether this option will be available when LaSalle County ceases operation. Future viability of this option will depend upon the ultimate location of the disposal site, as well as the disposal site licensee's ability to accept highly radioactive packages and effectively isolate them from the environment. Additionally, with BWRs, the diameter of the reactor vessel may severely limit overland transport. Consequently, the study assumes the reactor vessel will require segmentation, as a bounding condition.

3.5.3 Primary System Components

Reactor recirculation piping is cut from the reactor vessel once the water level in the vessel (used for personnel shielding during dismantling and cutting operations in and around the vessel) is dropped below the nozzle zone. The piping is boxed and transported by shielded van. The reactor recirculation pumps and motors are lifted out intact, packaged, and transported for processing and/or disposal.

3.5.4 Main Turbine and Condenser

The main turbine will be dismantled using conventional maintenance procedures. The turbine rotors and shafts will be removed to a laydown area. The lower turbine casings will be removed from their anchors by controlled demolition. The main condensers will also be disassembled and moved to a laydown area. Material is then prepared for transportation to an off-site recycling facility where it will be surveyed and designated for either decontamination or volume reduction, conventional disposal, or controlled disposal. Components will be

packaged and readied for transport in accordance with the intended disposition.

3.5.5 Transportation Methods

Contaminated piping, components, and structural material other than the highly activated reactor vessel and internal components will qualify as LSA-I, II or III or Surface Contaminated Object, SCO-I or II, as described in Title 49.[24] The contaminated material will be packaged in Industrial Packages (IP 1, IP-2, or IP-3, as defined in subpart 173.411) for transport unless demonstrated to qualify as their own shipping containers. The reactor vessel and internal components are expected to be transported in accordance with §71, as Type B. It is conceivable that the reactor, due to its limited specific activity, could qualify as LSA II or III. However, the high radiation levels on the outer surface would require that additional shielding be incorporated within the packaging so as to attenuate the dose to levels acceptable for transport.

Transport of the highly activated metal, produced in the segmentation of the reactor vessels and internal components, will be by shielded truck cask. Cask shipments may exceed 95,000 pounds, including vessel segment(s), supplementary shielding, cask tie-downs, and tractor-trailer. The maximum level of activity per shipment assumed permissible was based upon the license limits of the available shielded transport casks. The segmentation scheme for the vessel and internal segments is designed to meet these limits.

The transport of large intact components (e.g., large heat exchangers and other oversized components) will be by a combination of truck, rail, and/or multi-wheeled transporter. Truck transport costs were estimated using published tariffs from Tri-State Motor Transit.[25]

3.5.6 Low-Level Radioactive Waste Disposal

To the greatest extent practical, metallic material generated in the decontamination and dismantling processes is treated to reduce the total volume requiring controlled disposal. The treated material, meeting the regulatory and/or site release criterion, is released as scrap, requiring no further cost consideration. Conditioning and recovery of the waste stream is performed off site at a licensed processing center.

The mass of radioactive waste generated during the various decommissioning activities is reported by line-item in Appendices C, D and E, and summarized in Section 5. The Section 5 waste summaries are consistent with 10 CFR §61 classifications. Commercially available steel containers are used for the disposal of piping, small components, and concrete. Larger components can serve as their own containers, with proper closure of all openings, access ways, and penetrations. The waste volumes are calculated on the exterior package dimensions for containerized material or a dimensional calculation for components serving as their own waste containers.

The more highly activated reactor components are transported in reusable, shielded truck casks with disposable liners. In calculating disposal costs, the burial fees are applied against the liner volume, with surcharges added for the special handling requirements and the radiological characteristics of the payload. Packaging efficiencies are lower for the highly activated materials (greater than Type A quantity waste), where high concentrations of gamma-emitting radionuclides limit the capacity of the shipping canisters.

Disposal fees are calculated using current disposal agreements, with surcharges added for the highly activated components, for example, generated in the segmentation of the reactor vessel. The cost to dispose of the majority of the material generated from the decontamination and dismantling activities is based upon Exelon's current disposal agreement with EnergySolutions for its facility in Clive, Utah.

Since the EnergySolutions facility is not able to accept the higher activity waste (Class B and C) generated in the decontamination of the reactor vessel and segmentation of the components closest to the core, the cost of disposal of this material at a yet-to-be determined facility were based upon Exelon's last negotiated rates for the Barnwell facility.

Material exceeding Class C limits (limited to material closest to the reactor core and comprising a small percentage of the total waste volume) is generally not suitable for shallow-land disposal. This material is packaged in the same multipurpose canisters used for spent fuel storage/transport and designated for geologic disposal.

3.5.7 Site Conditions Following Decommissioning

The NRC will terminate (or amend) the site license when it determines that site remediation has been performed in accordance with the license termination plan, and that the terminal radiation survey and associated documentation demonstrate that the facility is suitable for release. The NRC's involvement in the decommissioning process will end at this point. Building codes and environmental regulations will dictate the next step in the decommissioning process, as well as the owner's own future plans for the site.

Non-essential structures or buildings severely damaged in decontamination process are removed to a nominal depth of three feet below grade. Concrete rubble generated from demolition activities is processed and made available as clean fill. The excavations will be regraded such that the power block area will have a final contour consistent with adjacent surroundings.

The estimates do assume the remediation of a small volume of contaminated soil. This estimate may be adjusted by continued plant operations and/or future regulatory actions, such as the development of site-specific release criteria.

3.6 ASSUMPTIONS

The following are the major assumptions made in the development of the estimates for decommissioning the site.

3.6.1 Estimating Basis

The study follows the principles of ALARA through the use of work duration adjustment factors. These factors address the impact of activities such as radiological protection instruction, mock-up training, and the use of respiratory protection and protective clothing. The factors lengthen a task's duration, increasing costs and lengthening the overall schedule. ALARA planning is considered in the costs for engineering and planning, and in the development of activity specifications and detailed procedures. Changes to worker exposure limits may impact the decommissioning cost and project schedule.

3.6.2 Labor Costs

The craft labor required to decontaminate and dismantle the nuclear units will be acquired through standard site contracting practices. The current cost of labor at the site is used as an estimating basis. Costs for site administration, operations, construction, and maintenance personnel are based upon average salary information provided by Exelon or from comparable industry information.

Exelon will hire a Decommissioning Operations Contractor (DOC) to manage the decommissioning. The owner will provide site security, radiological health and safety, quality assurance and overall site administration during the decommissioning and demolition phases. Contract personnel will provide engineering services (e.g., for preparing the activity specifications, work procedures, activation, and structural analyses) under the direction of Exelon.

3.6.3 Design Conditions

Any fuel cladding failure that occurred during the lifetime of the plant is assumed to have released fission products at sufficiently low levels that the buildup of quantities of long-lived isotopes (e.g., ^{137}Cs, ^{90}Sr, or transuranics) has been prevented from reaching levels exceeding those that permit the major NSSS components to be shipped under current transportation regulations and disposal requirements.

The curie contents of the vessel and internals at final shutdown are derived from those listed in NUREG/CR-3474.[26] Actual estimates are derived from the curie/gram values contained therein and adjusted for the different mass of the LaSalle County components, projected operating life, and different periods of decay. Additional short-lived isotopes were derived from CR-0130[27] and CR-0672,[28] and benchmarked to the long-lived values from CR-3474.

The disposal cost for the control blades removed from the vessel with the final core load is included within the estimates. Control blade residence time in the reactor is assumed to be controlled such that the blades do not become GTCC material. Disposition of any blades stored in the pools from operations is considered an operating expense and therefore not accounted for in the estimates.

Activation of the reactor building structures is confined to the reactor shield. More extensive activation (at very low levels) of the interior structures within containment has been detected at several reactors and their owners have elected to dispose of the affected material at a controlled facility rather than reuse the material as fill on site or send it to a landfill. The ultimate disposition of the material removed from the reactor buildings will depend upon the site release criteria selected, as well as the designated end use for the site.

3.6.4 General

Transition Activities

Existing warehouses will be cleared of non-essential material and remain for use by Exelon and its subcontractors. The plant's operating staff will perform the following activities at no additional cost or credit to the project during the transition period:

- Drain and collect fuel oils, lubricating oils, and transformer oils for recycle and/or sale.
- Drain and collect acids, caustics, and other chemical stores for recycle and/or sale.
- Processes operating waste inventories, i.e., the estimates do not address the disposition of any legacy wastes; the disposal of operating wastes during this initial period is not considered a decommissioning expense.

Scrap and Salvage

The existing plant equipment is considered obsolete and suitable for scrap as deadweight quantities only. Exelon will make economically reasonable efforts to salvage equipment following final plant shutdown. However, dismantling techniques assumed by TLG for equipment in this analysis are not consistent with removal techniques required for salvage (resale) of equipment. Experience has indicated that some buyers wanted equipment stripped down to very specific requirements before they would consider purchase. This required expensive rework after the equipment had been removed from its installed location. Since placing a salvage value on this machinery and equipment would be speculative, and the value would be small in comparison to the overall decommissioning expenses, this analysis does not attempt to quantify

the possible salvage value that an owner may realize based upon those efforts.

It is assumed, for purposes of this analysis, that any value received from the sale of scrap generated in the dismantling process would be more than offset by the on-site processing costs. The dismantling techniques assumed in the decommissioning estimates do not include the additional cost for size reduction and preparation to meet "furnace ready" conditions. For example, the recovery of copper from electrical cabling may require the removal and disposition of any contaminated insulation, an added expense. With a volatile market, the potential profit margin in scrap recovery is highly speculative, regardless of the ability to free release this material. This assumption is an implicit recognition of scrap value in the disposal of clean metallic waste at no additional cost to the project.

Furniture, tools, mobile equipment such as forklifts, trucks, bulldozers, and other property will be removed at no cost or credit to the decommissioning project. Disposition may include relocation to other facilities. Spare parts will also be made available for alternative use.

Energy

For estimating purposes, the plant is assumed to be de-energized, with the exception of those facilities associated with spent fuel storage. Replacement power costs are used for the cost of energy consumption during decommissioning for tooling, lighting, ventilation, and essential services.

Insurance

Costs for continuing coverage (nuclear liability and property insurance) following cessation of plant operations and during decommissioning are included and based upon current operating premiums. Reductions in premiums, throughout the decommissioning process, are based upon the guidance and the limits for coverage defined in the NRC's proposed rulemaking "Financial Protection Requirements for Permanently Shutdown Nuclear Power Reactors."[29] NRC's financial protection requirements are based on various reactor (and spent fuel) configurations.

Taxes

Property taxes are included for all decommissioning periods. Exelon provided a schedule of decreasing tax payments against the current tax assessment. These reductions continue until reaching a minimum property tax payment of $1 million per year for the site; this level is maintained for the balance of the decommissioning program.

Site Modifications

The perimeter fence and in-plant security barriers will be moved, as appropriate, to conform to the Site Security Plan in force during the various stages of the project.

3.7 COST ESTIMATE SUMMARY

A schedule of expenditures for each scenario is provided in Tables 3.1 through 3.3. Decommissioning costs are reported in the year of projected expenditure; however, the values are provided in thousands of 2009 dollars. Costs are not inflated, escalated, or discounted over the period of expenditure. The annual expenditures are based upon the detailed activity costs reported in Appendices C through E, along with the schedules discussed in Section 4.

TABLE 3.1a
LaSALLE COUNTY STATION, UNIT 1
DECON ALTERNATIVE
SCHEDULE OF TOTAL ANNUAL EXPENDITURES
(thousands, 2009 dollars)

Year	Labor	Equipment & Materials	Energy	Burial	Other	Total
2042	38,815	6,592	1,119	30	10,726	57,282
2043	65,734	16,765	2,351	10,787	25,167	120,804
2044	65,688	21,934	1,502	30,071	9,081	128,276
2045	59,048	19,474	1,394	22,097	7,642	109,654
2046	45,857	14,572	1,182	5,985	4,753	72,350
2047	43,307	12,984	1,069	6,712	4,778	68,850
2048	11,710	2,254	202	3,058	2,575	19,799
2049	2,456	186	10	8	1,511	4,170
2050	30,322	4,693	273	23	2,106	37,416
2051	17,867	8,578	158	0	1,491	28,094
2052	13,733	6,605	115	0	1,456	21,910
2053	2,448	1,217	0	0	1,346	5,011
2054	2,448	1,217	0	0	1,346	5,011
2055	2,415	1,667	0	0	14,131	18,213
2056	1,806	901	0	191	1,345	4,242
Total	403,654	119,638	9,375	78,961	89,452	701,080

TABLE 3.1b
LaSALLE COUNTY STATION, UNIT 2
DECON ALTERNATIVE
SCHEDULE OF TOTAL ANNUAL EXPENDITURES
(thousands, 2009 dollars)

Year	Labor	Equipment & Materials	Energy	Burial	Other	Total
2043	1,886	633	69	2	651	3,241
2044	43,600	14,924	1,654	458	15,418	76,054
2045	62,177	25,314	2,251	20,939	16,795	127,475
2046	70,151	26,334	1,498	30,872	9,109	137,964
2047	65,900	15,579	1,289	14,847	6,160	103,774
2048	63,914	10,140	1,186	6,720	4,673	86,633
2049	55,469	8,476	875	8,229	4,633	77,682
2050	33,380	5,568	273	23	1,916	41,160
2051	23,090	11,439	158	0	1,492	36,179
2052	17,555	8,698	115	0	1,456	27,824
2053	2,448	1,217	0	0	1,346	5,011
2054	2,448	1,217	0	0	1,346	5,011
2055	2,415	1,667	0	0	14,131	18,213
2056	1,806	901	0	191	1,345	4,242
Total	446,238	132,107	9,368	82,280	80,471	750,464

TABLE 3.2a
LaSALLE COUNTY STATION, UNIT 1
DELAYED DECON ALTERNATIVE
SCHEDULE OF TOTAL ANNUAL EXPENDITURES
(thousands, 2009 dollars)

Year	Labor	Equipment & Materials	Energy	Burial	Other	Total
2042	29,478	749	1,119	30	2,239	33,615
2043	33,007	5,498	1,311	856	17,366	58,038
2044	5,272	1,705	316	27	3,424	10,743
2045	5,258	1,700	315	27	3,414	10,714
2046	5,258	1,700	315	27	3,414	10,714
2047	5,258	1,700	315	27	3,414	10,714
2048	5,272	1,705	316	27	3,424	10,743
2049	5,258	1,700	315	27	3,414	10,714
2050	5,258	1,700	315	27	3,414	10,714
2051	3,414	1,350	249	26	2,631	7,669
2052	861	867	158	26	1,549	3,460
2053	858	864	158	26	1,545	3,451
2054	10,854	1,326	504	28	1,544	14,255
2055	45,655	3,685	1,577	37	3,222	54,176
2056	56,278	12,883	1,522	15,588	12,421	98,693
2057	52,659	13,447	1,437	17,910	11,855	97,308
2058	39,995	6,809	1,182	5,294	3,851	57,131
2059	39,995	6,809	1,182	5,294	3,851	57,131
2060	2,251	274	32	152	978	3,687
2061	24,374	1,189	231	25	1,511	27,329
2062	16,949	7,359	163	1	743	25,215
2063	16,407	7,555	158	0	709	24,829
2064	494	228	5	0	21	748
Total	410,361	82,801	13,196	45,480	89,953	641,791

TABLE 3.2b
LaSALLE COUNTY STATION, UNIT 2
DELAYED DECON ALTERNATIVE
SCHEDULE OF TOTAL ANNUAL EXPENDITURES
(thousands, 2009 dollars)

Year	Labor	Equipment & Materials	Energy	Burial	Other	Total
2043	1,980	46	69	2	127	2,225
2044	46,871	1,802	1,581	130	3,192	53,577
2045	25,356	5,389	885	786	13,329	45,746
2046	7,315	1,757	315	27	3,368	12,783
2047	7,315	1,757	315	27	3,368	12,783
2048	7,336	1,762	316	27	3,377	12,818
2049	7,315	1,757	315	27	3,368	12,783
2050	7,315	1,757	315	27	3,368	12,783
2051	7,315	1,757	315	27	3,368	12,783
2052	7,336	1,762	316	27	3,377	12,818
2053	7,309	1,756	315	27	3,363	12,770
2054	4,790	1,580	158	26	1,537	8,091
2055	4,849	1,580	162	26	1,537	8,153
2056	26,314	1,455	1,581	34	1,405	30,789
2057	46,082	10,423	1,537	10,769	8,956	77,766
2058	57,849	15,587	1,498	21,442	13,605	109,981
2059	56,684	7,742	1,199	6,908	4,316	76,849
2060	56,775	7,331	1,186	6,127	3,816	75,235
2061	40,922	3,242	548	1,663	2,104	48,479
2062	22,076	10,131	163	1	735	33,105
2063	21,631	10,416	158	0	710	32,914
2064	652	314	5	0	21	992
Total	471,388	91,103	13,252	48,130	82,346	706,218

TABLE 3.3a
LaSALLE COUNTY STATION, UNIT 1
SAFSTOR ALTERNATIVE
SCHEDULE OF TOTAL ANNUAL EXPENDITURES
(thousands, 2009 dollars)

Year	Labor	Equipment & Materials	Energy	Burial	Other	Total
2042	31,323	6,257	1,119	30	10,726	49,455
2043	35,573	14,123	1,311	856	20,855	72,717
2044	5,646	7,388	316	27	3,499	16,876
2045	5,630	7,368	315	27	3,490	16,829
2046	5,630	7,368	315	27	3,490	16,829
2047	5,239	6,084	282	27	3,078	14,710
2048	3,763	1,206	158	26	1,516	6,669
2049	3,753	1,203	158	26	1,511	6,651
2050	3,753	1,203	158	26	1,511	6,651
2051	3,753	1,203	158	26	1,511	6,651
2052	3,763	1,206	158	26	1,516	6,669
2053	3,753	1,203	158	26	1,511	6,651
2054	3,753	1,203	158	26	1,511	6,651
2055	3,750	1,200	158	26	1,511	6,645
2056	2,449	258	158	26	1,324	4,215
2057	2,442	257	158	26	1,320	4,204
2058	2,442	257	158	26	1,320	4,204
2059	2,442	257	158	26	1,320	4,204
2060	2,449	258	158	26	1,324	4,215
2061	2,442	257	158	26	1,320	4,204
2062	2,442	257	158	26	1,320	4,204
2063	2,442	257	158	26	1,320	4,204
2064	2,449	258	158	26	1,324	4,215
2065	2,442	257	158	26	1,320	4,204
2066	2,442	257	158	26	1,320	4,204
2067	2,442	257	158	26	1,320	4,204
2068	2,449	258	158	26	1,324	4,215
2069	2,442	257	158	26	1,320	4,204
2070	2,442	257	158	26	1,320	4,204
2071	2,442	257	158	26	1,320	4,204

TABLE 3.3a (continued)
LaSALLE COUNTY STATION, UNIT 1
SAFSTOR ALTERNATIVE
SCHEDULE OF TOTAL ANNUAL EXPENDITURES
(thousands, 2009 dollars)

Year	Labor	Equipment & Materials	Energy	Burial	Other	Total
2072	2,449	258	158	26	1,324	4,215
2073	2,442	257	158	26	1,320	4,204
2074	2,442	257	158	26	1,320	4,204
2075	2,442	257	158	26	1,320	4,204
2076	2,449	258	158	26	1,324	4,215
2077	2,442	257	158	26	1,320	4,204
2078	2,442	257	158	26	1,320	4,204
2079	2,442	257	158	26	1,320	4,204
2080	2,449	258	158	26	1,324	4,215
2081	2,442	257	158	26	1,320	4,204
2082	2,442	257	158	26	1,320	4,204
2083	2,442	257	158	26	1,320	4,204
2084	2,449	258	158	26	1,324	4,215
2085	2,442	257	158	26	1,320	4,204
2086	2,442	257	158	26	1,320	4,204
2087	2,442	257	158	26	1,320	4,204
2088	2,449	258	158	26	1,324	4,215
2089	2,442	257	158	26	1,320	4,204
2090	2,442	257	158	26	1,320	4,204
2091	2,442	257	158	26	1,320	4,204
2092	2,449	258	158	26	1,324	4,215
2093	2,442	257	158	26	1,320	4,204
2094	2,442	257	158	26	1,320	4,204
2095	18,227	750	737	30	1,348	21,092
2096	47,637	3,030	1,581	38	4,242	56,528
2097	58,704	16,637	1,505	17,321	15,039	109,206
2098	46,475	10,490	1,290	9,824	7,833	75,912
2099	40,003	6,699	1,182	5,025	3,733	56,642
2100	22,985	3,802	664	2,825	2,488	32,765

TABLE 3.3a (continued)
LaSALLE COUNTY STATION, UNIT 1
SAFSTOR ALTERNATIVE
SCHEDULE OF TOTAL ANNUAL EXPENDITURES
(thousands, 2009 dollars)

Year	Labor	Equipment & Materials	Energy	Burial	Other	Total
2101	16,217	802	149	18	1,294	18,480
2102	21,209	5,823	203	9	1,008	28,252
2103	16,422	7,555	158	0	709	24,844
2104	4,724	2,173	45	0	204	7,147
Total	507,005	126,018	18,589	37,315	146,656	835,583

TABLE 3.3b
LaSALLE COUNTY STATION, UNIT 2
SAFSTOR ALTERNATIVE
SCHEDULE OF TOTAL ANNUAL EXPENDITURES
(thousands, 2009 dollars)

Year	Labor	Equipment & Materials	Energy	Burial	Other	Total
2043	2,103	387	69	2	651	3,212
2044	49,708	9,708	1,581	130	14,628	75,755
2045	28,887	13,758	885	786	13,392	57,708
2046	10,740	8,468	315	27	3,481	23,031
2047	10,740	8,468	315	27	3,481	23,031
2048	10,769	8,491	316	27	3,491	23,094
2049	5,530	4,671	230	26	2,409	12,866
2050	1,135	1,469	158	26	1,504	4,292
2051	1,135	1,469	158	26	1,504	4,292
2052	1,138	1,473	158	26	1,508	4,304
2053	1,135	1,469	158	26	1,504	4,292
2054	1,135	1,469	158	26	1,504	4,292
2055	1,137	1,466	158	26	1,503	4,289
2056	1,629	284	158	26	1,328	3,424
2057	1,624	283	158	26	1,325	3,415
2058	1,624	283	158	26	1,325	3,415
2059	1,624	283	158	26	1,325	3,415
2060	1,629	284	158	26	1,328	3,424
2061	1,624	283	158	26	1,325	3,415
2062	1,624	283	158	26	1,325	3,415
2063	1,624	283	158	26	1,325	3,415
2064	1,629	284	158	26	1,328	3,424
2065	1,624	283	158	26	1,325	3,415
2066	1,624	283	158	26	1,325	3,415
2067	1,624	283	158	26	1,325	3,415
2068	1,629	284	158	26	1,328	3,424
2069	1,624	283	158	26	1,325	3,415
2070	1,624	283	158	26	1,325	3,415
2071	1,624	283	158	26	1,325	3,415

TABLE 3.3b (continued)
LaSALLE COUNTY STATION, UNIT 2
SAFSTOR ALTERNATIVE
SCHEDULE OF TOTAL ANNUAL EXPENDITURES
(thousands, 2009 dollars)

Year	Labor	Equipment & Materials	Energy	Burial	Other	Total
2072	1,629	284	158	26	1,328	3,424
2073	1,624	283	158	26	1,325	3,415
2074	1,624	283	158	26	1,325	3,415
2075	1,624	283	158	26	1,325	3,415
2076	1,629	284	158	26	1,328	3,424
2077	1,624	283	158	26	1,325	3,415
2078	1,624	283	158	26	1,325	3,415
2079	1,624	283	158	26	1,325	3,415
2080	1,629	284	158	26	1,328	3,424
2081	1,624	283	158	26	1,325	3,415
2082	1,624	283	158	26	1,325	3,415
2083	1,624	283	158	26	1,325	3,415
2084	1,629	284	158	26	1,328	3,424
2085	1,624	283	158	26	1,325	3,415
2086	1,624	283	158	26	1,325	3,415
2087	1,624	283	158	26	1,325	3,415
2088	1,629	284	158	26	1,328	3,424
2089	1,624	283	158	26	1,325	3,415
2090	1,624	283	158	26	1,325	3,415
2091	1,624	283	158	26	1,325	3,415
2092	1,629	284	158	26	1,328	3,424
2093	1,624	283	158	26	1,325	3,415
2094	1,624	283	158	26	1,325	3,415
2095	1,624	283	158	26	1,325	3,415
2096	12,829	811	803	29	1,340	15,813
2097	29,843	3,144	1,577	35	2,669	37,268
2098	59,491	17,740	1,502	18,661	14,956	112,350
2099	57,981	10,643	1,279	10,084	7,322	87,310
2100	56,697	7,197	1,182	5,835	3,682	74,593
2101	46,498	4,614	771	3,084	2,638	57,605

TABLE 3.3b (continued)
LaSALLE COUNTY STATION, UNIT 2
SAFSTOR ALTERNATIVE
SCHEDULE OF TOTAL ANNUAL EXPENDITURES
(thousands, 2009 dollars)

Year	Labor	Equipment & Materials	Energy	Burial	Other	Total
2102	25,576	7,899	203	9	933	34,620
2103	21,646	10,416	158	0	710	32,929
2104	6,227	2,996	45	0	204	9,473
Total	507,089	139,544	18,491	39,949	138,033	843,106

4. SCHEDULE ESTIMATE

The schedules for the decommissioning scenarios considered in this study follow the sequence presented in the AIF/NESP-036 study, with minor changes to reflect recent experience and site-specific constraints. In addition, the scheduling has been revised to reflect the spent fuel management plans described in Section 3.4.1.

A schedule or sequence of activities is presented in Figure 4.1 for the DECON decommissioning alternative. The schedule is also representative of the work activities identified in the delayed dismantling scenarios, absent any spent fuel constraints. The scheduling sequence assumes that fuel is removed from the spent fuel pools within the first 5½ years after operations cease at Unit 2. The key activities listed in the schedule do not reflect a one-to-one correspondence with those activities in the cost tables, but reflect dividing some activities for clarity and combining others for convenience. The schedule was prepared using the "Microsoft Project 2003" computer software.[30]

4.1 SCHEDULE ESTIMATE ASSUMPTIONS

The schedule reflects the results of a precedence network developed for the site decommissioning activities, i.e., a PERT (Program Evaluation and Review Technique) Software Package. The work activity durations used in the precedence network reflect the actual man-hour estimates from the cost tables, adjusted by stretching certain activities over their slack range and shifting the start and end dates of others. The following assumptions were made in the development of the DECON decommissioning schedule:

- The reactor buildings are isolated until such time that all spent fuel has been discharged from the storage pools to the DOE or to the ISFSI. Decontamination and dismantling of the storage pools are initiated once the transfer of spent fuel to the ISFSI is complete.
- All work (except vessel and internals removal) is performed during an 8-hour workday, 5 days per week, with no overtime. There are eleven paid holidays per year.
- Reactor and internals removal activities are performed by using separate crews for different activities working on different shifts, with a corresponding backshift charge for the second shift.
- Multiple crews work parallel activities to the maximum extent possible, consistent with optimum efficiency, adequate access for cutting, removal

and laydown space, and with the stringent safety measures necessary during demolition of heavy components and structures.

- For plant systems removal, the systems with the longest removal durations in areas on the critical path are considered to determine the duration of the activity.

4.2 PROJECT SCHEDULE

The period-dependent costs presented in the detailed cost tables are based upon the durations developed in the schedule for decommissioning LaSalle County. Durations are established between several milestones in each project period; these durations are used to establish a critical path for the entire project. In turn, the critical path duration for each period is used as the basis for determining the period-dependent costs. A second critical path is also shown for the spent fuel cooling period, which determines the release of the reactor building for final decontamination.

Project timelines are provided in Figures 4.2 through 4.4; the milestone dates are based on this same shutdown date. The start of decommissioning activities in the Delayed Decommissioning scenario is concurrent with the end of the fuel transfer activity (i.e. to an off-site DOE facility).

FIGURE 4.1
DECON ACTIVITY SCHEDULE

FIGURE 4.1
DECON ACTIVITY SCHEDULE
(continued)

FIGURE 4.1
DECON ACTIVITY SCHEDULE
(continued)

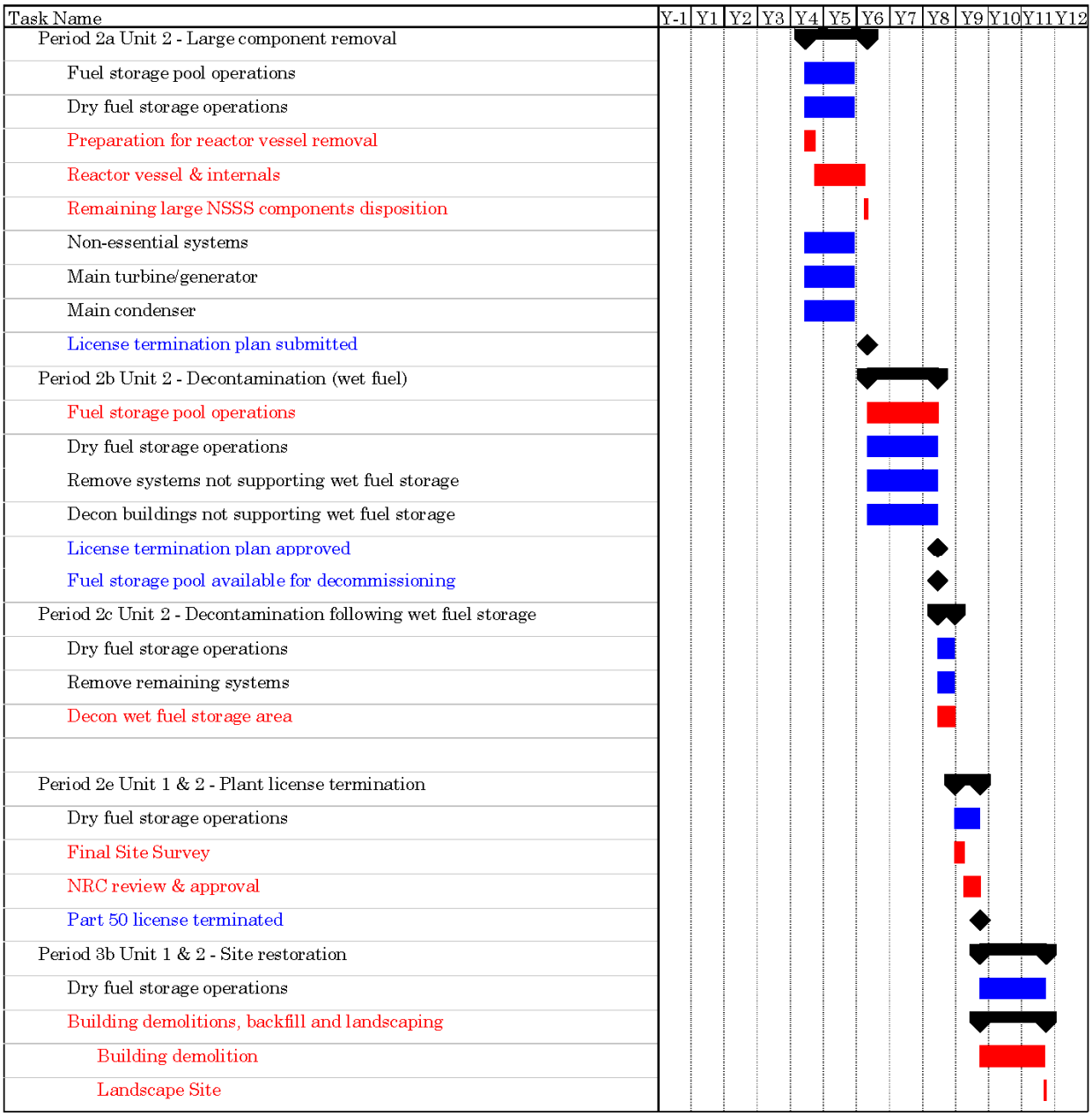
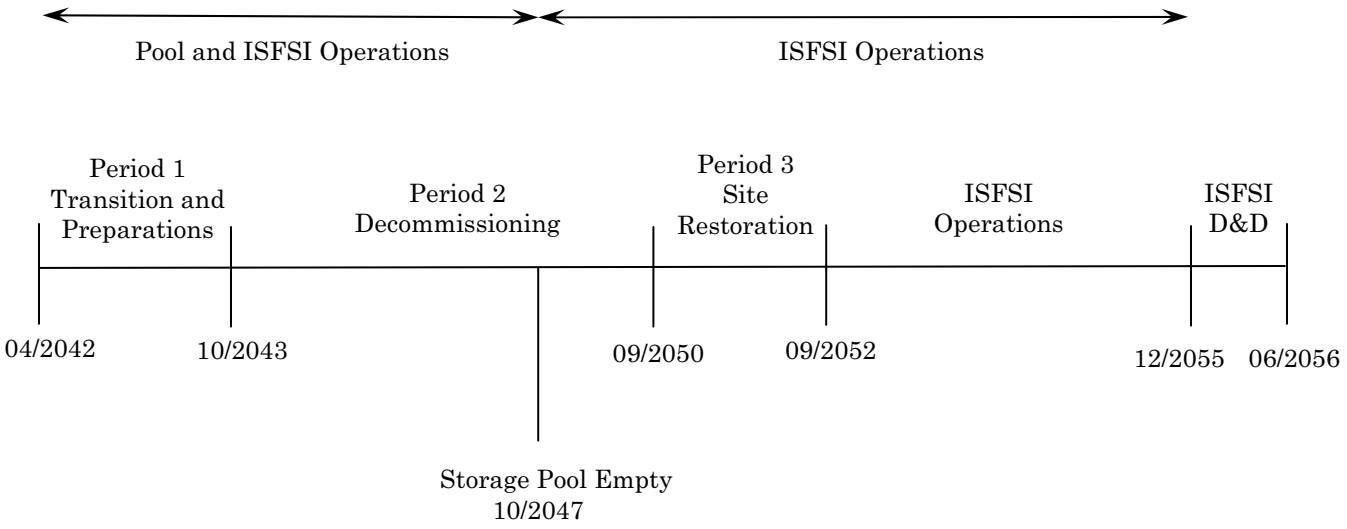


FIGURE 4.2
DECOMMISSIONING TIMELINE
DECON
(not to scale)

Unit 1
(Shutdown April 17, 2042)



Unit 2
(Shutdown December 16, 2043)

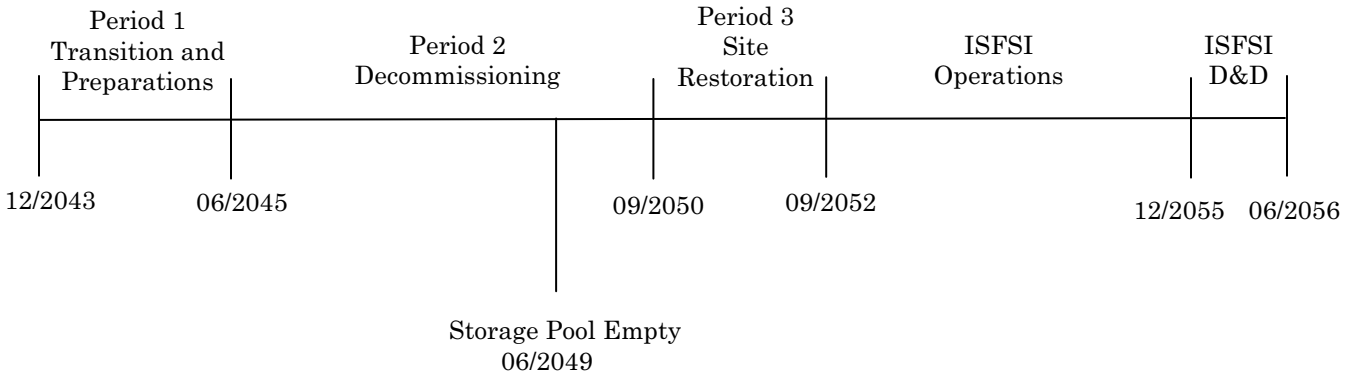
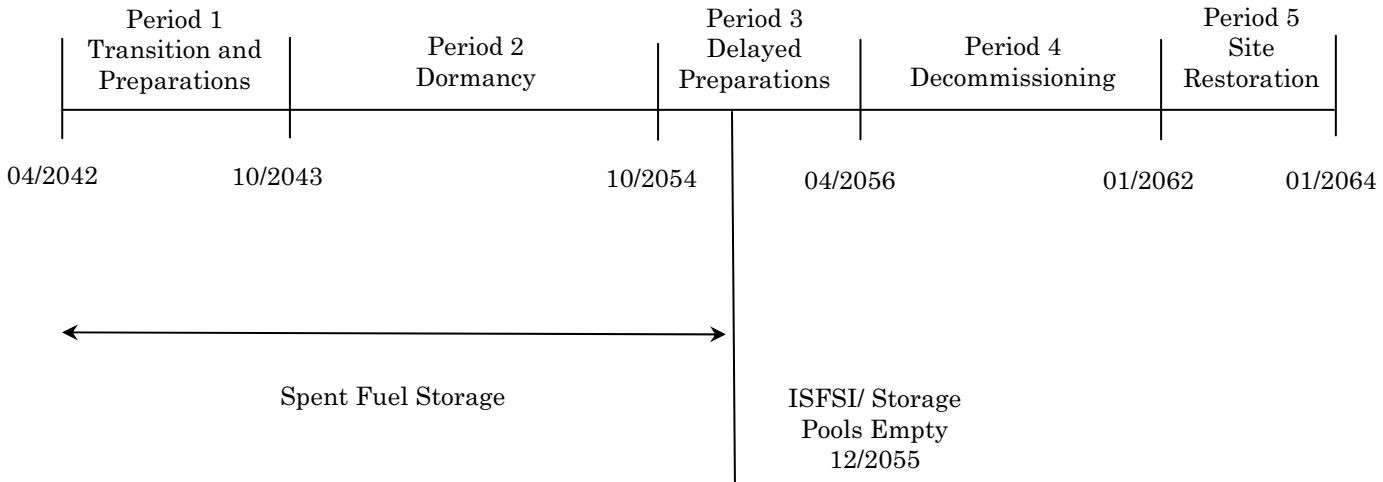


FIGURE 4.3
DECOMMISSIONING TIMELINE
DELAYED DECON
(not to scale)

Unit 1
(Shutdown April 17, 2042)



Unit 2
(Shutdown December 16, 2043)

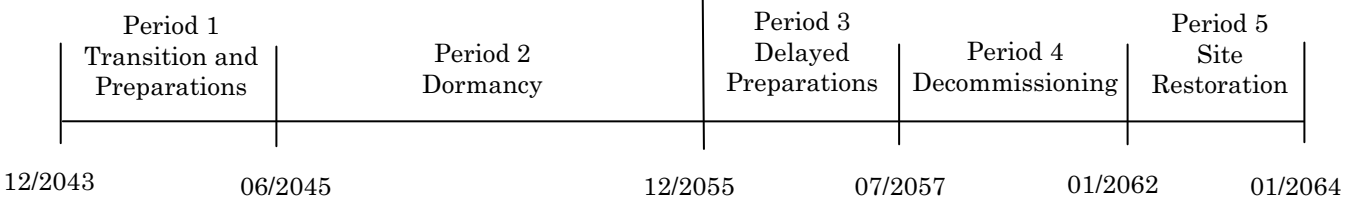
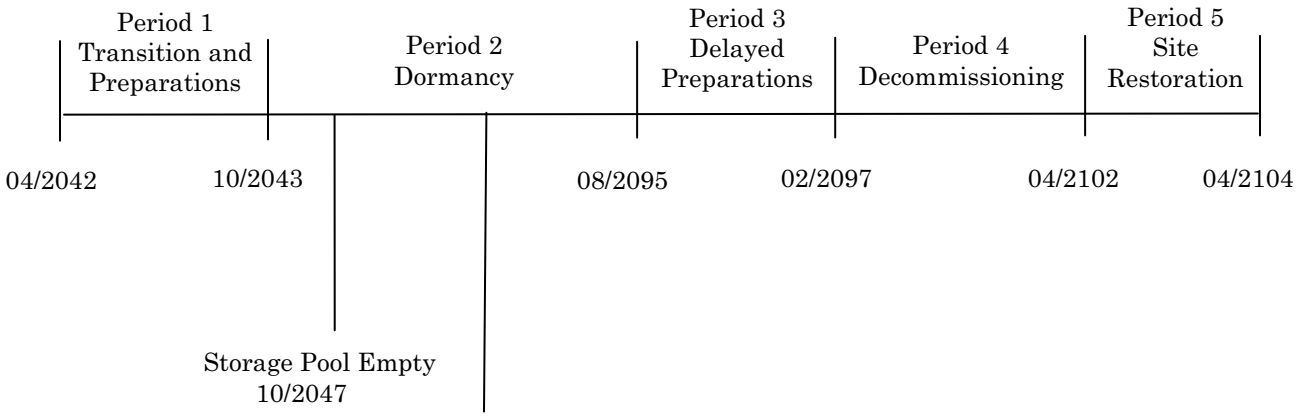


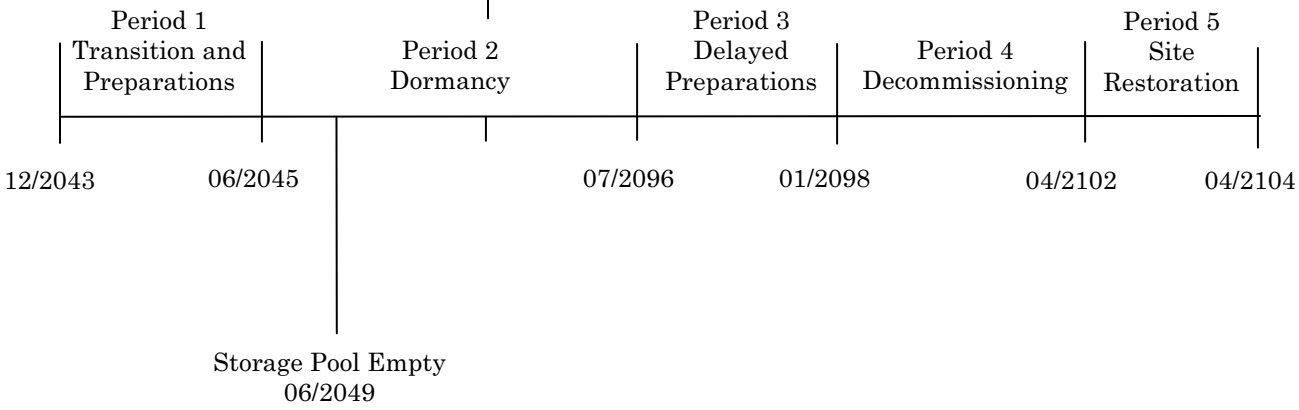
FIGURE 4.4
DECOMMISSIONING TIMELINE
SAFSTOR
(not to scale)

Unit 1
(Shutdown April 17, 2042)



Spent Fuel Storage

Unit 2
(Shutdown December 16, 2043)



5. RADIOACTIVE WASTES

The objectives of the decommissioning process are the removal of all radioactive material from the site that would restrict its future use and the termination of the NRC license(s). This currently requires the remediation of all radioactive material at the site in excess of applicable legal limits. Under the Atomic Energy Act,[31] the NRC is responsible for protecting the public from sources of ionizing radiation. Title 10 of the Code of Federal Regulations delineates the production, utilization, and disposal of radioactive materials and processes. In particular, §71 defines radioactive material as it pertains to packaging and transportation and §61 specifies its disposition.

Most of the materials being transported for controlled burial are categorized as Low Specific Activity (LSA) or Surface Contaminated Object (SCO) materials containing Type A quantities, as defined in 49 CFR §173-178. Shipping containers are required to be Industrial Packages (IP-1, IP-2 or IP-3, as defined in subpart 173.411). For this study, commercially available steel containers are presumed to be used for the disposal of piping, small components, and concrete. Larger components can serve as their own containers, with proper closure of all openings, access ways, and penetrations.

The volumes of radioactive waste generated during the various decommissioning activities at the site is shown on a line-item basis in Appendices C, D, and E and summarized in Tables 5.1 through 5.3. The quantified waste volume summaries shown in these tables are consistent with §61 classifications. The volumes are calculated based on the exterior dimensions for containerized material and on the displaced volume of components serving as their own waste containers.

The reactor vessel and internals are categorized as large quantity shipments and, accordingly, will be shipped in reusable, shielded truck casks with disposable liners. In calculating disposal costs, the burial fees are applied against the liner volume, as well as the special handling requirements of the payload. Packaging efficiencies are lower for the highly activated materials (greater than Type A quantity waste), where high concentrations of gamma-emitting radionuclides limit the capacity of the shipping canisters.

No process system containing/handling radioactive substances at shutdown is presumed to meet material release criteria by decay alone, i.e., systems radioactive at shutdown will still be radioactive over the time period during which the decommissioning is accomplished, due to the presence of long-lived radionuclides.

While the dose rates decrease with time, radionuclides such as ^{137}Cs will still control the disposition requirements.

The waste material generated in the decontamination and dismantling of LaSalle County is primarily generated during Period 2 of the DECON alternative and Period 4 of the deferred alternatives. Material that is considered potentially contaminated when removed from the radiologically controlled area is sent to processing facilities in Tennessee for conditioning and disposal. Heavily contaminated components and activated materials are routed for controlled disposal. The disposal volumes reported in the tables reflect the savings resulting from reprocessing and recycling.

Disposal fees are calculated using current disposal agreements, with surcharges added for the highly activated components, for example, generated in the segmentation of the reactor vessel. The cost to dispose of the majority of the material generated from the decontamination and dismantling activities is based upon Exelon's current disposal agreement with EnergySolutions for its facility in Clive, Utah.

Since the EnergySolutions facility is not able to accept the higher activity waste (Class B and C) generated in the decontamination of the reactor vessel and segmentation of the components closest to the core, the cost of disposal of this material at a yet-to-be determined facility are based upon Exelon's previously negotiated cost of disposal at the Barnwell site.

TABLE 5.1
DECOMMISSIONING WASTE SUMMARY
DECON

Waste	Cost Basis	Class [1]	Waste Volume (cubic feet)	Mass (pounds)
Low-Level Radioactive Waste (near-surface disposal)	EnergySolutions	A	347,330	28,054,418
	Barnwell	B	10,423	1,329,245
	Barnwell	C	2,870	224,010
Greater than Class C (geologic repository)	Spent Fuel Equivalent	GTCC	1,342	219,820
Processed/Conditioned (off-site recycling center)	Recycling Vendors	A	1,158,691	48,952,700
Total [2]			1,520,656	78,780,193
Scrap Metal				239,662,000

[1] Waste is classified according to the requirements as delineated in Title 10 CFR, Part 61.55
[2] Columns may not add due to rounding.

TABLE 5.2
DECOMMISSIONING WASTE SUMMARY
DELAYED DECON

Waste	Cost Basis	Class [1]	Waste Volume (cubic feet)	Mass (pounds)
Low-Level Radioactive Waste (near-surface disposal)	EnergySolutions	A	218,238	15,972,520
	Barnwell	B	9,014	1,143,931
	Barnwell	C	1,263	149,270
Greater than Class C (geologic repository)	Spent Fuel Equivalent	GTCC	1,342	219,820
Processed/Conditioned (off-site recycling center)	Recycling Vendors	A	1,368,652	57,572,900
Total [2]			1,598,509	75,058,441
Scrap Metal				239,102,000

[1] Waste is classified according to the requirements as delineated in Title 10 CFR, Part 61.55
[2] Columns may not add due to rounding.

TABLE 5.3
DECOMMISSIONING WASTE SUMMARY
SAFSTOR

Waste	Cost Basis	Class [1]	Waste Volume (cubic feet)	Mass (pounds)
Low-Level Radioactive Waste (near-surface disposal)	EnergySolutions	A	247,950	16,796,526
	Barnwell	B	3,506	406,400
	Barnwell	C	1,304	146,510
Greater than Class C (geologic repository)	Spent Fuel Equivalent	GTCC	1,342	219,820
Processed/Conditioned (off-site recycling center)	Recycling Vendors	A	1,372,013	57,876,560
Total [2]			1,626,115	75,445,816
Scrap Metal				239,102,000

[1] Waste is classified according to the requirements as delineated in Title 10 CFR, Part 61.55
[2] Columns may not add due to rounding.

6. RESULTS

The analysis to estimate the costs to decommission LaSalle County relied upon the site-specific, technical information developed for a previous analysis prepared in 2004. While not an engineering study, the estimates provide Exelon with sufficient information to assess its financial obligations, as they pertain to the eventual decommissioning of the nuclear station.

The estimates described in this report are based on numerous fundamental assumptions, including regulatory requirements, project contingencies, low-level radioactive waste disposal practices, high-level radioactive waste management options, and site restoration requirements. The decommissioning scenarios assume continued operation of the plant's spent fuel pools for a minimum of five and one-half years following the cessation of operations for continued cooling of the assemblies. For the DECON and SAFSTOR scenarios, the ISFSI is expanded to accommodate the spent fuel, once sufficiently cooled, until such time that the DOE can complete the transfer of the assemblies to its repository. The spent fuel remains in the storage pools in the Delayed-DECON alternative.

The cost projected to promptly decommission (DECON) LaSalle County is estimated to be $1,451.5 million. The majority of this cost (approximately 77.2%) is associated with the physical decontamination and dismantling of the nuclear unit so that the license can be terminated. Another 15.1% is associated with the management, interim storage, and eventual transfer of the spent fuel. The remaining 7.8% is for the demolition of the designated structures and limited restoration of the site.

The primary cost contributors, identified in Tables 6.1 through 6.3, are either labor-related or associated with the management and disposition of the radioactive waste. Program management is the largest single contributor to the overall cost. The magnitude of the expense is a function of both the size of the organization required to manage the decommissioning, as well as the duration of the program. It is assumed, for purposes of this analysis, that Exelon will oversee the decommissioning program, using a DOC to manage the decommissioning labor force and the associated subcontractors. The size and composition of the management organization varies with the decommissioning phase and associated site activities. However, once the operating license is terminated, the staff is substantially reduced for the conventional demolition and restoration of the site, and the long-term care of the spent fuel (for the DECON alternative).

As described in this report, the spent fuel pools will remain operational for a minimum of five and one-half years following the cessation of operations. The pools

will be isolated and an independent spent fuel island created. This will allow decommissioning operations to proceed in and around the pool areas. Over the five and one-half year period, the spent fuel will be packaged into transportable steel canisters for loading into a DOE-provided transport cask (DECON and SAFSTOR alternatives). The canisters will be stored in concrete overpacks at the ISFSI until the DOE is able to receive them. Dry storage of the fuel under a separate license provides additional flexibility in the event the DOE is not able to meet the current timetable for completing the transfer of assemblies to an off-site facility and minimizes the associated caretaking expenses.

The cost for waste disposal includes only those costs associated with the controlled disposition of the low-level radioactive waste generated from decontamination and dismantling activities, including plant equipment and components, structural material, filters, resins and dry-active waste. As described in Section 5, disposal of the majority of the radioactive material is at EnergySolutions facility in Clive, Utah or some alternative facility. Highly activated components, requiring additional isolation from the environment, are packaged for geologic disposal. Disposal of these components is based upon a cost equivalent for spent fuel.

A significant portion of the metallic waste is designated for additional processing and treatment at an off-site facility. Processing reduces the volume of material requiring controlled disposal through such techniques and processes as survey and sorting, decontamination, and volume reduction. The material that cannot be unconditionally released is packaged for controlled disposal at one of the currently operating facilities. The cost identified in the summary table for processing is all-inclusive, incorporating the ultimate disposition of the material.

Removal costs reflect the labor-intensive nature of the decommissioning process, as well as the management controls required to ensure a safe and successful program. Decontamination and packaging costs also have a large labor component that is based upon prevailing union wages. Non-radiological demolition is a natural extension of the decommissioning process. The methods employed in decontamination and dismantling are generally destructive and indiscriminate in inflicting collateral damage. With a work force mobilized to support decommissioning operations, non-radiological demolition can be an integrated activity and a logical expansion of the work being performed in the process of terminating the operating license. Prompt demolition reduces future liabilities and can be more cost effective than deferral, due to the deterioration of the facilities (and therefore the working conditions) with time.

The reported cost for transport includes the tariffs and surcharges associated with moving large components and/or overweight shielded casks overland, as well as the

general expense, e.g., labor and fuel, of transporting material to the destinations identified in this report. For purposes of this analysis, material is primarily moved overland by truck.

Decontamination is used to reduce the plant's radiation fields and minimize worker exposure. Slightly contaminated material or material located within a contaminated area is sent to an off-site processing center, i.e., this analysis does not assume that contaminated plant components and equipment can be decontaminated for uncontrolled release in-situ. Centralized processing centers have proven to be a more economical means of handling the large volumes of material produced in the dismantling of a nuclear unit.

License termination survey costs are associated with the labor intensive and complex activity of verifying that contamination has been removed from the site to the levels specified by the regulating agency. This process involves a systematic survey of all remaining plant surface areas and surrounding environs, sampling, isotopic analysis, and documentation of the findings. The status of any plant components and materials not removed in the decommissioning process will also require confirmation and will add to the expense of surveying the facilities alone.

The remaining costs include allocations for heavy equipment and temporary services, as well as for other expenses such as regulatory fees and the premiums for nuclear insurance. While site operating costs are greatly reduced following the final cessation of plant operations, certain administrative functions do need to be maintained either at a basic functional or regulatory level.

TABLE 6.1
SUMMARY OF DECOMMISSIONING COST ELEMENTS
DECON
(thousands of 2009 dollars)

Cost Element	Total	Percentage
Decontamination	42,821	3.0
Removal	264,200	18.2
Packaging	40,909	2.8
Transportation	25,293	1.7
Waste Disposal	160,354	11.0
Off-site Waste Processing	26,459	1.8
Program Management [1]	568,207	39.1
Spent Fuel Pool Isolation	18,572	1.3
Spent Fuel Management [2]	179,204	12.3
Insurance and Regulatory Fees	21,558	1.5
Energy	18,743	1.3
Characterization and Licensing Surveys	42,870	3.0
Property Taxes	26,701	1.8
Miscellaneous Equipment	12,892	0.9
Site O&M	2,762	0.2
Total [3]	1,451,544	100.0

Cost Element	Total	Percentage
NRC License Termination	1,120,226	77.2
Spent Fuel Management	218,596	15.1
Site Restoration	112,723	7.8
Total [3]	1,451,544	100.0

[1] Includes security and engineering costs
[2] Excludes program management costs (staffing) but includes costs for spent fuel loading/transfer/spent fuel pool O&M and EP fees
[3] Columns may not add due to rounding

TABLE 6.2
SUMMARY OF DECOMMISSIONING COST ELEMENTS
DELAYED DECON
(thousands of 2009 dollars)

Cost Element	Total	Percentage
Decontamination	48,480	3.6
Removal	252,519	18.7
Packaging	31,780	2.4
Transportation	16,621	1.2
Waste Disposal	88,063	6.5
Off-site Waste Processing	31,118	2.3
Program Management [1]	625,690	46.4
Spent Fuel Pool Isolation	18,572	1.4
Spent Fuel Management [2]	63,789	4.7
Insurance and Regulatory Fees	30,313	2.2
Energy	26,448	2.0
Characterization and Licensing Surveys	45,810	3.4
Property Taxes	42,334	3.1
Miscellaneous Equipment	20,461	1.5
Site O&M	6,011	0.4
Total [3]	1,348,009	100.0

Cost Element	Total	Percentage
NRC License Termination	1,011,820	75.1
Spent Fuel Management	220,584	16.4
Site Restoration	115,606	8.6
Total [3]	1,348,009	100.0

[1] Includes security and engineering costs
[2] Excludes program management costs (staffing) but includes costs for spent fuel loading/transfer/spent fuel pool O&M and EP fees
[3] Columns may not add due to rounding

TABLE 6.3
SUMMARY OF DECOMMISSIONING COST ELEMENTS
SAFSTOR
(thousands of 2009 dollars)

Cost Element	Total	Percentage
Decontamination	47,619	2.8
Removal	255,496	15.2
Packaging	29,285	1.7
Transportation	14,116	0.8
Waste Disposal	71,553	4.3
Off-site Waste Processing	31,282	1.9
Program Management [1]	733,181	43.7
Spent Fuel Pool Isolation	18,572	1.1
Spent Fuel Management [2]	177,037	10.5
Insurance and Regulatory Fees	79,189	4.7
Energy	37,080	2.2
Characterization and Licensing Surveys	45,810	2.7
Property Taxes	79,273	4.7
Miscellaneous Equipment	41,613	2.5
Site O&M	17,584	1.0
Total [3]	1,678,689	100.0

Cost Element	Total	Percentage
NRC License Termination	1,317,462	78.5
Spent Fuel Management	245,597	14.6
Site Restoration	115,630	6.9
Total [3]	1,678,689	100.0

[1] Includes security and engineering costs
[2] Excludes program management costs (staffing) but includes costs for spent fuel loading/transfer/spent fuel pool O&M and EP fees
[3] Columns may not add due to rounding

7. REFERENCES

1 "Decommissioning Cost Analysis for the LaSalle County Station," Document No. E16-1455-011, Rev. 0, TLG Services, Inc., January 2005

2. U.S. Code of Federal Regulations, Title 10, Parts 30, 40, 50, 51, 70 and 72, "General Requirements for Decommissioning Nuclear Facilities," Nuclear Regulatory Commission, Federal Register Volume 53, Number 123 (p 24018 et seq.), June 27, 1988

3. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.159, "Assuring the Availability of Funds for Decommissioning Nuclear Reactors," October 2003

4. U.S. Code of Federal Regulations, Title 10, Part 20, Subpart E, "Radiological Criteria for License Termination"

5. U.S. Code of Federal Regulations, Title 10, Parts 20 and 50, "Entombment Options for Power Reactors," Advanced Notice of Proposed Rulemaking, Federal Register Volume 66, Number 200, October 16, 2001

6. U.S. Code of Federal Regulations, Title 10, Parts 2, 50 and 51, "Decommissioning of Nuclear Power Reactors," Nuclear Regulatory Commission, Federal Register Volume 61 (p 39278 et seq.), July 29, 1996

7. "Nuclear Waste Policy Act of 1982 and Amendments," U.S. Department of Energy's Office of Civilian Radioactive Management, 1982

8. Settlement: Exelon and the U.S. Department of Justice, in close consultation with the DOE, under which the government will reimburse Exelon for costs associated with storage of spent fuel at the company's nuclear stations pending DOE fulfilling its contractual obligation to accept commercial spent nuclear fuel. Additional amounts reimbursed annually for future costs. August 5, 2004

9. U.S. Code of Federal Regulations, Title 10, Part 50, "Domestic Licensing of Production and Utilization Facilities," Subpart 54 (bb), "Conditions of Licenses"

10. "Low-Level Radioactive Waste Policy," Public Law 96-573, 1980

11. "Low-Level Radioactive Waste Policy Amendments Act of 1985," Public Law 99-240, January 15, 1986

7. REFERENCES
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12. U.S. Code of Federal Regulations, Title 10, Part 20, Subpart E, "Radiological Criteria for License Termination," Federal Register, Volume 62, Number 139 (p 39058 et seq.), July 21, 1997

13. "Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination," EPA Memorandum OSWER No. 9200.4-18, August 22, 1997

14. U.S. Code of Federal Regulations, Title 40, Part 141.16, "Maximum contaminant levels for beta particle and photon radioactivity from man-made radionuclides in community water systems"

15. "Memorandum of Understanding Between the Environmental Protection Agency and the Nuclear Regulatory Commission: Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites," OSWER 9295.8-06a, October 9, 2002

16. "Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)," NUREG-1575, Rev. 1, EPA 402-R-97-016, Rev. 1, August 2000

17. T.S. LaGuardia et al., "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates," AIF/NESP-036, May 1986

18. W.J. Manion and T.S. LaGuardia, "Decommissioning Handbook," U.S. Department of Energy, DOE/EV/10128-1, November 1980

19 "Building Construction Cost Data 2009," Robert Snow Means Company, Inc., Kingston, Massachusetts

20. Project and Cost Engineers' Handbook, Second Edition, p. 239, American Association of Cost Engineers, Marcel Dekker, Inc., New York, New York, 1984

21. DOE/RW-0351, "Civilian Radioactive Waste Management System Waste Acceptance System Requirements Document", Revision 5, May 31, 2007

22. "Civilian Radioactive Waste Management System Requirements Document, DOE/RW-0406, Revision 8, September 2007

7. REFERENCES
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23. "Strategy for Management and Disposal of Greater-Than-Class C Low-Level Radioactive Waste," Federal Register Volume 60, Number 48 (p 13424 et seq.), March 1995

24. U.S. Department of Transportation, Title 49 of the Code of Federal Regulations, "Transportation," Parts 173 through 178, 2009

25. Tri- Tri-State Motor Transit Company, published tariffs, Interstate Commerce Commission (ICC), Docket No. MC-427719 Rules Tariff, March 2004, Radioactive Materials Tariff, January 2008

26. J.C. Evans et al., "Long-Lived Activation Products in Reactor Materials" NUREG/CR-3474, Pacific Northwest Laboratory for the Nuclear Regulatory Commission. August 1984

27. R.I. Smith, G.J. Konzek, W.E. Kennedy, Jr., "Technology, Safety and Costs of Decommissioning a Reference Pressurized Water Reactor Power Station," NUREG/CR-0130 and addenda, Pacific Northwest Laboratory for the Nuclear Regulatory Commission. June 1978

28. H.D. Oak, et al., "Technology, Safety and Costs of Decommissioning a Reference Boiling Water Reactor Power Station," NUREG/CR-0672 and addenda, Pacific Northwest Laboratory for the Nuclear Regulatory Commission. June 1980

29. "Financial Protection Requirements for Permanently Shutdown Nuclear Power Reactors," 10 CFR Parts 50 and 140, Federal Register Notice, Vol. 62, No. 210, October 30, 1997

30. "Microsoft Project 2003," Microsoft Corporation, Redmond, WA, 2003

31. "Atomic Energy Act of 1954," (68 Stat. 919)

APPENDIX A

UNIT COST FACTOR DEVELOPMENT

APPENDIX A
UNIT COST FACTOR DEVELOPMENT

Example: Unit Factor for Removal of Contaminated Heat Exchanger < 3,000 lbs.

1. SCOPE

Heat exchangers weighing < 3,000 lbs. will be removed in one piece using a crane or small hoist. They will be disconnected from the inlet and outlet piping. The heat exchanger will be sent to the waste processing area.

2. CALCULATIONS

Act ID	Activity Description	Activity Duration (minutes)	Critical Duration (minutes)*
a	Remove insulation	60	(b)
b	Mount pipe cutters	60	60
c	Install contamination controls	20	(b)
d	Disconnect inlet and outlet lines	60	60
e	Cap openings	20	(d)
f	Rig for removal	30	30
g	Unbolt from mounts	30	30
h	Remove contamination controls	15	15
i	Remove, wrap, send to waste processing area	60	60
	Totals (Activity/Critical)	355	255

Duration adjustment(s):	
+ Respiratory protection adjustment (50% of critical duration)	128
+ Radiation/ALARA adjustment (37% of critical duration)	95
Adjusted work duration	478
+ Protective clothing adjustment (30% of adjusted duration)	143
Productive work duration	621
+ Work break adjustment (8.33 % of productive duration)	52
Total work duration (minutes)	673

***** Total duration = 11.217 hr *****

* Alpha designators indicate activities that can be performed in parallel

APPENDIX A
(Continued)

3. LABOR REQUIRED

Crew	Number	Duration (Hours)	Rate ($/hr)	Cost
Laborers	3.00	11.217	44.56	1499.49
Craftsmen	2.00	11.217	59.67	1338.64
Foreman	1.00	11.217	61.21	686.59
General Foreman	0.25	11.217	63.08	176.89
Fire Watch	0.05	11.217	44.56	24.99
Health Physics Technician	1.00	11.217	51.42	576.78
Total labor cost				$4,303.38

4. EQUIPMENT & CONSUMABLES COSTS

Equipment Costs	none
Consumables/Materials Costs	
• Blotting paper 50 @ $0.50/sq ft {1}	$25.00
• Plastic sheets/bags 50 @ $0.37/sq ft {2}	$18.50
• Gas torch consumables 1 @ $8.70 x 1 /hr {3}	$8.70
Subtotal cost of equipment and materials	$52.20
Overhead & profit on equipment and materials @ 16.25 %	$8.48
Total costs, equipment & material	$60.68

TOTAL COST:

Removal of contaminated heat exchanger <3000 pounds:	$4,364.06
Total labor cost:	$4,303.38
Total equipment/material costs:	$60.68
Total craft labor man-hours required per unit:	81.88

5. NOTES AND REFERENCES

- Work difficulty factors were developed in conjunction with the Atomic Industrial Forum's (now NEI) program to standardize nuclear decommissioning cost estimates and are delineated in Volume 1, Chapter 5 of the "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates," AIF/NESP-036, May 1986.

- References for equipment & consumables costs:

    1. www.mcmaster.com online catalog - Spill Control (7193T88)
    2. R.S. Means (2009) 01 56 13.60-0200, page 20
    3. R.S. Means (2009) 01 54 33.40-6360, page 626

- Material and consumable costs were adjusted using the regional indices for LaSalle County, Illinois.

APPENDIX B

UNIT COST FACTOR LISTING
(DECON: Power Block Structures Only)

APPENDIX B

UNIT COST FACTOR LISTING
(Power Block Structures Only)

Unit Cost Factor	Cost/Unit
Removal of clean instrument and sampling tubing, $/linear foot	0.49
Removal of clean pipe 0.25 to 2 inches diameter, $/linear foot	5.20
Removal of clean pipe >2 to 4 inches diameter, $/linear foot	7.41
Removal of clean pipe >4 to 8 inches diameter, $/linear foot	14.60
Removal of clean pipe >8 to 14 inches diameter, $/linear foot	28.17
Removal of clean pipe >14 to 20 inches diameter, $/linear foot	36.53
Removal of clean pipe >20 to 36 inches diameter, $/linear foot	53.78
Removal of clean pipe >36 inches diameter, $/linear foot	63.93
Removal of clean valve >2 to 4 inches	95.95
Removal of clean valve >4 to 8 inches	146.03
Removal of clean valve >8 to 14 inches	281.72
Removal of clean valve >14 to 20 inches	365.32
Removal of clean valve >20 to 36 inches	537.75
Removal of clean valve >36 inches	639.32
Removal of clean pipe hanger for small bore piping	31.11
Removal of clean pipe hanger for large bore piping	113.77
Removal of clean pump, <300 pound	244.33
Removal of clean pump, 300-1000 pound	683.75
Removal of clean pump, 1000-10,000 pound	2,708.74
Removal of clean pump, >10,000 pound	5,231.61
Removal of clean pump motor, 300-1000 pound	288.19
Removal of clean pump motor, 1000-10,000 pound	1,129.00
Removal of clean pump motor, >10,000 pound	2,540.24
Removal of clean heat exchanger <3000 pound	1,449.65
Removal of clean heat exchanger >3000 pound	3,639.49
Removal of clean feedwater heater/deaerator	10,294.03
Removal of clean moisture separator/reheater	21,208.19
Removal of clean tank, <300 gallons	314.53
Removal of clean tank, 300-3000 gallon	995.55
Removal of clean tank, >3000 gallons, $/square foot surface area	8.36

APPENDIX B

UNIT COST FACTOR LISTING
(Power Block Structures Only)

Unit Cost Factor	Cost/Unit
Removal of clean electrical equipment, <300 pound	134.27
Removal of clean electrical equipment, 300-1000 pound	469.21
Removal of clean electrical equipment, 1000-10,000 pound	938.41
Removal of clean electrical equipment, >10,000 pound	2,226.44
Removal of clean electrical transformer < 30 tons	1,546.22
Removal of clean electrical transformer > 30 tons	4,452.86
Removal of clean standby diesel generator, <100 kW	1,579.34
Removal of clean standby diesel generator, 100 kW to 1 MW	3,525.18
Removal of clean standby diesel generator, >1 MW	7,297.85
Removal of clean electrical cable tray, $/linear foot	12.49
Removal of clean electrical conduit, $/linear foot	5.45
Removal of clean mechanical equipment, <300 pound	134.27
Removal of clean mechanical equipment, 300-1000 pound	469.21
Removal of clean mechanical equipment, 1000-10,000 pound	938.41
Removal of clean mechanical equipment, >10,000 pound	2,226.44
Removal of clean HVAC equipment, <300 pound	162.37
Removal of clean HVAC equipment, 300-1000 pound	563.78
Removal of clean HVAC equipment, 1000-10,000 pound	1,123.63
Removal of clean HVAC equipment, >10,000 pound	2,226.44
Removal of clean HVAC ductwork, $/pound	0.52
Removal of contaminated instrument and sampling tubing, $/linear foot	1.54
Removal of contaminated pipe 0.25 to 2 inches diameter, $/linear foot	21.45
Removal of contaminated pipe >2 to 4 inches diameter, $/linear foot	36.73
Removal of contaminated pipe >4 to 8 inches diameter, $/linear foot	58.79
Removal of contaminated pipe >8 to 14 inches diameter, $/linear foot	114.88
Removal of contaminated pipe >14 to 20 inches diameter, $/linear foot	137.89
Removal of contaminated pipe >20 to 36 inches diameter, $/linear foot	190.79
Removal of contaminated pipe >36 inches diameter, $/linear foot	225.51
Removal of contaminated valve >2 to 4 inches	443.32
Removal of contaminated valve >4 to 8 inches	536.01

APPENDIX B

UNIT COST FACTOR LISTING
(Power Block Structures Only)

Unit Cost Factor	Cost/Unit
Removal of contaminated valve >8 to 14 inches	1,098.29
Removal of contaminated valve >14 to 20 inches	1,394.88
Removal of contaminated valve >20 to 36 inches	1,857.37
Removal of contaminated valve >36 inches	2,204.52
Removal of contaminated pipe hanger for small bore piping	143.99
Removal of contaminated pipe hanger for large bore piping	477.43
Removal of contaminated pump, <300 pound	954.17
Removal of contaminated pump, 300-1000 pound	2,217.18
Removal of contaminated pump, 1000-10,000 pound	7,218.18
Removal of contaminated pump, >10,000 pound	17,577.56
Removal of contaminated pump motor, 300-1000 pound	946.42
Removal of contaminated pump motor, 1000-10,000 pound	2,942.19
Removal of contaminated pump motor, >10,000 pound	6,605.61
Removal of contaminated heat exchanger <3000 pound	4,364.06
Removal of contaminated heat exchanger >3000 pound	12,646.33
Removal of contaminated feedwater heater/deaerator	31,008.18
Removal of contaminated moisture separator/reheater	67,818.66
Removal of contaminated tank, <300 gallons	1,587.89
Removal of contaminated tank, >300 gallons, $/square foot	31.05
Removal of contaminated electrical equipment, <300 pound	742.85
Removal of contaminated electrical equipment, 300-1000 pound	1,813.23
Removal of contaminated electrical equipment, 1000-10,000 pound	3,492.50
Removal of contaminated electrical equipment, >10,000 pound	6,840.09
Removal of contaminated electrical cable tray, $/linear foot	35.77
Removal of contaminated electrical conduit, $/linear foot	17.48
Removal of contaminated mechanical equipment, <300 pound	826.38
Removal of contaminated mechanical equipment, 300-1000 pound	2,002.41
Removal of contaminated mechanical equipment, 1000-10,000 pound	3,850.56
Removal of contaminated mechanical equipment, >10,000 pound	6,840.09
Removal of contaminated HVAC equipment, <300 pound	826.38

APPENDIX B

UNIT COST FACTOR LISTING
(Power Block Structures Only)

Unit Cost Factor	Cost/Unit
Removal of contaminated HVAC equipment, 300-1000 pound	2,002.41
Removal of contaminated HVAC equipment, 1000-10,000 pound	3,850.56
Removal of contaminated HVAC equipment, >10,000 pound	6,840.09
Removal of contaminated HVAC ductwork, $/pound	2.12
Removal/plasma arc cut of contaminated thin metal components, $/linear in.	3.96
Additional decontamination of surface by washing, $/square foot	8.14
Additional decontamination of surfaces by hydrolasing, $/square foot	35.77
Decontamination rig hook up and flush, $/ 250 foot length	6,965.99
Chemical flush of components/systems, $/gallon	14.49
Removal of clean standard reinforced concrete, $/cubic yard	133.21
Removal of grade slab concrete, $/cubic yard	180.48
Removal of clean concrete floors, $/cubic yard	345.16
Removal of sections of clean concrete floors, $/cubic yard	1,044.18
Removal of clean heavily rein concrete w/#9 rebar, $/cubic yard	225.02
Removal of contaminated heavily rein concrete w/#9 rebar, $/cubic yard	2,077.78
Removal of clean heavily rein concrete w/#18 rebar, $/cubic yard	284.45
Removal of contaminated heavily rein concrete w/#18 rebar, $/cubic yard	2,748.01
Removal heavily rein concrete w/#18 rebar & steel embedments, $/cubic yard	441.29
Removal of below-grade suspended floors, $/cubic yard	345.16
Removal of clean monolithic concrete structures, $/cubic yard	876.57
Removal of contaminated monolithic concrete structures, $/cubic yard	2,068.51
Removal of clean foundation concrete, $/cubic yard	686.99
Removal of contaminated foundation concrete, $/cubic yard	1,926.71
Explosive demolition of bulk concrete, $/cubic yard	29.89
Removal of clean hollow masonry block wall, $/cubic yard	93.99
Removal of contaminated hollow masonry block wall, $/cubic yard	318.45
Removal of clean solid masonry block wall, $/cubic yard	93.99
Removal of contaminated solid masonry block wall, $/cubic yard	318.45
Backfill of below-grade voids, $/cubic yard	21.09
Removal of subterranean tunnels/voids, $/linear foot	109.98

APPENDIX B

UNIT COST FACTOR LISTING
(Power Block Structures Only)

Unit Cost Factor	Cost/Unit
Placement of concrete for below-grade voids, $/cubic yard	123.48
Excavation of clean material, $/cubic yard	2.79
Excavation of contaminated material, $/cubic yard	39.47
Removal of clean concrete rubble (tipping fee included), $/cubic yard	21.48
Removal of contaminated concrete rubble, $/cubic yard	24.64
Removal of building by volume, $/cubic foot	0.29
Removal of clean building metal siding, $/square foot	1.14
Removal of contaminated building metal siding, $/square foot	4.02
Removal of standard asphalt roofing, $/square foot	2.29
Removal of transite panels, $/square foot	2.11
Scarifying contaminated concrete surfaces (drill & spall), $/square foot	12.39
Scabbling contaminated concrete floors, $/square foot	7.61
Scabbling contaminated concrete walls, $/square foot	20.22
Scabbling contaminated ceilings, $/square foot	69.50
Scabbling structural steel, $/square foot	6.29
Removal of clean overhead crane/monorail < 10 ton capacity	657.77
Removal of contaminated overhead crane/monorail < 10 ton capacity	1,852.82
Removal of clean overhead crane/monorail >10-50 ton capacity	1,578.64
Removal of contaminated overhead crane/monorail >10-50 ton capacity	4,445.99
Removal of polar crane > 50 ton capacity	6,576.02
Removal of gantry crane > 50 ton capacity	27,830.40
Removal of structural steel, $/pound	0.21
Removal of clean steel floor grating, $/square foot	4.63
Removal of contaminated steel floor grating, $/square foot	13.43
Removal of clean free standing steel liner, $/square foot	12.53
Removal of contaminated free standing steel liner, $/square foot	36.36
Removal of clean concrete-anchored steel liner, $/square foot	6.27
Removal of contaminated concrete-anchored steel liner, $/square foot	42.35
Placement of scaffolding in clean areas, $/square foot	16.04
Placement of scaffolding in contaminated areas, $/square foot	26.33

APPENDIX B

UNIT COST FACTOR LISTING
(Power Block Structures Only)

Unit Cost Factor	Cost/Unit
Landscaping with topsoil, $/acre	18,124.88
Cost of CPC B-88 LSA box & preparation for use	1,938.92
Cost of CPC B-25 LSA box & preparation for use	1,602.73
Cost of CPC B-12V 12 gauge LSA box & preparation for use	1,446.32
Cost of CPC B-144 LSA box & preparation for use	8,443.56
Cost of LSA drum & preparation for use	169.75
Cost of cask liner for CNSI 14 195 cask	239.43
Cost of cask liner for CNSI 8 120A cask (resins)	7,072.43
Cost of cask liner for CNSI 8 120A cask (filters)	7,525.89
Decontamination of surfaces with vacuuming, $/square foot	0.75

APPENDIX C

DETAILED COST ANALYSIS

DECON

Table C-1
LaSalle County Station, Unit 1
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Burial Volumes Class B Cu. Feet	Burial Volumes Class C Cu. Feet	Burial Volumes GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
PERIOD 1a - Shutdown through Transition																					
Period 1a Direct Decommissioning Activities																					
1a.1.1	Prepare preliminary decommissioning cost	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,300
1a.1.2	Notification of Cessation of Operations									a											
1a.1.3	Remove fuel & source material									n/a											
1a.1.4	Notification of Permanent Defueling									a											
1a.1.5	Deactivate plant systems & process waste									a											
1a.1.6	Prepare and submit PSDAR	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
1a.1.7	Review plant dwgs & specs.	-	-	-	-	-	-	543	81	624	624	-	-	-	-	-	-	-	-	-	4,600
1a.1.8	Perform detailed rad survey									a											
1a.1.9	Estimate by-product inventory	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
1a.1.10	End product description	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
1a.1.11	Detailed by-product inventory	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,300
1a.1.12	Define major work sequence	-	-	-	-	-	-	885	133	1,018	1,018	-	-	-	-	-	-	-	-	-	7,500
1a.1.13	Perform SER and EA	-	-	-	-	-	-	366	55	421	421	-	-	-	-	-	-	-	-	-	3,100
1a.1.14	Perform Site-Specific Cost Study	-	-	-	-	-	-	590	89	679	679	-	-	-	-	-	-	-	-	-	5,000
1a.1.15	Prepare/submit License Termination Plan	-	-	-	-	-	-	483	73	556	556	-	-	-	-	-	-	-	-	-	4,096
1a.1.16	Receive NRC approval of termination plan									a											
Activity Specifications																					
1a.1.17.1	Plant & temporary facilities	-	-	-	-	-	-	581	87	668	601	-	67	-	-	-	-	-	-	-	4,920
1a.1.17.2	Plant systems	-	-	-	-	-	-	492	74	565	509	-	57	-	-	-	-	-	-	-	4,167
1a.1.17.3	NSSS Decontamination Flush	-	-	-	-	-	-	59	9	68	68	-	-	-	-	-	-	-	-	-	500
1a.1.17.4	Reactor internals	-	-	-	-	-	-	838	126	964	964	-	-	-	-	-	-	-	-	-	7,100
1a.1.17.5	Reactor vessel	-	-	-	-	-	-	767	115	882	882	-	-	-	-	-	-	-	-	-	6,500
1a.1.17.6	Sacrificial shield	-	-	-	-	-	-	59	9	68	68	-	-	-	-	-	-	-	-	-	500
1a.1.17.7	Moisture separators/reheaters	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
1a.1.17.8	Reinforced concrete	-	-	-	-	-	-	189	28	217	109	-	109	-	-	-	-	-	-	-	1,600
1a.1.17.9	Main Turbine	-	-	-	-	-	-	246	37	283	283	-	-	-	-	-	-	-	-	-	2,088
1a.1.17.10	Main Condensers	-	-	-	-	-	-	246	37	283	283	-	-	-	-	-	-	-	-	-	2,088
1a.1.17.11	Pressure suppression structure	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
1a.1.17.12	Drywell	-	-	-	-	-	-	189	28	217	217	-	-	-	-	-	-	-	-	-	1,600
1a.1.17.13	Plant structures & buildings	-	-	-	-	-	-	368	55	423	212	-	212	-	-	-	-	-	-	-	3,120
1a.1.17.14	Waste management	-	-	-	-	-	-	543	81	624	624	-	-	-	-	-	-	-	-	-	4,600
1a.1.17.15	Facility & site closeout	-	-	-	-	-	-	106	16	122	61	-	61	-	-	-	-	-	-	-	900
1a.1.17	Total	-	-	-	-	-	-	5,037	756	5,793	5,288	-	505	-	-	-	-	-	-	-	42,683
Planning & Site Preparations																					
1a.1.18	Prepare dismantling sequence	-	-	-	-	-	-	283	42	326	326	-	-	-	-	-	-	-	-	-	2,400
1a.1.19	Plant prep. & temp. svces	-	-	-	-	-	-	2,800	420	3,220	3,220	-	-	-	-	-	-	-	-	-	-
1a.1.20	Design water clean-up system	-	-	-	-	-	-	165	25	190	190	-	-	-	-	-	-	-	-	-	1,400
1a.1.21	Rigging/Cont. Cntrl Envlps/tooling/etc.	-	-	-	-	-	-	2,200	330	2,530	2,530	-	-	-	-	-	-	-	-	-	-
1a.1.22	Procure casks/liners & containers	-	-	-	-	-	-	145	22	167	167	-	-	-	-	-	-	-	-	-	1,230
1a.1	Subtotal Period 1a Activity Costs	-	-	-	-	-	-	14,277	2,141	16,418	15,913	-	505	-	-	-	-	-	-	-	78,609
Period 1a Additional Costs																					
1a.2.1	ISFSI Expansion	-	-	-	-	-	-	10,400	1,560	11,960	-	11,960	-	-	-	-	-	-	-	-	-
1a.2	Subtotal Period 1a Additional Costs	-	-	-	-	-	-	10,400	1,560	11,960	-	11,960	-	-	-	-	-	-	-	-	-
Period 1a Collateral Costs																					
1a.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	9,000	1,350	10,350	-	10,350	-	-	-	-	-	-	-	-	-
1a.3	Subtotal Period 1a Collateral Costs	-	-	-	-	-	-	9,000	1,350	10,350	-	10,350	-	-	-	-	-	-	-	-	-

Table C-1
LaSalle County Station, Unit 1
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes: Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 1a Period-Dependent Costs																					
1a.4.1	Insurance	-	-	-	-	-	-	876	88	964	964	-	-	-	-	-	-	-	-	-	-
1a.4.2	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1a.4.3	Health physics supplies	-	396	-	-	-	-	-	99	495	495	-	-	-	-	-	-	-	-	-	-
1a.4.4	Heavy equipment rental	-	396	-	-	-	-	-	59	455	455	-	-	-	-	-	-	-	-	-	-
1a.4.5	Disposal of DAW generated	-	-	2	1	-	34	-	9	45	45	-	-	-	610	-	-	-	12,190	3	-
1a.4.6	Plant energy budget	-	-	-	-	-	-	1,371	206	1,577	1,577	-	-	-	-	-	-	-	-	-	-
1a.4.7	NRC Fees	-	-	-	-	-	-	706	71	776	776	-	-	-	-	-	-	-	-	-	-
1a.4.8	Emergency Planning Fees	-	-	-	-	-	-	313	31	344	-	344	-	-	-	-	-	-	-	-	-
1a.4.9	Site O&M Costs	-	-	-	-	-	-	125	19	144	144	-	-	-	-	-	-	-	-	-	-
1a.4.10	Spent Fuel Pool O&M	-	-	-	-	-	-	762	114	877	-	877	-	-	-	-	-	-	-	-	-
1a.4.11	ISFSI Operating Costs	-	-	-	-	-	-	44	7	51	-	51	-	-	-	-	-	-	-	-	-
1a.4.12	Security Staff Cost	-	-	-	-	-	-	457	69	526	526	-	-	-	-	-	-	-	-	-	12,264
1a.4.13	Utility Staff Cost	-	-	-	-	-	-	31,082	4,662	35,745	35,745	-	-	-	-	-	-	-	-	-	423,400
1a.4	Subtotal Period 1a Period-Dependent Costs	-	792	2	1	-	34	35,736	5,433	41,997	40,726	1,271	-	-	610	-	-	-	12,190	3	435,664
1a.0	TOTAL PERIOD 1a COST	-	792	2	1	-	34	69,413	10,484	80,725	56,640	23,581	505	-	610	-	-	-	12,190	3	514,273
PERIOD 1b - Decommissioning Preparations																					
Period 1b Direct Decommissioning Activities																					
Detailed Work Procedures																					
1b.1.1.1	Plant systems	-	-	-	-	-	-	559	84	642	578	-	64	-	-	-	-	-	-	-	4,733
1b.1.1.2	NSSS Decontamination Flush	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
1b.1.1.3	Reactor internals	-	-	-	-	-	-	472	71	543	543	-	-	-	-	-	-	-	-	-	4,000
1b.1.1.4	Remaining buildings	-	-	-	-	-	-	159	24	183	46	-	137	-	-	-	-	-	-	-	1,350
1b.1.1.5	CRD housings & NIs	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
1b.1.1.6	Incore instrumentation	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
1b.1.1.7	Removal primary containment	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
1b.1.1.8	Reactor vessel	-	-	-	-	-	-	428	64	493	493	-	-	-	-	-	-	-	-	-	3,630
1b.1.1.9	Facility closeout	-	-	-	-	-	-	142	21	163	81	-	81	-	-	-	-	-	-	-	1,200
1b.1.1.10	Sacrificial shield	-	-	-	-	-	-	142	21	163	163	-	-	-	-	-	-	-	-	-	1,200
1b.1.1.11	Reinforced concrete	-	-	-	-	-	-	118	18	136	68	-	68	-	-	-	-	-	-	-	1,000
1b.1.1.12	Main Turbine	-	-	-	-	-	-	245	37	282	282	-	-	-	-	-	-	-	-	-	2,080
1b.1.1.13	Main Condensers	-	-	-	-	-	-	246	37	283	283	-	-	-	-	-	-	-	-	-	2,088
1b.1.1.14	Moisture separators & reheaters	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
1b.1.1.15	Radwaste building	-	-	-	-	-	-	322	48	370	333	-	37	-	-	-	-	-	-	-	2,730
1b.1.1.16	Reactor building	-	-	-	-	-	-	322	48	370	333	-	37	-	-	-	-	-	-	-	2,730
1b.1.1	Total	-	-	-	-	-	-	3,982	597	4,579	4,154	-	425	-	-	-	-	-	-	-	33,741
1b.1.2	Decon NSSS	631	-	-	-	-	-	-	315	946	946	-	-	-	-	-	-	-	-	1,067	-
1b.1	Subtotal Period 1b Activity Costs	631	-	-	-	-	-	3,982	913	5,525	5,100	-	425	-	-	-	-	-	-	1,067	33,741
Period 1b Additional Costs																					
1b.2.1	Site Characterization	-	-	-	-	-	-	6,086	1,826	7,912	7,912	-	-	-	-	-	-	-	-	29,730	10,672
1b.2.2	Spent Fuel Pool Isolation	-	-	-	-	-	-	9,690	1,453	11,143	11,143	-	-	-	-	-	-	-	-	-	-
1b.2	Subtotal Period 1b Additional Costs	-	-	-	-	-	-	15,775	3,279	19,055	19,055	-	-	-	-	-	-	-	-	29,730	10,672
Period 1b Collateral Costs																					
1b.3.1	Decon equipment	763	-	-	-	-	-	-	114	877	877	-	-	-	-	-	-	-	-	-	-
1b.3.2	DOC staff relocation expenses	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
1b.3.3	Process liquid waste	39	-	71	355	-	3,604	-	981	5,050	5,050	-	-	-	252	960	-	-	121,632	236	-
1b.3.4	Small tool allowance	-	2	-	-	-	-	-	0	2	2	-	-	-	-	-	-	-	-	-	-
1b.3.5	Pipe cutting equipment	-	1,100	-	-	-	-	-	165	1,265	1,265	-	-	-	-	-	-	-	-	-	-
1b.3.6	Decon rig	1,400	-	-	-	-	-	-	210	1,610	1,610	-	-	-	-	-	-	-	-	-	-

Table C-1
LaSalle County Station, Unit 1
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 1b Collateral Costs (continued)																					
1b.3.7	Spent Fuel Capital and Transfer	-	-	-	-	-	-	5,000	750	5,750	-	5,750	-	-	-	-	-	-	-	-	-
1b.3	Subtotal Period 1b Collateral Costs	2,202	1,102	71	355	-	3,604	6,130	2,390	15,854	10,104	5,750	-	-	252	960	-	-	121,632	236	-
Period 1b Period-Dependent Costs																					
1b.4.1	Decon supplies	23	-	-	-	-	-	-	6	29	29	-	-	-	-	-	-	-	-	-	-
1b.4.2	Insurance	-	-	-	-	-	-	211	21	232	232	-	-	-	-	-	-	-	-	-	-
1b.4.3	Property taxes	-	-	-	-	-	-	2,321	232	2,554	2,554	-	-	-	-	-	-	-	-	-	-
1b.4.4	Health physics supplies	-	223	-	-	-	-	-	56	279	279	-	-	-	-	-	-	-	-	-	-
1b.4.5	Heavy equipment rental	-	198	-	-	-	-	-	30	228	228	-	-	-	-	-	-	-	-	-	-
1b.4.6	Disposal of DAW generated	-	-	1	0	-	20	-	5	26	26	-	-	-	358	-	-	-	7,159	2	-
1b.4.7	Plant energy budget	-	-	-	-	-	-	1,375	206	1,581	1,581	-	-	-	-	-	-	-	-	-	-
1b.4.8	NRC Fees	-	-	-	-	-	-	354	35	389	389	-	-	-	-	-	-	-	-	-	-
1b.4.9	Emergency Planning Fees	-	-	-	-	-	-	157	16	172	-	172	-	-	-	-	-	-	-	-	-
1b.4.10	Site O&M Costs	-	-	-	-	-	-	63	9	72	72	-	-	-	-	-	-	-	-	-	-
1b.4.11	Spent Fuel Pool O&M	-	-	-	-	-	-	382	57	440	-	440	-	-	-	-	-	-	-	-	-
1b.4.12	ISFSI Operating Costs	-	-	-	-	-	-	22	3	25	-	25	-	-	-	-	-	-	-	-	-
1b.4.13	Security Staff Cost	-	-	-	-	-	-	229	34	264	264	-	-	-	-	-	-	-	-	-	6,149
1b.4.14	DOC Staff Cost	-	-	-	-	-	-	5,217	783	5,999	5,999	-	-	-	-	-	-	-	-	-	63,789
1b.4.15	Utility Staff Cost	-	-	-	-	-	-	15,652	2,348	17,999	17,999	-	-	-	-	-	-	-	-	-	213,326
1b.4	Subtotal Period 1b Period-Dependent Costs	23	421	1	0	-	20	25,983	3,842	30,290	29,653	637	-	-	358	-	-	-	7,159	2	283,263
1b.0	TOTAL PERIOD 1b COST	2,856	1,523	72	355	-	3,624	51,870	10,424	70,724	63,911	6,387	425	-	610	960	-	-	128,791	31,035	327,676
PERIOD 1 TOTALS		2,856	2,315	74	356	-	3,658	121,283	20,908	151,449	120,551	29,969	930	-	1,220	960	-	-	140,981	31,037	841,949
PERIOD 2a - Large Component Removal																					
Period 2a Direct Decommissioning Activities																					
Nuclear Steam Supply System Removal																					
2a.1.1.1	Recirculation System Piping & Valves	103	85	18	22	-	198	-	127	553	553	-	-	-	1,006	-	-	-	121,649	3,377	-
2a.1.1.2	Recirculation Pumps & Motors	55	48	14	30	9	313	-	125	594	594	-	-	238	2,356	-	-	-	211,420	1,957	-
2a.1.1.3	CRDMs & NIs Removal	232	177	492	119	-	166	-	269	1,455	1,455	-	-	-	5,536	-	-	-	141,063	7,193	-
2a.1.1.4	Reactor Vessel Internals	252	2,853	6,757	2,868	-	22,817	348	16,133	52,028	52,028	-	-	-	2,128	1,435	1,435	-	474,320	41,825	1,805
2a.1.1.5	Reactor Vessel	114	5,174	2,483	1,075	-	5,464	348	7,611	22,268	22,268	-	-	-	13,945	2,754	-	-	1,791,753	41,825	1,805
2a.1.1	Totals	756	8,337	9,764	4,113	9	28,959	695	24,265	76,899	76,899	-	-	238	24,972	4,189	1,435	-	2,740,204	96,177	3,610
Removal of Major Equipment																					
2a.1.2	Main Turbine/Generator	-	543	2,170	459	2,501	369	-	889	6,931	6,931	-	-	118,264	3,487	-	-	-	5,634,727	9,919	-
2a.1.3	Main Condensers	-	1,028	1,546	327	1,783	263	-	794	5,741	5,741	-	-	84,292	2,485	-	-	-	4,016,136	18,785	-
Cascading Costs from Clean Building Demolition																					
2a.1.4.1	Reactor Building	-	983	-	-	-	-	-	147	1,130	1,130	-	-	-	-	-	-	-	-	11,163	-
2a.1.4.2	Auxiliary Building	-	408	-	-	-	-	-	61	469	469	-	-	-	-	-	-	-	-	4,733	-
2a.1.4.3	Off Gas Building	-	71	-	-	-	-	-	11	82	82	-	-	-	-	-	-	-	-	920	-
2a.1.4.4	Turbine Building	-	597	-	-	-	-	-	90	687	687	-	-	-	-	-	-	-	-	7,337	-
2a.1.4	Totals	-	2,059	-	-	-	-	-	309	2,368	2,368	-	-	-	-	-	-	-	-	24,153	-
Disposal of Plant Systems																					
2a.1.5.1	Auxiliary Steam	-	108	2	4	24	-	-	31	169	169	-	-	1,250	-	-	-	-	50,766	1,862	-
2a.1.5.2	CSCS Equipment Cooling	-	6	-	-	-	-	-	1	7	-	-	7	-	-	-	-	-	-	122	-
2a.1.5.3	Circulating Water	-	175	-	-	-	-	-	26	201	-	-	201	-	-	-	-	-	-	3,464	-
2a.1.5.4	Circulating Water - RCA	-	225	4	8	50	-	-	65	353	353	-	-	2,599	-	-	-	-	105,533	3,802	-
2a.1.5.5	Clean Condensate Storage	-	83	-	-	-	-	-	12	95	-	-	95	-	-	-	-	-	-	1,677	-
2a.1.5.6	Clean Condensate Storage - RCA	-	25	0	0	3	-	-	7	36	36	-	-	150	-	-	-	-	6,112	419	-
2a.1.5.7	Condensate	-	934	84	107	382	296	-	389	2,191	2,191	-	-	19,997	2,795	-	-	-	1,062,833	17,322	-

Table C-1
LaSalle County Station, Unit 1
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Disposal of Plant Systems (continued)																					
2a.1.5.8	Condensate Booster	-	965	231	273	711	1,041	-	672	3,892	3,892	-	-	37,272	9,829	-	-	-	2,395,561	18,222	-
2a.1.5.9	Condensate Polishing Demineralizer	-	902	30	28	73	108	-	270	1,410	1,410	-	-	3,806	1,038	-	-	-	246,105	16,162	-
2a.1.5.10	Containment Combustible Gas Control	-	85	1	2	13	-	-	24	124	124	-	-	671	-	-	-	-	27,268	1,436	-
2a.1.5.11	Cycled Condensate Storage	-	297	12	12	29	48	-	94	492	492	-	-	1,526	454	-	-	-	102,734	5,352	-
2a.1.5.12	Drywell Instrument Nitrogen	-	61	1	2	12	-	-	18	94	94	-	-	646	-	-	-	-	26,238	1,070	-
2a.1.5.13	Extraction Steam	-	357	23	29	93	91	-	133	725	725	-	-	4,856	856	-	-	-	273,991	6,662	-
2a.1.5.14	Feedwater	-	593	59	72	208	249	-	259	1,440	1,440	-	-	10,913	2,357	-	-	-	654,598	11,054	-
2a.1.5.15	Feedwater Heater Vents & Drains	-	2,835	155	191	655	558	-	991	5,385	5,385	-	-	34,334	5,282	-	-	-	1,867,479	52,311	-
2a.1.5.16	Gland Steam	-	253	9	9	24	35	-	78	408	408	-	-	1,234	328	-	-	-	79,493	4,601	-
2a.1.5.17	HVAC-River\Lake Screen House	-	8	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	151	-
2a.1.5.18	HVAC-Service Building	-	12	-	-	-	-	-	2	14	-	-	14	-	-	-	-	-	-	221	-
2a.1.5.19	Hydrogen & Carbon Dioxide	-	110	2	4	23	-	-	32	171	171	-	-	1,214	-	-	-	-	49,318	1,878	-
2a.1.5.20	Main Steam	-	138	5	5	8	24	-	43	223	223	-	-	422	226	-	-	-	37,404	2,483	-
2a.1.5.21	Misc Bldgs Floor Drains	-	0	-	-	-	-	-	0	1	-	-	1	-	-	-	-	-	-	9	-
2a.1.5.22	Screen Wash	-	25	-	-	-	-	-	4	29	-	-	29	-	-	-	-	-	-	506	-
2a.1.5.23	Service Air	-	11	-	-	-	-	-	2	13	-	-	13	-	-	-	-	-	-	222	-
2a.1.5.24	Standby Gas Treatment	-	57	4	5	15	15	-	21	116	116	-	-	770	141	-	-	-	43,939	1,047	-
2a.1.5.25	Station Heat Recovery	-	252	4	6	40	-	-	70	373	373	-	-	2,104	-	-	-	-	85,433	4,310	-
2a.1.5.26	Switchgear Heat Removal	-	10	-	-	-	-	-	1	11	-	-	11	-	-	-	-	-	-	180	-
2a.1.5.27	Turbine Bldg Closed Cooling Water	-	520	34	38	123	117	-	187	1,018	1,018	-	-	6,446	1,105	-	-	-	360,727	9,422	-
2a.1.5.28	Turbine Building Equip Drains	73	96	4	5	13	18	-	68	278	278	-	-	700	170	-	-	-	43,649	2,331	-
2a.1.5.29	Turbine Building Floor Drains	16	38	1	1	2	4	-	19	79	79	-	-	81	35	-	-	-	6,465	943	-
2a.1.5.30	Turbine Generator	-	199	27	30	55	137	-	99	546	546	-	-	2,857	1,297	-	-	-	232,141	3,760	-
2a.1.5.31	Turbine Oil	-	585	21	26	112	50	-	181	975	975	-	-	5,855	519	-	-	-	280,058	10,694	-
2a.1.5	Totals	89	9,966	713	855	2,667	2,790	-	3,800	20,878	20,499	-	380	139,705	26,433	-	-	-	8,037,842	183,694	-
2a.1.6	Scaffolding in support of decommissioning	-	2,357	39	9	43	14	-	604	3,066	3,066	-	-	2,054	128	-	-	-	103,876	48,820	-
2a.1	Subtotal Period 2a Activity Costs	845	24,289	14,232	5,763	7,003	32,395	695	30,661	115,883	115,503	-	380	344,553	57,504	4,189	1,435	-	20,532,780	381,550	3,610
Period 2a Collateral Costs																					
2a.3.1	Process liquid waste	91	-	46	224	-	257	-	148	767	767	-	-	-	784	-	-	-	55,478	153	-
2a.3.2	Small tool allowance	-	320	-	-	-	-	-	48	368	331	-	37	-	-	-	-	-	-	-	-
2a.3.3	Spent Fuel Capital and Transfer	-	-	-	-	-	-	17,000	2,550	19,550	-	19,550	-	-	-	-	-	-	-	-	-
2a.3	Subtotal Period 2a Collateral Costs	91	320	46	224	-	257	17,000	2,746	20,685	1,098	19,550	37	-	784	-	-	-	55,478	153	-
Period 2a Period-Dependent Costs																					
2a.4.1	Decon supplies	88	-	-	-	-	-	-	22	110	110	-	-	-	-	-	-	-	-	-	-
2a.4.2	Insurance	-	-	-	-	-	-	793	79	873	873	-	-	-	-	-	-	-	-	-	-
2a.4.3	Property taxes	-	-	-	-	-	-	4,818	482	5,300	4,770	-	530	-	-	-	-	-	-	-	-
2a.4.4	Health physics supplies	-	2,164	-	-	-	-	-	541	2,706	2,706	-	-	-	-	-	-	-	-	-	-
2a.4.5	Heavy equipment rental	-	3,142	-	-	-	-	-	471	3,613	3,613	-	-	-	-	-	-	-	-	-	-
2a.4.6	Disposal of DAW generated	-	-	20	8	-	404	-	104	536	536	-	-	-	7,248	-	-	-	144,951	33	-
2a.4.7	Plant energy budget	-	-	-	-	-	-	2,451	368	2,819	2,819	-	-	-	-	-	-	-	-	-	-
2a.4.8	NRC Fees	-	-	-	-	-	-	1,239	124	1,363	1,363	-	-	-	-	-	-	-	-	-	-
2a.4.9	Emergency Planning Fees	-	-	-	-	-	-	188	19	207	-	207	-	-	-	-	-	-	-	-	-
2a.4.10	Site O&M Costs	-	-	-	-	-	-	235	35	270	270	-	-	-	-	-	-	-	-	-	-
2a.4.11	Spent Fuel Pool O&M	-	-	-	-	-	-	1,435	215	1,650	-	1,650	-	-	-	-	-	-	-	-	-
2a.4.12	ISFSI Operating Costs	-	-	-	-	-	-	83	12	95	-	95	-	-	-	-	-	-	-	-	-
2a.4.13	Security Staff Cost	-	-	-	-	-	-	8,290	1,243	9,533	9,533	-	-	-	-	-	-	-	-	-	222,235
2a.4.14	DOC Staff Cost	-	-	-	-	-	-	24,139	3,621	27,760	27,760	-	-	-	-	-	-	-	-	-	298,354
2a.4.15	Utility Staff Cost	-	-	-	-	-	-	41,198	6,180	47,378	47,378	-	-	-	-	-	-	-	-	-	553,251
2a.4	Subtotal Period 2a Period-Dependent Costs	88	5,306	20	8	-	404	84,870	13,517	104,212	101,730	1,952	530	-	7,248	-	-	-	144,951	33	1,073,840
2a.0	TOTAL PERIOD 2a COST	1,023	29,916	14,298	5,994	7,003	33,057	102,565	46,924	240,780	218,331	21,502	947	344,553	65,536	4,189	1,435	-	20,733,210	381,736	1,077,450

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Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
PERIOD 2b - Site Decontamination																					
Period 2b Direct Decommissioning Activities																					
Disposal of Plant Systems																					
2b.1.1.1	Aux Diesel Bldg Floor Drains	-	4	-	-	-	-	-	1	5	-	-	5	-	-	-	-	-	-	86	-
2b.1.1.2	Auxiliary Diesel Generator	-	52	-	-	-	-	-	8	59	-	-	59	-	-	-	-	-	-	1,006	-
2b.1.1.3	Control Rod Drive	-	216	4	5	14	15	-	61	315	315	-	-	718	146	-	-	-	42,251	4,064	-
2b.1.1.4	Diesel Oil	-	43	-	-	-	-	-	6	50	-	-	50	-	-	-	-	-	-	823	-
2b.1.1.5	Electrical	-	273	-	-	-	-	-	41	314	-	-	314	-	-	-	-	-	-	5,201	-
2b.1.1.6	Electrical - RCA	-	4,641	86	155	962	-	-	1,337	7,182	7,182	-	-	50,427	-	-	-	-	2,047,847	79,254	-
2b.1.1.7	Fire Protection	-	116	-	-	-	-	-	17	134	-	-	134	-	-	-	-	-	-	2,339	-
2b.1.1.8	HVAC-Auxiliary Building	-	220	6	10	52	8	-	67	362	362	-	-	2,745	73	-	-	-	118,018	3,773	-
2b.1.1.9	HVAC-Diesel Generator Room	-	7	-	-	-	-	-	1	8	-	-	8	-	-	-	-	-	-	127	-
2b.1.1.10	HVAC-Off Gas Building	-	22	0	1	4	1	-	6	34	34	-	-	226	6	-	-	-	9,699	376	-
2b.1.1.11	HVAC-Radwaste Building	-	6	0	0	2	0	-	2	11	11	-	-	101	4	-	-	-	4,494	108	-
2b.1.1.12	HVAC-Turbine Building	-	811	19	31	168	25	-	241	1,294	1,294	-	-	8,797	234	-	-	-	378,235	13,872	-
2b.1.1.13	High Pressure Core Spray	-	349	58	52	74	263	-	178	974	974	-	-	3,883	2,484	-	-	-	380,413	6,460	-
2b.1.1.14	Instrument Air	-	5	-	-	-	-	-	1	5	-	-	5	-	-	-	-	-	-	94	-
2b.1.1.15	Instrument Air - RCA	-	134	1	2	12	-	-	36	185	185	-	-	629	-	-	-	-	25,528	2,372	-
2b.1.1.16	Low Pressure Core Spray	-	167	27	24	33	123	-	84	458	458	-	-	1,754	1,159	-	-	-	175,160	3,078	-
2b.1.1.17	Nuclear Boiler	-	1,700	166	166	272	801	-	707	3,812	3,812	-	-	14,267	7,566	-	-	-	1,258,057	31,666	-
2b.1.1.18	Off Gas	-	662	48	46	68	231	-	245	1,301	1,301	-	-	3,564	2,192	-	-	-	340,686	12,044	-
2b.1.1.19	Primary Containment Vent & Purge	-	452	39	50	164	153	-	187	1,045	1,045	-	-	8,608	1,447	-	-	-	479,446	8,497	-
2b.1.1.20	Process Radiation Monitoring	-	22	0	0	0	1	-	6	30	30	-	-	19	12	-	-	-	1,822	437	-
2b.1.1.21	Process Sampling	-	30	0	0	1	2	-	8	42	42	-	-	57	17	-	-	-	3,831	589	-
2b.1.1.22	Radioactive Waste Disposal	-	1,609	83	70	139	314	-	520	2,736	2,736	-	-	7,272	3,297	-	-	-	561,812	29,103	-
2b.1.1.23	Reactor Building Equipment Drains	-	71	3	3	5	12	-	22	116	116	-	-	250	124	-	-	-	20,359	1,293	-
2b.1.1.24	Reactor Core Isolation Cooling	117	236	13	11	14	61	-	138	590	590	-	-	718	573	-	-	-	80,539	5,667	-
2b.1.1.25	Reactor Recirculation	-	44	1	1	1	4	-	13	64	64	-	-	76	39	-	-	-	6,618	819	-
2b.1.1.26	Reactor Water Clean-up	488	915	35	26	25	146	-	520	2,155	2,155	-	-	1,302	1,377	-	-	-	176,282	24,691	-
2b.1.1.27	Residual Heat Removal	1,534	1,715	269	247	353	1,243	-	1,623	6,984	6,984	-	-	18,520	11,751	-	-	-	1,805,919	38,888	-
2b.1.1.28	Service Air - RCA	-	234	2	4	25	-	-	63	328	328	-	-	1,326	-	-	-	-	53,837	3,994	-
2b.1.1.29	Service Water	-	48	-	-	-	-	-	7	55	-	-	55	-	-	-	-	-	-	938	-
2b.1.1.30	Service Water - RCA	-	683	22	40	247	-	-	216	1,208	1,208	-	-	12,930	-	-	-	-	525,074	11,877	-
2b.1.1.31	Standby Liquid Control	-	51	1	1	7	-	-	14	73	73	-	-	341	-	-	-	-	13,830	854	-
2b.1.1	Totals	2,138	15,538	885	945	2,644	3,403	-	6,376	31,929	31,298	-	631	138,527	32,502	-	-	-	8,509,760	294,389	-
2b.1.2	Scaffolding in support of decommissioning	-	2,946	49	11	54	17	-	755	3,832	3,832	-	-	2,567	160	-	-	-	129,845	61,026	-
Decontamination of Site Buildings																					
2b.1.3.1	Reactor Building	2,626	2,692	105	122	223	263	-	2,114	8,146	8,146	-	-	11,674	4,684	-	-	-	934,937	94,606	-
2b.1.3.2	Auxiliary Building	323	101	16	18	2	49	-	203	712	712	-	-	100	914	-	-	-	95,416	7,570	-
2b.1.3.3	Off Gas Building	147	58	12	13	1	35	-	100	365	365	-	-	46	651	-	-	-	66,884	3,619	-
2b.1.3.4	Turbine Building	1,726	1,003	141	159	98	399	-	1,266	4,793	4,793	-	-	5,149	7,435	-	-	-	946,610	47,961	-
2b.1.3	Totals	4,822	3,854	275	312	324	745	-	3,684	14,016	14,016	-	-	16,969	13,684	-	-	-	2,043,847	153,755	-
2b.1	Subtotal Period 2b Activity Costs	6,960	22,338	1,208	1,268	3,022	4,165	-	10,815	49,777	49,146	-	631	158,063	46,346	-	-	-	10,683,450	509,170	-
Period 2b Collateral Costs																					
2b.3.1	Process liquid waste	169	-	343	1,705	-	2,740	-	1,060	6,017	6,017	-	-	-	5,821	-	-	-	590,533	1,135	-
2b.3.2	Small tool allowance	-	414	-	-	-	-	-	62	476	476	-	-	-	-	-	-	-	-	-	-
2b.3.3	Spent Fuel Capital and Transfer	-	-	-	-	-	-	17,000	2,550	19,550	-	19,550	-	-	-	-	-	-	-	-	-
2b.3	Subtotal Period 2b Collateral Costs	169	414	343	1,705	-	2,740	17,000	3,672	26,043	6,493	19,550	-	-	5,821	-	-	-	590,533	1,135	-

Table C-1
LaSalle County Station, Unit 1
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
Period 2b Period-Dependent Costs																					
2b.4.1	Decon supplies	1,482	-	-	-	-	-	-	371	1,853	1,853	-	-	-	-	-	-	-	-	-	-
2b.4.2	Insurance	-	-	-	-	-	-	895	89	984	984	-	-	-	-	-	-	-	-	-	-
2b.4.3	Property taxes	-	-	-	-	-	-	1,061	106	1,167	1,167	-	-	-	-	-	-	-	-	-	-
2b.4.4	Health physics supplies	-	2,651	-	-	-	-	-	663	3,313	3,313	-	-	-	-	-	-	-	-	-	-
2b.4.5	Heavy equipment rental	-	3,515	-	-	-	-	-	527	4,042	4,042	-	-	-	-	-	-	-	-	-	-
2b.4.6	Disposal of DAW generated	-	-	24	9	-	480	-	124	637	637	-	-	-	8,609	-	-	-	172,182	39	-
2b.4.7	Plant energy budget	-	-	-	-	-	-	2,183	327	2,511	2,511	-	-	-	-	-	-	-	-	-	-
2b.4.8	NRC Fees	-	-	-	-	-	-	1,397	140	1,537	1,537	-	-	-	-	-	-	-	-	-	-
2b.4.9	Emergency Planning Fees	-	-	-	-	-	-	212	21	233	-	233	-	-	-	-	-	-	-	-	-
2b.4.10	Site O&M Costs	-	-	-	-	-	-	265	40	305	305	-	-	-	-	-	-	-	-	-	-
2b.4.11	Spent Fuel Pool O&M	-	-	-	-	-	-	1,619	243	1,862	-	1,862	-	-	-	-	-	-	-	-	-
2b.4.12	Liquid Radwaste Processing Equipment/Services	-	-	-	-	-	-	407	61	468	468	-	-	-	-	-	-	-	-	-	-
2b.4.13	ISFSI Operating Costs	-	-	-	-	-	-	93	14	107	-	107	-	-	-	-	-	-	-	-	-
2b.4.14	Security Staff Cost	-	-	-	-	-	-	909	136	1,045	1,045	-	-	-	-	-	-	-	-	-	24,357
2b.4.15	DOC Staff Cost	-	-	-	-	-	-	18,478	2,772	21,249	21,249	-	-	-	-	-	-	-	-	-	239,143
2b.4.16	Utility Staff Cost	-	-	-	-	-	-	31,728	4,759	36,487	36,487	-	-	-	-	-	-	-	-	-	445,071
2b.4	Subtotal Period 2b Period-Dependent Costs	1,482	6,166	24	9	-	480	59,246	10,393	77,800	75,598	2,202	-	-	8,609	-	-	-	172,182	39	708,571
2b.0	TOTAL PERIOD 2b COST	8,611	28,918	1,575	2,982	3,022	7,385	76,246	24,880	153,620	131,236	21,752	631	158,063	60,776	-	-	-	11,446,170	510,344	708,571
PERIOD 2c - Decontamination Following Wet Fuel Storage																					
Period 2c Direct Decommissioning Activities																					
2c.1.1	Remove spent fuel racks	918	82	166	157	-	1,030	-	777	3,130	3,130	-	-	-	9,726	-	-	-	872,665	1,631	-
Disposal of Plant Systems																					
2c.1.2.1	Containment Monitoring	-	23	0	0	1	1	-	6	32	32	-	-	55	12	-	-	-	3,285	439	-
2c.1.2.2	Electrical - Contaminated	-	750	11	18	100	15	-	210	1,104	1,104	-	-	5,233	139	-	-	-	225,019	13,327	-
2c.1.2.3	Fire Protection - RCA	-	664	13	23	143	-	-	192	1,035	1,035	-	-	7,493	-	-	-	-	304,287	11,294	-
2c.1.2.4	Fuel Pool Cooling & Cleanup	-	810	48	57	193	171	-	288	1,567	1,567	-	-	10,121	1,621	-	-	-	556,011	14,738	-
2c.1.2.5	HVAC-Primary Containment	-	959	32	44	194	86	-	300	1,615	1,615	-	-	10,180	814	-	-	-	485,888	16,962	-
2c.1.2.6	Reactor Bldg Closed Cooling Water	-	339	43	51	178	146	-	160	917	917	-	-	9,311	1,379	-	-	-	501,684	6,004	-
2c.1.2.7	Reactor Building Floor Drains	-	7	0	0	0	1	-	2	10	10	-	-	8	7	-	-	-	951	123	-
2c.1.2	Totals	-	3,550	148	194	809	419	-	1,158	6,278	6,278	-	-	42,400	3,971	-	-	-	2,077,126	62,887	-
Decontamination of Site Buildings																					
2c.1.3.1	Reactor Building Spent Fuel Pool	265	973	254	262	16	1,201	-	743	3,714	3,714	-	-	842	14,610	-	-	-	1,412,321	20,548	-
2c.1.3	Totals	265	973	254	262	16	1,201	-	743	3,714	3,714	-	-	842	14,610	-	-	-	1,412,321	20,548	-
2c.1.4	Scaffolding in support of decommissioning	-	589	10	2	11	3	-	151	766	766	-	-	513	32	-	-	-	25,969	12,205	-
2c.1	Subtotal Period 2c Activity Costs	1,183	5,195	578	615	836	2,653	-	2,829	13,889	13,889	-	-	43,756	28,339	-	-	-	4,388,080	97,271	-
Period 2c Additional Costs																					
2c.2.1	License Termination Survey Planning	-	-	-	-	-	-	940	282	1,222	1,222	-	-	-	-	-	-	-	-	-	6,240
2c.2	Subtotal Period 2c Additional Costs	-	-	-	-	-	-	940	282	1,222	1,222	-	-	-	-	-	-	-	-	-	6,240
Period 2c Collateral Costs																					
2c.3.1	Process liquid waste	137	-	55	266	-	262	-	179	899	899	-	-	-	940	-	-	-	56,409	183	-
2c.3.2	Small tool allowance	-	92	-	-	-	-	-	14	106	106	-	-	-	-	-	-	-	-	-	-
2c.3.3	Decommissioning Equipment Disposition	-	-	114	31	127	40	-	45	356	356	-	-	6,000	373	-	-	-	303,507	88	-
2c.3	Subtotal Period 2c Collateral Costs	137	92	169	297	127	301	-	238	1,362	1,362	-	-	6,000	1,314	-	-	-	359,916	271	-
Period 2c Period-Dependent Costs																					
2c.4.1	Decon supplies	48	-	-	-	-	-	-	12	60	60	-	-	-	-	-	-	-	-	-	-
2c.4.2	Insurance	-	-	-	-	-	-	222	22	244	244	-	-	-	-	-	-	-	-	-	-

Table C-1
LaSalle County Station, Unit 1
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Burial Volumes Class B Cu. Feet	Burial Volumes Class C Cu. Feet	Burial Volumes GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 2c Period-Dependent Costs (continued)																					
2c.4.3	Property taxes	-	-	-	-	-	-	263	26	289	289	-	-	-	-	-	-	-	-	-	-
2c.4.4	Health physics supplies	-	531	-	-	-	-	-	133	664	664	-	-	-	-	-	-	-	-	-	-
2c.4.5	Heavy equipment rental	-	871	-	-	-	-	-	131	1,001	1,001	-	-	-	-	-	-	-	-	-	-
2c.4.6	Disposal of DAW generated	-	-	8	3	-	168	-	43	223	223	-	-	-	3,008	-	-	-	60,169	14	-
2c.4.7	Plant energy budget	-	-	-	-	-	-	288	43	332	332	-	-	-	-	-	-	-	-	-	-
2c.4.8	NRC Fees	-	-	-	-	-	-	346	35	381	381	-	-	-	-	-	-	-	-	-	-
2c.4.9	Emergency Planning Fees	-	-	-	-	-	-	53	5	58	-	58	-	-	-	-	-	-	-	-	-
2c.4.10	Site O&M Costs	-	-	-	-	-	-	66	10	76	76	-	-	-	-	-	-	-	-	-	-
2c.4.11	Liquid Radwaste Processing Equipment/Services	-	-	-	-	-	-	202	30	232	232	-	-	-	-	-	-	-	-	-	-
2c.4.12	ISFSI Operating Costs	-	-	-	-	-	-	23	3	27	-	27	-	-	-	-	-	-	-	-	-
2c.4.13	Security Staff Cost	-	-	-	-	-	-	123	18	141	141	-	-	-	-	-	-	-	-	-	3,291
2c.4.14	DOC Staff Cost	-	-	-	-	-	-	3,093	464	3,557	3,557	-	-	-	-	-	-	-	-	-	40,046
2c.4.15	Utility Staff Cost	-	-	-	-	-	-	4,644	697	5,341	5,341	-	-	-	-	-	-	-	-	-	66,377
2c.4	Subtotal Period 2c Period-Dependent Costs	48	1,402	8	3	-	168	9,322	1,673	12,625	12,540	84	-	-	3,008	-	-	-	60,169	14	109,714
2c.0	TOTAL PERIOD 2c COST	1,368	6,689	755	915	963	3,123	10,262	5,022	29,097	29,013	84	-	49,756	32,661	-	-	-	4,808,165	97,556	115,954
PERIOD 2d - Delay before License Termination																					
Period 2d Direct Decommissioning Activities																					
Period 2d Period-Dependent Costs																					
2d.4.1	Insurance	-	-	-	-	-	-	647	65	711	711	-	-	-	-	-	-	-	-	-	-
2d.4.2	Property taxes	-	-	-	-	-	-	825	83	908	908	-	-	-	-	-	-	-	-	-	-
2d.4.3	Health physics supplies	-	118	-	-	-	-	-	30	148	148	-	-	-	-	-	-	-	-	-	-
2d.4.4	Disposal of DAW generated	-	-	0	0	-	9	-	2	12	12	-	-	-	165	-	-	-	3,294	1	-
2d.4.5	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2d.4.6	NRC Fees	-	-	-	-	-	-	301	30	332	332	-	-	-	-	-	-	-	-	-	-
2d.4.7	Emergency Planning Fees	-	-	-	-	-	-	165	17	182	-	182	-	-	-	-	-	-	-	-	-
2d.4.8	Site O&M Costs	-	-	-	-	-	-	206	31	237	237	-	-	-	-	-	-	-	-	-	-
2d.4.9	ISFSI Operating Costs	-	-	-	-	-	-	73	11	83	-	83	-	-	-	-	-	-	-	-	-
2d.4.10	Security Staff Cost	-	-	-	-	-	-	386	58	443	443	-	-	-	-	-	-	-	-	-	10,337
2d.4.11	Utility Staff Cost	-	-	-	-	-	-	1,697	255	1,952	1,952	-	-	-	-	-	-	-	-	-	24,120
2d.4	Subtotal Period 2d Period-Dependent Costs	-	118	0	0	-	9	4,301	580	5,008	4,743	265	-	-	165	-	-	-	3,294	1	34,457
2d.0	TOTAL PERIOD 2d COST	-	118	0	0	-	9	4,301	580	5,008	4,743	265	-	-	165	-	-	-	3,294	1	34,457
PERIOD 2e - License Termination																					
Period 2e Direct Decommissioning Activities																					
2e.1.1	ORISE confirmatory survey	-	-	-	-	-	-	151	45	197	197	-	-	-	-	-	-	-	-	-	-
2e.1.2	Terminate license									a											
2e.1	Subtotal Period 2e Activity Costs	-	-	-	-	-	-	151	45	197	197	-	-	-	-	-	-	-	-	-	-
Period 2e Additional Costs																					
2e.2.1	License Termination Survey	-	-	-	-	-	-	10,410	3,123	13,533	13,533	-	-	-	-	-	-	-	-	191,885	3,120
2e.2	Subtotal Period 2e Additional Costs	-	-	-	-	-	-	10,410	3,123	13,533	13,533	-	-	-	-	-	-	-	-	191,885	3,120
Period 2e Collateral Costs																					
2e.3.1	DOC staff relocation expenses	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
2e.3.2	Spent Fuel Capital and Transfer	-	-	-	-	-	-	1,500	225	1,725	-	1,725	-	-	-	-	-	-	-	-	-
2e.3	Subtotal Period 2e Collateral Costs	-	-	-	-	-	-	2,630	394	3,024	1,299	1,725	-	-	-	-	-	-	-	-	-
Period 2e Period-Dependent Costs																					
2e.4.1	Insurance	-	-	-	-	-	-	299	30	329	329	-	-	-	-	-	-	-	-	-	-
2e.4.2	Property taxes	-	-	-	-	-	-	382	38	420	420	-	-	-	-	-	-	-	-	-	-

Table C-1
LaSalle County Station, Unit 1
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 2e Period-Dependent Costs (continued)																					
2e.4.3	Health physics supplies	-	942	-	-	-	-	-	236	1,178	1,178	-	-	-	-	-	-	-	-	-	-
2e.4.4	Disposal of DAW generated	-	-	1	0	-	19	-	5	25	25	-	-	-	342	-	-	-	6,832	2	-
2e.4.5	Plant energy budget	-	-	-	-	-	-	210	31	241	241	-	-	-	-	-	-	-	-	-	-
2e.4.6	NRC Fees	-	-	-	-	-	-	539	54	593	593	-	-	-	-	-	-	-	-	-	-
2e.4.7	Emergency Planning Fees	-	-	-	-	-	-	76	8	84	-	84	-	-	-	-	-	-	-	-	-
2e.4.8	Site O&M Costs	-	-	-	-	-	-	95	14	110	110	-	-	-	-	-	-	-	-	-	-
2e.4.9	ISFSI Operating Costs	-	-	-	-	-	-	34	5	39	-	39	-	-	-	-	-	-	-	-	-
2e.4.10	Security Staff Cost	-	-	-	-	-	-	1,197	180	1,377	1,377	-	-	-	-	-	-	-	-	-	28,299
2e.4.11	DOC Staff Cost	-	-	-	-	-	-	3,856	578	4,434	4,434	-	-	-	-	-	-	-	-	-	47,430
2e.4.12	Utility Staff Cost	-	-	-	-	-	-	4,865	730	5,594	5,594	-	-	-	-	-	-	-	-	-	60,981
2e.4	Subtotal Period 2e Period-Dependent Costs	-	942	1	0	-	19	11,553	1,909	14,425	14,302	123	-	-	342	-	-	-	6,832	2	136,710
2e.0	TOTAL PERIOD 2e COST	-	942	1	0	-	19	24,745	5,472	31,180	29,332	1,848	-	-	342	-	-	-	6,832	191,887	139,830
PERIOD 2 TOTALS		11,002	66,583	16,629	9,892	10,989	43,593	218,119	82,878	459,685	412,656	45,452	1,577	552,372	159,479	4,189	1,435	-	36,997,670	1,181,524	2,076,263
PERIOD 3b - Site Restoration																					
Period 3b Direct Decommissioning Activities																					
Demolition of Remaining Site Buildings																					
3b.1.1.1	Reactor Building	-	5,664	-	-	-	-	-	850	6,514	-	-	6,514	-	-	-	-	-	-	64,472	-
3b.1.1.2	Auxiliary Building	-	3,692	-	-	-	-	-	554	4,246	-	-	4,246	-	-	-	-	-	-	43,048	-
3b.1.1.3	Diesel Generator Room	-	468	-	-	-	-	-	70	538	-	-	538	-	-	-	-	-	-	6,000	-
3b.1.1.4	Off Gas Building	-	648	-	-	-	-	-	97	745	-	-	745	-	-	-	-	-	-	8,484	-
3b.1.1.5	Turbine Building	-	5,501	-	-	-	-	-	825	6,326	-	-	6,326	-	-	-	-	-	-	68,584	-
3b.1.1.6	Turbine Pedestal	-	2,881	-	-	-	-	-	432	3,313	-	-	3,313	-	-	-	-	-	-	30,829	-
3b.1.1	Totals	-	18,854	-	-	-	-	-	2,828	21,682	-	-	21,682	-	-	-	-	-	-	221,416	-
Site Closeout Activities																					
3b.1.2	Grade & landscape site	-	149	-	-	-	-	-	22	171	-	-	171	-	-	-	-	-	-	499	-
3b.1.3	Final report to NRC	-	-	-	-	-	-	184	28	212	212	-	-	-	-	-	-	-	-	-	1,560
3b.1	Subtotal Period 3b Activity Costs	-	19,003	-	-	-	-	184	2,878	22,065	212	-	21,853	-	-	-	-	-	-	221,916	1,560
Period 3b Additional Costs																					
3b.2.1	Concrete Crushing	-	776	-	-	-	-	4	117	897	-	-	897	-	-	-	-	-	-	3,936	-
3b.2	Subtotal Period 3b Additional Costs	-	776	-	-	-	-	4	117	897	-	-	897	-	-	-	-	-	-	3,936	-
Period 3b Collateral Costs																					
3b.3.1	Small tool allowance	-	194	-	-	-	-	-	29	223	-	-	223	-	-	-	-	-	-	-	-
3b.3.2	Spent Fuel Capital and Transfer	-	-	-	-	-	-	3,000	450	3,450	-	3,450	-	-	-	-	-	-	-	-	-
3b.3	Subtotal Period 3b Collateral Costs	-	194	-	-	-	-	3,000	479	3,673	-	3,450	223	-	-	-	-	-	-	-	-
Period 3b Period-Dependent Costs																					
3b.4.1	Insurance	-	-	-	-	-	-	782	78	860	-	860	-	-	-	-	-	-	-	-	-
3b.4.2	Property taxes	-	-	-	-	-	-	998	100	1,098	-	1,098	-	-	-	-	-	-	-	-	-
3b.4.3	Heavy equipment rental	-	4,728	-	-	-	-	-	709	5,437	-	-	5,437	-	-	-	-	-	-	-	-
3b.4.4	Plant energy budget	-	-	-	-	-	-	274	41	315	-	63	252	-	-	-	-	-	-	-	-
3b.4.5	NRC ISFSI Fees	-	-	-	-	-	-	372	37	409	-	409	-	-	-	-	-	-	-	-	-
3b.4.6	Emergency Planning Fees	-	-	-	-	-	-	200	20	220	-	220	-	-	-	-	-	-	-	-	-
3b.4.7	ISFSI Operating Costs	-	-	-	-	-	-	88	13	101	-	101	-	-	-	-	-	-	-	-	-
3b.4.8	Site O&M Cost	-	-	-	-	-	-	249	37	287	-	-	287	-	-	-	-	-	-	-	-
3b.4.9	Security Staff Cost	-	-	-	-	-	-	2,993	449	3,442	(0)	2,822	619	-	-	-	-	-	-	-	70,317
3b.4.10	DOC Staff Cost	-	-	-	-	-	-	9,384	1,408	10,792	-	-	10,792	-	-	-	-	-	-	-	110,391
3b.4.11	Utility Staff Cost	-	-	-	-	-	-	5,667	850	6,516	(0)	1,238	5,278	-	-	-	-	-	-	-	70,317
3b.4	Subtotal Period 3b Period-Dependent Costs	-	4,728	-	-	-	-	21,006	3,743	29,476	(0)	6,811	22,666	-	-	-	-	-	-	-	251,026

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LaSalle County Station, Unit 1
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(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
3b.0	TOTAL PERIOD 3b COST	-	24,700	-	-	-	-	24,194	7,217	56,110	212	10,261	45,638	-	-	-	-	-	-	225,852	252,586
PERIOD 3c - Fuel Storage Operations/Shipping																					
Period 3c Direct Decommissioning Activities																					
Period 3c Collateral Costs																					
3c.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	4,500	675	5,175	-	5,175	-	-	-	-	-	-	-	-	-
3c.3	Subtotal Period 3c Collateral Costs	-	-	-	-	-	-	4,500	675	5,175	-	5,175	-	-	-	-	-	-	-	-	-
Period 3c Period-Dependent Costs																					
3c.4.1	Insurance	-	-	-	-	-	-	1,248	125	1,373	-	1,373	-	-	-	-	-	-	-	-	-
3c.4.2	Property taxes	-	-	-	-	-	-	1,593	159	1,753	-	1,753	-	-	-	-	-	-	-	-	-
3c.4.3	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3c.4.4	NRC ISFSI Fees	-	-	-	-	-	-	594	59	654	-	654	-	-	-	-	-	-	-	-	-
3c.4.5	Emergency Planning Fees	-	-	-	-	-	-	319	32	351	-	351	-	-	-	-	-	-	-	-	-
3c.4.6	ISFSI Operating Costs	-	-	-	-	-	-	140	21	161	-	161	-	-	-	-	-	-	-	-	-
3c.4.7	Security Staff Cost	-	-	-	-	-	-	3,941	591	4,532	-	4,532	-	-	-	-	-	-	-	-	89,794
3c.4.8	Utility Staff Cost	-	-	-	-	-	-	1,723	258	1,981	-	1,981	-	-	-	-	-	-	-	-	22,482
3c.4	Subtotal Period 3c Period-Dependent Costs	-	-	-	-	-	-	9,559	1,246	10,805	-	10,805	-	-	-	-	-	-	-	-	112,276
3c.0	TOTAL PERIOD 3c COST	-	-	-	-	-	-	14,059	1,921	15,980	-	15,980	-	-	-	-	-	-	-	-	112,276
PERIOD 3d - GTCC shipping																					
Period 3d Direct Decommissioning Activities																					
Nuclear Steam Supply System Removal																					
3d.1.1.1	Vessel & Internals GTCC Disposal	-	-	500	-	-	11,118	-	1,718	13,336	13,336	-	-	-	-	-	-	671	109,910	-	-
3d.1.1	Totals	-	-	500	-	-	11,118	-	1,718	13,336	13,336	-	-	-	-	-	-	671	109,910	-	-
3d.1	Subtotal Period 3d Activity Costs	-	-	500	-	-	11,118	-	1,718	13,336	13,336	-	-	-	-	-	-	671	109,910	-	-
Period 3d Period-Dependent Costs																					
3d.4.1	Insurance	-	-	-	-	-	-	32	3	35	-	35	-	-	-	-	-	-	-	-	-
3d.4.2	Property taxes	-	-	-	-	-	-	41	4	45	-	45	-	-	-	-	-	-	-	-	-
3d.4.3	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3d.4.4	NRC ISFSI Fees	-	-	-	-	-	-	15	2	17	-	17	-	-	-	-	-	-	-	-	-
3d.4.5	Emergency Planning Fees	-	-	-	-	-	-	8	1	9	-	9	-	-	-	-	-	-	-	-	-
3d.4.6	ISFSI Operating Costs	-	-	-	-	-	-	4	1	4	-	4	-	-	-	-	-	-	-	-	-
3d.4.7	Security Staff Cost	-	-	-	-	-	-	102	15	117	-	117	-	-	-	-	-	-	-	-	2,314
3d.4.8	Utility Staff Cost	-	-	-	-	-	-	44	7	51	-	51	-	-	-	-	-	-	-	-	579
3d.4	Subtotal Period 3d Period-Dependent Costs	-	-	-	-	-	-	246	32	278	-	278	-	-	-	-	-	-	-	-	2,894
3d.0	TOTAL PERIOD 3d COST	-	-	500	-	-	11,118	246	1,750	13,614	13,336	278	-	-	-	-	-	671	109,910	-	2,894
PERIOD 3e - ISFSI Decontamination																					
Period 3e Direct Decommissioning Activities																					
Period 3e Additional Costs																					
3e.2.1	ISFSI License Termination	-	57	1	38	-	153	749	169	1,167	-	1,167	-	-	2,905	-	-	-	244,104	3,498	1,280
3e.2	Subtotal Period 3e Additional Costs	-	57	1	38	-	153	749	169	1,167	-	1,167	-	-	2,905	-	-	-	244,104	3,498	1,280
Period 3e Collateral Costs																					
3e.3.1	Small tool allowance	-	1	-	-	-	-	-	0	1	-	1	-	-	-	-	-	-	-	-	-
3e.3	Subtotal Period 3e Collateral Costs	-	1	-	-	-	-	-	0	1	-	1	-	-	-	-	-	-	-	-	-

Table C-1
LaSalle County Station, Unit 1
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 3e Period-Dependent Costs																					
3e.4.1	Insurance	-	-	-	-	-	-	128	13	140	-	140	-	-	-	-	-	-	-	-	-
3e.4.2	Property taxes	-	-	-	-	-	-	163	16	179	-	179	-	-	-	-	-	-	-	-	-
3e.4.3	Heavy equipment rental	-	209	-	-	-	-	-	31	241	-	241	-	-	-	-	-	-	-	-	-
3e.4.4	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3e.4.5	Security Staff Cost	-	-	-	-	-	-	106	16	122	-	122	-	-	-	-	-	-	-	-	2,468
3e.4.6	Utility Staff Cost	-	-	-	-	-	-	147	22	169	-	169	-	-	-	-	-	-	-	-	1,870
3e.4	Subtotal Period 3e Period-Dependent Costs	-	209	-	-	-	-	544	98	851	-	851	-	-	-	-	-	-	-	-	4,338
3e.0	TOTAL PERIOD 3e COST	-	267	1	38	-	153	1,292	267	2,018	-	2,018	-	-	2,905	-	-	-	244,104	3,498	5,618
PERIOD 3f - ISFSI Site Restoration																					
Period 3f Direct Decommissioning Activities																					
Period 3f Additional Costs																					
3f.2.1	ISFSI Demolition and Site Restoration	-	1,604	-	-	-	-	24	244	1,872	-	1,872	-	-	-	-	-	-	-	21,545	80
3f.2	Subtotal Period 3f Additional Costs	-	1,604	-	-	-	-	24	244	1,872	-	1,872	-	-	-	-	-	-	-	21,545	80
Period 3f Collateral Costs																					
3f.3.1	Small tool allowance	-	18	-	-	-	-	-	3	21	-	21	-	-	-	-	-	-	-	-	-
3f.3	Subtotal Period 3f Collateral Costs	-	18	-	-	-	-	-	3	21	-	21	-	-	-	-	-	-	-	-	-
Period 3f Period-Dependent Costs																					
3f.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3f.4.2	Property taxes	-	-	-	-	-	-	86	9	95	-	95	-	-	-	-	-	-	-	-	-
3f.4.3	Heavy equipment rental	-	86	-	-	-	-	-	13	98	-	98	-	-	-	-	-	-	-	-	-
3f.4.4	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3f.4.5	Security Staff Cost	-	-	-	-	-	-	56	8	64	-	64	-	-	-	-	-	-	-	-	1,307
3f.4.6	Utility Staff Cost	-	-	-	-	-	-	64	10	73	-	73	-	-	-	-	-	-	-	-	810
3f.4	Subtotal Period 3f Period-Dependent Costs	-	86	-	-	-	-	206	39	331	-	331	-	-	-	-	-	-	-	-	2,117
3f.0	TOTAL PERIOD 3f COST	-	1,708	-	-	-	-	230	286	2,224	-	2,224	-	-	-	-	-	-	-	21,545	2,197
PERIOD 3 TOTALS		-	26,675	501	38	-	11,271	40,021	11,441	89,946	13,547	30,761	45,638	-	2,905	-	-	671	354,014	250,895	375,571
TOTAL COST TO DECOMMISSION		13,858	95,574	17,204	10,286	10,989	58,521	379,423	115,226	701,080	546,754	106,181	48,145	552,372	163,604	5,149	1,435	671	37,492,660	1,463,456	3,293,782

Table C-1
LaSalle County Station, Unit 1
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			

TOTAL COST TO DECOMMISSION WITH 19.67% CONTINGENCY:	$701,080	thousands of 2009 dollars
TOTAL NRC LICENSE TERMINATION COST IS 77.99% OR:	$546,754	thousands of 2009 dollars
SPENT FUEL MANAGEMENT COST IS 15.15% OR:	$106,181	thousands of 2009 dollars
NON-NUCLEAR DEMOLITION COST IS 6.87% OR:	$48,145	thousands of 2009 dollars
TOTAL LOW-LEVEL RADIOACTIVE WASTE VOLUME BURIED (EXCLUDING GTCC):	170,188	cubic feet
TOTAL GREATER THAN CLASS C RADWASTE VOLUME GENERATED:	671	cubic feet
TOTAL SCRAP METAL REMOVED:	52,025	tons
TOTAL CRAFT LABOR REQUIREMENTS:	1,463,456	man-hours

End Notes:
n/a - indicates that this activity not charged as decommissioning expense.
a - indicates that this activity performed by decommissioning staff.
0 - indicates that this value is less than 0.5 but is non-zero.
a cell containing " - " indicates a zero value

Table C-2
LaSalle County Station, Unit 2
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
PERIOD 1a - Shutdown through Transition																					
Period 1a Direct Decommissioning Activities																					
1a.1.1	Prepare preliminary decommissioning cost	-	-	-	-	-	-	64	10	74	74	-	-	-	-	-	-	-	-	-	545
1a.1.2	Notification of Cessation of Operations									a											
1a.1.3	Remove fuel & source material									n/a											
1a.1.4	Notification of Permanent Defueling									a											
1a.1.5	Deactivate plant systems & process waste									a											
1a.1.6	Prepare and submit PSDAR	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
1a.1.7	Review plant dwgs & specs.	-	-	-	-	-	-	227	34	262	262	-	-	-	-	-	-	-	-	-	1,927
1a.1.8	Perform detailed rad survey									a											
1a.1.9	Estimate by-product inventory	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
1a.1.10	End product description	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
1a.1.11	Detailed by-product inventory	-	-	-	-	-	-	64	10	74	74	-	-	-	-	-	-	-	-	-	545
1a.1.12	Define major work sequence	-	-	-	-	-	-	371	56	426	426	-	-	-	-	-	-	-	-	-	3,143
1a.1.13	Perform SER and EA	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,299
1a.1.14	Perform Site-Specific Cost Study	-	-	-	-	-	-	247	37	284	284	-	-	-	-	-	-	-	-	-	2,095
1a.1.15	Prepare/submit License Termination Plan	-	-	-	-	-	-	203	30	233	233	-	-	-	-	-	-	-	-	-	1,716
1a.1.16	Receive NRC approval of termination plan									a											
Activity Specifications																					
1a.1.17.1	Plant & temporary facilities	-	-	-	-	-	-	243	36	280	252	-	28	-	-	-	-	-	-	-	2,061
1a.1.17.2	Plant systems	-	-	-	-	-	-	206	31	237	213	-	24	-	-	-	-	-	-	-	1,746
1a.1.17.3	NSSS Decontamination Flush	-	-	-	-	-	-	25	4	28	28	-	-	-	-	-	-	-	-	-	210
1a.1.17.4	Reactor internals	-	-	-	-	-	-	351	53	404	404	-	-	-	-	-	-	-	-	-	2,975
1a.1.17.5	Reactor vessel	-	-	-	-	-	-	321	48	370	370	-	-	-	-	-	-	-	-	-	2,724
1a.1.17.6	Sacrificial shield	-	-	-	-	-	-	25	4	28	28	-	-	-	-	-	-	-	-	-	210
1a.1.17.7	Moisture separators/reheaters	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
1a.1.17.8	Reinforced concrete	-	-	-	-	-	-	79	12	91	45	-	45	-	-	-	-	-	-	-	670
1a.1.17.9	Main Turbine	-	-	-	-	-	-	103	15	119	119	-	-	-	-	-	-	-	-	-	875
1a.1.17.10	Main Condensers	-	-	-	-	-	-	103	15	119	119	-	-	-	-	-	-	-	-	-	875
1a.1.17.11	Pressure suppression structure	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
1a.1.17.12	Drywell	-	-	-	-	-	-	79	12	91	91	-	-	-	-	-	-	-	-	-	670
1a.1.17.13	Plant structures & buildings	-	-	-	-	-	-	154	23	177	89	-	89	-	-	-	-	-	-	-	1,307
1a.1.17.14	Waste management	-	-	-	-	-	-	227	34	262	262	-	-	-	-	-	-	-	-	-	1,927
1a.1.17.15	Facility & site closeout	-	-	-	-	-	-	45	7	51	26	-	26	-	-	-	-	-	-	-	377
1a.1.17	Total	-	-	-	-	-	-	2,110	317	2,427	2,216	-	211	-	-	-	-	-	-	-	17,884
Planning & Site Preparations																					
1a.1.18	Prepare dismantling sequence	-	-	-	-	-	-	119	18	136	136	-	-	-	-	-	-	-	-	-	1,006
1a.1.19	Plant prep. & temp. svces	-	-	-	-	-	-	2,800	420	3,220	3,220	-	-	-	-	-	-	-	-	-	-
1a.1.20	Design water clean-up system	-	-	-	-	-	-	69	10	80	80	-	-	-	-	-	-	-	-	-	587
1a.1.21	Rigging/Cont. Cntrl Envlps/tooling/etc.	-	-	-	-	-	-	2,200	330	2,530	2,530	-	-	-	-	-	-	-	-	-	-
1a.1.22	Procure casks/liners & containers	-	-	-	-	-	-	61	9	70	70	-	-	-	-	-	-	-	-	-	515
1a.1	Subtotal Period 1a Activity Costs	-	-	-	-	-	-	8,887	1,333	10,220	10,008	-	211	-	-	-	-	-	-	-	32,937
Period 1a Additional Costs																					
1a.2.1	ISFSI Expansion	-	-	-	-	-	-	10,400	1,560	11,960	-	11,960	-	-	-	-	-	-	-	-	-
1a.2	Subtotal Period 1a Additional Costs	-	-	-	-	-	-	10,400	1,560	11,960	-	11,960	-	-	-	-	-	-	-	-	-
Period 1a Collateral Costs																					
1a.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	15,000	2,250	17,250	-	17,250	-	-	-	-	-	-	-	-	-
1a.3	Subtotal Period 1a Collateral Costs	-	-	-	-	-	-	15,000	2,250	17,250	-	17,250	-	-	-	-	-	-	-	-	-

Table C-2
LaSalle County Station, Unit 2
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 1a Period-Dependent Costs																					
1a.4.1	Insurance	-	-	-	-	-	-	876	88	964	964	-	-	-	-	-	-	-	-	-	-
1a.4.2	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1a.4.3	Health physics supplies	-	373	-	-	-	-	-	93	466	466	-	-	-	-	-	-	-	-	-	-
1a.4.4	Heavy equipment rental	-	396	-	-	-	-	-	59	455	455	-	-	-	-	-	-	-	-	-	-
1a.4.5	Disposal of DAW generated	-	-	2	1	-	32	-	8	42	42	-	-	-	565	-	-	-	11,299	3	-
1a.4.6	Plant energy budget	-	-	-	-	-	-	1,371	206	1,577	1,577	-	-	-	-	-	-	-	-	-	-
1a.4.7	NRC Fees	-	-	-	-	-	-	471	47	518	518	-	-	-	-	-	-	-	-	-	-
1a.4.8	Emergency Planning Fees	-	-	-	-	-	-	313	31	344	-	344	-	-	-	-	-	-	-	-	-
1a.4.9	Site O&M Costs	-	-	-	-	-	-	125	19	144	144	-	-	-	-	-	-	-	-	-	-
1a.4.10	Spent Fuel Pool O&M	-	-	-	-	-	-	762	114	877	-	877	-	-	-	-	-	-	-	-	-
1a.4.11	ISFSI Operating Costs	-	-	-	-	-	-	44	7	51	-	51	-	-	-	-	-	-	-	-	-
1a.4.12	Security Staff Cost	-	-	-	-	-	-	457	69	526	526	-	-	-	-	-	-	-	-	-	12,264
1a.4.13	Utility Staff Cost	-	-	-	-	-	-	24,828	3,724	28,552	28,552	-	-	-	-	-	-	-	-	-	346,229
1a.4	Subtotal Period 1a Period-Dependent Costs	-	769	2	1	-	32	29,247	4,465	34,514	33,243	1,271	-	-	565	-	-	-	11,299	3	358,493
1a.0	TOTAL PERIOD 1a COST	-	769	2	1	-	32	63,534	9,608	73,944	43,252	30,481	211	-	565	-	-	-	11,299	3	391,430
PERIOD 1b - Decommissioning Preparations																					
Period 1b Direct Decommissioning Activities																					
Detailed Work Procedures																					
1b.1.1.1	Plant systems	-	-	-	-	-	-	234	35	269	242	-	27	-	-	-	-	-	-	-	1,983
1b.1.1.2	NSSS Decontamination Flush	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
1b.1.1.3	Reactor internals	-	-	-	-	-	-	198	30	227	227	-	-	-	-	-	-	-	-	-	1,676
1b.1.1.4	Remaining buildings	-	-	-	-	-	-	67	10	77	19	-	58	-	-	-	-	-	-	-	566
1b.1.1.5	CRD housings & NIs	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
1b.1.1.6	Incore instrumentation	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
1b.1.1.7	Removal primary containment	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
1b.1.1.8	Reactor vessel	-	-	-	-	-	-	179	27	206	206	-	-	-	-	-	-	-	-	-	1,521
1b.1.1.9	Facility closeout	-	-	-	-	-	-	59	9	68	34	-	34	-	-	-	-	-	-	-	503
1b.1.1.10	Sacrificial shield	-	-	-	-	-	-	59	9	68	68	-	-	-	-	-	-	-	-	-	503
1b.1.1.11	Reinforced concrete	-	-	-	-	-	-	49	7	57	28	-	28	-	-	-	-	-	-	-	419
1b.1.1.12	Main Turbine	-	-	-	-	-	-	103	15	118	118	-	-	-	-	-	-	-	-	-	872
1b.1.1.13	Main Condensers	-	-	-	-	-	-	103	15	119	119	-	-	-	-	-	-	-	-	-	875
1b.1.1.14	Moisture separators & reheaters	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
1b.1.1.15	Radwaste building	-	-	-	-	-	-	135	20	155	140	-	16	-	-	-	-	-	-	-	1,144
1b.1.1.16	Reactor building	-	-	-	-	-	-	135	20	155	140	-	16	-	-	-	-	-	-	-	1,144
1b.1.1	Total	-	-	-	-	-	-	1,668	250	1,919	1,741	-	178	-	-	-	-	-	-	-	14,137
1b.1.2	Decon NSSS	631	-	-	-	-	-	-	315	946	946	-	-	-	-	-	-	-	-	1,067	-
1b.1	Subtotal Period 1b Activity Costs	631	-	-	-	-	-	1,668	566	2,864	2,686	-	178	-	-	-	-	-	-	1,067	14,137
Period 1b Additional Costs																					
1b.2.1	Site Characterization	-	-	-	-	-	-	2,550	765	3,315	3,315	-	-	-	-	-	-	-	-	12,457	4,471
1b.2.2	Spent Fuel Pool Isolation	-	-	-	-	-	-	6,460	969	7,429	7,429	-	-	-	-	-	-	-	-	-	-
1b.2	Subtotal Period 1b Additional Costs	-	-	-	-	-	-	9,010	1,734	10,744	10,744	-	-	-	-	-	-	-	-	12,457	4,471
Period 1b Collateral Costs																					
1b.3.1	Decon equipment	763	-	-	-	-	-	-	114	877	877	-	-	-	-	-	-	-	-	-	-
1b.3.2	DOC staff relocation expenses	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
1b.3.3	Process liquid waste	39	-	71	355	-	3,604	-	981	5,050	5,050	-	-	-	252	960	-	-	121,632	236	-
1b.3.4	Small tool allowance	-	2	-	-	-	-	-	0	2	2	-	-	-	-	-	-	-	-	-	-
1b.3.5	Pipe cutting equipment	-	1,100	-	-	-	-	-	165	1,265	1,265	-	-	-	-	-	-	-	-	-	-
1b.3.6	Decon rig	1,400	-	-	-	-	-	-	210	1,610	1,610	-	-	-	-	-	-	-	-	-	-

Table C-2
LaSalle County Station, Unit 2
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Burial Volumes Class B Cu. Feet	Burial Volumes Class C Cu. Feet	Burial Volumes GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 1b Collateral Costs (continued)																					
1b.3.7	Spent Fuel Capital and Transfer	-	-	-	-	-	-	8,000	1,200	9,200	-	9,200	-	-	-	-	-	-	-	-	-
1b.3	Subtotal Period 1b Collateral Costs	2,202	1,102	71	355	-	3,604	9,130	2,840	19,304	10,104	9,200	-	-	252	960	-	-	121,632	236	-
Period 1b Period-Dependent Costs																					
1b.4.1	Decon supplies	23	-	-	-	-	-	-	6	29	29	-	-	-	-	-	-	-	-	-	-
1b.4.2	Insurance	-	-	-	-	-	-	211	21	232	232	-	-	-	-	-	-	-	-	-	-
1b.4.3	Property taxes	-	-	-	-	-	-	2,321	232	2,554	2,554	-	-	-	-	-	-	-	-	-	-
1b.4.4	Health physics supplies	-	206	-	-	-	-	-	52	258	258	-	-	-	-	-	-	-	-	-	-
1b.4.5	Heavy equipment rental	-	198	-	-	-	-	-	30	228	228	-	-	-	-	-	-	-	-	-	-
1b.4.6	Disposal of DAW generated	-	-	1	0	-	18	-	5	24	24	-	-	-	325	-	-	-	6,507	1	-
1b.4.7	Plant energy budget	-	-	-	-	-	-	1,375	206	1,581	1,581	-	-	-	-	-	-	-	-	-	-
1b.4.8	NRC Fees	-	-	-	-	-	-	236	24	260	260	-	-	-	-	-	-	-	-	-	-
1b.4.9	Emergency Planning Fees	-	-	-	-	-	-	157	16	172	-	172	-	-	-	-	-	-	-	-	-
1b.4.10	Site O&M Costs	-	-	-	-	-	-	63	9	72	72	-	-	-	-	-	-	-	-	-	-
1b.4.11	Spent Fuel Pool O&M	-	-	-	-	-	-	382	57	440	-	440	-	-	-	-	-	-	-	-	-
1b.4.12	ISFSI Operating Costs	-	-	-	-	-	-	22	3	25	-	25	-	-	-	-	-	-	-	-	-
1b.4.13	Security Staff Cost	-	-	-	-	-	-	229	34	264	264	-	-	-	-	-	-	-	-	-	6,149
1b.4.14	DOC Staff Cost	-	-	-	-	-	-	3,689	553	4,242	4,242	-	-	-	-	-	-	-	-	-	47,057
1b.4.15	Utility Staff Cost	-	-	-	-	-	-	12,448	1,867	14,315	14,315	-	-	-	-	-	-	-	-	-	173,589
1b.4	Subtotal Period 1b Period-Dependent Costs	23	404	1	0	-	18	21,134	3,116	24,696	24,059	637	-	-	325	-	-	-	6,507	1	226,795
1b.0	TOTAL PERIOD 1b COST	2,856	1,506	72	355	-	3,622	40,942	8,255	57,608	47,592	9,837	178	-	577	960	-	-	128,139	13,761	245,403
PERIOD 1 TOTALS		2,856	2,275	74	355	-	3,654	104,476	17,863	131,552	90,844	40,319	390	-	1,142	960	-	-	139,438	13,764	636,833
PERIOD 2a - Large Component Removal																					
Period 2a Direct Decommissioning Activities																					
Nuclear Steam Supply System Removal																					
2a.1.1.1	Recirculation System Piping & Valves	103	85	18	22	-	198	-	127	553	553	-	-	-	1,006	-	-	-	121,649	3,377	-
2a.1.1.2	Recirculation Pumps & Motors	55	48	14	30	9	313	-	125	594	594	-	-	238	2,356	-	-	-	211,420	1,957	-
2a.1.1.3	CRDMs & NIs Removal	232	177	492	119	-	166	-	269	1,455	1,455	-	-	-	5,536	-	-	-	141,063	7,193	-
2a.1.1.4	Reactor Vessel Internals	252	2,853	6,757	2,868	-	22,908	348	16,178	52,163	52,163	-	-	-	2,003	1,560	1,435	-	474,320	41,825	1,805
2a.1.1.5	Reactor Vessel	114	5,174	2,483	1,075	-	5,466	348	7,612	22,270	22,270	-	-	-	13,945	2,754	-	-	1,791,753	41,825	1,805
2a.1.1	Totals	756	8,337	9,764	4,113	9	29,051	695	24,311	77,037	77,037	-	-	238	24,846	4,315	1,435	-	2,740,204	96,177	3,610
Removal of Major Equipment																					
2a.1.2	Main Turbine/Generator	-	543	2,170	459	2,501	369	-	889	6,931	6,931	-	-	118,264	3,487	-	-	-	5,634,727	9,919	-
2a.1.3	Main Condensers	-	1,028	1,546	327	1,783	263	-	794	5,741	5,741	-	-	84,292	2,485	-	-	-	4,016,136	18,785	-
Cascading Costs from Clean Building Demolition																					
2a.1.4.1	Reactor Building	-	985	-	-	-	-	-	148	1,132	1,132	-	-	-	-	-	-	-	-	11,181	-
2a.1.4.2	Auxiliary Building	-	407	-	-	-	-	-	61	468	468	-	-	-	-	-	-	-	-	4,723	-
2a.1.4.3	IRSF Building	-	74	-	-	-	-	-	11	85	85	-	-	-	-	-	-	-	-	939	-
2a.1.4.4	Service Building	-	162	-	-	-	-	-	24	187	187	-	-	-	-	-	-	-	-	2,230	-
2a.1.4.5	Solid Radwaste Building	-	224	-	-	-	-	-	34	258	258	-	-	-	-	-	-	-	-	2,559	-
2a.1.4.6	Turbine Building	-	597	-	-	-	-	-	90	687	687	-	-	-	-	-	-	-	-	7,337	-
2a.1.4	Totals	-	2,449	-	-	-	-	-	367	2,816	2,816	-	-	-	-	-	-	-	-	28,970	-
Disposal of Plant Systems																					
2a.1.5.1	Acid & Caustic	-	17	-	-	-	-	-	2	19	-	-	19	-	-	-	-	-	-	317	-
2a.1.5.2	Auxiliary Steam	-	304	7	12	74	-	-	89	486	486	-	-	3,882	-	-	-	-	157,664	5,230	-
2a.1.5.3	CSCS Equipment Cooling	-	7	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	141	-
2a.1.5.4	Chemical Feed	-	34	-	-	-	-	-	5	39	-	-	39	-	-	-	-	-	-	638	-
2a.1.5.5	Circulating Water	-	158	-	-	-	-	-	24	182	-	-	182	-	-	-	-	-	-	3,125	-

Table C-2
LaSalle County Station, Unit 2
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Disposal of Plant Systems (continued)																					
2a.1.5.6	Circulating Water - RCA	-	218	3	6	36	-	-	61	324	324	-	-	1,874	-	-	-	-	76,117	3,663	-
2a.1.5.7	Clean Condensate Storage	-	146	-	-	-	-	-	22	168	-	-	168	-	-	-	-	-	-	2,875	-
2a.1.5.8	Clean Condensate Storage - RCA	-	68	1	1	8	-	-	18	96	96	-	-	429	-	-	-	-	17,422	1,131	-
2a.1.5.9	Condensate	-	801	77	98	353	269	-	343	1,940	1,940	-	-	18,488	2,540	-	-	-	978,672	14,863	-
2a.1.5.10	Condensate Booster	-	902	227	269	697	1,028	-	650	3,774	3,774	-	-	36,538	9,709	-	-	-	2,354,967	17,069	-
2a.1.5.11	Condensate Polishing Demineralizer	-	893	30	28	72	111	-	269	1,404	1,404	-	-	3,756	1,065	-	-	-	246,471	15,985	-
2a.1.5.12	Containment Combustible Gas Control	-	69	1	2	11	-	-	19	101	101	-	-	567	-	-	-	-	23,007	1,161	-
2a.1.5.13	Cycled Condensate Storage	-	532	21	27	110	60	-	170	920	920	-	-	5,741	602	-	-	-	283,940	9,749	-
2a.1.5.14	Drywell Instrument Nitrogen	-	59	1	2	12	-	-	17	90	90	-	-	613	-	-	-	-	24,892	1,048	-
2a.1.5.15	Extraction Steam	-	294	20	25	79	78	-	111	606	606	-	-	4,161	736	-	-	-	234,989	5,484	-
2a.1.5.16	Feedwater	-	508	56	67	194	235	-	230	1,289	1,289	-	-	10,138	2,218	-	-	-	610,662	9,480	-
2a.1.5.17	Feedwater Heater Vents & Drains	-	2,350	138	169	587	492	-	838	4,574	4,574	-	-	30,744	4,650	-	-	-	1,665,071	43,380	-
2a.1.5.18	Gland Steam	-	210	8	8	21	30	-	65	342	342	-	-	1,117	281	-	-	-	70,536	3,809	-
2a.1.5.19	HVAC-Machine Shop\TB Sandblast	-	33	1	1	5	1	-	9	49	49	-	-	256	7	-	-	-	11,025	598	-
2a.1.5.20	HVAC-River\Lake Screen House	-	21	-	-	-	-	-	3	24	-	-	24	-	-	-	-	-	-	422	-
2a.1.5.21	HVAC-Service Building	-	54	-	-	-	-	-	8	63	-	-	63	-	-	-	-	-	-	1,072	-
2a.1.5.22	Hydrogen & Carbon Dioxide	-	36	-	-	-	-	-	5	41	-	-	41	-	-	-	-	-	-	708	-
2a.1.5.23	Lake Makeup & Blowdown	-	214	-	-	-	-	-	32	246	-	-	246	-	-	-	-	-	-	4,257	-
2a.1.5.24	Main Steam	-	114	5	4	7	22	-	36	187	187	-	-	375	203	-	-	-	33,466	2,050	-
2a.1.5.25	Makeup Demineralizer	-	688	25	32	142	61	-	216	1,164	1,164	-	-	7,416	634	-	-	-	352,906	12,612	-
2a.1.5.26	Misc Bldgs Floor Drains	832	1,156	66	58	125	250	-	802	3,288	3,288	-	-	6,544	2,367	-	-	-	477,918	29,288	-
2a.1.5.27	Refrigeration	-	55	-	-	-	-	-	8	63	-	-	63	-	-	-	-	-	-	1,110	-
2a.1.5.28	Refrigeration - RCA	-	40	0	1	5	-	-	11	57	57	-	-	245	-	-	-	-	9,954	666	-
2a.1.5.29	Screen Wash	-	20	-	-	-	-	-	3	23	-	-	23	-	-	-	-	-	-	407	-
2a.1.5.30	Service Air	-	22	-	-	-	-	-	3	25	-	-	25	-	-	-	-	-	-	427	-
2a.1.5.31	Sewage Treatment	-	87	-	-	-	-	-	13	100	-	-	100	-	-	-	-	-	-	1,741	-
2a.1.5.32	Standby Gas Treatment	-	46	3	4	13	13	-	18	97	97	-	-	661	122	-	-	-	37,760	855	-
2a.1.5.33	Station Heat Recovery	-	581	18	31	195	-	-	181	1,007	1,007	-	-	10,223	-	-	-	-	415,159	10,039	-
2a.1.5.34	Switchgear Heat Removal	-	10	-	-	-	-	-	1	11	-	-	11	-	-	-	-	-	-	180	-
2a.1.5.35	Turbine Bldg Closed Cooling Water	-	459	32	36	118	111	-	169	924	924	-	-	6,181	1,047	-	-	-	344,838	8,319	-
2a.1.5.36	Turbine Building Equipment Drains	59	81	4	4	12	15	-	56	232	232	-	-	610	146	-	-	-	37,892	1,912	-
2a.1.5.37	Turbine Building Floor Drains	32	82	2	2	3	8	-	39	168	168	-	-	183	73	-	-	-	13,933	2,020	-
2a.1.5.38	Turbine Generator	-	237	28	32	66	139	-	111	613	613	-	-	3,455	1,319	-	-	-	257,852	4,479	-
2a.1.5.39	Turbine Oil	-	684	24	28	115	64	-	211	1,128	1,128	-	-	6,048	656	-	-	-	300,237	12,441	-
2a.1.5.40	Wastewater Treatment	-	129	-	-	-	-	-	19	148	-	-	148	-	-	-	-	-	-	2,499	-
2a.1.5	Totals	923	12,418	798	948	3,059	2,985	-	4,892	26,022	24,861	-	1,161	160,246	28,376	-	-	-	9,037,352	237,248	-
2a.1.6	Scaffolding in support of decommissioning	-	2,722	43	10	48	15	-	697	3,534	3,534	-	-	2,253	140	-	-	-	113,976	56,438	-
2a.1	Subtotal Period 2a Activity Costs	1,678	27,498	14,321	5,857	7,399	32,683	695	31,950	122,082	120,921	-	1,161	365,294	59,334	4,315	1,435	-	21,542,400	447,539	3,610
Period 2a Collateral Costs																					
2a.3.1	Process liquid waste	101	-	119	589	-	883	-	372	2,065	2,065	-	-	-	2,024	-	-	-	190,399	395	-
2a.3.2	Small tool allowance	-	374	-	-	-	-	-	56	430	387	-	43	-	-	-	-	-	-	-	-
2a.3.3	Spent Fuel Capital and Transfer	-	-	-	-	-	-	25,000	3,750	28,750	-	28,750	-	-	-	-	-	-	-	-	-
2a.3	Subtotal Period 2a Collateral Costs	101	374	119	589	-	883	25,000	4,178	31,244	2,452	28,750	43	-	2,024	-	-	-	190,399	395	-
Period 2a Period-Dependent Costs																					
2a.4.1	Decon supplies	88	-	-	-	-	-	-	22	110	110	-	-	-	-	-	-	-	-	-	-
2a.4.2	Insurance	-	-	-	-	-	-	793	79	873	873	-	-	-	-	-	-	-	-	-	-
2a.4.3	Property taxes	-	-	-	-	-	-	4,818	482	5,300	4,770	-	530	-	-	-	-	-	-	-	-
2a.4.4	Health physics supplies	-	2,408	-	-	-	-	-	602	3,010	3,010	-	-	-	-	-	-	-	-	-	-
2a.4.5	Heavy equipment rental	-	3,142	-	-	-	-	-	471	3,613	3,613	-	-	-	-	-	-	-	-	-	-
2a.4.6	Disposal of DAW generated	-	-	21	8	-	437	-	112	579	579	-	-	-	7,823	-	-	-	156,465	36	-
2a.4.7	Plant energy budget	-	-	-	-	-	-	2,451	368	2,819	2,819	-	-	-	-	-	-	-	-	-	-
2a.4.8	NRC Fees	-	-	-	-	-	-	848	85	933	933	-	-	-	-	-	-	-	-	-	-

Table C-2
LaSalle County Station, Unit 2
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 2a Period-Dependent Costs (continued)																					
2a.4.9	Emergency Planning Fees	-	-	-	-	-	-	188	19	207	-	207	-	-	-	-	-	-	-	-	-
2a.4.10	Site O&M Costs	-	-	-	-	-	-	235	35	270	270	-	-	-	-	-	-	-	-	-	-
2a.4.11	Spent Fuel Pool O&M	-	-	-	-	-	-	1,435	215	1,650	-	1,650	-	-	-	-	-	-	-	-	-
2a.4.12	ISFSI Operating Costs	-	-	-	-	-	-	83	12	95	-	95	-	-	-	-	-	-	-	-	-
2a.4.13	Security Staff Cost	-	-	-	-	-	-	9,960	1,494	11,455	11,455	-	-	-	-	-	-	-	-	-	248,301
2a.4.14	DOC Staff Cost	-	-	-	-	-	-	24,139	3,621	27,760	27,760	-	-	-	-	-	-	-	-	-	298,354
2a.4.15	Utility Staff Cost	-	-	-	-	-	-	41,456	6,218	47,675	47,675	-	-	-	-	-	-	-	-	-	555,489
2a.4	Subtotal Period 2a Period-Dependent Costs	88	5,550	21	8	-	437	86,408	13,837	106,348	103,866	1,952	530	-	7,823	-	-	-	156,465	36	1,102,144
2a.0	TOTAL PERIOD 2a COST	1,867	33,421	14,462	6,454	7,399	34,003	112,103	49,965	259,675	227,239	30,702	1,734	365,294	69,181	4,315	1,435	-	21,889,260	447,969	1,105,754
PERIOD 2b - Site Decontamination																					
Period 2b Direct Decommissioning Activities																					
Disposal of Plant Systems																					
2b.1.1.1	Aux Diesel Bldg Floor Drains	-	8	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	147	-
2b.1.1.2	Auxiliary Diesel Generator	-	69	-	-	-	-	-	10	79	-	-	79	-	-	-	-	-	-	1,341	-
2b.1.1.3	Control Rod Drive	-	206	4	4	13	14	-	58	300	300	-	-	694	136	-	-	-	40,347	3,887	-
2b.1.1.4	Diesel Oil	-	58	-	-	-	-	-	9	67	-	-	67	-	-	-	-	-	-	1,104	-
2b.1.1.5	Domestic Water	-	25	-	-	-	-	-	4	29	-	-	29	-	-	-	-	-	-	499	-
2b.1.1.6	Domestic Water - RCA	-	39	0	1	5	-	-	11	56	56	-	-	263	-	-	-	-	10,694	653	-
2b.1.1.7	Electrical	-	518	-	-	-	-	-	78	596	-	-	596	-	-	-	-	-	-	9,872	-
2b.1.1.8	Electrical - RCA	-	5,152	94	168	1,047	-	-	1,480	7,941	7,941	-	-	54,830	-	-	-	-	2,226,676	87,927	-
2b.1.1.9	Fire Protection	-	214	-	-	-	-	-	32	246	-	-	246	-	-	-	-	-	-	4,263	-
2b.1.1.10	HVAC-Auxiliary Building	-	290	8	13	72	11	-	89	482	482	-	-	3,773	100	-	-	-	162,244	5,080	-
2b.1.1.11	HVAC-Control Rm\Aux Equip Area	-	38	-	-	-	-	-	6	44	-	-	44	-	-	-	-	-	-	729	-
2b.1.1.12	HVAC-Diesel Generator Room	-	14	-	-	-	-	-	2	16	-	-	16	-	-	-	-	-	-	284	-
2b.1.1.13	HVAC-Off Gas Building	-	68	3	5	28	4	-	23	132	132	-	-	1,470	39	-	-	-	63,223	1,242	-
2b.1.1.14	HVAC-Radwaste Building	-	108	2	4	22	4	-	32	172	172	-	-	1,130	35	-	-	-	49,058	1,906	-
2b.1.1.15	HVAC-Turbine Building	-	811	19	31	168	25	-	241	1,294	1,294	-	-	8,797	234	-	-	-	378,235	13,872	-
2b.1.1.16	High Pressure Core Spray	-	297	55	49	69	249	-	160	879	879	-	-	3,637	2,355	-	-	-	358,873	5,498	-
2b.1.1.17	Instrument Air	-	7	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	152	-
2b.1.1.18	Instrument Air - RCA	-	142	1	2	13	-	-	38	197	197	-	-	681	-	-	-	-	27,654	2,514	-
2b.1.1.19	Low Pressure Core Spray	-	141	26	23	31	116	-	75	413	413	-	-	1,647	1,100	-	-	-	165,528	2,613	-
2b.1.1.20	Nuclear Boiler	-	1,410	145	144	235	694	-	597	3,224	3,224	-	-	12,316	6,555	-	-	-	1,088,103	26,278	-
2b.1.1.21	Off Gas	-	558	43	41	61	208	-	211	1,122	1,122	-	-	3,170	1,968	-	-	-	304,618	10,160	-
2b.1.1.22	Primary Containment Vent & Purge	-	440	36	46	160	135	-	178	994	994	-	-	8,370	1,282	-	-	-	454,098	8,267	-
2b.1.1.23	Process Radiation Monitoring	-	14	0	0	0	1	-	4	20	20	-	-	19	8	-	-	-	1,433	282	-
2b.1.1.24	Process Sampling	-	52	1	1	3	3	-	14	74	74	-	-	158	27	-	-	-	8,792	1,001	-
2b.1.1.25	Radioactive Waste Disposal	-	2,457	135	116	241	506	-	808	4,263	4,263	-	-	12,638	5,367	-	-	-	941,983	44,557	-
2b.1.1.26	Radwaste Area Floor Drains	-	2	0	0	0	0	-	1	3	3	-	-	2	2	-	-	-	272	35	-
2b.1.1.27	Reactor Building Equipment Drains	34	64	3	2	5	11	-	37	155	155	-	-	239	115	-	-	-	19,131	1,707	-
2b.1.1.28	Reactor Core Isolation Cooling	95	198	12	10	12	54	-	115	496	496	-	-	625	510	-	-	-	71,097	4,693	-
2b.1.1.29	Reactor Recirculation	-	113	13	14	24	67	-	52	282	282	-	-	1,243	631	-	-	-	107,158	2,142	-
2b.1.1.30	Reactor Water Clean-up	401	744	29	22	20	123	-	426	1,766	1,766	-	-	1,062	1,159	-	-	-	146,989	20,103	-
2b.1.1.31	Residual Heat Removal	1,395	1,470	260	236	337	1,195	-	1,476	6,368	6,368	-	-	17,633	11,296	-	-	-	1,729,020	33,311	-
2b.1.1.32	Service Air - RCA	-	325	3	6	37	-	-	88	459	459	-	-	1,953	-	-	-	-	79,314	5,520	-
2b.1.1.33	Service Water	-	82	-	-	-	-	-	12	95	-	-	95	-	-	-	-	-	-	1,595	-
2b.1.1.34	Service Water - RCA	-	749	24	44	271	-	-	237	1,325	1,325	-	-	14,208	-	-	-	-	577,006	12,979	-
2b.1.1.35	Standby Liquid Control	-	42	0	1	6	-	-	12	60	60	-	-	291	-	-	-	-	11,832	702	-
2b.1.1	Totals	1,925	16,926	918	985	2,879	3,419	-	6,617	33,669	32,480	-	1,189	150,849	32,919	-	-	-	9,023,378	316,914	-
2b.1.2	Scaffolding in support of decommissioning	-	3,402	53	12	60	19	-	871	4,418	4,418	-	-	2,816	175	-	-	-	142,471	70,548	-

Table C-2
LaSalle County Station, Unit 2
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Decontamination of Site Buildings																					
2b.1.3.1	Reactor Building	2,626	2,688	105	121	221	262	-	2,113	8,138	8,138	-	-	11,604	4,679	-	-	-	931,913	94,524	-
2b.1.3.2	Auxiliary Building	1,397	645	52	63	275	91	-	938	3,460	3,460	-	-	14,385	1,321	-	-	-	712,143	36,118	-
2b.1.3.3	IRSF Building	78	34	6	7	1	18	-	54	199	199	-	-	26	348	-	-	-	35,816	1,985	-
2b.1.3.4	Service Building	108	41	9	10	1	26	-	73	267	267	-	-	34	485	-	-	-	49,855	2,631	-
2b.1.3.5	Solid Radwaste Building	477	377	22	25	19	61	-	356	1,336	1,336	-	-	984	1,120	-	-	-	151,467	15,211	-
2b.1.3.6	Turbine Building	1,734	1,005	142	160	98	401	-	1,271	4,811	4,811	-	-	5,149	7,470	-	-	-	950,042	48,144	-
2b.1.3	Totals	6,420	4,791	336	386	614	859	-	4,806	18,212	18,212	-	-	32,181	15,423	-	-	-	2,831,236	198,613	-
2b.1	Subtotal Period 2b Activity Costs	8,345	25,120	1,307	1,383	3,553	4,296	-	12,294	56,299	55,110	-	1,189	185,847	48,517	-	-	-	11,997,080	586,075	-
Period 2b Additional Costs																					
2b.2.1	Soil Remediation	-	29	1	216	-	706	-	216	1,168	1,168	-	-	-	13,453	-	-	-	1,119,288	367	-
2b.2	Subtotal Period 2b Additional Costs	-	29	1	216	-	706	-	216	1,168	1,168	-	-	-	13,453	-	-	-	1,119,288	367	-
Period 2b Collateral Costs																					
2b.3.1	Process liquid waste	182	-	328	1,627	-	2,584	-	1,014	5,735	5,735	-	-	-	5,561	-	-	-	556,934	1,084	-
2b.3.2	Small tool allowance	-	480	-	-	-	-	-	72	553	553	-	-	-	-	-	-	-	-	-	-
2b.3.3	Spent Fuel Capital and Transfer	-	-	-	-	-	-	5,000	750	5,750	-	5,750	-	-	-	-	-	-	-	-	-
2b.3	Subtotal Period 2b Collateral Costs	182	480	328	1,627	-	2,584	5,000	1,836	12,037	6,287	5,750	-	-	5,561	-	-	-	556,934	1,084	-
Period 2b Period-Dependent Costs																					
2b.4.1	Decon supplies	1,657	-	-	-	-	-	-	414	2,071	2,071	-	-	-	-	-	-	-	-	-	-
2b.4.2	Insurance	-	-	-	-	-	-	896	90	986	986	-	-	-	-	-	-	-	-	-	-
2b.4.3	Property taxes	-	-	-	-	-	-	1,062	106	1,169	1,169	-	-	-	-	-	-	-	-	-	-
2b.4.4	Health physics supplies	-	3,008	-	-	-	-	-	752	3,760	3,760	-	-	-	-	-	-	-	-	-	-
2b.4.5	Heavy equipment rental	-	3,520	-	-	-	-	-	528	4,048	4,048	-	-	-	-	-	-	-	-	-	-
2b.4.6	Disposal of DAW generated	-	-	27	10	-	544	-	140	721	721	-	-	-	9,748	-	-	-	194,954	45	-
2b.4.7	Plant energy budget	-	-	-	-	-	-	2,186	328	2,514	2,514	-	-	-	-	-	-	-	-	-	-
2b.4.8	NRC Fees	-	-	-	-	-	-	958	96	1,054	1,054	-	-	-	-	-	-	-	-	-	-
2b.4.9	Emergency Planning Fees	-	-	-	-	-	-	212	21	234	-	234	-	-	-	-	-	-	-	-	-
2b.4.10	Site O&M Costs	-	-	-	-	-	-	266	40	305	305	-	-	-	-	-	-	-	-	-	-
2b.4.11	Spent Fuel Pool O&M	-	-	-	-	-	-	1,621	243	1,864	-	1,864	-	-	-	-	-	-	-	-	-
2b.4.12	Liquid Radwaste Processing Equipment/Services	-	-	-	-	-	-	407	61	468	468	-	-	-	-	-	-	-	-	-	-
2b.4.13	ISFSI Operating Costs	-	-	-	-	-	-	93	14	107	-	107	-	-	-	-	-	-	-	-	-
2b.4.14	Security Staff Cost	-	-	-	-	-	-	11,251	1,688	12,938	12,938	-	-	-	-	-	-	-	-	-	280,469
2b.4.15	DOC Staff Cost	-	-	-	-	-	-	26,230	3,935	30,165	30,165	-	-	-	-	-	-	-	-	-	323,703
2b.4.16	Utility Staff Cost	-	-	-	-	-	-	45,020	6,753	51,773	51,773	-	-	-	-	-	-	-	-	-	600,846
2b.4	Subtotal Period 2b Period-Dependent Costs	1,657	6,527	27	10	-	544	90,203	15,208	114,177	111,971	2,205	-	-	9,748	-	-	-	194,954	45	1,205,017
2b.0	TOTAL PERIOD 2b COST	10,184	32,157	1,663	3,236	3,553	8,130	95,203	29,555	183,681	174,537	7,955	1,189	185,847	77,279	-	-	-	13,868,260	587,571	1,205,017
PERIOD 2c - Decontamination Following Wet Fuel Storage																					
Period 2c Direct Decommissioning Activities																					
2c.1.1	Remove spent fuel racks	918	82	166	157	-	1,030	-	777	3,130	3,130	-	-	-	9,726	-	-	-	872,665	1,631	-
Disposal of Plant Systems																					
2c.1.2.1	Containment Monitoring	-	23	0	0	1	1	-	6	33	33	-	-	58	12	-	-	-	3,416	455	-
2c.1.2.2	Electrical - Contaminated	-	830	12	20	108	16	-	232	1,219	1,219	-	-	5,678	151	-	-	-	244,161	14,760	-
2c.1.2.3	Fire Protection - RCA	-	1,033	22	39	244	-	-	303	1,641	1,641	-	-	12,787	-	-	-	-	519,289	17,581	-
2c.1.2.4	Fuel Pool Cooling & Cleanup	-	777	47	56	190	168	-	278	1,517	1,517	-	-	9,938	1,594	-	-	-	546,102	14,131	-
2c.1.2.5	HVAC-Primary Containment	-	887	30	43	191	77	-	279	1,508	1,508	-	-	10,027	732	-	-	-	472,374	15,669	-
2c.1.2.6	Reactor Bldg Closed Cooling Water	-	355	44	51	177	151	-	165	943	943	-	-	9,277	1,424	-	-	-	504,377	6,243	-
2c.1.2.7	Reactor Building Floor Drains	0	7	0	0	0	1	-	2	10	10	-	-	8	7	-	-	-	951	123	-
2c.1.2.8	Well Water	-	91	-	-	-	-	-	14	104	-	-	104	-	-	-	-	-	-	1,732	-
2c.1.2	Totals	0	4,003	157	210	912	414	-	1,279	6,975	6,870	-	104	47,773	3,920	-	-	-	2,290,669	70,694	-

Table C-2
LaSalle County Station, Unit 2
DECON Decommissioning Cost Estimate
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Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Decontamination of Site Buildings																					
2c.1.3.1	Reactor Building Spent Fuel Pool	265	973	254	262	16	1,201	-	743	3,714	3,714	-	-	842	14,610	-	-	-	1,412,321	20,548	-
2c.1.3	Totals	265	973	254	262	16	1,201	-	743	3,714	3,714	-	-	842	14,610	-	-	-	1,412,321	20,548	-
2c.1.4	Scaffolding in support of decommissioning	-	680	11	2	12	4	-	174	884	884	-	-	563	35	-	-	-	28,494	14,110	-
2c.1	Subtotal Period 2c Activity Costs	1,183	5,739	588	631	940	2,648	-	2,974	14,702	14,598	-	104	49,179	28,292	-	-	-	4,604,149	106,983	-
Period 2c Additional Costs																					
2c.2.1	License Termination Survey Planning	-	-	-	-	-	-	940	282	1,222	1,222	-	-	-	-	-	-	-	-	-	6,240
2c.2	Subtotal Period 2c Additional Costs	-	-	-	-	-	-	940	282	1,222	1,222	-	-	-	-	-	-	-	-	-	6,240
Period 2c Collateral Costs																					
2c.3.1	Process liquid waste	138	-	56	267	-	263	-	180	904	904	-	-	-	945	-	-	-	56,700	184	-
2c.3.2	Small tool allowance	-	100	-	-	-	-	-	15	115	115	-	-	-	-	-	-	-	-	-	-
2c.3.3	Decommissioning Equipment Disposition	-	-	114	31	127	40	-	45	356	356	-	-	6,000	373	-	-	-	303,507	88	-
2c.3	Subtotal Period 2c Collateral Costs	138	100	169	298	127	303	-	240	1,375	1,375	-	-	6,000	1,318	-	-	-	360,207	272	-
Period 2c Period-Dependent Costs																					
2c.4.1	Decon supplies	47	-	-	-	-	-	-	12	59	59	-	-	-	-	-	-	-	-	-	-
2c.4.2	Insurance	-	-	-	-	-	-	215	21	236	236	-	-	-	-	-	-	-	-	-	-
2c.4.3	Property taxes	-	-	-	-	-	-	255	25	280	280	-	-	-	-	-	-	-	-	-	-
2c.4.4	Health physics supplies	-	577	-	-	-	-	-	144	722	722	-	-	-	-	-	-	-	-	-	-
2c.4.5	Heavy equipment rental	-	844	-	-	-	-	-	127	970	970	-	-	-	-	-	-	-	-	-	-
2c.4.6	Disposal of DAW generated	-	-	9	3	-	182	-	47	242	242	-	-	-	3,268	-	-	-	65,363	15	-
2c.4.7	Plant energy budget	-	-	-	-	-	-	279	42	321	321	-	-	-	-	-	-	-	-	-	-
2c.4.8	NRC Fees	-	-	-	-	-	-	230	23	253	253	-	-	-	-	-	-	-	-	-	-
2c.4.9	Emergency Planning Fees	-	-	-	-	-	-	51	5	56	-	56	-	-	-	-	-	-	-	-	-
2c.4.10	Site O&M Costs	-	-	-	-	-	-	64	10	73	73	-	-	-	-	-	-	-	-	-	-
2c.4.11	Liquid Radwaste Processing Equipment/Services	-	-	-	-	-	-	195	29	224	224	-	-	-	-	-	-	-	-	-	-
2c.4.12	ISFSI Operating Costs	-	-	-	-	-	-	22	3	26	-	26	-	-	-	-	-	-	-	-	-
2c.4.13	Security Staff Cost	-	-	-	-	-	-	1,507	226	1,733	1,733	-	-	-	-	-	-	-	-	-	35,340
2c.4.14	DOC Staff Cost	-	-	-	-	-	-	4,344	652	4,995	4,995	-	-	-	-	-	-	-	-	-	53,143
2c.4.15	Utility Staff Cost	-	-	-	-	-	-	7,939	1,191	9,130	9,130	-	-	-	-	-	-	-	-	-	101,503
2c.4	Subtotal Period 2c Period-Dependent Costs	47	1,421	9	3	-	182	15,101	2,557	19,321	19,240	82	-	-	3,268	-	-	-	65,363	15	189,986
2c.0	TOTAL PERIOD 2c COST	1,368	7,260	766	933	1,067	3,133	16,041	6,053	36,621	36,435	82	104	55,179	32,878	-	-	-	5,029,720	107,271	196,226
PERIOD 2e - License Termination																					
Period 2e Direct Decommissioning Activities																					
2e.1.1	ORISE confirmatory survey	-	-	-	-	-	-	151	45	197	197	-	-	-	-	-	-	-	-	-	-
2e.1.2	Terminate license									a											
2e.1	Subtotal Period 2e Activity Costs	-	-	-	-	-	-	151	45	197	197	-	-	-	-	-	-	-	-	-	-
Period 2e Additional Costs																					
2e.2.1	License Termination Survey	-	-	-	-	-	-	11,748	3,524	15,272	15,272	-	-	-	-	-	-	-	-	217,865	3,120
2e.2	Subtotal Period 2e Additional Costs	-	-	-	-	-	-	11,748	3,524	15,272	15,272	-	-	-	-	-	-	-	-	217,865	3,120
Period 2e Collateral Costs																					
2e.3.1	DOC staff relocation expenses	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
2e.3.2	Spent Fuel Capital and Transfer	-	-	-	-	-	-	1,500	225	1,725	-	1,725	-	-	-	-	-	-	-	-	-
2e.3	Subtotal Period 2e Collateral Costs	-	-	-	-	-	-	2,630	394	3,024	1,299	1,725	-	-	-	-	-	-	-	-	-
Period 2e Period-Dependent Costs																					
2e.4.1	Insurance	-	-	-	-	-	-	299	30	329	329	-	-	-	-	-	-	-	-	-	-
2e.4.2	Property taxes	-	-	-	-	-	-	382	38	420	420	-	-	-	-	-	-	-	-	-	-

Table C-2
LaSalle County Station, Unit 2
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 2e Period-Dependent Costs (continued)																					
2e.4.3	Health physics supplies	-	1,038	-	-	-	-	-	259	1,297	1,297	-	-	-	-	-	-	-	-	-	-
2e.4.4	Disposal of DAW generated	-	-	1	0	-	19	-	5	25	25	-	-	-	342	-	-	-	6,832	2	-
2e.4.5	Plant energy budget	-	-	-	-	-	-	210	31	241	241	-	-	-	-	-	-	-	-	-	-
2e.4.6	NRC Fees	-	-	-	-	-	-	360	36	396	396	-	-	-	-	-	-	-	-	-	-
2e.4.7	Emergency Planning Fees	-	-	-	-	-	-	76	8	84	-	84	-	-	-	-	-	-	-	-	-
2e.4.8	Site O&M Costs	-	-	-	-	-	-	95	14	110	110	-	-	-	-	-	-	-	-	-	-
2e.4.9	ISFSI Operating Costs	-	-	-	-	-	-	34	5	39	-	39	-	-	-	-	-	-	-	-	-
2e.4.10	Security Staff Cost	-	-	-	-	-	-	1,197	180	1,377	1,377	-	-	-	-	-	-	-	-	-	28,299
2e.4.11	DOC Staff Cost	-	-	-	-	-	-	3,856	578	4,434	4,434	-	-	-	-	-	-	-	-	-	47,430
2e.4.12	Utility Staff Cost	-	-	-	-	-	-	4,865	730	5,594	5,594	-	-	-	-	-	-	-	-	-	60,981
2e.4	Subtotal Period 2e Period-Dependent Costs	-	1,038	1	0	-	19	11,374	1,915	14,347	14,224	123	-	-	342	-	-	-	6,832	2	136,710
2e.0	TOTAL PERIOD 2e COST	-	1,038	1	0	-	19	25,903	5,879	32,840	30,993	1,848	-	-	342	-	-	-	6,832	217,867	139,830
PERIOD 2 TOTALS		13,419	73,876	16,891	10,623	12,019	45,286	249,251	91,452	512,817	469,203	40,587	3,027	606,319	179,680	4,315	1,435	-	40,794,070	1,360,677	2,646,827
PERIOD 3b - Site Restoration																					
Period 3b Direct Decommissioning Activities																					
Demolition of Remaining Site Buildings																					
3b.1.1.1	Reactor Building	-	5,667	-	-	-	-	-	850	6,518	-	-	6,518	-	-	-	-	-	-	64,458	-
3b.1.1.2	Auxiliary Building	-	3,686	-	-	-	-	-	553	4,239	-	-	4,239	-	-	-	-	-	-	42,962	-
3b.1.1.3	Capital Improvements 2009	-	1,314	-	-	-	-	-	197	1,511	-	-	1,511	-	-	-	-	-	-	20,778	-
3b.1.1.4	Chemical Feed Building	-	32	-	-	-	-	-	5	36	-	-	36	-	-	-	-	-	-	482	-
3b.1.1.5	Diesel Generator Room	-	468	-	-	-	-	-	70	538	-	-	538	-	-	-	-	-	-	6,000	-
3b.1.1.6	Discharge Structure	-	20	-	-	-	-	-	3	23	-	-	23	-	-	-	-	-	-	190	-
3b.1.1.7	IRSF Building	-	691	-	-	-	-	-	104	794	-	-	794	-	-	-	-	-	-	8,924	-
3b.1.1.8	ISFSI Haul Path	-	651	-	-	-	-	-	98	748	-	748	-	-	-	-	-	-	-	9,520	-
3b.1.1.9	Lake Screen House	-	1,102	-	-	-	-	-	165	1,267	-	-	1,267	-	-	-	-	-	-	13,877	-
3b.1.1.10	Main Access Facility	-	390	-	-	-	-	-	58	448	-	-	448	-	-	-	-	-	-	5,396	-
3b.1.1.11	Miscellaneous Yard Structures	-	1,946	-	-	-	-	-	292	2,238	-	-	2,238	-	-	-	-	-	-	27,034	-
3b.1.1.12	New Service Building	-	1,840	-	-	-	-	-	276	2,116	-	-	2,116	-	-	-	-	-	-	23,587	-
3b.1.1.13	Outfall Structure	-	8	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	113	-
3b.1.1.14	River Screen House	-	330	-	-	-	-	-	50	380	-	-	380	-	-	-	-	-	-	4,230	-
3b.1.1.15	Security Modifications	-	677	-	-	-	-	-	102	778	-	-	778	-	-	-	-	-	-	3,834	-
3b.1.1.16	Service Building	-	1,534	-	-	-	-	-	230	1,764	-	-	1,764	-	-	-	-	-	-	21,582	-
3b.1.1.17	Sewage Treatment Plant	-	36	-	-	-	-	-	5	41	-	-	41	-	-	-	-	-	-	591	-
3b.1.1.18	Sewage Treatment Plant Upgrades	-	263	-	-	-	-	-	39	302	-	-	302	-	-	-	-	-	-	3,306	-
3b.1.1.19	Solid Radwaste Building	-	2,029	-	-	-	-	-	304	2,333	-	-	2,333	-	-	-	-	-	-	23,167	-
3b.1.1.20	Training Center	-	1,222	-	-	-	-	-	183	1,406	-	-	1,406	-	-	-	-	-	-	16,863	-
3b.1.1.21	Turbine Building	-	5,501	-	-	-	-	-	825	6,326	-	-	6,326	-	-	-	-	-	-	68,584	-
3b.1.1.22	Turbine Pedestal	-	2,102	-	-	-	-	-	315	2,418	-	-	2,418	-	-	-	-	-	-	22,592	-
3b.1.1.23	Wastewater Treatment Plant	-	59	-	-	-	-	-	9	68	-	-	68	-	-	-	-	-	-	911	-
3b.1.1	Totals	-	31,566	-	-	-	-	-	4,735	36,300	-	748	35,552	-	-	-	-	-	-	388,980	-
Site Closeout Activities																					
3b.1.2	BackFill Site	-	522	-	-	-	-	-	78	600	-	-	600	-	-	-	-	-	-	1,485	-
3b.1.3	Grade & landscape site	-	149	-	-	-	-	-	22	171	-	-	171	-	-	-	-	-	-	499	-
3b.1.4	Final report to NRC	-	-	-	-	-	-	77	12	89	89	-	-	-	-	-	-	-	-	-	654
3b.1	Subtotal Period 3b Activity Costs	-	32,236	-	-	-	-	77	4,847	37,160	89	748	36,323	-	-	-	-	-	-	390,964	654
Period 3b Additional Costs																					
3b.2.1	Concrete Crushing	-	1,155	-	-	-	-	5	174	1,333	-	-	1,333	-	-	-	-	-	-	5,855	-
3b.2.2	Cofferdam Construction and Teardown	-	389	-	-	-	-	-	58	447	-	-	447	-	-	-	-	-	-	3,896	-
3b.2	Subtotal Period 3b Additional Costs	-	1,543	-	-	-	-	5	232	1,780	-	-	1,780	-	-	-	-	-	-	9,751	-

Table C-2
LaSalle County Station, Unit 2
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 3b Collateral Costs																					
3b.3.1	Small tool allowance	-	341	-	-	-	-	-	51	392	-	-	392	-	-	-	-	-	-	-	-
3b.3.2	Spent Fuel Capital and Transfer	-	-	-	-	-	-	3,000	450	3,450	-	3,450	-	-	-	-	-	-	-	-	-
3b.3	Subtotal Period 3b Collateral Costs	-	341	-	-	-	-	3,000	501	3,842	-	3,450	392	-	-	-	-	-	-	-	-
Period 3b Period-Dependent Costs																					
3b.4.1	Insurance	-	-	-	-	-	-	782	78	860	-	860	-	-	-	-	-	-	-	-	-
3b.4.2	Property taxes	-	-	-	-	-	-	998	100	1,098	-	1,098	-	-	-	-	-	-	-	-	-
3b.4.3	Heavy equipment rental	-	4,728	-	-	-	-	-	709	5,437	-	-	5,437	-	-	-	-	-	-	-	-
3b.4.4	Plant energy budget	-	-	-	-	-	-	274	41	315	-	63	252	-	-	-	-	-	-	-	-
3b.4.5	NRC ISFSI Fees	-	-	-	-	-	-	372	37	409	-	409	-	-	-	-	-	-	-	-	-
3b.4.6	Emergency Planning Fees	-	-	-	-	-	-	200	20	220	-	220	-	-	-	-	-	-	-	-	-
3b.4.7	ISFSI Operating Costs	-	-	-	-	-	-	88	13	101	-	101	-	-	-	-	-	-	-	-	-
3b.4.8	Site O&M Cost	-	-	-	-	-	-	249	37	287	-	-	287	-	-	-	-	-	-	-	-
3b.4.9	Security Staff Cost	-	-	-	-	-	-	2,993	449	3,442	(0)	2,822	619	-	-	-	-	-	-	-	70,317
3b.4.10	DOC Staff Cost	-	-	-	-	-	-	9,384	1,408	10,792	-	-	10,792	-	-	-	-	-	-	-	110,391
3b.4.11	Utility Staff Cost	-	-	-	-	-	-	5,667	850	6,516	(0)	1,238	5,278	-	-	-	-	-	-	-	70,317
3b.4	Subtotal Period 3b Period-Dependent Costs	-	4,728	-	-	-	-	21,006	3,743	29,476	(0)	6,811	22,666	-	-	-	-	-	-	-	251,026
3b.0	TOTAL PERIOD 3b COST	-	38,848	-	-	-	-	24,088	9,323	72,259	89	11,009	61,161	-	-	-	-	-	-	400,715	251,680
PERIOD 3c - Fuel Storage Operations/Shipping																					
Period 3c Direct Decommissioning Activities																					
Period 3c Collateral Costs																					
3c.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	4,500	675	5,175	-	5,175	-	-	-	-	-	-	-	-	-
3c.3	Subtotal Period 3c Collateral Costs	-	-	-	-	-	-	4,500	675	5,175	-	5,175	-	-	-	-	-	-	-	-	-
Period 3c Period-Dependent Costs																					
3c.4.1	Insurance	-	-	-	-	-	-	1,248	125	1,373	-	1,373	-	-	-	-	-	-	-	-	-
3c.4.2	Property taxes	-	-	-	-	-	-	1,593	159	1,753	-	1,753	-	-	-	-	-	-	-	-	-
3c.4.3	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3c.4.4	NRC ISFSI Fees	-	-	-	-	-	-	594	59	654	-	654	-	-	-	-	-	-	-	-	-
3c.4.5	Emergency Planning Fees	-	-	-	-	-	-	319	32	351	-	351	-	-	-	-	-	-	-	-	-
3c.4.6	ISFSI Operating Costs	-	-	-	-	-	-	140	21	161	-	161	-	-	-	-	-	-	-	-	-
3c.4.7	Security Staff Cost	-	-	-	-	-	-	3,941	591	4,532	-	4,532	-	-	-	-	-	-	-	-	89,794
3c.4.8	Utility Staff Cost	-	-	-	-	-	-	1,723	258	1,981	-	1,981	-	-	-	-	-	-	-	-	22,482
3c.4	Subtotal Period 3c Period-Dependent Costs	-	-	-	-	-	-	9,559	1,246	10,805	-	10,805	-	-	-	-	-	-	-	-	112,276
3c.0	TOTAL PERIOD 3c COST	-	-	-	-	-	-	14,059	1,921	15,980	-	15,980	-	-	-	-	-	-	-	-	112,276
PERIOD 3d - GTCC shipping																					
Period 3d Direct Decommissioning Activities																					
Nuclear Steam Supply System Removal																					
3d.1.1.1	Vessel & Internals GTCC Disposal	-	-	500	-	-	11,118	-	1,718	13,336	13,336	-	-	-	-	-	-	671	109,910	-	-
3d.1.1	Totals	-	-	500	-	-	11,118	-	1,718	13,336	13,336	-	-	-	-	-	-	671	109,910	-	-
3d.1	Subtotal Period 3d Activity Costs	-	-	500	-	-	11,118	-	1,718	13,336	13,336	-	-	-	-	-	-	671	109,910	-	-
Period 3d Period-Dependent Costs																					
3d.4.1	Insurance	-	-	-	-	-	-	32	3	35	-	35	-	-	-	-	-	-	-	-	-
3d.4.2	Property taxes	-	-	-	-	-	-	41	4	45	-	45	-	-	-	-	-	-	-	-	-
3d.4.3	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3d.4.4	NRC ISFSI Fees	-	-	-	-	-	-	15	2	17	-	17	-	-	-	-	-	-	-	-	-
3d.4.5	Emergency Planning Fees	-	-	-	-	-	-	8	1	9	-	9	-	-	-	-	-	-	-	-	-

Table C-2
LaSalle County Station, Unit 2
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 3d Period-Dependent Costs (continued)																					
3d.4.6	ISFSI Operating Costs	-	-	-	-	-	-	4	1	4	-	4	-	-	-	-	-	-	-	-	-
3d.4.7	Security Staff Cost	-	-	-	-	-	-	102	15	117	-	117	-	-	-	-	-	-	-	-	2,314
3d.4.8	Utility Staff Cost	-	-	-	-	-	-	44	7	51	-	51	-	-	-	-	-	-	-	-	579
3d.4	Subtotal Period 3d Period-Dependent Costs	-	-	-	-	-	-	246	32	278	-	278	-	-	-	-	-	-	-	-	2,894
3d.0	TOTAL PERIOD 3d COST	-	-	500	-	-	11,118	246	1,750	13,614	13,336	278	-	-	-	-	-	671	109,910	-	2,894
PERIOD 3e - ISFSI Decontamination																					
Period 3e Direct Decommissioning Activities																					
Period 3e Additional Costs																					
3e.2.1	ISFSI License Termination	-	57	1	38	-	153	749	169	1,167	-	1,167	-	-	2,905	-	-	-	244,104	3,498	1,280
3e.2	Subtotal Period 3e Additional Costs	-	57	1	38	-	153	749	169	1,167	-	1,167	-	-	2,905	-	-	-	244,104	3,498	1,280
Period 3e Collateral Costs																					
3e.3.1	Small tool allowance	-	1	-	-	-	-	-	0	1	-	1	-	-	-	-	-	-	-	-	-
3e.3	Subtotal Period 3e Collateral Costs	-	1	-	-	-	-	-	0	1	-	1	-	-	-	-	-	-	-	-	-
Period 3e Period-Dependent Costs																					
3e.4.1	Insurance	-	-	-	-	-	-	128	13	140	-	140	-	-	-	-	-	-	-	-	-
3e.4.2	Property taxes	-	-	-	-	-	-	163	16	179	-	179	-	-	-	-	-	-	-	-	-
3e.4.3	Heavy equipment rental	-	209	-	-	-	-	-	31	241	-	241	-	-	-	-	-	-	-	-	-
3e.4.4	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3e.4.5	Security Staff Cost	-	-	-	-	-	-	106	16	122	-	122	-	-	-	-	-	-	-	-	2,468
3e.4.6	Utility Staff Cost	-	-	-	-	-	-	147	22	169	-	169	-	-	-	-	-	-	-	-	1,870
3e.4	Subtotal Period 3e Period-Dependent Costs	-	209	-	-	-	-	544	98	851	-	851	-	-	-	-	-	-	-	-	4,338
3e.0	TOTAL PERIOD 3e COST	-	267	1	38	-	153	1,292	267	2,018	-	2,018	-	-	2,905	-	-	-	244,104	3,498	5,618
PERIOD 3f - ISFSI Site Restoration																					
Period 3f Direct Decommissioning Activities																					
Period 3f Additional Costs																					
3f.2.1	ISFSI Demolition and Site Restoration	-	1,604	-	-	-	-	24	244	1,872	-	1,872	-	-	-	-	-	-	-	21,545	80
3f.2	Subtotal Period 3f Additional Costs	-	1,604	-	-	-	-	24	244	1,872	-	1,872	-	-	-	-	-	-	-	21,545	80
Period 3f Collateral Costs																					
3f.3.1	Small tool allowance	-	18	-	-	-	-	-	3	21	-	21	-	-	-	-	-	-	-	-	-
3f.3	Subtotal Period 3f Collateral Costs	-	18	-	-	-	-	-	3	21	-	21	-	-	-	-	-	-	-	-	-
Period 3f Period-Dependent Costs																					
3f.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3f.4.2	Property taxes	-	-	-	-	-	-	86	9	95	-	95	-	-	-	-	-	-	-	-	-
3f.4.3	Heavy equipment rental	-	86	-	-	-	-	-	13	98	-	98	-	-	-	-	-	-	-	-	-
3f.4.4	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3f.4.5	Security Staff Cost	-	-	-	-	-	-	56	8	64	-	64	-	-	-	-	-	-	-	-	1,307
3f.4.6	Utility Staff Cost	-	-	-	-	-	-	64	10	73	-	73	-	-	-	-	-	-	-	-	810
3f.4	Subtotal Period 3f Period-Dependent Costs	-	86	-	-	-	-	206	39	331	-	331	-	-	-	-	-	-	-	-	2,117
3f.0	TOTAL PERIOD 3f COST	-	1,708	-	-	-	-	230	286	2,224	-	2,224	-	-	-	-	-	-	-	21,545	2,197
PERIOD 3 TOTALS		-	40,823	501	38	-	11,271	39,915	13,547	106,095	13,424	31,510	61,161	-	2,905	-	-	671	354,014	425,758	374,665
TOTAL COST TO DECOMMISSION		16,275	116,974	17,466	11,017	12,019	60,210	393,642	122,862	750,464	573,472	112,415	64,578	606,319	183,727	5,274	1,435	671	41,287,520	1,800,199	3,658,324

Table C-2
LaSalle County Station, Unit 2
DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			

TOTAL COST TO DECOMMISSION WITH 19.58% CONTINGENCY:	$750,464	thousands of 2009 dollars
TOTAL NRC LICENSE TERMINATION COST IS 76.42% OR:	$573,472	thousands of 2009 dollars
SPENT FUEL MANAGEMENT COST IS 14.98% OR:	$112,415	thousands of 2009 dollars
NON-NUCLEAR DEMOLITION COST IS 8.61% OR:	$64,578	thousands of 2009 dollars
TOTAL LOW-LEVEL RADIOACTIVE WASTE VOLUME BURIED (EXCLUDING GTCC):	190,436	cubic feet
TOTAL GREATER THAN CLASS C RADWASTE VOLUME GENERATED	671	cubic feet
TOTAL SCRAP METAL REMOVED:	67,806	tons
TOTAL CRAFT LABOR REQUIREMENTS:	1,800,199	man-hours

End Notes:
n/a - indicates that this activity not charged as decommissioning expense.
a - indicates that this activity performed by decommissioning staff.
0 - indicates that this value is less than 0.5 but is non-zero.
a cell containing " - " indicates a zero value

APPENDIX D

DETAILED COST ANALYSIS

DELAYED DECON

Table D-1
LaSalle County Station, Unit 1
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Burial Volumes Class B Cu. Feet	Burial Volumes Class C Cu. Feet	Burial Volumes GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
PERIOD 1a - Shutdown through Transition																					
Period 1a Direct Decommissioning Activities																					
1a.1.1	SAFSTOR site characterization survey	-	-	-	-	-	-	398	119	517	517	-	-	-	-	-	-	-	-	-	-
1a.1.2	Prepare preliminary decommissioning cost	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,300
1a.1.3	Notification of Cessation of Operations									a											
1a.1.4	Remove fuel & source material									n/a											
1a.1.5	Notification of Permanent Defueling									a											
1a.1.6	Deactivate plant systems & process waste									a											
1a.1.7	Prepare and submit PSDAR	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
1a.1.8	Review plant dwgs & specs.	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,300
1a.1.9	Perform detailed rad survey									a											
1a.1.10	Estimate by-product inventory	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
1a.1.11	End product description	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
1a.1.12	Detailed by-product inventory	-	-	-	-	-	-	177	27	204	204	-	-	-	-	-	-	-	-	-	1,500
1a.1.13	Define major work sequence	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
1a.1.14	Perform SER and EA	-	-	-	-	-	-	366	55	421	421	-	-	-	-	-	-	-	-	-	3,100
1a.1.15	Perform Site-Specific Cost Study	-	-	-	-	-	-	590	89	679	679	-	-	-	-	-	-	-	-	-	5,000
Activity Specifications																					
1a.1.16.1	Prepare plant and facilities for SAFSTOR	-	-	-	-	-	-	581	87	668	668	-	-	-	-	-	-	-	-	-	4,920
1a.1.16.2	Plant systems	-	-	-	-	-	-	492	74	565	565	-	-	-	-	-	-	-	-	-	4,167
1a.1.16.3	Plant structures and buildings	-	-	-	-	-	-	368	55	423	423	-	-	-	-	-	-	-	-	-	3,120
1a.1.16.4	Waste management	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
1a.1.16.5	Facility and site dormancy	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
1a.1.16	Total	-	-	-	-	-	-	1,913	287	2,199	2,199	-	-	-	-	-	-	-	-	-	16,207
Detailed Work Procedures																					
1a.1.17.1	Plant systems	-	-	-	-	-	-	140	21	161	161	-	-	-	-	-	-	-	-	-	1,183
1a.1.17.2	Facility closeout & dormancy	-	-	-	-	-	-	142	21	163	163	-	-	-	-	-	-	-	-	-	1,200
1a.1.17	Total	-	-	-	-	-	-	281	42	323	323	-	-	-	-	-	-	-	-	-	2,383
1a.1.18	Procure vacuum drying system	-	-	-	-	-	-	12	2	14	14	-	-	-	-	-	-	-	-	-	100
1a.1.19	Drain/de-energize non-cont. systems									a											
1a.1.20	Drain & dry NSSS									a											
1a.1.21	Drain/de-energize contaminated systems									a											
1a.1.22	Decon/secure contaminated systems									a											
1a.1	Subtotal Period 1a Activity Costs	-	-	-	-	-	-	4,633	755	5,388	5,388	-	-	-	-	-	-	-	-	-	35,890
Period 1a Period-Dependent Costs																					
1a.4.1	Insurance	-	-	-	-	-	-	876	88	964	964	-	-	-	-	-	-	-	-	-	-
1a.4.2	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1a.4.3	Health physics supplies	-	396	-	-	-	-	-	99	495	495	-	-	-	-	-	-	-	-	-	-
1a.4.4	Heavy equipment rental	-	396	-	-	-	-	-	59	455	455	-	-	-	-	-	-	-	-	-	-
1a.4.5	Disposal of DAW generated	-	-	2	1	-	34	-	9	45	45	-	-	-	610	-	-	-	12,190	3	-
1a.4.6	Plant energy budget	-	-	-	-	-	-	1,371	206	1,577	1,577	-	-	-	-	-	-	-	-	-	-
1a.4.7	NRC Fees	-	-	-	-	-	-	706	71	776	776	-	-	-	-	-	-	-	-	-	-
1a.4.8	Emergency Planning Fees	-	-	-	-	-	-	313	31	344	-	344	-	-	-	-	-	-	-	-	-
1a.4.9	Site O&M Costs	-	-	-	-	-	-	125	19	144	144	-	-	-	-	-	-	-	-	-	-
1a.4.10	Spent Fuel Pool O&M	-	-	-	-	-	-	762	114	877	-	877	-	-	-	-	-	-	-	-	-
1a.4.11	ISFSI Operating Costs	-	-	-	-	-	-	44	7	51	-	51	-	-	-	-	-	-	-	-	-
1a.4.12	Security Staff Cost	-	-	-	-	-	-	446	67	512	512	-	-	-	-	-	-	-	-	-	12,264
1a.4.13	Utility Staff Cost	-	-	-	-	-	-	31,082	4,662	35,745	35,745	-	-	-	-	-	-	-	-	-	423,400
1a.4	Subtotal Period 1a Period-Dependent Costs	-	792	2	1	-	34	35,725	5,431	41,984	40,713	1,271	-	-	610	-	-	-	12,190	3	435,664
1a.0	TOTAL PERIOD 1a COST	-	792	2	1	-	34	40,358	6,186	47,372	46,101	1,271	-	-	610	-	-	-	12,190	3	471,554

Table D-1
LaSalle County Station, Unit 1
Delayed DECON Decommissioning Cost Estimate
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Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes: Class A Cu. Feet	Burial Volumes: Class B Cu. Feet	Burial Volumes: Class C Cu. Feet	Burial Volumes: GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
PERIOD 1b - SAFSTOR Limited DECON Activities																					
Period 1b Direct Decommissioning Activities																					
Decontamination of Site Buildings																					
1b.1.1.1	Reactor Building	2,820	-	-	-	-	-	-	1,410	4,230	4,230	-	-	-	-	-	-	-	-	49,197	-
1b.1.1.2	Auxiliary Building	311	-	-	-	-	-	-	155	466	466	-	-	-	-	-	-	-	-	5,731	-
1b.1.1.3	Off Gas Building	139	-	-	-	-	-	-	69	208	208	-	-	-	-	-	-	-	-	2,566	-
1b.1.1.4	Turbine Building	1,631	-	-	-	-	-	-	816	2,447	2,447	-	-	-	-	-	-	-	-	30,081	-
1b.1.1	Totals	4,901	-	-	-	-	-	-	2,450	7,351	7,351	-	-	-	-	-	-	-	-	87,576	-
1b.1	Subtotal Period 1b Activity Costs	4,901	-	-	-	-	-	-	2,450	7,351	7,351	-	-	-	-	-	-	-	-	87,576	-
Period 1b Collateral Costs																					
1b.3.1	Decon equipment	763	-	-	-	-	-	-	114	877	877	-	-	-	-	-	-	-	-	-	-
1b.3.2	Process liquid waste	167	-	67	322	-	317	-	218	1,090	1,090	-	-	-	1,137	-	-	-	68,232	222	-
1b.3.3	Small tool allowance	-	75	-	-	-	-	-	11	86	86	-	-	-	-	-	-	-	-	-	-
1b.3	Subtotal Period 1b Collateral Costs	930	75	67	322	-	317	-	343	2,053	2,053	-	-	-	1,137	-	-	-	68,232	222	-
Period 1b Period-Dependent Costs																					
1b.4.1	Decon supplies	1,260	-	-	-	-	-	-	315	1,576	1,576	-	-	-	-	-	-	-	-	-	-
1b.4.2	Insurance	-	-	-	-	-	-	105	11	116	116	-	-	-	-	-	-	-	-	-	-
1b.4.3	Property taxes	-	-	-	-	-	-	1,155	116	1,271	1,271	-	-	-	-	-	-	-	-	-	-
1b.4.4	Health physics supplies	-	421	-	-	-	-	-	105	527	527	-	-	-	-	-	-	-	-	-	-
1b.4.5	Heavy equipment rental	-	99	-	-	-	-	-	15	113	113	-	-	-	-	-	-	-	-	-	-
1b.4.6	Disposal of DAW generated	-	-	2	1	-	48	-	12	63	63	-	-	-	857	-	-	-	17,148	4	-
1b.4.7	Plant energy budget	-	-	-	-	-	-	342	51	393	393	-	-	-	-	-	-	-	-	-	-
1b.4.8	NRC Fees	-	-	-	-	-	-	176	18	194	194	-	-	-	-	-	-	-	-	-	-
1b.4.9	Emergency Planning Fees	-	-	-	-	-	-	78	8	86	-	86	-	-	-	-	-	-	-	-	-
1b.4.10	Site O&M Costs	-	-	-	-	-	-	31	5	36	36	-	-	-	-	-	-	-	-	-	-
1b.4.11	Spent Fuel Pool O&M	-	-	-	-	-	-	190	29	219	-	219	-	-	-	-	-	-	-	-	-
1b.4.12	ISFSI Operating Costs	-	-	-	-	-	-	11	2	13	-	13	-	-	-	-	-	-	-	-	-
1b.4.13	Security Staff Cost	-	-	-	-	-	-	111	17	128	128	-	-	-	-	-	-	-	-	-	3,058
1b.4.14	Utility Staff Cost	-	-	-	-	-	-	7,749	1,162	8,912	8,912	-	-	-	-	-	-	-	-	-	105,560
1b.4	Subtotal Period 1b Period-Dependent Costs	1,260	520	2	1	-	48	9,948	1,864	13,644	13,327	317	-	-	857	-	-	-	17,148	4	108,618
1b.0	TOTAL PERIOD 1b COST	7,091	595	69	322	-	364	9,948	4,658	23,048	22,731	317	-	-	1,995	-	-	-	85,381	87,801	108,618
PERIOD 1c - Preparations for SAFSTOR Dormancy																					
Period 1c Direct Decommissioning Activities																					
1c.1.1	Prepare support equipment for storage	-	432	-	-	-	-	-	65	496	496	-	-	-	-	-	-	-	-	3,000	-
1c.1.2	Install containment pressure equal. lines	-	42	-	-	-	-	-	6	48	48	-	-	-	-	-	-	-	-	700	-
1c.1.3	Interim survey prior to dormancy	-	-	-	-	-	-	733	220	953	953	-	-	-	-	-	-	-	-	13,416	-
1c.1.4	Secure building accesses									a											
1c.1.5	Prepare & submit interim report	-	-	-	-	-	-	69	10	79	79	-	-	-	-	-	-	-	-	-	583
1c.1	Subtotal Period 1c Activity Costs	-	473	-	-	-	-	802	301	1,576	1,576	-	-	-	-	-	-	-	-	17,116	583
Period 1c Additional Costs																					
1c.2.1	Spent Fuel Pool Isolation	-	-	-	-	-	-	9,690	1,453	11,143	11,143	-	-	-	-	-	-	-	-	-	-
1c.2	Subtotal Period 1c Additional Costs	-	-	-	-	-	-	9,690	1,453	11,143	11,143	-	-	-	-	-	-	-	-	-	-
Period 1c Collateral Costs																					
1c.3.1	Process liquid waste	158	-	64	305	-	300	-	206	1,033	1,033	-	-	-	1,078	-	-	-	64,659	210	-
1c.3.2	Small tool allowance	-	4	-	-	-	-	-	1	4	4	-	-	-	-	-	-	-	-	-	-

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LaSalle County Station, Unit 1
Delayed DECON Decommissioning Cost Estimate
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Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Burial Volumes Class B Cu. Feet	Burial Volumes Class C Cu. Feet	Burial Volumes GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
1c.3	Subtotal Period 1c Collateral Costs	158	4	64	305	-	300	-	207	1,037	1,037	-	-	-	1,078	-	-	-	64,659	210	-
Period 1c Period-Dependent Costs																					
1c.4.1	Insurance	-	-	-	-	-	-	105	11	116	116	-	-	-	-	-	-	-	-	-	-
1c.4.2	Property taxes	-	-	-	-	-	-	1,155	116	1,271	1,271	-	-	-	-	-	-	-	-	-	-
1c.4.3	Health physics supplies	-	139	-	-	-	-	-	35	173	173	-	-	-	-	-	-	-	-	-	-
1c.4.4	Heavy equipment rental	-	99	-	-	-	-	-	15	113	113	-	-	-	-	-	-	-	-	-	-
1c.4.5	Disposal of DAW generated	-	-	0	0	-	6	-	2	8	8	-	-	-	107	-	-	-	2,132	0	-
1c.4.6	Plant energy budget	-	-	-	-	-	-	342	51	393	393	-	-	-	-	-	-	-	-	-	-
1c.4.7	NRC Fees	-	-	-	-	-	-	176	18	194	194	-	-	-	-	-	-	-	-	-	-
1c.4.8	Emergency Planning Fees	-	-	-	-	-	-	78	8	86	-	86	-	-	-	-	-	-	-	-	-
1c.4.9	Site O&M Costs	-	-	-	-	-	-	31	5	36	36	-	-	-	-	-	-	-	-	-	-
1c.4.10	Spent Fuel Pool O&M	-	-	-	-	-	-	190	29	219	-	219	-	-	-	-	-	-	-	-	-
1c.4.11	ISFSI Operating Costs	-	-	-	-	-	-	11	2	13	-	13	-	-	-	-	-	-	-	-	-
1c.4.12	Security Staff Cost	-	-	-	-	-	-	111	17	128	128	-	-	-	-	-	-	-	-	-	3,058
1c.4.13	Utility Staff Cost	-	-	-	-	-	-	2,147	322	2,468	2,468	-	-	-	-	-	-	-	-	-	27,040
1c.4	Subtotal Period 1c Period-Dependent Costs	-	237	0	0	-	6	4,346	627	5,216	4,900	317	-	-	107	-	-	-	2,132	0	30,098
1c.0	TOTAL PERIOD 1c COST	158	714	64	305	-	306	14,837	2,589	18,973	18,656	317	-	-	1,184	-	-	-	66,791	17,326	30,681
PERIOD 1 TOTALS		7,249	2,101	135	628	-	704	65,144	13,432	89,392	87,487	1,905	-	-	3,788	-	-	-	164,362	105,130	610,852
PERIOD 2a - SAFSTOR Dormancy with Wet Spent Fuel Storage																					
Period 2a Direct Decommissioning Activities																					
2a.1.1	Quarterly Inspection									a											
2a.1.2	Semi-annual environmental survey									a											
2a.1.3	Prepare reports									a											
2a.1.4	Bituminous roof replacement	-	-	-	-	-	-	264	40	304	304	-	-	-	-	-	-	-	-	-	-
2a.1.5	Maintenance supplies	-	-	-	-	-	-	980	245	1,225	1,225	-	-	-	-	-	-	-	-	-	-
2a.1	Subtotal Period 2a Activity Costs	-	-	-	-	-	-	1,244	285	1,529	1,529	-	-	-	-	-	-	-	-	-	-
Period 2a Collateral Costs																					
2a.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	13,000	1,950	14,950	-	14,950	-	-	-	-	-	-	-	-	-
2a.3	Subtotal Period 2a Collateral Costs	-	-	-	-	-	-	13,000	1,950	14,950	-	14,950	-	-	-	-	-	-	-	-	-
Period 2a Period-Dependent Costs																					
2a.4.1	Insurance	-	-	-	-	-	-	3,286	329	3,615	-	3,615	-	-	-	-	-	-	-	-	-
2a.4.2	Property taxes	-	-	-	-	-	-	10,936	1,094	12,029	-	12,029	-	-	-	-	-	-	-	-	-
2a.4.3	Health physics supplies	-	596	-	-	-	-	-	149	744	744	-	-	-	-	-	-	-	-	-	-
2a.4.4	Disposal of DAW generated	-	-	8	3	-	167	-	43	221	221	-	-	-	2,985	-	-	-	59,702	14	-
2a.4.5	Plant energy budget	-	-	-	-	-	-	2,138	321	2,459	-	2,459	-	-	-	-	-	-	-	-	-
2a.4.6	NRC Fees	-	-	-	-	-	-	1,571	157	1,728	1,728	-	-	-	-	-	-	-	-	-	-
2a.4.7	Emergency Planning Fees	-	-	-	-	-	-	779	78	857	-	857	-	-	-	-	-	-	-	-	-
2a.4.8	Site O&M Costs	-	-	-	-	-	-	974	146	1,120	-	1,120	-	-	-	-	-	-	-	-	-
2a.4.9	Spent Fuel Pool O&M	-	-	-	-	-	-	5,944	892	6,836	-	6,836	-	-	-	-	-	-	-	-	-
2a.4.10	ISFSI Operating Costs	-	-	-	-	-	-	343	51	394	-	394	-	-	-	-	-	-	-	-	-
2a.4.11	Security Staff Cost	-	-	-	-	-	-	13,456	2,018	15,474	-	15,474	-	-	-	-	-	-	-	-	340,544
2a.4.12	Utility Staff Cost	-	-	-	-	-	-	18,769	2,815	21,585	-	21,585	-	-	-	-	-	-	-	-	240,853
2a.4	Subtotal Period 2a Period-Dependent Costs	-	596	8	3	-	167	58,196	8,093	67,062	2,694	64,368	-	-	2,985	-	-	-	59,702	14	581,397
2a.0	TOTAL PERIOD 2a COST	-	596	8	3	-	167	72,440	10,327	83,541	4,222	79,318	-	-	2,985	-	-	-	59,702	14	581,397

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PERIOD 2b - SAFSTOR Dormancy with Dry Spent Fuel Storage																					
Period 2b Direct Decommissioning Activities																					
2b.1.1	Quarterly Inspection									a											
2b.1.2	Semi-annual environmental survey									a											
2b.1.3	Prepare reports									a											
2b.1.4	Bituminous roof replacement	-	-	-	-	-	-	108	16	124	124	-	-	-	-	-	-	-	-	-	-
2b.1.5	Maintenance supplies	-	-	-	-	-	-	399	100	499	499	-	-	-	-	-	-	-	-	-	-
2b.1	Subtotal Period 2b Activity Costs	-	-	-	-	-	-	507	116	623	623	-	-	-	-	-	-	-	-	-	-
Period 2b Collateral Costs																					
2b.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	2,250	338	2,588	-	2,588	-	-	-	-	-	-	-	-	-
2b.3	Subtotal Period 2b Collateral Costs	-	-	-	-	-	-	2,250	338	2,588	-	2,588	-	-	-	-	-	-	-	-	-
Period 2b Period-Dependent Costs																					
2b.4.1	Insurance	-	-	-	-	-	-	1,339	134	1,473	-	1,473	-	-	-	-	-	-	-	-	-
2b.4.2	Property taxes	-	-	-	-	-	-	1,588	159	1,747	-	1,747	-	-	-	-	-	-	-	-	-
2b.4.3	Health physics supplies	-	221	-	-	-	-	-	55	276	276	-	-	-	-	-	-	-	-	-	-
2b.4.4	Disposal of DAW generated	-	-	3	1	-	66	-	17	87	87	-	-	-	1,175	-	-	-	23,506	5	-
2b.4.5	Plant energy budget	-	-	-	-	-	-	436	65	501	-	501	-	-	-	-	-	-	-	-	-
2b.4.6	NRC Fees	-	-	-	-	-	-	640	64	704	704	-	-	-	-	-	-	-	-	-	-
2b.4.7	Emergency Planning Fees	-	-	-	-	-	-	318	32	349	-	349	-	-	-	-	-	-	-	-	-
2b.4.8	Site O&M Costs	-	-	-	-	-	-	397	60	457	-	457	-	-	-	-	-	-	-	-	-
2b.4.9	ISFSI Operating Costs	-	-	-	-	-	-	140	21	161	-	161	-	-	-	-	-	-	-	-	-
2b.4.10	Security Staff Cost	-	-	-	-	-	-	7	1	9	-	9	-	-	-	-	-	-	-	-	-
2b.4.11	Utility Staff Cost	-	-	-	-	-	-	1,732	260	1,992	-	1,992	-	-	-	-	-	-	-	-	26,514
2b.4	Subtotal Period 2b Period-Dependent Costs	-	221	3	1	-	66	6,597	867	7,756	1,068	6,688	-	-	1,175	-	-	-	23,506	5	26,514
2b.0	TOTAL PERIOD 2b COST	-	221	3	1	-	66	9,354	1,321	10,966	1,691	9,275	-	-	1,175	-	-	-	23,506	5	26,514
PERIOD 2 TOTALS		-	817	11	4	-	232	81,794	11,648	94,507	5,913	88,594	-	-	4,160	-	-	-	83,208	19	607,911
PERIOD 3a - Reactivate Site Following SAFSTOR Dormancy																					
Period 3a Direct Decommissioning Activities																					
3a.1.1	Prepare preliminary decommissioning cost	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,300
3a.1.2	Review plant dwgs & specs.	-	-	-	-	-	-	543	81	624	624	-	-	-	-	-	-	-	-	-	4,600
3a.1.3	Perform detailed rad survey									a											
3a.1.4	End product description	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
3a.1.5	Detailed by-product inventory	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,300
3a.1.6	Define major work sequence	-	-	-	-	-	-	885	133	1,018	1,018	-	-	-	-	-	-	-	-	-	7,500
3a.1.7	Perform SER and EA	-	-	-	-	-	-	366	55	421	421	-	-	-	-	-	-	-	-	-	3,100
3a.1.8	Perform Site-Specific Cost Study	-	-	-	-	-	-	590	89	679	679	-	-	-	-	-	-	-	-	-	5,000
3a.1.9	Prepare/submit License Termination Plan	-	-	-	-	-	-	483	73	556	556	-	-	-	-	-	-	-	-	-	4,096
3a.1.10	Receive NRC approval of termination plan									a											
Activity Specifications																					
3a.1.11.1	Re-activate plant & temporary facilities	-	-	-	-	-	-	870	130	1,000	900	-	100	-	-	-	-	-	-	-	7,370
3a.1.11.2	Plant systems	-	-	-	-	-	-	492	74	565	509	-	57	-	-	-	-	-	-	-	4,167
3a.1.11.3	Reactor internals	-	-	-	-	-	-	838	126	964	964	-	-	-	-	-	-	-	-	-	7,100
3a.1.11.4	Reactor vessel	-	-	-	-	-	-	767	115	882	882	-	-	-	-	-	-	-	-	-	6,500
3a.1.11.5	Sacrificial shield	-	-	-	-	-	-	59	9	68	68	-	-	-	-	-	-	-	-	-	500
3a.1.11.6	Moisture separators/reheaters	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
3a.1.11.7	Reinforced concrete	-	-	-	-	-	-	189	28	217	109	-	109	-	-	-	-	-	-	-	1,600
3a.1.11.8	Main Turbine	-	-	-	-	-	-	246	37	283	283	-	-	-	-	-	-	-	-	-	2,088
3a.1.11.9	Main Condensers	-	-	-	-	-	-	246	37	283	283	-	-	-	-	-	-	-	-	-	2,088

Table D-1
LaSalle County Station, Unit 1
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(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Burial Volumes Class B Cu. Feet	Burial Volumes Class C Cu. Feet	Burial Volumes GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Activity Specifications (continued)																					
3a.1.11.10	Pressure suppression structure	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
3a.1.11.11	Drywell	-	-	-	-	-	-	189	28	217	217	-	-	-	-	-	-	-	-	-	1,600
3a.1.11.12	Plant structures & buildings	-	-	-	-	-	-	368	55	423	212	-	212	-	-	-	-	-	-	-	3,120
3a.1.11.13	Waste management	-	-	-	-	-	-	543	81	624	624	-	-	-	-	-	-	-	-	-	4,600
3a.1.11.14	Facility & site closeout	-	-	-	-	-	-	106	16	122	61	-	61	-	-	-	-	-	-	-	900
3a.1.11	Total	-	-	-	-	-	-	5,267	790	6,057	5,519	-	538	-	-	-	-	-	-	-	44,633
Planning & Site Preparations																					
3a.1.12	Prepare dismantling sequence	-	-	-	-	-	-	283	42	326	326	-	-	-	-	-	-	-	-	-	2,400
3a.1.13	Plant prep. & temp. svces	-	-	-	-	-	-	2,800	420	3,220	3,220	-	-	-	-	-	-	-	-	-	-
3a.1.14	Design water clean-up system	-	-	-	-	-	-	165	25	190	190	-	-	-	-	-	-	-	-	-	1,400
3a.1.15	Rigging/Cont. Cntrl Envlps/tooling/etc.	-	-	-	-	-	-	2,200	330	2,530	2,530	-	-	-	-	-	-	-	-	-	-
3a.1.16	Procure casks/liners & containers	-	-	-	-	-	-	145	22	167	167	-	-	-	-	-	-	-	-	-	1,230
3a.1	Subtotal Period 3a Activity Costs	-	-	-	-	-	-	14,153	2,123	16,276	15,738	-	538	-	-	-	-	-	-	-	77,559
Period 3a Collateral Costs																					
3a.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	1,500	225	1,725	-	1,725	-	-	-	-	-	-	-	-	-
3a.3	Subtotal Period 3a Collateral Costs	-	-	-	-	-	-	1,500	225	1,725	-	1,725	-	-	-	-	-	-	-	-	-
Period 3a Period-Dependent Costs																					
3a.4.1	Insurance	-	-	-	-	-	-	421	42	464	464	-	-	-	-	-	-	-	-	-	-
3a.4.2	Property taxes	-	-	-	-	-	-	500	50	550	550	-	-	-	-	-	-	-	-	-	-
3a.4.3	Health physics supplies	-	347	-	-	-	-	-	87	434	434	-	-	-	-	-	-	-	-	-	-
3a.4.4	Heavy equipment rental	-	396	-	-	-	-	-	59	455	455	-	-	-	-	-	-	-	-	-	-
3a.4.5	Disposal of DAW generated	-	-	1	1	-	29	-	7	38	38	-	-	-	516	-	-	-	10,311	2	-
3a.4.6	Plant energy budget	-	-	-	-	-	-	1,371	206	1,577	1,577	-	-	-	-	-	-	-	-	-	-
3a.4.7	NRC Fees	-	-	-	-	-	-	249	25	274	274	-	-	-	-	-	-	-	-	-	-
3a.4.8	Emergency Planning Fees	-	-	-	-	-	-	100	10	110	-	110	-	-	-	-	-	-	-	-	-
3a.4.9	Site O&M Costs	-	-	-	-	-	-	125	19	144	144	-	-	-	-	-	-	-	-	-	-
3a.4.10	Security Staff Cost	-	-	-	-	-	-	2,882	432	3,315	3,315	-	-	-	-	-	-	-	-	-	69,350
3a.4.11	Utility Staff Cost	-	-	-	-	-	-	19,481	2,922	22,403	22,403	-	-	-	-	-	-	-	-	-	260,714
3a.4	Subtotal Period 3a Period-Dependent Costs	-	743	1	1	-	29	25,129	3,859	29,762	29,652	110	-	-	516	-	-	-	10,311	2	330,064
3a.0	TOTAL PERIOD 3a COST	-	743	1	1	-	29	40,782	6,207	47,763	45,390	1,835	538	-	516	-	-	-	10,311	2	407,623
PERIOD 3b - Decommissioning Preparations																					
Period 3b Direct Decommissioning Activities																					
Detailed Work Procedures																					
3b.1.1.1	Plant systems	-	-	-	-	-	-	559	84	642	578	-	64	-	-	-	-	-	-	-	4,733
3b.1.1.2	Reactor internals	-	-	-	-	-	-	472	71	543	543	-	-	-	-	-	-	-	-	-	4,000
3b.1.1.3	Remaining buildings	-	-	-	-	-	-	159	24	183	46	-	137	-	-	-	-	-	-	-	1,350
3b.1.1.4	CRD housings & NIs	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
3b.1.1.5	Incore instrumentation	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
3b.1.1.6	Removal primary containment	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
3b.1.1.7	Reactor vessel	-	-	-	-	-	-	428	64	493	493	-	-	-	-	-	-	-	-	-	3,630
3b.1.1.8	Facility closeout	-	-	-	-	-	-	142	21	163	81	-	81	-	-	-	-	-	-	-	1,200
3b.1.1.9	Sacrificial shield	-	-	-	-	-	-	142	21	163	163	-	-	-	-	-	-	-	-	-	1,200
3b.1.1.10	Reinforced concrete	-	-	-	-	-	-	118	18	136	68	-	68	-	-	-	-	-	-	-	1,000
3b.1.1.11	Main Turbine	-	-	-	-	-	-	245	37	282	282	-	-	-	-	-	-	-	-	-	2,080
3b.1.1.12	Main Condensers	-	-	-	-	-	-	246	37	283	283	-	-	-	-	-	-	-	-	-	2,088
3b.1.1.13	Moisture separators & reheaters	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
3b.1.1.14	Radwaste building	-	-	-	-	-	-	322	48	370	333	-	37	-	-	-	-	-	-	-	2,730
3b.1.1.15	Reactor building	-	-	-	-	-	-	322	48	370	333	-	37	-	-	-	-	-	-	-	2,730
3b.1.1	Total	-	-	-	-	-	-	3,864	580	4,443	4,018	-	425	-	-	-	-	-	-	-	32,741

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Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
3b.1	Subtotal Period 3b Activity Costs	-	-	-	-	-	-	3,864	580	4,443	4,018	-	425	-	-	-	-	-	-	-	32,741
Period 3b Additional Costs																					
3b.2.1	Site Characterization	-	-	-	-	-	-	6,086	1,826	7,912	7,912	-	-	-	-	-	-	-	-	29,730	10,672
3b.2	Subtotal Period 3b Additional Costs	-	-	-	-	-	-	6,086	1,826	7,912	7,912	-	-	-	-	-	-	-	-	29,730	10,672
Period 3b Collateral Costs																					
3b.3.1	Decon equipment	763	-	-	-	-	-	-	114	877	877	-	-	-	-	-	-	-	-	-	-
3b.3.2	DOC staff relocation expenses	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
3b.3.3	Pipe cutting equipment	-	1,100	-	-	-	-	-	165	1,265	1,265	-	-	-	-	-	-	-	-	-	-
3b.3.4	Spent Fuel Capital and Transfer	-	-	-	-	-	-	750	113	863	-	863	-	-	-	-	-	-	-	-	-
3b.3	Subtotal Period 3b Collateral Costs	763	1,100	-	-	-	-	1,880	561	4,304	3,442	863	-	-	-	-	-	-	-	-	-
Period 3b Period-Dependent Costs																					
3b.4.1	Decon supplies	23	-	-	-	-	-	-	6	29	29	-	-	-	-	-	-	-	-	-	-
3b.4.2	Insurance	-	-	-	-	-	-	211	21	232	232	-	-	-	-	-	-	-	-	-	-
3b.4.3	Property taxes	-	-	-	-	-	-	251	25	276	276	-	-	-	-	-	-	-	-	-	-
3b.4.4	Health physics supplies	-	192	-	-	-	-	-	48	240	240	-	-	-	-	-	-	-	-	-	-
3b.4.5	Heavy equipment rental	-	198	-	-	-	-	-	30	228	228	-	-	-	-	-	-	-	-	-	-
3b.4.6	Disposal of DAW generated	-	-	1	0	-	16	-	4	22	22	-	-	-	292	-	-	-	5,846	1	-
3b.4.7	Plant energy budget	-	-	-	-	-	-	687	103	790	790	-	-	-	-	-	-	-	-	-	-
3b.4.8	NRC Fees	-	-	-	-	-	-	125	12	137	137	-	-	-	-	-	-	-	-	-	-
3b.4.9	Emergency Planning Fees	-	-	-	-	-	-	50	5	55	-	55	-	-	-	-	-	-	-	-	-
3b.4.10	Site O&M Costs	-	-	-	-	-	-	63	9	72	72	-	-	-	-	-	-	-	-	-	-
3b.4.11	Security Staff Cost	-	-	-	-	-	-	1,445	217	1,662	1,662	-	-	-	-	-	-	-	-	-	34,770
3b.4.12	DOC Staff Cost	-	-	-	-	-	-	4,781	717	5,498	5,498	-	-	-	-	-	-	-	-	-	58,560
3b.4.13	Utility Staff Cost	-	-	-	-	-	-	9,767	1,465	11,232	11,232	-	-	-	-	-	-	-	-	-	130,714
3b.4	Subtotal Period 3b Period-Dependent Costs	23	390	1	0	-	16	17,380	2,663	20,474	20,419	55	-	-	292	-	-	-	5,846	1	224,044
3b.0	TOTAL PERIOD 3b COST	786	1,490	1	0	-	16	29,210	5,630	37,133	35,790	918	425	-	292	-	-	-	5,846	29,731	267,457
PERIOD 3 TOTALS		786	2,233	2	1	-	45	69,992	11,837	84,896	81,180	2,753	963	-	808	-	-	-	16,157	29,734	675,080
PERIOD 4a - Large Component Removal																					
Period 4a Direct Decommissioning Activities																					
Nuclear Steam Supply System Removal																					
4a.1.1.1	Recirculation System Piping & Valves	21	77	18	16	-	198	-	84	414	414	-	-	-	1,006	-	-	-	121,649	1,846	-
4a.1.1.2	Recirculation Pumps & Motors	11	43	14	28	9	313	-	102	520	520	-	-	238	2,356	-	-	-	211,420	1,136	-
4a.1.1.3	CRDMs & NIs Removal	48	177	492	88	-	166	-	172	1,143	1,143	-	-	-	5,536	-	-	-	141,063	4,118	-
4a.1.1.4	Reactor Vessel Internals	171	2,440	4,993	1,437	-	10,200	283	8,666	28,190	28,190	-	-	-	2,128	1,753	631	-	454,265	33,492	1,472
4a.1.1.5	Vessel & Internals GTCC Disposal	-	-	-	-	-	11,118	-	1,668	12,786	12,786	-	-	-	-	-	-	671	109,910	-	-
4a.1.1.6	Reactor Vessel	103	4,760	2,019	1,075	-	4,152	283	6,514	18,907	18,907	-	-	-	13,945	2,754	-	-	1,791,753	33,492	1,472
4a.1.1	Totals	354	7,497	7,536	2,644	9	26,148	567	17,204	61,960	61,960	-	-	238	24,972	4,507	631	671	2,830,059	74,084	2,943
Removal of Major Equipment																					
4a.1.2	Main Turbine/Generator	-	480	2,215	424	2,633	-	-	800	6,551	6,551	-	-	124,489	-	-	-	-	5,601,986	8,748	-
4a.1.3	Main Condensers	-	921	1,579	302	1,877	-	-	715	5,393	5,393	-	-	88,729	-	-	-	-	3,992,800	16,783	-
Cascading Costs from Clean Building Demolition																					
4a.1.4.1	Reactor Building	-	983	-	-	-	-	-	147	1,130	1,130	-	-	-	-	-	-	-	-	11,163	-
4a.1.4.2	Auxiliary Building	-	408	-	-	-	-	-	61	469	469	-	-	-	-	-	-	-	-	4,733	-
4a.1.4.3	Off Gas Building	-	71	-	-	-	-	-	11	82	82	-	-	-	-	-	-	-	-	920	-
4a.1.4.4	Turbine Building	-	597	-	-	-	-	-	90	687	687	-	-	-	-	-	-	-	-	7,337	-
4a.1.4	Totals	-	2,059	-	-	-	-	-	309	2,368	2,368	-	-	-	-	-	-	-	-	24,153	-

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Disposal of Plant Systems																					
4a.1.5.1	Auxiliary Steam	-	108	2	4	24	-	-	31	169	169	-	-	1,250	-	-	-	-	50,766	1,862	-
4a.1.5.2	CSCS Equipment Cooling	-	6	-	-	-	-	-	1	7	-	-	7	-	-	-	-	-	-	122	-
4a.1.5.3	Circulating Water	-	175	-	-	-	-	-	26	201	-	-	201	-	-	-	-	-	-	3,464	-
4a.1.5.4	Circulating Water - RCA	-	225	4	8	50	-	-	65	353	353	-	-	2,599	-	-	-	-	105,533	3,802	-
4a.1.5.5	Clean Condensate Storage	-	83	-	-	-	-	-	12	95	-	-	95	-	-	-	-	-	-	1,677	-
4a.1.5.6	Clean Condensate Storage - RCA	-	25	0	0	3	-	-	7	36	36	-	-	150	-	-	-	-	6,112	419	-
4a.1.5.7	Condensate	-	841	42	78	487	-	-	299	1,748	1,748	-	-	25,514	-	-	-	-	1,036,129	15,392	-
4a.1.5.8	Condensate Booster	-	867	94	174	1,082	-	-	415	2,632	2,632	-	-	56,706	-	-	-	-	2,302,853	16,068	-
4a.1.5.9	Condensate Polishing Demineralizer	-	819	10	18	111	-	-	225	1,182	1,182	-	-	5,808	-	-	-	-	235,877	14,440	-
4a.1.5.10	Containment Combustible Gas Control	-	85	1	2	13	-	-	24	124	124	-	-	671	-	-	-	-	27,268	1,436	-
4a.1.5.11	Cycled Condensate Storage	-	269	4	7	46	-	-	76	403	403	-	-	2,421	-	-	-	-	98,310	4,774	-
4a.1.5.12	Drywell Instrument Nitrogen	-	61	1	2	12	-	-	18	94	94	-	-	646	-	-	-	-	26,238	1,070	-
4a.1.5.13	Extraction Steam	-	322	11	20	125	-	-	103	582	582	-	-	6,547	-	-	-	-	265,890	5,933	-
4a.1.5.14	Feedwater	-	534	26	48	297	-	-	188	1,093	1,093	-	-	15,570	-	-	-	-	632,298	9,816	-
4a.1.5.15	Feedwater Heater Vents & Drains	-	2,557	74	137	854	-	-	795	4,418	4,418	-	-	44,739	-	-	-	-	1,816,866	46,568	-
4a.1.5.16	Gland Steam	-	229	3	6	36	-	-	64	338	338	-	-	1,878	-	-	-	-	76,265	4,100	-
4a.1.5.17	HVAC-River\Lake Screen House	-	8	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	151	-
4a.1.5.18	HVAC-Service Building	-	12	-	-	-	-	-	2	14	-	-	14	-	-	-	-	-	-	221	-
4a.1.5.19	Hydrogen & Carbon Dioxide	-	110	2	4	23	-	-	32	171	171	-	-	1,214	-	-	-	-	49,318	1,878	-
4a.1.5.20	Main Steam	-	125	1	3	17	-	-	34	179	179	-	-	866	-	-	-	-	35,179	2,211	-
4a.1.5.21	Misc Bldgs Floor Drains	-	0	-	-	-	-	-	0	1	-	-	1	-	-	-	-	-	-	9	-
4a.1.5.22	Screen Wash	-	25	-	-	-	-	-	4	29	-	-	29	-	-	-	-	-	-	506	-
4a.1.5.23	Service Air	-	11	-	-	-	-	-	2	13	-	-	13	-	-	-	-	-	-	222	-
4a.1.5.24	Standby Gas Treatment	-	51	2	3	20	-	-	17	93	93	-	-	1,049	-	-	-	-	42,596	932	-
4a.1.5.25	Station Heat Recovery	-	252	4	6	40	-	-	70	373	373	-	-	2,104	-	-	-	-	85,433	4,310	-
4a.1.5.26	Switchgear Heat Removal	-	10	-	-	-	-	-	1	11	-	-	11	-	-	-	-	-	-	180	-
4a.1.5.27	Turbine Bldg Closed Cooling Water	-	471	14	26	164	-	-	148	823	823	-	-	8,615	-	-	-	-	349,869	8,388	-
4a.1.5.28	Turbine Building Equip Drains	-	87	2	3	20	-	-	25	137	137	-	-	1,035	-	-	-	-	42,020	1,562	-
4a.1.5.29	Turbine Building Floor Drains	-	34	0	0	3	-	-	9	46	46	-	-	150	-	-	-	-	6,104	598	-
4a.1.5.30	Turbine Generator	-	178	9	17	103	-	-	63	370	370	-	-	5,416	-	-	-	-	219,950	3,324	-
4a.1.5.31	Turbine Oil	-	529	21	26	112	50	-	167	904	904	-	-	5,855	519	-	-	-	280,058	9,595	-
4a.1.5	Totals	-	9,111	327	594	3,642	50	-	2,925	16,649	16,269	-	380	190,804	519	-	-	-	7,790,930	165,027	-
4a.1.6	Scaffolding in support of decommissioning	-	2,111	39	9	43	14	-	543	2,758	2,758	-	-	2,054	128	-	-	-	103,876	43,646	-
4a.1	Subtotal Period 4a Activity Costs	354	22,178	11,696	3,972	8,204	26,212	567	22,496	95,679	95,299	-	380	406,313	25,618	4,507	631	671	20,319,650	332,441	2,943
Period 4a Collateral Costs																					
4a.3.1	Process liquid waste	65	-	27	128	-	126	-	86	432	432	-	-	-	454	-	-	-	27,224	88	-
4a.3.2	Small tool allowance	-	279	-	-	-	-	-	42	321	289	-	32	-	-	-	-	-	-	-	-
4a.3	Subtotal Period 4a Collateral Costs	65	279	27	128	-	126	-	128	753	721	-	32	-	454	-	-	-	27,224	88	-
Period 4a Period-Dependent Costs																					
4a.4.1	Decon supplies	72	-	-	-	-	-	-	18	90	90	-	-	-	-	-	-	-	-	-	-
4a.4.2	Insurance	-	-	-	-	-	-	655	65	720	720	-	-	-	-	-	-	-	-	-	-
4a.4.3	Property taxes	-	-	-	-	-	-	776	78	854	768	-	85	-	-	-	-	-	-	-	-
4a.4.4	Health physics supplies	-	1,825	-	-	-	-	-	456	2,281	2,281	-	-	-	-	-	-	-	-	-	-
4a.4.5	Heavy equipment rental	-	2,593	-	-	-	-	-	389	2,982	2,982	-	-	-	-	-	-	-	-	-	-
4a.4.6	Disposal of DAW generated	-	-	17	6	-	340	-	88	450	450	-	-	-	6,089	-	-	-	121,789	28	-
4a.4.7	Plant energy budget	-	-	-	-	-	-	2,023	303	2,327	2,327	-	-	-	-	-	-	-	-	-	-
4a.4.8	NRC Fees	-	-	-	-	-	-	1,022	102	1,125	1,125	-	-	-	-	-	-	-	-	-	-
4a.4.9	Site O&M Costs	-	-	-	-	-	-	194	29	223	223	-	-	-	-	-	-	-	-	-	-
4a.4.10	Liquid Radwaste Processing Equipment/Services	-	-	-	-	-	-	595	89	684	684	-	-	-	-	-	-	-	-	-	-
4a.4.11	Security Staff Cost	-	-	-	-	-	-	3,157	474	3,630	3,630	-	-	-	-	-	-	-	-	-	84,629
4a.4.12	DOC Staff Cost	-	-	-	-	-	-	17,754	2,663	20,418	20,418	-	-	-	-	-	-	-	-	-	222,264
4a.4.13	Utility Staff Cost	-	-	-	-	-	-	29,351	4,403	33,754	33,754	-	-	-	-	-	-	-	-	-	396,608

Table D-1
LaSalle County Station, Unit 1
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
4a.4	Subtotal Period 4a Period-Dependent Costs	72	4,418	17	6	-	340	55,528	9,157	69,539	69,453	-	85	-	6,089	-	-	-	121,789	28	703,501
4a.0	TOTAL PERIOD 4a COST	491	26,875	11,739	4,107	8,204	26,678	56,095	31,781	165,971	165,474	-	497	406,313	32,161	4,507	631	671	20,468,660	332,557	706,445
PERIOD 4b - Site Decontamination																					
Period 4b Direct Decommissioning Activities																					
4b.1.1	Remove spent fuel racks	832	82	166	157	-	1,030	-	734	3,001	3,001	-	-	-	9,726	-	-	-	872,665	1,631	-
Disposal of Plant Systems																					
4b.1.2.1	Aux Diesel Bldg Floor Drains	-	4	-	-	-	-	-	1	5	-	-	5	-	-	-	-	-	-	86	-
4b.1.2.2	Auxiliary Diesel Generator	-	52	-	-	-	-	-	8	59	-	-	59	-	-	-	-	-	-	1,006	-
4b.1.2.3	Containment Monitoring	-	20	0	0	1	-	-	5	27	27	-	-	78	-	-	-	-	3,169	392	-
4b.1.2.4	Control Rod Drive	-	194	2	3	19	-	-	52	270	270	-	-	1,006	-	-	-	-	40,845	3,622	-
4b.1.2.5	Diesel Oil	-	43	-	-	-	-	-	6	50	-	-	50	-	-	-	-	-	-	823	-
4b.1.2.6	Electrical	-	273	-	-	-	-	-	41	314	-	-	314	-	-	-	-	-	-	5,201	-
4b.1.2.7	Electrical - Contaminated	-	676	9	17	105	-	-	188	995	995	-	-	5,509	-	-	-	-	223,712	11,889	-
4b.1.2.8	Electrical - RCA	-	4,641	86	155	962	-	-	1,337	7,182	7,182	-	-	50,427	-	-	-	-	2,047,847	79,254	-
4b.1.2.9	Fire Protection	-	116	-	-	-	-	-	17	134	-	-	134	-	-	-	-	-	-	2,339	-
4b.1.2.10	Fire Protection - RCA	-	664	13	23	143	-	-	192	1,035	1,035	-	-	7,493	-	-	-	-	304,287	11,294	-
4b.1.2.11	Fuel Pool Cooling & Cleanup	-	732	22	41	254	-	-	229	1,279	1,279	-	-	13,307	-	-	-	-	540,403	13,138	-
4b.1.2.12	HVAC-Auxiliary Building	-	198	5	9	55	-	-	60	326	326	-	-	2,889	-	-	-	-	117,333	3,260	-
4b.1.2.13	HVAC-Diesel Generator Room	-	7	-	-	-	-	-	1	8	-	-	8	-	-	-	-	-	-	127	-
4b.1.2.14	HVAC-Off Gas Building	-	20	0	1	5	-	-	6	31	31	-	-	237	-	-	-	-	9,643	326	-
4b.1.2.15	HVAC-Primary Containment	-	865	19	36	225	-	-	257	1,403	1,403	-	-	11,773	-	-	-	-	478,116	14,924	-
4b.1.2.16	HVAC-Radwaste Building	-	5	0	0	2	-	-	2	10	10	-	-	110	-	-	-	-	4,453	97	-
4b.1.2.17	HVAC-Turbine Building	-	731	15	28	177	-	-	215	1,166	1,166	-	-	9,260	-	-	-	-	376,037	11,966	-
4b.1.2.18	High Pressure Core Spray	-	316	29	36	134	94	-	131	739	739	-	-	7,014	889	-	-	-	364,579	5,729	-
4b.1.2.19	Instrument Air	-	5	-	-	-	-	-	1	5	-	-	5	-	-	-	-	-	-	94	-
4b.1.2.20	Instrument Air - RCA	-	134	1	2	12	-	-	36	185	185	-	-	629	-	-	-	-	25,528	2,372	-
4b.1.2.21	Low Pressure Core Spray	-	151	13	17	62	43	-	62	347	347	-	-	3,225	410	-	-	-	167,703	2,731	-
4b.1.2.22	Nuclear Boiler	-	1,533	109	129	409	415	-	579	3,174	3,174	-	-	21,452	3,922	-	-	-	1,222,966	28,205	-
4b.1.2.23	Off Gas	-	598	34	37	101	139	-	209	1,118	1,118	-	-	5,271	1,319	-	-	-	332,284	10,737	-
4b.1.2.24	Primary Containment Vent & Purge	-	406	19	35	219	-	-	142	821	821	-	-	11,470	-	-	-	-	465,819	7,544	-
4b.1.2.25	Process Radiation Monitoring	-	20	0	0	1	-	-	5	26	26	-	-	42	-	-	-	-	1,697	393	-
4b.1.2.26	Process Sampling	-	27	0	0	2	-	-	7	36	36	-	-	90	-	-	-	-	3,660	528	-
4b.1.2.27	Radioactive Waste Disposal	-	1,459	54	57	189	174	-	450	2,383	2,383	-	-	9,882	1,711	-	-	-	548,907	26,040	-
4b.1.2.28	Reactor Bldg Closed Cooling Water	-	339	21	37	230	-	-	127	753	753	-	-	12,027	-	-	-	-	488,418	5,945	-
4b.1.2.29	Reactor Building Equipment Drains	-	64	2	2	7	7	-	19	101	101	-	-	344	68	-	-	-	19,878	1,152	-
4b.1.2.30	Reactor Building Floor Drains	-	6	0	0	0	0	-	2	8	8	-	-	17	2	-	-	-	897	108	-
4b.1.2.31	Reactor Core Isolation Cooling	-	214	8	9	24	33	-	67	354	354	-	-	1,237	309	-	-	-	77,945	3,847	-
4b.1.2.32	Reactor Recirculation	-	40	1	1	2	3	-	11	57	57	-	-	103	26	-	-	-	6,479	732	-
4b.1.2.33	Reactor Water Clean-up	-	831	28	23	37	110	-	247	1,276	1,276	-	-	1,958	1,041	-	-	-	172,819	14,701	-
4b.1.2.34	Residual Heat Removal	-	1,546	135	171	633	456	-	635	3,575	3,575	-	-	33,146	4,305	-	-	-	1,732,275	28,360	-
4b.1.2.35	Service Air - RCA	-	234	2	4	25	-	-	63	328	328	-	-	1,326	-	-	-	-	53,837	3,994	-
4b.1.2.36	Service Water	-	48	-	-	-	-	-	7	55	-	-	55	-	-	-	-	-	-	938	-
4b.1.2.37	Service Water - RCA	-	683	22	40	247	-	-	216	1,208	1,208	-	-	12,930	-	-	-	-	525,074	11,877	-
4b.1.2.38	Standby Liquid Control	-	51	1	1	7	-	-	14	73	73	-	-	341	-	-	-	-	13,830	854	-
4b.1.2	Totals	-	17,944	651	915	4,287	1,475	-	5,645	30,917	30,286	-	631	224,591	14,002	-	-	-	10,370,440	316,624	-
4b.1.3	Scaffolding in support of decommissioning	-	3,166	58	14	65	20	-	814	4,138	4,138	-	-	3,080	192	-	-	-	155,814	65,468	-
Decontamination of Site Buildings																					
4b.1.4.1	Reactor Building	2,568	3,069	310	339	239	1,092	-	2,442	10,059	10,059	-	-	12,516	16,303	-	-	-	2,089,406	99,097	-
4b.1.4.2	Auxiliary Building	287	56	8	9	2	24	-	166	553	553	-	-	100	459	-	-	-	49,865	6,152	-
4b.1.4.3	Off Gas Building	129	28	6	7	1	17	-	78	266	266	-	-	46	326	-	-	-	34,435	2,805	-
4b.1.4.4	Turbine Building	1,521	629	77	88	98	207	-	1,005	3,624	3,624	-	-	5,149	3,809	-	-	-	584,008	38,010	-

Table D-1
LaSalle County Station, Unit 1
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
4b.1.4	Totals	4,506	3,783	401	443	340	1,341	-	3,691	14,503	14,503	-	-	17,812	20,897	-	-	-	2,757,713	146,065	-
4b.1	Subtotal Period 4b Activity Costs	5,338	24,975	1,277	1,528	4,692	3,865	-	10,885	52,559	51,928	-	631	245,483	44,816	-	-	-	14,156,630	529,789	-
Period 4b Additional Costs																					
4b.2.1	License Termination Survey Planning	-	-	-	-	-	-	940	282	1,222	1,222	-	-	-	-	-	-	-	-	-	6,240
4b.2.2	ISFSI License Termination	-	57	1	38	-	153	749	171	1,168	-	1,168	-	-	2,905	-	-	-	244,104	3,498	1,280
4b.2	Subtotal Period 4b Additional Costs	-	57	1	38	-	153	1,689	453	2,391	1,222	1,168	-	-	2,905	-	-	-	244,104	3,498	7,520
Period 4b Collateral Costs																					
4b.3.1	Process liquid waste	211	-	87	418	-	412	-	280	1,409	1,409	-	-	-	1,480	-	-	-	88,801	289	-
4b.3.2	Small tool allowance	-	445	-	-	-	-	-	67	511	511	-	-	-	-	-	-	-	-	-	-
4b.3.3	Decommissioning Equipment Disposition	-	-	114	31	127	40	-	45	356	356	-	-	6,000	373	-	-	-	303,507	88	-
4b.3	Subtotal Period 4b Collateral Costs	211	445	201	449	127	452	-	392	2,276	2,276	-	-	6,000	1,853	-	-	-	392,308	377	-
Period 4b Period-Dependent Costs																					
4b.4.1	Decon supplies	1,352	-	-	-	-	-	-	338	1,690	1,690	-	-	-	-	-	-	-	-	-	-
4b.4.2	Insurance	-	-	-	-	-	-	935	94	1,029	1,029	-	-	-	-	-	-	-	-	-	-
4b.4.3	Property taxes	-	-	-	-	-	-	1,109	111	1,220	1,220	-	-	-	-	-	-	-	-	-	-
4b.4.4	Health physics supplies	-	2,739	-	-	-	-	-	685	3,423	3,423	-	-	-	-	-	-	-	-	-	-
4b.4.5	Heavy equipment rental	-	3,674	-	-	-	-	-	551	4,225	4,225	-	-	-	-	-	-	-	-	-	-
4b.4.6	Disposal of DAW generated	-	-	24	9	-	495	-	128	657	657	-	-	-	8,878	-	-	-	177,563	41	-
4b.4.7	Plant energy budget	-	-	-	-	-	-	2,282	342	2,624	2,624	-	-	-	-	-	-	-	-	-	-
4b.4.8	NRC Fees	-	-	-	-	-	-	1,461	146	1,607	1,607	-	-	-	-	-	-	-	-	-	-
4b.4.9	Site O&M Costs	-	-	-	-	-	-	277	42	319	319	-	-	-	-	-	-	-	-	-	-
4b.4.10	Liquid Radwaste Processing Equipment/Services	-	-	-	-	-	-	850	128	978	978	-	-	-	-	-	-	-	-	-	-
4b.4.11	Security Staff Cost	-	-	-	-	-	-	926	139	1,065	1,065	-	-	-	-	-	-	-	-	-	25,457
4b.4.12	DOC Staff Cost	-	-	-	-	-	-	16,451	2,468	18,919	18,919	-	-	-	-	-	-	-	-	-	217,543
4b.4.13	Utility Staff Cost	-	-	-	-	-	-	27,655	4,148	31,803	31,803	-	-	-	-	-	-	-	-	-	388,800
4b.4	Subtotal Period 4b Period-Dependent Costs	1,352	6,412	24	9	-	495	51,946	9,318	69,558	69,558	-	-	-	8,878	-	-	-	177,563	41	631,800
4b.0	TOTAL PERIOD 4b COST	6,901	31,889	1,503	2,025	4,819	4,965	53,635	21,047	126,783	124,984	1,168	631	251,483	58,453	-	-	-	14,970,610	533,704	639,320
PERIOD 4d - Delay before License Termination																					
Period 4d Direct Decommissioning Activities																					
Period 4d Period-Dependent Costs																					
4d.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4d.4.2	Property taxes	-	-	-	-	-	-	622	62	684	684	-	-	-	-	-	-	-	-	-	-
4d.4.3	Health physics supplies	-	89	-	-	-	-	-	22	111	111	-	-	-	-	-	-	-	-	-	-
4d.4.4	Disposal of DAW generated	-	-	0	0	-	7	-	2	9	9	-	-	-	124	-	-	-	2,480	1	-
4d.4.5	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4d.4.6	NRC Fees	-	-	-	-	-	-	227	23	250	250	-	-	-	-	-	-	-	-	-	-
4d.4.7	Site O&M Costs	-	-	-	-	-	-	155	23	179	179	-	-	-	-	-	-	-	-	-	-
4d.4.8	Security Staff Cost	-	-	-	-	-	-	3	0	3	3	-	-	-	-	-	-	-	-	-	-
4d.4.9	Utility Staff Cost	-	-	-	-	-	-	1,278	192	1,470	1,470	-	-	-	-	-	-	-	-	-	18,160
4d.4	Subtotal Period 4d Period-Dependent Costs	-	89	0	0	-	7	2,285	324	2,705	2,705	-	-	-	124	-	-	-	2,480	1	18,160
4d.0	TOTAL PERIOD 4d COST	-	89	0	0	-	7	2,285	324	2,705	2,705	-	-	-	124	-	-	-	2,480	1	18,160
PERIOD 4e - License Termination																					
Period 4e Direct Decommissioning Activities																					
4e.1.1	ORISE confirmatory survey	-	-	-	-	-	-	151	45	197	197	-	-	-	-	-	-	-	-	-	-
4e.1.2	Terminate license									a											
4e.1	Subtotal Period 4e Activity Costs	-	-	-	-	-	-	151	45	197	197	-	-	-	-	-	-	-	-	-	-

Table D-1
LaSalle County Station, Unit 1
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 4e Additional Costs																					
4e.2.1	License Termination Survey	-	-	-	-	-	-	10,410	3,123	13,533	13,533	-	-	-	-	-	-	-	-	191,885	3,120
4e.2	Subtotal Period 4e Additional Costs	-	-	-	-	-	-	10,410	3,123	13,533	13,533	-	-	-	-	-	-	-	-	191,885	3,120
Period 4e Collateral Costs																					
4e.3.1	DOC staff relocation expenses	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
4e.3	Subtotal Period 4e Collateral Costs	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
Period 4e Period-Dependent Costs																					
4e.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4e.4.2	Property taxes	-	-	-	-	-	-	382	38	420	420	-	-	-	-	-	-	-	-	-	-
4e.4.3	Health physics supplies	-	942	-	-	-	-	-	235	1,177	1,177	-	-	-	-	-	-	-	-	-	-
4e.4.4	Disposal of DAW generated	-	-	1	0	-	19	-	5	25	25	-	-	-	340	-	-	-	6,795	2	-
4e.4.5	Plant energy budget	-	-	-	-	-	-	210	31	241	241	-	-	-	-	-	-	-	-	-	-
4e.4.6	NRC Fees	-	-	-	-	-	-	539	54	593	593	-	-	-	-	-	-	-	-	-	-
4e.4.7	Site O&M Costs	-	-	-	-	-	-	95	14	110	110	-	-	-	-	-	-	-	-	-	-
4e.4.8	Security Staff Cost	-	-	-	-	-	-	528	79	607	607	-	-	-	-	-	-	-	-	-	11,957
4e.4.9	DOC Staff Cost	-	-	-	-	-	-	3,856	578	4,434	4,434	-	-	-	-	-	-	-	-	-	47,430
4e.4.10	Utility Staff Cost	-	-	-	-	-	-	4,617	693	5,310	5,310	-	-	-	-	-	-	-	-	-	57,793
4e.4	Subtotal Period 4e Period-Dependent Costs	-	942	1	0	-	19	10,227	1,728	12,917	12,917	-	-	-	340	-	-	-	6,795	2	117,180
4e.0	TOTAL PERIOD 4e COST	-	942	1	0	-	19	21,919	5,066	27,947	27,947	-	-	-	340	-	-	-	6,795	191,887	120,300
PERIOD 4 TOTALS		7,392	59,794	13,243	6,132	13,023	31,669	133,934	58,219	323,406	321,110	1,168	1,128	657,796	91,078	4,507	631	671	35,448,540	1,058,149	1,484,225
PERIOD 5b - Site Restoration																					
Period 5b Direct Decommissioning Activities																					
Demolition of Remaining Site Buildings																					
5b.1.1.1	Reactor Building	-	5,664	-	-	-	-	-	850	6,514	-	-	6,514	-	-	-	-	-	-	64,472	-
5b.1.1.2	Auxiliary Building	-	3,692	-	-	-	-	-	554	4,246	-	-	4,246	-	-	-	-	-	-	43,048	-
5b.1.1.3	Diesel Generator Room	-	468	-	-	-	-	-	70	538	-	-	538	-	-	-	-	-	-	6,000	-
5b.1.1.4	Off Gas Building	-	648	-	-	-	-	-	97	745	-	-	745	-	-	-	-	-	-	8,484	-
5b.1.1.5	Turbine Building	-	5,501	-	-	-	-	-	825	6,326	-	-	6,326	-	-	-	-	-	-	68,584	-
5b.1.1.6	Turbine Pedestal	-	2,881	-	-	-	-	-	432	3,313	-	-	3,313	-	-	-	-	-	-	30,829	-
5b.1.1	Totals	-	18,854	-	-	-	-	-	2,828	21,682	-	-	21,682	-	-	-	-	-	-	221,416	-
Site Closeout Activities																					
5b.1.2	Grade & landscape site	-	149	-	-	-	-	-	22	171	-	-	171	-	-	-	-	-	-	499	-
5b.1.3	Final report to NRC	-	-	-	-	-	-	184	28	212	212	-	-	-	-	-	-	-	-	-	1,560
5b.1	Subtotal Period 5b Activity Costs	-	19,003	-	-	-	-	184	2,878	22,065	212	-	21,853	-	-	-	-	-	-	221,916	1,560
Period 5b Additional Costs																					
5b.2.1	Concrete Crushing	-	776	-	-	-	-	4	117	897	-	-	897	-	-	-	-	-	-	3,936	-
5b.2.2	ISFSI Demolition and Site Restoration	-	1,604	-	-	-	-	24	244	1,872	-	1,872	-	-	-	-	-	-	-	21,545	80
5b.2	Subtotal Period 5b Additional Costs	-	2,380	-	-	-	-	28	361	2,769	-	1,872	897	-	-	-	-	-	-	25,481	80
Period 5b Collateral Costs																					
5b.3.1	Small tool allowance	-	212	-	-	-	-	-	32	244	-	-	244	-	-	-	-	-	-	-	-
5b.3	Subtotal Period 5b Collateral Costs	-	212	-	-	-	-	-	32	244	-	-	244	-	-	-	-	-	-	-	-
Period 5b Period-Dependent Costs																					
5b.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5b.4.2	Property taxes	-	-	-	-	-	-	998	100	1,098	-	-	1,098	-	-	-	-	-	-	-	-
5b.4.3	Heavy equipment rental	-	4,728	-	-	-	-	-	709	5,437	-	-	5,437	-	-	-	-	-	-	-	-
5b.4.4	Plant energy budget	-	-	-	-	-	-	274	41	315	-	-	315	-	-	-	-	-	-	-	-

Table D-1
LaSalle County Station, Unit 1
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 5b Period-Dependent Costs (continued)																					
5b.4.5	Site O&M Cost	-	-	-	-	-	-	249	37	287	-	-	287	-	-	-	-	-	-	-	-
5b.4.6	Security Staff Cost	-	-	-	-	-	-	1,247	187	1,435	-	-	1,435	-	-	-	-	-	-	-	27,619
5b.4.7	DOC Staff Cost	-	-	-	-	-	-	9,384	1,408	10,792	-	-	10,792	-	-	-	-	-	-	-	110,391
5b.4.8	Utility Staff Cost	-	-	-	-	-	-	4,478	672	5,149	-	-	5,149	-	-	-	-	-	-	-	54,154
5b.4	Subtotal Period 5b Period-Dependent Costs	-	4,728	-	-	-	-	16,631	3,154	24,512	-	-	24,512	-	-	-	-	-	-	-	192,164
5b.0	TOTAL PERIOD 5b COST	-	26,322	-	-	-	-	16,842	6,425	49,590	212	1,872	47,506	-	-	-	-	-	-	247,397	193,804
PERIOD 5 TOTALS		-	26,322	-	-	-	-	16,842	6,425	49,590	212	1,872	47,506	-	-	-	-	-	-	247,397	193,804
TOTAL COST TO DECOMMISSION		15,427	91,267	13,392	6,765	13,023	32,651	367,706	101,561	641,791	495,902	96,292	49,597	657,796	99,834	4,507	631	671	35,712,270	1,440,428	3,571,873

TOTAL COST TO DECOMMISSION WITH 18.8% CONTINGENCY:	**$641,791**	**thousands of 2009 dollars**
TOTAL NRC LICENSE TERMINATION COST IS 77.27% OR:	**$495,902**	**thousands of 2009 dollars**
SPENT FUEL MANAGEMENT COST IS 15% OR:	**$96,292**	**thousands of 2009 dollars**
NON-NUCLEAR DEMOLITION COST IS 7.73% OR:	**$49,597**	**thousands of 2009 dollars**
TOTAL LOW-LEVEL RADIOACTIVE WASTE VOLUME BURIED (EXCLUDING GTCC):	**104,972**	**cubic feet**
TOTAL GREATER THAN CLASS C RADWASTE VOLUME GENERATED:	**671**	**cubic feet**
TOTAL SCRAP METAL REMOVED:	**51,885**	**tons**
TOTAL CRAFT LABOR REQUIREMENTS:	**1,440,428**	**man-hours**

End Notes:
n/a - indicates that this activity not charged as decommissioning expense.
a - indicates that this activity performed by decommissioning staff.
0 - indicates that this value is less than 0.5 but is non-zero.
a cell containing " - " indicates a zero value

Table D-2
LaSalle County Station, Unit 2
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
PERIOD 1a - Shutdown through Transition																					
Period 1a Direct Decommissioning Activities																					
1a.1.1	SAFSTOR site characterization survey	-	-	-	-	-	-	398	119	517	517	-	-	-	-	-	-	-	-	-	-
1a.1.2	Prepare preliminary decommissioning cost	-	-	-	-	-	-	64	10	74	74	-	-	-	-	-	-	-	-	-	545
1a.1.3	Notification of Cessation of Operations									a											
1a.1.4	Remove fuel & source material									n/a											
1a.1.5	Notification of Permanent Defueling									a											
1a.1.6	Deactivate plant systems & process waste									a											
1a.1.7	Prepare and submit PSDAR	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
1a.1.8	Review plant dwgs & specs.	-	-	-	-	-	-	64	10	74	74	-	-	-	-	-	-	-	-	-	545
1a.1.9	Perform detailed rad survey									a											
1a.1.10	Estimate by-product inventory	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
1a.1.11	End product description	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
1a.1.12	Detailed by-product inventory	-	-	-	-	-	-	74	11	85	85	-	-	-	-	-	-	-	-	-	629
1a.1.13	Define major work sequence	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
1a.1.14	Perform SER and EA	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,299
1a.1.15	Perform Site-Specific Cost Study	-	-	-	-	-	-	247	37	284	284	-	-	-	-	-	-	-	-	-	2,095
Activity Specifications																					
1a.1.16.1	Prepare plant and facilities for SAFSTOR	-	-	-	-	-	-	243	36	280	280	-	-	-	-	-	-	-	-	-	2,061
1a.1.16.2	Plant systems	-	-	-	-	-	-	206	31	237	237	-	-	-	-	-	-	-	-	-	1,746
1a.1.16.3	Plant structures and buildings	-	-	-	-	-	-	154	23	177	177	-	-	-	-	-	-	-	-	-	1,307
1a.1.16.4	Waste management	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
1a.1.16.5	Facility and site dormancy	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
1a.1.16	Total	-	-	-	-	-	-	801	120	922	922	-	-	-	-	-	-	-	-	-	6,791
Detailed Work Procedures																					
1a.1.17.1	Plant systems	-	-	-	-	-	-	59	9	67	67	-	-	-	-	-	-	-	-	-	496
1a.1.17.2	Facility closeout & dormancy	-	-	-	-	-	-	59	9	68	68	-	-	-	-	-	-	-	-	-	503
1a.1.17	Total	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	999
1a.1.18	Procure vacuum drying system	-	-	-	-	-	-	5	1	6	6	-	-	-	-	-	-	-	-	-	42
1a.1.19	Drain/de-energize non-cont. systems									a											
1a.1.20	Drain & dry NSSS									a											
1a.1.21	Drain/de-energize contaminated systems									a											
1a.1.22	Decon/secure contaminated systems									a											
1a.1	Subtotal Period 1a Activity Costs	-	-	-	-	-	-	2,172	386	2,558	2,558	-	-	-	-	-	-	-	-	-	15,038
Period 1a Period-Dependent Costs																					
1a.4.1	Insurance	-	-	-	-	-	-	876	88	964	964	-	-	-	-	-	-	-	-	-	-
1a.4.2	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1a.4.3	Health physics supplies	-	396	-	-	-	-	-	99	495	495	-	-	-	-	-	-	-	-	-	-
1a.4.4	Heavy equipment rental	-	396	-	-	-	-	-	59	455	455	-	-	-	-	-	-	-	-	-	-
1a.4.5	Disposal of DAW generated	-	-	2	1	-	34	-	9	45	45	-	-	-	610	-	-	-	12,190	3	-
1a.4.6	Plant energy budget	-	-	-	-	-	-	1,371	206	1,577	1,577	-	-	-	-	-	-	-	-	-	-
1a.4.7	NRC Fees	-	-	-	-	-	-	471	47	518	518	-	-	-	-	-	-	-	-	-	-
1a.4.8	Emergency Planning Fees	-	-	-	-	-	-	313	31	344	-	344	-	-	-	-	-	-	-	-	-
1a.4.9	Site O&M Costs	-	-	-	-	-	-	125	19	144	144	-	-	-	-	-	-	-	-	-	-
1a.4.10	Spent Fuel Pool O&M	-	-	-	-	-	-	762	114	877	-	877	-	-	-	-	-	-	-	-	-
1a.4.11	ISFSI Operating Costs	-	-	-	-	-	-	44	7	51	-	51	-	-	-	-	-	-	-	-	-
1a.4.12	Security Staff Cost	-	-	-	-	-	-	6,070	911	6,981	6,981	-	-	-	-	-	-	-	-	-	157,471
1a.4.13	Utility Staff Cost	-	-	-	-	-	-	31,082	4,662	35,745	35,745	-	-	-	-	-	-	-	-	-	423,400
1a.4	Subtotal Period 1a Period-Dependent Costs	-	792	2	1	-	34	41,115	6,251	48,194	46,923	1,271	-	-	610	-	-	-	12,190	3	580,871
1a.0	TOTAL PERIOD 1a COST	-	792	2	1	-	34	43,287	6,637	50,752	49,481	1,271	-	-	610	-	-	-	12,190	3	595,909

Table D-2
LaSalle County Station, Unit 2
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
PERIOD 1b - SAFSTOR Limited DECON Activities																					
Period 1b Direct Decommissioning Activities																					
Decontamination of Site Buildings																					
1b.1.1.1	Reactor Building	2,820	-	-	-	-	-	-	1,410	4,230	4,230	-	-	-	-	-	-	-	-	49,197	-
1b.1.1.2	Auxiliary Building	1,385	-	-	-	-	-	-	692	2,077	2,077	-	-	-	-	-	-	-	-	24,021	-
1b.1.1.3	IRSF Building	67	-	-	-	-	-	-	33	100	100	-	-	-	-	-	-	-	-	1,210	-
1b.1.1.4	Service Building	92	-	-	-	-	-	-	46	139	139	-	-	-	-	-	-	-	-	1,692	-
1b.1.1.5	Solid Radwaste Building	417	-	-	-	-	-	-	208	625	625	-	-	-	-	-	-	-	-	7,355	-
1b.1.1.6	Turbine Building	1,484	-	-	-	-	-	-	742	2,227	2,227	-	-	-	-	-	-	-	-	27,018	-
1b.1.1	Totals	6,265	-	-	-	-	-	-	3,132	9,397	9,397	-	-	-	-	-	-	-	-	110,493	-
1b.1	Subtotal Period 1b Activity Costs	6,265	-	-	-	-	-	-	3,132	9,397	9,397	-	-	-	-	-	-	-	-	110,493	-
Period 1b Collateral Costs																					
1b.3.1	Decon equipment	763	-	-	-	-	-	-	114	877	877	-	-	-	-	-	-	-	-	-	-
1b.3.2	Process liquid waste	176	-	71	339	-	334	-	229	1,148	1,148	-	-	-	1,198	-	-	-	71,877	234	-
1b.3.3	Small tool allowance	-	96	-	-	-	-	-	14	111	111	-	-	-	-	-	-	-	-	-	-
1b.3	Subtotal Period 1b Collateral Costs	939	96	71	339	-	334	-	358	2,136	2,136	-	-	-	1,198	-	-	-	71,877	234	-
Period 1b Period-Dependent Costs																					
1b.4.1	Decon supplies	1,420	-	-	-	-	-	-	355	1,774	1,774	-	-	-	-	-	-	-	-	-	-
1b.4.2	Insurance	-	-	-	-	-	-	105	11	116	116	-	-	-	-	-	-	-	-	-	-
1b.4.3	Property taxes	-	-	-	-	-	-	1,155	116	1,271	1,271	-	-	-	-	-	-	-	-	-	-
1b.4.4	Health physics supplies	-	505	-	-	-	-	-	126	632	632	-	-	-	-	-	-	-	-	-	-
1b.4.5	Heavy equipment rental	-	99	-	-	-	-	-	15	113	113	-	-	-	-	-	-	-	-	-	-
1b.4.6	Disposal of DAW generated	-	-	2	1	-	49	-	13	65	65	-	-	-	876	-	-	-	17,516	4	-
1b.4.7	Plant energy budget	-	-	-	-	-	-	342	51	393	393	-	-	-	-	-	-	-	-	-	-
1b.4.8	NRC Fees	-	-	-	-	-	-	117	12	129	129	-	-	-	-	-	-	-	-	-	-
1b.4.9	Emergency Planning Fees	-	-	-	-	-	-	78	8	86	-	86	-	-	-	-	-	-	-	-	-
1b.4.10	Site O&M Costs	-	-	-	-	-	-	31	5	36	36	-	-	-	-	-	-	-	-	-	-
1b.4.11	Spent Fuel Pool O&M	-	-	-	-	-	-	190	29	219	-	219	-	-	-	-	-	-	-	-	-
1b.4.12	ISFSI Operating Costs	-	-	-	-	-	-	11	2	13	-	13	-	-	-	-	-	-	-	-	-
1b.4.13	Security Staff Cost	-	-	-	-	-	-	1,513	227	1,740	1,740	-	-	-	-	-	-	-	-	-	39,260
1b.4.14	Utility Staff Cost	-	-	-	-	-	-	7,749	1,162	8,912	8,912	-	-	-	-	-	-	-	-	-	105,560
1b.4	Subtotal Period 1b Period-Dependent Costs	1,420	604	2	1	-	49	11,292	2,130	15,498	15,181	317	-	-	876	-	-	-	17,516	4	144,820
1b.0	TOTAL PERIOD 1b COST	8,623	700	73	340	-	382	11,292	5,620	27,031	26,714	317	-	-	2,074	-	-	-	89,394	110,731	144,820
PERIOD 1c - Preparations for SAFSTOR Dormancy																					
Period 1c Direct Decommissioning Activities																					
1c.1.1	Prepare support equipment for storage	-	432	-	-	-	-	-	65	496	496	-	-	-	-	-	-	-	-	3,000	-
1c.1.2	Install containment pressure equal. lines	-	42	-	-	-	-	-	6	48	48	-	-	-	-	-	-	-	-	700	-
1c.1.3	Interim survey prior to dormancy	-	-	-	-	-	-	733	220	953	953	-	-	-	-	-	-	-	-	13,416	-
1c.1.4	Secure building accesses									a											
1c.1.5	Prepare & submit interim report	-	-	-	-	-	-	29	4	33	33	-	-	-	-	-	-	-	-	-	244
1c.1	Subtotal Period 1c Activity Costs	-	473	-	-	-	-	762	295	1,530	1,530	-	-	-	-	-	-	-	-	17,116	244
Period 1c Additional Costs																					
1c.2.1	Spent Fuel Pool Isolation	-	-	-	-	-	-	6,460	969	7,429	7,429	-	-	-	-	-	-	-	-	-	-
1c.2	Subtotal Period 1c Additional Costs	-	-	-	-	-	-	6,460	969	7,429	7,429	-	-	-	-	-	-	-	-	-	-

Table D-2
LaSalle County Station, Unit 2
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Burial Volumes Class B Cu. Feet	Burial Volumes Class C Cu. Feet	Burial Volumes GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 1c Collateral Costs																					
1c.3.1	Process liquid waste	158	-	64	305	-	300	-	206	1,033	1,033	-	-	-	1,078	-	-	-	64,659	210	-
1c.3.2	Small tool allowance	-	4	-	-	-	-	-	1	4	4	-	-	-	-	-	-	-	-	-	-
1c.3	Subtotal Period 1c Collateral Costs	158	4	64	305	-	300	-	207	1,037	1,037	-	-	-	1,078	-	-	-	64,659	210	-
Period 1c Period-Dependent Costs																					
1c.4.1	Insurance	-	-	-	-	-	-	105	11	116	116	-	-	-	-	-	-	-	-	-	-
1c.4.2	Property taxes	-	-	-	-	-	-	1,155	116	1,271	1,271	-	-	-	-	-	-	-	-	-	-
1c.4.3	Health physics supplies	-	139	-	-	-	-	-	35	173	173	-	-	-	-	-	-	-	-	-	-
1c.4.4	Heavy equipment rental	-	99	-	-	-	-	-	15	113	113	-	-	-	-	-	-	-	-	-	-
1c.4.5	Disposal of DAW generated	-	-	0	0	-	6	-	2	8	8	-	-	-	107	-	-	-	2,132	0	-
1c.4.6	Plant energy budget	-	-	-	-	-	-	342	51	393	393	-	-	-	-	-	-	-	-	-	-
1c.4.7	NRC Fees	-	-	-	-	-	-	117	12	129	129	-	-	-	-	-	-	-	-	-	-
1c.4.8	Emergency Planning Fees	-	-	-	-	-	-	78	8	86	-	86	-	-	-	-	-	-	-	-	-
1c.4.9	Site O&M Costs	-	-	-	-	-	-	31	5	36	36	-	-	-	-	-	-	-	-	-	-
1c.4.10	Spent Fuel Pool O&M	-	-	-	-	-	-	190	29	219	-	219	-	-	-	-	-	-	-	-	-
1c.4.11	ISFSI Operating Costs	-	-	-	-	-	-	11	2	13	-	13	-	-	-	-	-	-	-	-	-
1c.4.12	Security Staff Cost	-	-	-	-	-	-	1,513	227	1,740	1,740	-	-	-	-	-	-	-	-	-	39,260
1c.4.13	Utility Staff Cost	-	-	-	-	-	-	2,147	322	2,468	2,468	-	-	-	-	-	-	-	-	-	27,040
1c.4	Subtotal Period 1c Period-Dependent Costs	-	237	0	0	-	6	5,689	832	6,765	6,448	317	-	-	107	-	-	-	2,132	0	66,300
1c.0	TOTAL PERIOD 1c COST	158	714	64	305	-	306	12,911	2,303	16,761	16,444	317	-	-	1,184	-	-	-	66,791	17,326	66,544
PERIOD 1 TOTALS		8,781	2,207	138	645	-	722	67,490	14,560	94,544	92,639	1,905	-	-	3,868	-	-	-	168,375	128,060	807,274
PERIOD 2a - SAFSTOR Dormancy with Wet Spent Fuel Storage																					
Period 2a Direct Decommissioning Activities																					
2a.1.1	Quarterly Inspection									a											
2a.1.2	Semi-annual environmental survey									a											
2a.1.3	Prepare reports									a											
2a.1.4	Bituminous roof replacement	-	-	-	-	-	-	1,288	193	1,481	1,481	-	-	-	-	-	-	-	-	-	-
2a.1.5	Maintenance supplies	-	-	-	-	-	-	1,075	269	1,344	1,344	-	-	-	-	-	-	-	-	-	-
2a.1	Subtotal Period 2a Activity Costs	-	-	-	-	-	-	2,363	462	2,825	2,825	-	-	-	-	-	-	-	-	-	-
Period 2a Collateral Costs																					
2a.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	14,500	2,175	16,675	-	16,675	-	-	-	-	-	-	-	-	-
2a.3	Subtotal Period 2a Collateral Costs	-	-	-	-	-	-	14,500	2,175	16,675	-	16,675	-	-	-	-	-	-	-	-	-
Period 2a Period-Dependent Costs																					
2a.4.1	Insurance	-	-	-	-	-	-	3,603	360	3,964	-	3,964	-	-	-	-	-	-	-	-	-
2a.4.2	Property taxes	-	-	-	-	-	-	11,689	1,169	12,858	-	12,858	-	-	-	-	-	-	-	-	-
2a.4.3	Health physics supplies	-	674	-	-	-	-	-	168	842	842	-	-	-	-	-	-	-	-	-	-
2a.4.4	Disposal of DAW generated	-	-	9	3	-	185	-	48	245	245	-	-	-	3,313	-	-	-	66,251	15	-
2a.4.5	Plant energy budget	-	-	-	-	-	-	2,345	352	2,696	-	2,696	-	-	-	-	-	-	-	-	-
2a.4.6	NRC Fees	-	-	-	-	-	-	1,528	153	1,681	1,681	-	-	-	-	-	-	-	-	-	-
2a.4.7	Emergency Planning Fees	-	-	-	-	-	-	854	85	940	-	940	-	-	-	-	-	-	-	-	-
2a.4.8	Site O&M Costs	-	-	-	-	-	-	1,068	160	1,228	-	1,228	-	-	-	-	-	-	-	-	-
2a.4.9	Spent Fuel Pool O&M	-	-	-	-	-	-	6,519	978	7,496	-	7,496	-	-	-	-	-	-	-	-	-
2a.4.10	ISFSI Operating Costs	-	-	-	-	-	-	376	56	432	-	432	-	-	-	-	-	-	-	-	-
2a.4.11	Security Staff Cost	-	-	-	-	-	-	24,073	3,611	27,684	-	27,684	-	-	-	-	-	-	-	-	609,219
2a.4.12	Utility Staff Cost	-	-	-	-	-	-	25,854	3,878	29,733	-	29,733	-	-	-	-	-	-	-	-	331,718
2a.4	Subtotal Period 2a Period-Dependent Costs	-	674	9	3	-	185	77,910	11,019	89,800	2,768	87,032	-	-	3,313	-	-	-	66,251	15	940,937
2a.0	TOTAL PERIOD 2a COST	-	674	9	3	-	185	94,773	13,656	109,299	5,593	103,707	-	-	3,313	-	-	-	66,251	15	940,937

Table D-2
LaSalle County Station, Unit 2
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes: Class A Cu. Feet	Burial Volumes: Class B Cu. Feet	Burial Volumes: Class C Cu. Feet	Burial Volumes: GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
PERIOD 2b - SAFSTOR Dormancy with Dry Spent Fuel Storage																					
Period 2b Direct Decommissioning Activities																					
2b.1.1	Quarterly Inspection									a											
2b.1.2	Semi-annual environmental survey									a											
2b.1.3	Prepare reports									a											
2b.1.4	Bituminous roof replacement	-	-	-	-	-	-	301	45	346	346	-	-	-	-	-	-	-	-	-	-
2b.1.5	Maintenance supplies	-	-	-	-	-	-	251	63	314	314	-	-	-	-	-	-	-	-	-	-
2b.1	Subtotal Period 2b Activity Costs	-	-	-	-	-	-	553	108	661	661	-	-	-	-	-	-	-	-	-	-
Period 2b Collateral Costs																					
2b.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	3,000	450	3,450	-	3,450	-	-	-	-	-	-	-	-	-
2b.3	Subtotal Period 2b Collateral Costs	-	-	-	-	-	-	3,000	450	3,450	-	3,450	-	-	-	-	-	-	-	-	-
Period 2b Period-Dependent Costs																					
2b.4.1	Insurance	-	-	-	-	-	-	843	84	927	-	927	-	-	-	-	-	-	-	-	-
2b.4.2	Property taxes	-	-	-	-	-	-	999	100	1,099	-	1,099	-	-	-	-	-	-	-	-	-
2b.4.3	Health physics supplies	-	145	-	-	-	-	-	36	181	181	-	-	-	-	-	-	-	-	-	-
2b.4.4	Disposal of DAW generated	-	-	2	1	-	42	-	11	56	56	-	-	-	751	-	-	-	15,012	3	-
2b.4.5	Plant energy budget	-	-	-	-	-	-	274	41	315	-	315	-	-	-	-	-	-	-	-	-
2b.4.6	NRC Fees	-	-	-	-	-	-	357	36	393	393	-	-	-	-	-	-	-	-	-	-
2b.4.7	Emergency Planning Fees	-	-	-	-	-	-	200	20	220	-	220	-	-	-	-	-	-	-	-	-
2b.4.8	Site O&M Costs	-	-	-	-	-	-	250	37	287	-	287	-	-	-	-	-	-	-	-	-
2b.4.9	ISFSI Operating Costs	-	-	-	-	-	-	88	13	101	-	101	-	-	-	-	-	-	-	-	-
2b.4.10	Security Staff Cost	-	-	-	-	-	-	4,821	723	5,544	-	5,544	-	-	-	-	-	-	-	-	112,629
2b.4.11	Utility Staff Cost	-	-	-	-	-	-	2,562	384	2,947	-	2,947	-	-	-	-	-	-	-	-	35,666
2b.4	Subtotal Period 2b Period-Dependent Costs	-	145	2	1	-	42	10,395	1,486	12,071	630	11,441	-	-	751	-	-	-	15,012	3	148,294
2b.0	TOTAL PERIOD 2b COST	-	145	2	1	-	42	13,948	2,044	16,182	1,290	14,891	-	-	751	-	-	-	15,012	3	148,294
PERIOD 2 TOTALS		-	818	11	4	-	227	108,720	15,700	125,481	6,883	118,598	-	-	4,063	-	-	-	81,263	19	1,089,231
PERIOD 3a - Reactivate Site Following SAFSTOR Dormancy																					
Period 3a Direct Decommissioning Activities																					
3a.1.1	Prepare preliminary decommissioning cost	-	-	-	-	-	-	64	10	74	74	-	-	-	-	-	-	-	-	-	545
3a.1.2	Review plant dwgs & specs.	-	-	-	-	-	-	227	34	262	262	-	-	-	-	-	-	-	-	-	1,927
3a.1.3	Perform detailed rad survey									a											
3a.1.4	End product description	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
3a.1.5	Detailed by-product inventory	-	-	-	-	-	-	64	10	74	74	-	-	-	-	-	-	-	-	-	545
3a.1.6	Define major work sequence	-	-	-	-	-	-	371	56	426	426	-	-	-	-	-	-	-	-	-	3,143
3a.1.7	Perform SER and EA	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,299
3a.1.8	Perform Site-Specific Cost Study	-	-	-	-	-	-	247	37	284	284	-	-	-	-	-	-	-	-	-	2,095
3a.1.9	Prepare/submit License Termination Plan	-	-	-	-	-	-	203	30	233	233	-	-	-	-	-	-	-	-	-	1,716
3a.1.10	Receive NRC approval of termination plan									a											
Activity Specifications																					
3a.1.11.1	Re-activate plant & temporary facilities	-	-	-	-	-	-	364	55	419	377	-	42	-	-	-	-	-	-	-	3,088
3a.1.11.2	Plant systems	-	-	-	-	-	-	206	31	237	213	-	24	-	-	-	-	-	-	-	1,746
3a.1.11.3	Reactor internals	-	-	-	-	-	-	351	53	404	404	-	-	-	-	-	-	-	-	-	2,975
3a.1.11.4	Reactor vessel	-	-	-	-	-	-	321	48	370	370	-	-	-	-	-	-	-	-	-	2,724
3a.1.11.5	Sacrificial shield	-	-	-	-	-	-	25	4	28	28	-	-	-	-	-	-	-	-	-	210
3a.1.11.6	Moisture separators/reheaters	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
3a.1.11.7	Reinforced concrete	-	-	-	-	-	-	79	12	91	45	-	45	-	-	-	-	-	-	-	670
3a.1.11.8	Main Turbine	-	-	-	-	-	-	103	15	119	119	-	-	-	-	-	-	-	-	-	875
3a.1.11.9	Main Condensers	-	-	-	-	-	-	103	15	119	119	-	-	-	-	-	-	-	-	-	875

Table D-2
LaSalle County Station, Unit 2
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Burial Volumes Class B Cu. Feet	Burial Volumes Class C Cu. Feet	Burial Volumes GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Activity Specifications (continued)																					
3a.1.11.10	Pressure suppression structure	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
3a.1.11.11	Drywell	-	-	-	-	-	-	79	12	91	91	-	-	-	-	-	-	-	-	-	670
3a.1.11.12	Plant structures & buildings	-	-	-	-	-	-	154	23	177	89	-	89	-	-	-	-	-	-	-	1,307
3a.1.11.13	Waste management	-	-	-	-	-	-	227	34	262	262	-	-	-	-	-	-	-	-	-	1,927
3a.1.11.14	Facility & site closeout	-	-	-	-	-	-	45	7	51	26	-	26	-	-	-	-	-	-	-	377
3a.1.11	Total	-	-	-	-	-	-	2,207	331	2,538	2,313	-	225	-	-	-	-	-	-	-	18,701
Planning & Site Preparations																					
3a.1.12	Prepare dismantling sequence	-	-	-	-	-	-	119	18	136	136	-	-	-	-	-	-	-	-	-	1,006
3a.1.13	Plant prep. & temp. svces	-	-	-	-	-	-	2,800	420	3,220	3,220	-	-	-	-	-	-	-	-	-	-
3a.1.14	Design water clean-up system	-	-	-	-	-	-	69	10	80	80	-	-	-	-	-	-	-	-	-	587
3a.1.15	Rigging/Cont. Cntrl Envlps/tooling/etc.	-	-	-	-	-	-	2,200	330	2,530	2,530	-	-	-	-	-	-	-	-	-	-
3a.1.16	Procure casks/liners & containers	-	-	-	-	-	-	61	9	70	70	-	-	-	-	-	-	-	-	-	515
3a.1	Subtotal Period 3a Activity Costs	-	-	-	-	-	-	8,835	1,325	10,160	9,935	-	225	-	-	-	-	-	-	-	32,497
Period 3a Period-Dependent Costs																					
3a.4.1	Insurance	-	-	-	-	-	-	423	42	465	465	-	-	-	-	-	-	-	-	-	-
3a.4.2	Property taxes	-	-	-	-	-	-	501	50	551	551	-	-	-	-	-	-	-	-	-	-
3a.4.3	Health physics supplies	-	330	-	-	-	-	-	82	412	412	-	-	-	-	-	-	-	-	-	-
3a.4.4	Heavy equipment rental	-	397	-	-	-	-	-	60	456	456	-	-	-	-	-	-	-	-	-	-
3a.4.5	Disposal of DAW generated	-	-	1	1	-	27	-	7	36	36	-	-	-	482	-	-	-	9,639	2	-
3a.4.6	Plant energy budget	-	-	-	-	-	-	1,375	206	1,581	1,581	-	-	-	-	-	-	-	-	-	-
3a.4.7	NRC Fees	-	-	-	-	-	-	215	21	236	236	-	-	-	-	-	-	-	-	-	-
3a.4.8	Site O&M Costs	-	-	-	-	-	-	125	19	144	144	-	-	-	-	-	-	-	-	-	-
3a.4.9	Security Staff Cost	-	-	-	-	-	-	229	34	264	264	-	-	-	-	-	-	-	-	-	6,274
3a.4.10	Utility Staff Cost	-	-	-	-	-	-	14,299	2,145	16,443	16,443	-	-	-	-	-	-	-	-	-	200,777
3a.4	Subtotal Period 3a Period-Dependent Costs	-	726	1	1	-	27	17,166	2,667	20,588	20,588	-	-	-	482	-	-	-	9,639	2	207,051
3a.0	TOTAL PERIOD 3a COST	-	726	1	1	-	27	26,001	3,992	30,749	30,523	-	225	-	482	-	-	-	9,639	2	239,549
PERIOD 3b - Decommissioning Preparations																					
Period 3b Direct Decommissioning Activities																					
Detailed Work Procedures																					
3b.1.1.1	Plant systems	-	-	-	-	-	-	234	35	269	242	-	27	-	-	-	-	-	-	-	1,983
3b.1.1.2	Reactor internals	-	-	-	-	-	-	198	30	227	227	-	-	-	-	-	-	-	-	-	1,676
3b.1.1.3	Remaining buildings	-	-	-	-	-	-	67	10	77	19	-	58	-	-	-	-	-	-	-	566
3b.1.1.4	CRD housings & NIs	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
3b.1.1.5	Incore instrumentation	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
3b.1.1.6	Removal primary containment	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
3b.1.1.7	Reactor vessel	-	-	-	-	-	-	179	27	206	206	-	-	-	-	-	-	-	-	-	1,521
3b.1.1.8	Facility closeout	-	-	-	-	-	-	59	9	68	34	-	34	-	-	-	-	-	-	-	503
3b.1.1.9	Sacrificial shield	-	-	-	-	-	-	59	9	68	68	-	-	-	-	-	-	-	-	-	503
3b.1.1.10	Reinforced concrete	-	-	-	-	-	-	49	7	57	28	-	28	-	-	-	-	-	-	-	419
3b.1.1.11	Main Turbine	-	-	-	-	-	-	103	15	118	118	-	-	-	-	-	-	-	-	-	872
3b.1.1.12	Main Condensers	-	-	-	-	-	-	103	15	119	119	-	-	-	-	-	-	-	-	-	875
3b.1.1.13	Moisture separators & reheaters	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
3b.1.1.14	Radwaste building	-	-	-	-	-	-	135	20	155	140	-	16	-	-	-	-	-	-	-	1,144
3b.1.1.15	Reactor building	-	-	-	-	-	-	135	20	155	140	-	16	-	-	-	-	-	-	-	1,144
3b.1.1	Total	-	-	-	-	-	-	1,619	243	1,862	1,684	-	178	-	-	-	-	-	-	-	13,718
3b.1	Subtotal Period 3b Activity Costs	-	-	-	-	-	-	1,619	243	1,862	1,684	-	178	-	-	-	-	-	-	-	13,718

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LaSalle County Station, Unit 2
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 3b Additional Costs																					
3b.2.1	Site Characterization	-	-	-	-	-	-	2,550	765	3,315	3,315	-	-	-	-	-	-	-	-	12,457	4,471
3b.2	Subtotal Period 3b Additional Costs	-	-	-	-	-	-	2,550	765	3,315	3,315	-	-	-	-	-	-	-	-	12,457	4,471
Period 3b Collateral Costs																					
3b.3.1	Decon equipment	763	-	-	-	-	-	-	114	877	877	-	-	-	-	-	-	-	-	-	-
3b.3.2	DOC staff relocation expenses	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
3b.3.3	Pipe cutting equipment	-	1,100	-	-	-	-	-	165	1,265	1,265	-	-	-	-	-	-	-	-	-	-
3b.3	Subtotal Period 3b Collateral Costs	763	1,100	-	-	-	-	1,130	449	3,442	3,442	-	-	-	-	-	-	-	-	-	-
Period 3b Period-Dependent Costs																					
3b.4.1	Decon supplies	23	-	-	-	-	-	-	6	29	29	-	-	-	-	-	-	-	-	-	-
3b.4.2	Insurance	-	-	-	-	-	-	211	21	232	232	-	-	-	-	-	-	-	-	-	-
3b.4.3	Property taxes	-	-	-	-	-	-	251	25	276	276	-	-	-	-	-	-	-	-	-	-
3b.4.4	Health physics supplies	-	178	-	-	-	-	-	44	222	222	-	-	-	-	-	-	-	-	-	-
3b.4.5	Heavy equipment rental	-	198	-	-	-	-	-	30	228	228	-	-	-	-	-	-	-	-	-	-
3b.4.6	Disposal of DAW generated	-	-	1	0	-	15	-	4	20	20	-	-	-	266	-	-	-	5,315	1	-
3b.4.7	Plant energy budget	-	-	-	-	-	-	687	103	790	790	-	-	-	-	-	-	-	-	-	-
3b.4.8	NRC Fees	-	-	-	-	-	-	107	11	118	118	-	-	-	-	-	-	-	-	-	-
3b.4.9	Site O&M Costs	-	-	-	-	-	-	63	9	72	72	-	-	-	-	-	-	-	-	-	-
3b.4.10	Security Staff Cost	-	-	-	-	-	-	115	17	132	132	-	-	-	-	-	-	-	-	-	3,137
3b.4.11	DOC Staff Cost	-	-	-	-	-	-	3,296	494	3,790	3,790	-	-	-	-	-	-	-	-	-	42,874
3b.4.12	Utility Staff Cost	-	-	-	-	-	-	7,149	1,072	8,222	8,222	-	-	-	-	-	-	-	-	-	100,389
3b.4	Subtotal Period 3b Period-Dependent Costs	23	376	1	0	-	15	11,879	1,837	14,132	14,132	-	-	-	266	-	-	-	5,315	1	146,400
3b.0	TOTAL PERIOD 3b COST	786	1,476	1	0	-	15	17,178	3,294	22,750	22,572	-	178	-	266	-	-	-	5,315	12,458	164,590
PERIOD 3 TOTALS		786	2,202	2	1	-	42	43,179	7,286	53,498	53,095	-	403	-	748	-	-	-	14,954	12,460	404,138
PERIOD 4a - Large Component Removal																					
Period 4a Direct Decommissioning Activities																					
Nuclear Steam Supply System Removal																					
4a.1.1.1	Recirculation System Piping & Valves	21	77	18	16	-	198	-	84	414	414	-	-	-	1,006	-	-	-	121,649	1,846	-
4a.1.1.2	Recirculation Pumps & Motors	11	43	14	28	9	313	-	102	520	520	-	-	238	2,356	-	-	-	211,420	1,136	-
4a.1.1.3	CRDMs & NIs Removal	48	177	492	88	-	166	-	172	1,143	1,143	-	-	-	5,536	-	-	-	141,063	4,118	-
4a.1.1.4	Reactor Vessel Internals	171	2,440	4,993	1,437	-	10,215	283	8,673	28,213	28,213	-	-	-	2,128	1,753	631	-	454,265	33,492	1,472
4a.1.1.5	Vessel & Internals GTCC Disposal	-	-	-	-	-	11,118	-	1,668	12,786	12,786	-	-	-	-	-	-	671	109,910	-	-
4a.1.1.6	Reactor Vessel	103	4,760	2,019	1,075	-	4,157	283	6,516	18,914	18,914	-	-	-	13,945	2,754	-	-	1,791,753	33,492	1,472
4a.1.1	Totals	354	7,497	7,536	2,644	9	26,168	567	17,214	61,989	61,989	-	-	238	24,972	4,507	631	671	2,830,059	74,084	2,943
Removal of Major Equipment																					
4a.1.2	Main Turbine/Generator	-	480	2,215	424	2,633	-	-	800	6,551	6,551	-	-	124,489	-	-	-	-	5,601,986	8,748	-
4a.1.3	Main Condensers	-	921	1,579	302	1,877	-	-	715	5,393	5,393	-	-	88,729	-	-	-	-	3,992,800	16,783	-
Cascading Costs from Clean Building Demolition																					
4a.1.4.1	Reactor Building	-	985	-	-	-	-	-	148	1,132	1,132	-	-	-	-	-	-	-	-	11,181	-
4a.1.4.2	Auxiliary Building	-	407	-	-	-	-	-	61	468	468	-	-	-	-	-	-	-	-	4,723	-
4a.1.4.3	IRSF Building	-	74	-	-	-	-	-	11	85	85	-	-	-	-	-	-	-	-	939	-
4a.1.4.4	Service Building	-	162	-	-	-	-	-	24	187	187	-	-	-	-	-	-	-	-	2,230	-
4a.1.4.5	Solid Radwaste Building	-	224	-	-	-	-	-	34	258	258	-	-	-	-	-	-	-	-	2,559	-
4a.1.4.6	Turbine Building	-	597	-	-	-	-	-	90	687	687	-	-	-	-	-	-	-	-	7,337	-
4a.1.4	Totals	-	2,449	-	-	-	-	-	367	2,816	2,816	-	-	-	-	-	-	-	-	28,970	-

Table D-2
LaSalle County Station, Unit 2
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Disposal of Plant Systems																					
4a.1.5.1	Acid & Caustic	-	17	-	-	-	-	-	2	19	-	-	19	-	-	-	-	-	-	317	-
4a.1.5.2	Auxiliary Steam	-	304	7	12	74	-	-	89	486	486	-	-	3,882	-	-	-	-	157,664	5,230	-
4a.1.5.3	CSCS Equipment Cooling	-	7	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	141	-
4a.1.5.4	Chemical Feed	-	34	-	-	-	-	-	5	39	-	-	39	-	-	-	-	-	-	638	-
4a.1.5.5	Circulating Water	-	158	-	-	-	-	-	24	182	-	-	182	-	-	-	-	-	-	3,125	-
4a.1.5.6	Circulating Water - RCA	-	218	3	6	36	-	-	61	324	324	-	-	1,874	-	-	-	-	76,117	3,663	-
4a.1.5.7	Clean Condensate Storage	-	146	-	-	-	-	-	22	168	-	-	168	-	-	-	-	-	-	2,875	-
4a.1.5.8	Clean Condensate Storage - RCA	-	68	1	1	8	-	-	18	96	96	-	-	429	-	-	-	-	17,422	1,131	-
4a.1.5.9	Condensate	-	721	39	72	449	-	-	262	1,542	1,542	-	-	23,501	-	-	-	-	954,377	13,200	-
4a.1.5.10	Condensate Booster	-	811	92	171	1,064	-	-	397	2,535	2,535	-	-	55,734	-	-	-	-	2,263,391	15,040	-
4a.1.5.11	Condensate Polishing Demineralizer	-	811	10	18	111	-	-	223	1,173	1,173	-	-	5,810	-	-	-	-	235,956	14,279	-
4a.1.5.12	Containment Combustible Gas Control	-	69	1	2	11	-	-	19	101	101	-	-	567	-	-	-	-	23,007	1,161	-
4a.1.5.13	Cycled Condensate Storage	-	480	11	21	131	-	-	144	788	788	-	-	6,857	-	-	-	-	278,483	8,725	-
4a.1.5.14	Drywell Instrument Nitrogen	-	59	1	2	12	-	-	17	90	90	-	-	613	-	-	-	-	24,892	1,048	-
4a.1.5.15	Extraction Steam	-	265	9	17	107	-	-	86	485	485	-	-	5,615	-	-	-	-	228,022	4,883	-
4a.1.5.16	Feedwater	-	457	24	45	277	-	-	165	968	968	-	-	14,520	-	-	-	-	589,682	8,412	-
4a.1.5.17	Feedwater Heater Vents & Drains	-	2,119	66	123	762	-	-	669	3,738	3,738	-	-	39,902	-	-	-	-	1,620,422	38,608	-
4a.1.5.18	Gland Steam	-	190	3	5	32	-	-	53	283	283	-	-	1,669	-	-	-	-	67,764	3,394	-
4a.1.5.19	HVAC-Machine Shop\TB Sandblast	-	29	0	1	5	-	-	8	44	44	-	-	270	-	-	-	-	10,961	531	-
4a.1.5.20	HVAC-River\Lake Screen House	-	21	-	-	-	-	-	3	24	-	-	24	-	-	-	-	-	-	422	-
4a.1.5.21	HVAC-Service Building	-	54	-	-	-	-	-	8	63	-	-	63	-	-	-	-	-	-	1,072	-
4a.1.5.22	Hydrogen & Carbon Dioxide	-	36	-	-	-	-	-	5	41	-	-	41	-	-	-	-	-	-	708	-
4a.1.5.23	Lake Makeup & Blowdown	-	214	-	-	-	-	-	32	246	-	-	246	-	-	-	-	-	-	4,257	-
4a.1.5.24	Main Steam	-	103	1	2	15	-	-	28	150	150	-	-	775	-	-	-	-	31,473	1,824	-
4a.1.5.25	Makeup Demineralizer	-	622	14	26	163	-	-	185	1,010	1,010	-	-	8,552	-	-	-	-	347,300	11,294	-
4a.1.5.26	Misc Bldgs Floor Drains	-	1,156	66	58	125	250	-	386	2,041	2,041	-	-	6,544	2,367	-	-	-	477,918	19,530	-
4a.1.5.27	Refrigeration	-	55	-	-	-	-	-	8	63	-	-	63	-	-	-	-	-	-	1,110	-
4a.1.5.28	Refrigeration - RCA	-	40	0	1	5	-	-	11	57	57	-	-	245	-	-	-	-	9,954	666	-
4a.1.5.29	Screen Wash	-	20	-	-	-	-	-	3	23	-	-	23	-	-	-	-	-	-	407	-
4a.1.5.30	Service Air	-	22	-	-	-	-	-	3	25	-	-	25	-	-	-	-	-	-	427	-
4a.1.5.31	Sewage Treatment	-	87	-	-	-	-	-	13	100	-	-	100	-	-	-	-	-	-	1,741	-
4a.1.5.32	Standby Gas Treatment	-	42	1	3	17	-	-	14	77	77	-	-	901	-	-	-	-	36,604	761	-
4a.1.5.33	Station Heat Recovery	-	581	18	31	195	-	-	181	1,007	1,007	-	-	10,223	-	-	-	-	415,159	10,039	-
4a.1.5.34	Switchgear Heat Removal	-	10	-	-	-	-	-	1	11	-	-	11	-	-	-	-	-	-	180	-
4a.1.5.35	Turbine Bldg Closed Cooling Water	-	415	14	25	157	-	-	133	744	744	-	-	8,238	-	-	-	-	334,542	7,401	-
4a.1.5.36	Turbine Building Equipment Drains	-	73	1	3	17	-	-	21	116	116	-	-	898	-	-	-	-	36,485	1,308	-
4a.1.5.37	Turbine Building Floor Drains	-	74	1	1	6	-	-	20	102	102	-	-	325	-	-	-	-	13,189	1,313	-
4a.1.5.38	Turbine Generator	-	212	10	19	115	-	-	74	431	431	-	-	6,046	-	-	-	-	245,513	3,970	-
4a.1.5.39	Turbine Oil	-	619	24	28	115	64	-	195	1,047	1,047	-	-	6,048	656	-	-	-	300,237	11,160	-
4a.1.5.40	Wastewater Treatment	-	129	-	-	-	-	-	19	148	-	-	148	-	-	-	-	-	-	2,499	-
4a.1.5	Totals	-	11,548	418	693	4,009	315	-	3,612	20,595	19,434	-	1,161	210,037	3,023	-	-	-	8,796,532	208,490	-
4a.1.6	Scaffolding in support of decommissioning	-	2,452	43	10	48	15	-	630	3,197	3,197	-	-	2,253	140	-	-	-	113,977	50,760	-
4a.1	Subtotal Period 4a Activity Costs	354	25,347	11,790	4,072	8,575	26,498	567	23,338	100,542	99,381	-	1,161	425,746	28,135	4,507	631	671	21,335,350	387,835	2,943
Period 4a Collateral Costs																					
4a.3.1	Process liquid waste	68	-	28	134	-	132	-	90	453	453	-	-	-	476	-	-	-	28,537	93	-
4a.3.2	Small tool allowance	-	324	-	-	-	-	-	49	372	335	-	37	-	-	-	-	-	-	-	-
4a.3	Subtotal Period 4a Collateral Costs	68	324	28	134	-	132	-	139	825	788	-	37	-	476	-	-	-	28,537	93	-
Period 4a Period-Dependent Costs																					
4a.4.1	Decon supplies	72	-	-	-	-	-	-	18	90	90	-	-	-	-	-	-	-	-	-	-
4a.4.2	Insurance	-	-	-	-	-	-	655	65	720	720	-	-	-	-	-	-	-	-	-	-
4a.4.3	Property taxes	-	-	-	-	-	-	776	78	854	768	-	85	-	-	-	-	-	-	-	-
4a.4.4	Health physics supplies	-	2,029	-	-	-	-	-	507	2,536	2,536	-	-	-	-	-	-	-	-	-	-

Table D-2
LaSalle County Station, Unit 2
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
Period 4a Period-Dependent Costs (continued)																					
4a.4.5	Heavy equipment rental	-	2,593	-	-	-	-	-	389	2,982	2,982	-	-	-	-	-	-	-	-	-	-
4a.4.6	Disposal of DAW generated	-	-	18	7	-	371	-	96	491	491	-	-	-	6,643	-	-	-	132,865	30	-
4a.4.7	Plant energy budget	-	-	-	-	-	-	2,023	303	2,327	2,327	-	-	-	-	-	-	-	-	-	-
4a.4.8	NRC Fees	-	-	-	-	-	-	700	70	770	770	-	-	-	-	-	-	-	-	-	-
4a.4.9	Site O&M Costs	-	-	-	-	-	-	194	29	223	223	-	-	-	-	-	-	-	-	-	-
4a.4.10	Liquid Radwaste Processing Equipment/Services	-	-	-	-	-	-	595	89	684	684	-	-	-	-	-	-	-	-	-	-
4a.4.11	Security Staff Cost	-	-	-	-	-	-	3,157	474	3,630	3,630	-	-	-	-	-	-	-	-	-	84,629
4a.4.12	DOC Staff Cost	-	-	-	-	-	-	17,754	2,663	20,418	20,418	-	-	-	-	-	-	-	-	-	222,264
4a.4.13	Utility Staff Cost	-	-	-	-	-	-	29,351	4,403	33,754	33,754	-	-	-	-	-	-	-	-	-	396,608
4a.4	Subtotal Period 4a Period-Dependent Costs	72	4,621	18	7	-	371	55,206	9,184	69,479	69,394	-	85	-	6,643	-	-	-	132,865	30	703,501
4a.0	TOTAL PERIOD 4a COST	495	30,292	11,836	4,214	8,575	27,001	55,773	32,661	170,847	169,563	-	1,283	425,746	35,254	4,507	631	671	21,496,760	387,958	706,445
PERIOD 4b - Site Decontamination																					
Period 4b Direct Decommissioning Activities																					
4b.1.1	Remove spent fuel racks	832	82	166	157	-	1,030	-	734	3,001	3,001	-	-	-	9,726	-	-	-	872,665	1,631	-
Disposal of Plant Systems																					
4b.1.2.1	Aux Diesel Bldg Floor Drains	-	8	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	147	-
4b.1.2.2	Auxiliary Diesel Generator	-	69	-	-	-	-	-	10	79	-	-	79	-	-	-	-	-	-	1,341	-
4b.1.2.3	Containment Monitoring	-	21	0	0	2	-	-	6	28	28	-	-	81	-	-	-	-	3,296	407	-
4b.1.2.4	Control Rod Drive	-	185	2	3	18	-	-	50	258	258	-	-	961	-	-	-	-	39,042	3,464	-
4b.1.2.5	Diesel Oil	-	58	-	-	-	-	-	9	67	-	-	67	-	-	-	-	-	-	1,104	-
4b.1.2.6	Domestic Water	-	25	-	-	-	-	-	4	29	-	-	29	-	-	-	-	-	-	499	-
4b.1.2.7	Domestic Water - RCA	-	39	0	1	5	-	-	11	56	56	-	-	263	-	-	-	-	10,694	653	-
4b.1.2.8	Electrical	-	518	-	-	-	-	-	78	596	-	-	596	-	-	-	-	-	-	9,872	-
4b.1.2.9	Electrical - Contaminated	-	749	10	18	114	-	-	208	1,099	1,099	-	-	5,977	-	-	-	-	242,742	13,169	-
4b.1.2.10	Electrical - RCA	-	5,152	94	168	1,047	-	-	1,480	7,941	7,941	-	-	54,830	-	-	-	-	2,226,676	87,927	-
4b.1.2.11	Fire Protection	-	214	-	-	-	-	-	32	246	-	-	246	-	-	-	-	-	-	4,263	-
4b.1.2.12	Fire Protection - RCA	-	1,033	22	39	244	-	-	303	1,641	1,641	-	-	12,787	-	-	-	-	519,289	17,581	-
4b.1.2.13	Fuel Pool Cooling & Cleanup	-	703	22	40	249	-	-	221	1,235	1,235	-	-	13,068	-	-	-	-	530,713	12,596	-
4b.1.2.14	HVAC-Auxiliary Building	-	261	7	12	76	-	-	79	434	434	-	-	3,972	-	-	-	-	161,301	4,427	-
4b.1.2.15	HVAC-Control Rm\Aux Equip Area	-	38	-	-	-	-	-	6	44	-	-	44	-	-	-	-	-	-	729	-
4b.1.2.16	HVAC-Diesel Generator Room	-	14	-	-	-	-	-	2	16	-	-	16	-	-	-	-	-	-	284	-
4b.1.2.17	HVAC-Off Gas Building	-	61	3	5	30	-	-	21	119	119	-	-	1,548	-	-	-	-	62,855	1,100	-
4b.1.2.18	HVAC-Primary Containment	-	800	19	35	219	-	-	240	1,313	1,313	-	-	11,460	-	-	-	-	465,384	13,770	-
4b.1.2.19	HVAC-Radwaste Building	-	97	2	4	23	-	-	28	154	154	-	-	1,200	-	-	-	-	48,728	1,667	-
4b.1.2.20	HVAC-Turbine Building	-	731	15	28	177	-	-	215	1,166	1,166	-	-	9,260	-	-	-	-	376,037	11,966	-
4b.1.2.21	High Pressure Core Spray	-	268	27	34	127	87	-	115	657	657	-	-	6,654	818	-	-	-	343,590	4,869	-
4b.1.2.22	Instrument Air	-	7	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	152	-
4b.1.2.23	Instrument Air - RCA	-	142	1	2	13	-	-	38	197	197	-	-	681	-	-	-	-	27,654	2,514	-
4b.1.2.24	Low Pressure Core Spray	-	128	12	15	59	40	-	54	308	308	-	-	3,069	376	-	-	-	158,310	2,315	-
4b.1.2.25	Nuclear Boiler	-	1,271	95	112	354	359	-	487	2,677	2,677	-	-	18,553	3,390	-	-	-	1,057,552	23,399	-
4b.1.2.26	Off Gas	-	504	30	34	90	126	-	179	962	962	-	-	4,693	1,189	-	-	-	297,108	9,052	-
4b.1.2.27	Primary Containment Vent & Purge	-	395	18	33	208	-	-	137	791	791	-	-	10,887	-	-	-	-	442,119	7,350	-
4b.1.2.28	Process Radiation Monitoring	-	13	0	0	1	-	-	3	17	17	-	-	33	-	-	-	-	1,355	253	-
4b.1.2.29	Process Sampling	-	46	0	1	4	-	-	12	64	64	-	-	210	-	-	-	-	8,527	895	-
4b.1.2.30	Radioactive Waste Disposal	-	2,225	85	93	328	261	-	693	3,685	3,685	-	-	17,201	2,582	-	-	-	919,500	39,849	-
4b.1.2.31	Radwaste Area Floor Drains	-	2	0	0	0	0	-	0	2	2	-	-	5	1	-	-	-	256	31	-
4b.1.2.32	Reactor Bldg Closed Cooling Water	-	355	21	37	231	-	-	131	774	774	-	-	12,081	-	-	-	-	490,626	6,182	-
4b.1.2.33	Reactor Building Equipment Drains	-	57	2	2	6	6	-	17	91	91	-	-	330	61	-	-	-	18,672	1,038	-
4b.1.2.34	Reactor Building Floor Drains	-	6	0	0	0	0	-	2	8	8	-	-	17	2	-	-	-	897	108	-
4b.1.2.35	Reactor Core Isolation Cooling	-	178	7	8	21	28	-	57	300	300	-	-	1,099	269	-	-	-	68,725	3,218	-
4b.1.2.36	Reactor Recirculation	-	102	9	11	35	34	-	42	232	232	-	-	1,858	321	-	-	-	104,233	1,910	-
4b.1.2.37	Reactor Water Clean-up	-	675	23	19	31	92	-	202	1,042	1,042	-	-	1,618	874	-	-	-	144,057	11,928	-

Table D-2
LaSalle County Station, Unit 2
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Burial Volumes Class B Cu. Feet	Burial Volumes Class C Cu. Feet	Burial Volumes GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Disposal of Plant Systems (continued)																					
4b.1.2.38	Residual Heat Removal	-	1,324	129	163	608	429	-	567	3,220	3,220	-	-	31,857	4,053	-	-	-	1,657,265	24,347	-
4b.1.2.39	Service Air - RCA	-	325	3	6	37	-	-	88	459	459	-	-	1,953	-	-	-	-	79,314	5,520	-
4b.1.2.40	Service Water	-	82	-	-	-	-	-	12	95	-	-	95	-	-	-	-	-	-	1,595	-
4b.1.2.41	Service Water - RCA	-	749	24	44	271	-	-	237	1,325	1,325	-	-	14,208	-	-	-	-	577,006	12,979	-
4b.1.2.42	Standby Liquid Control	-	42	0	1	6	-	-	12	60	60	-	-	291	-	-	-	-	11,832	702	-
4b.1.2.43	Well Water	-	91	-	-	-	-	-	14	104	-	-	104	-	-	-	-	-	-	1,732	-
4b.1.2	Totals	-	19,765	682	968	4,633	1,462	-	6,103	33,612	32,319	-	1,293	242,706	13,935	-	-	-	11,095,350	348,903	-
4b.1.3	Scaffolding in support of decommissioning	-	3,678	64	15	71	22	-	944	4,795	4,795	-	-	3,380	210	-	-	-	170,965	76,140	-
Decontamination of Site Buildings																					
4b.1.4.1	Reactor Building	2,568	3,065	310	339	238	1,092	-	2,441	10,052	10,052	-	-	12,446	16,298	-	-	-	2,086,382	99,025	-
4b.1.4.2	Auxiliary Building	1,250	543	44	54	275	66	-	831	3,062	3,062	-	-	14,385	856	-	-	-	665,655	31,725	-
4b.1.4.3	IRSF Building	69	18	3	4	1	9	-	42	146	146	-	-	26	174	-	-	-	18,472	1,537	-
4b.1.4.4	Service Building	95	19	4	5	1	13	-	57	194	194	-	-	34	243	-	-	-	25,654	2,032	-
4b.1.4.5	Solid Radwaste Building	423	297	12	14	19	32	-	300	1,097	1,097	-	-	984	574	-	-	-	96,903	12,864	-
4b.1.4.6	Turbine Building	1,528	630	77	88	98	208	-	1,009	3,638	3,638	-	-	5,149	3,826	-	-	-	585,724	38,151	-
4b.1.4	Totals	5,933	4,573	450	503	630	1,420	-	4,680	18,188	18,188	-	-	33,023	21,972	-	-	-	3,478,791	185,335	-
4b.1	Subtotal Period 4b Activity Costs	6,765	28,097	1,363	1,643	5,334	3,934	-	12,461	59,598	58,304	-	1,293	279,109	45,843	-	-	-	15,617,780	612,009	-
Period 4b Additional Costs																					
4b.2.1	License Termination Survey Planning	-	-	-	-	-	-	940	282	1,222	1,222	-	-	-	-	-	-	-	-	-	6,240
4b.2.2	ISFSI License Termination	-	57	1	38	-	153	749	171	1,168	-	1,168	-	-	2,905	-	-	-	244,104	3,498	1,280
4b.2.3	Soil Remediation	-	29	1	216	-	706	-	216	1,168	1,168	-	-	-	13,453	-	-	-	1,119,288	367	-
4b.2	Subtotal Period 4b Additional Costs	-	86	2	254	-	859	1,689	669	3,559	2,391	1,168	-	-	16,358	-	-	-	1,363,392	3,865	7,520
Period 4b Collateral Costs																					
4b.3.1	Process liquid waste	222	-	92	440	-	433	-	294	1,480	1,480	-	-	-	1,555	-	-	-	93,305	303	-
4b.3.2	Small tool allowance	-	515	-	-	-	-	-	77	592	592	-	-	-	-	-	-	-	-	-	-
4b.3.3	Decommissioning Equipment Disposition	-	-	114	31	127	40	-	45	356	356	-	-	6,000	373	-	-	-	303,507	88	-
4b.3	Subtotal Period 4b Collateral Costs	222	515	205	471	127	472	-	416	2,429	2,429	-	-	6,000	1,929	-	-	-	396,812	391	-
Period 4b Period-Dependent Costs																					
4b.4.1	Decon supplies	1,511	-	-	-	-	-	-	378	1,889	1,889	-	-	-	-	-	-	-	-	-	-
4b.4.2	Insurance	-	-	-	-	-	-	935	94	1,029	1,029	-	-	-	-	-	-	-	-	-	-
4b.4.3	Property taxes	-	-	-	-	-	-	1,109	111	1,220	1,220	-	-	-	-	-	-	-	-	-	-
4b.4.4	Health physics supplies	-	3,118	-	-	-	-	-	779	3,897	3,897	-	-	-	-	-	-	-	-	-	-
4b.4.5	Heavy equipment rental	-	3,674	-	-	-	-	-	551	4,225	4,225	-	-	-	-	-	-	-	-	-	-
4b.4.6	Disposal of DAW generated	-	-	27	10	-	558	-	144	740	740	-	-	-	10,002	-	-	-	200,042	46	-
4b.4.7	Plant energy budget	-	-	-	-	-	-	2,282	342	2,624	2,624	-	-	-	-	-	-	-	-	-	-
4b.4.8	NRC Fees	-	-	-	-	-	-	1,000	100	1,100	1,100	-	-	-	-	-	-	-	-	-	-
4b.4.9	Site O&M Costs	-	-	-	-	-	-	277	42	319	319	-	-	-	-	-	-	-	-	-	-
4b.4.10	Liquid Radwaste Processing Equipment/Services	-	-	-	-	-	-	850	128	978	978	-	-	-	-	-	-	-	-	-	-
4b.4.11	Security Staff Cost	-	-	-	-	-	-	6,061	909	6,970	6,970	-	-	-	-	-	-	-	-	-	144,643
4b.4.12	DOC Staff Cost	-	-	-	-	-	-	24,954	3,743	28,697	28,697	-	-	-	-	-	-	-	-	-	310,114
4b.4.13	Utility Staff Cost	-	-	-	-	-	-	41,070	6,161	47,231	47,231	-	-	-	-	-	-	-	-	-	546,171
4b.4	Subtotal Period 4b Period-Dependent Costs	1,511	6,792	27	10	-	558	78,538	13,481	100,918	100,918	-	-	-	10,002	-	-	-	200,042	46	1,000,929
4b.0	TOTAL PERIOD 4b COST	8,498	35,490	1,598	2,378	5,461	5,823	80,227	27,027	166,503	164,041	1,168	1,293	285,109	74,131	-	-	-	17,578,020	616,312	1,008,449
PERIOD 4e - License Termination																					
Period 4e Direct Decommissioning Activities																					
4e.1.1	ORISE confirmatory survey	-	-	-	-	-	-	151	45	197	197	-	-	-	-	-	-	-	-	-	-
4e.1.2	Terminate license									a											

Table D-2
LaSalle County Station, Unit 2
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
4e.1	Subtotal Period 4e Activity Costs	-	-	-	-	-	-	151	45	197	197	-	-	-	-	-	-	-	-	-	-
Period 4e Additional Costs																					
4e.2.1	License Termination Survey	-	-	-	-	-	-	11,748	3,524	15,272	15,272	-	-	-	-	-	-	-	-	217,865	3,120
4e.2	Subtotal Period 4e Additional Costs	-	-	-	-	-	-	11,748	3,524	15,272	15,272	-	-	-	-	-	-	-	-	217,865	3,120
Period 4e Collateral Costs																					
4e.3.1	DOC staff relocation expenses	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
4e.3	Subtotal Period 4e Collateral Costs	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
Period 4e Period-Dependent Costs																					
4e.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4e.4.2	Property taxes	-	-	-	-	-	-	382	38	420	420	-	-	-	-	-	-	-	-	-	-
4e.4.3	Health physics supplies	-	1,037	-	-	-	-	-	259	1,296	1,296	-	-	-	-	-	-	-	-	-	-
4e.4.4	Disposal of DAW generated	-	-	1	0	-	19	-	5	25	25	-	-	-	340	-	-	-	6,795	2	-
4e.4.5	Plant energy budget	-	-	-	-	-	-	210	31	241	241	-	-	-	-	-	-	-	-	-	-
4e.4.6	NRC Fees	-	-	-	-	-	-	360	36	396	396	-	-	-	-	-	-	-	-	-	-
4e.4.7	Site O&M Costs	-	-	-	-	-	-	95	14	110	110	-	-	-	-	-	-	-	-	-	-
4e.4.8	Security Staff Cost	-	-	-	-	-	-	528	79	607	607	-	-	-	-	-	-	-	-	-	11,957
4e.4.9	DOC Staff Cost	-	-	-	-	-	-	3,856	578	4,434	4,434	-	-	-	-	-	-	-	-	-	47,430
4e.4.10	Utility Staff Cost	-	-	-	-	-	-	4,617	693	5,310	5,310	-	-	-	-	-	-	-	-	-	57,793
4e.4	Subtotal Period 4e Period-Dependent Costs	-	1,037	1	0	-	19	10,048	1,734	12,839	12,839	-	-	-	340	-	-	-	6,795	2	117,180
4e.0	TOTAL PERIOD 4e COST	-	1,037	1	0	-	19	23,077	5,474	29,608	29,608	-	-	-	340	-	-	-	6,795	217,867	120,300
PERIOD 4 TOTALS		8,993	66,819	13,435	6,593	14,037	32,843	159,077	65,161	366,958	363,212	1,168	2,577	710,855	109,725	4,507	631	671	39,081,570	1,222,137	1,835,193
PERIOD 5b - Site Restoration																					
Period 5b Direct Decommissioning Activities																					
Demolition of Remaining Site Buildings																					
5b.1.1.1	Sewage Treatment Plant Upgrade	-	263	-	-	-	-	-	39	302	-	-	302	-	-	-	-	-	-	3,306	-
5b.1.1.2	Reactor Building	-	5,667	-	-	-	-	-	850	6,518	-	-	6,518	-	-	-	-	-	-	64,458	-
5b.1.1.3	Auxiliary Building	-	3,686	-	-	-	-	-	553	4,239	-	-	4,239	-	-	-	-	-	-	42,962	-
5b.1.1.4	Capital Improvements 2009	-	1,314	-	-	-	-	-	197	1,511	-	-	1,511	-	-	-	-	-	-	20,778	-
5b.1.1.5	Chemical Feed Building	-	32	-	-	-	-	-	5	36	-	-	36	-	-	-	-	-	-	482	-
5b.1.1.6	Diesel Generator Room	-	468	-	-	-	-	-	70	538	-	-	538	-	-	-	-	-	-	6,000	-
5b.1.1.7	Discharge Structure	-	20	-	-	-	-	-	3	23	-	-	23	-	-	-	-	-	-	190	-
5b.1.1.8	IRSF Building	-	691	-	-	-	-	-	104	794	-	-	794	-	-	-	-	-	-	8,924	-
5b.1.1.9	ISFSI Haul Path	-	651	-	-	-	-	-	98	748	-	748	-	-	-	-	-	-	-	9,520	-
5b.1.1.10	Lake Screen House	-	1,102	-	-	-	-	-	165	1,267	-	-	1,267	-	-	-	-	-	-	13,877	-
5b.1.1.11	Main Access Facility	-	390	-	-	-	-	-	58	448	-	-	448	-	-	-	-	-	-	5,396	-
5b.1.1.12	Miscellaneous Yard Structures	-	1,946	-	-	-	-	-	292	2,238	-	-	2,238	-	-	-	-	-	-	27,034	-
5b.1.1.13	New Service Building	-	1,840	-	-	-	-	-	276	2,116	-	-	2,116	-	-	-	-	-	-	23,587	-
5b.1.1.14	Outfall Structure	-	8	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	113	-
5b.1.1.15	River Screen House	-	330	-	-	-	-	-	50	380	-	-	380	-	-	-	-	-	-	4,230	-
5b.1.1.16	Security Modifications	-	677	-	-	-	-	-	102	778	-	-	778	-	-	-	-	-	-	3,834	-
5b.1.1.17	Service Building	-	1,534	-	-	-	-	-	230	1,764	-	-	1,764	-	-	-	-	-	-	21,582	-
5b.1.1.18	Sewage Treatment Plant	-	36	-	-	-	-	-	5	41	-	-	41	-	-	-	-	-	-	591	-
5b.1.1.19	Solid Radwaste Building	-	2,029	-	-	-	-	-	304	2,333	-	-	2,333	-	-	-	-	-	-	23,167	-
5b.1.1.20	Training Center	-	1,222	-	-	-	-	-	183	1,406	-	-	1,406	-	-	-	-	-	-	16,863	-
5b.1.1.21	Turbine Building	-	5,501	-	-	-	-	-	825	6,326	-	-	6,326	-	-	-	-	-	-	68,584	-
5b.1.1.22	Turbine Pedestal	-	2,102	-	-	-	-	-	315	2,418	-	-	2,418	-	-	-	-	-	-	22,592	-
5b.1.1.23	Wastewater Treatment Plant	-	59	-	-	-	-	-	9	68	-	-	68	-	-	-	-	-	-	911	-
5b.1.1	Totals	-	31,566	-	-	-	-	-	4,735	36,300	-	748	35,552	-	-	-	-	-	-	388,980	-

Table D-2
LaSalle County Station, Unit 2
Delayed DECON Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Site Closeout Activities																					
5b.1.2	BackFill Site	-	522	-	-	-	-	-	78	600	-	-	600	-	-	-	-	-	-	1,485	-
5b.1.3	Grade & landscape site	-	149	-	-	-	-	-	22	171	-	-	171	-	-	-	-	-	-	499	-
5b.1.4	Final report to NRC	-	-	-	-	-	-	77	12	89	89	-	-	-	-	-	-	-	-	-	654
5b.1	Subtotal Period 5b Activity Costs	-	32,236	-	-	-	-	77	4,847	37,160	89	748	36,323	-	-	-	-	-	-	390,964	654
Period 5b Additional Costs																					
5b.2.1	Concrete Crushing	-	1,155	-	-	-	-	5	174	1,333	-	-	1,333	-	-	-	-	-	-	5,855	-
5b.2.2	ISFSI Demolition and Site Restoration	-	1,604	-	-	-	-	24	244	1,872	-	1,872	-	-	-	-	-	-	-	21,545	80
5b.2.3	Cofferdam Construction and Teardown	-	389	-	-	-	-	-	58	447	-	-	447	-	-	-	-	-	-	3,896	-
5b.2	Subtotal Period 5b Additional Costs	-	3,147	-	-	-	-	29	476	3,652	-	1,872	1,780	-	-	-	-	-	-	31,296	80
Period 5b Collateral Costs																					
5b.3.1	Small tool allowance	-	359	-	-	-	-	-	54	413	-	-	413	-	-	-	-	-	-	-	-
5b.3	Subtotal Period 5b Collateral Costs	-	359	-	-	-	-	-	54	413	-	-	413	-	-	-	-	-	-	-	-
Period 5b Period-Dependent Costs																					
5b.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5b.4.2	Property taxes	-	-	-	-	-	-	998	100	1,098	-	-	1,098	-	-	-	-	-	-	-	-
5b.4.3	Heavy equipment rental	-	4,728	-	-	-	-	-	709	5,437	-	-	5,437	-	-	-	-	-	-	-	-
5b.4.4	Plant energy budget	-	-	-	-	-	-	274	41	315	-	-	315	-	-	-	-	-	-	-	-
5b.4.5	Site O&M Cost	-	-	-	-	-	-	249	37	287	-	-	287	-	-	-	-	-	-	-	-
5b.4.6	Security Staff Cost	-	-	-	-	-	-	1,247	187	1,435	-	-	1,435	-	-	-	-	-	-	-	27,619
5b.4.7	DOC Staff Cost	-	-	-	-	-	-	9,384	1,408	10,792	-	-	10,792	-	-	-	-	-	-	-	110,391
5b.4.8	Utility Staff Cost	-	-	-	-	-	-	4,478	672	5,149	-	-	5,149	-	-	-	-	-	-	-	54,154
5b.4	Subtotal Period 5b Period-Dependent Costs	-	4,728	-	-	-	-	16,631	3,154	24,512	-	-	24,512	-	-	-	-	-	-	-	192,164
5b.0	TOTAL PERIOD 5b COST	-	40,470	-	-	-	-	16,737	8,531	65,738	89	2,621	63,029	-	-	-	-	-	-	422,260	192,898
PERIOD 5 TOTALS		-	40,470	-	-	-	-	16,737	8,531	65,738	89	2,621	63,029	-	-	-	-	-	-	422,260	192,898
TOTAL COST TO DECOMMISSION		18,560	112,517	13,587	7,243	14,037	33,834	395,204	111,238	706,219	515,918	124,292	66,009	710,855	118,403	4,507	631	671	39,346,160	1,784,936	4,328,734

TOTAL COST TO DECOMMISSION WITH 18.7% CONTINGENCY:	**$706,219**	**thousands of 2009 dollars**
TOTAL NRC LICENSE TERMINATION COST IS 73.05% OR:	**$515,918**	**thousands of 2009 dollars**
SPENT FUEL MANAGEMENT COST IS 17.6% OR:	**$124,292**	**thousands of 2009 dollars**
NON-NUCLEAR DEMOLITION COST IS 9.35% OR:	**$66,009**	**thousands of 2009 dollars**
TOTAL LOW-LEVEL RADIOACTIVE WASTE VOLUME BURIED (EXCLUDING GTCC):	**123,541**	**cubic feet**
TOTAL GREATER THAN CLASS C RADWASTE VOLUME GENERATED:	**671**	**cubic feet**
TOTAL SCRAP METAL REMOVED:	**67,666**	**tons**
TOTAL CRAFT LABOR REQUIREMENTS:	**1,784,936**	**man-hours**

End Notes:
n/a - indicates that this activity not charged as decommissioning expense.
a - indicates that this activity performed by decommissioning staff.
0 - indicates that this value is less than 0.5 but is non-zero.
a cell containing " - " indicates a zero value

APPENDIX E

DETAILED COST ANALYSIS

SAFSTOR

Table E-1
LaSalle County Station, Unit 1
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
PERIOD 1a - Shutdown through Transition																					
Period 1a Direct Decommissioning Activities																					
1a.1.1	SAFSTOR site characterization survey	-	-	-	-	-	-	398	119	517	517	-	-	-	-	-	-	-	-	-	-
1a.1.2	Prepare preliminary decommissioning cost	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,300
1a.1.3	Notification of Cessation of Operations									a											
1a.1.4	Remove fuel & source material									n/a											
1a.1.5	Notification of Permanent Defueling									a											
1a.1.6	Deactivate plant systems & process waste									a											
1a.1.7	Prepare and submit PSDAR	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
1a.1.8	Review plant dwgs & specs.	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,300
1a.1.9	Perform detailed rad survey									a											
1a.1.10	Estimate by-product inventory	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
1a.1.11	End product description	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
1a.1.12	Detailed by-product inventory	-	-	-	-	-	-	177	27	204	204	-	-	-	-	-	-	-	-	-	1,500
1a.1.13	Define major work sequence	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
1a.1.14	Perform SER and EA	-	-	-	-	-	-	366	55	421	421	-	-	-	-	-	-	-	-	-	3,100
1a.1.15	Perform Site-Specific Cost Study	-	-	-	-	-	-	590	89	679	679	-	-	-	-	-	-	-	-	-	5,000
Activity Specifications																					
1a.1.16.1	Prepare plant and facilities for SAFSTOR	-	-	-	-	-	-	581	87	668	668	-	-	-	-	-	-	-	-	-	4,920
1a.1.16.2	Plant systems	-	-	-	-	-	-	492	74	565	565	-	-	-	-	-	-	-	-	-	4,167
1a.1.16.3	Plant structures and buildings	-	-	-	-	-	-	368	55	423	423	-	-	-	-	-	-	-	-	-	3,120
1a.1.16.4	Waste management	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
1a.1.16.5	Facility and site dormancy	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
1a.1.16	Total	-	-	-	-	-	-	1,913	287	2,199	2,199	-	-	-	-	-	-	-	-	-	16,207
Detailed Work Procedures																					
1a.1.17.1	Plant systems	-	-	-	-	-	-	140	21	161	161	-	-	-	-	-	-	-	-	-	1,183
1a.1.17.2	Facility closeout & dormancy	-	-	-	-	-	-	142	21	163	163	-	-	-	-	-	-	-	-	-	1,200
1a.1.17	Total	-	-	-	-	-	-	281	42	323	323	-	-	-	-	-	-	-	-	-	2,383
1a.1.18	Procure vacuum drying system	-	-	-	-	-	-	12	2	14	14	-	-	-	-	-	-	-	-	-	100
1a.1.19	Drain/de-energize non-cont. systems									a											
1a.1.20	Drain & dry NSSS									a											
1a.1.21	Drain/de-energize contaminated systems									a											
1a.1.22	Decon/secure contaminated systems									a											
1a.1	Subtotal Period 1a Activity Costs	-	-	-	-	-	-	4,633	755	5,388	5,388	-	-	-	-	-	-	-	-	-	35,890
Period 1a Additional Costs																					
1a.2.1	ISFSI Expansion	-	-	-	-	-	-	10,400	1,560	11,960	-	11,960	-	-	-	-	-	-	-	-	-
1a.2	Subtotal Period 1a Additional Costs	-	-	-	-	-	-	10,400	1,560	11,960	-	11,960	-	-	-	-	-	-	-	-	-
Period 1a Collateral Costs																					
1a.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	9,000	1,350	10,350	-	10,350	-	-	-	-	-	-	-	-	-
1a.3	Subtotal Period 1a Collateral Costs	-	-	-	-	-	-	9,000	1,350	10,350	-	10,350	-	-	-	-	-	-	-	-	-
Period 1a Period-Dependent Costs																					
1a.4.1	Insurance	-	-	-	-	-	-	876	88	964	964	-	-	-	-	-	-	-	-	-	-
1a.4.2	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1a.4.3	Health physics supplies	-	396	-	-	-	-	-	99	495	495	-	-	-	-	-	-	-	-	-	-
1a.4.4	Heavy equipment rental	-	396	-	-	-	-	-	59	455	455	-	-	-	-	-	-	-	-	-	-
1a.4.5	Disposal of DAW generated	-	-	2	1	-	34	-	9	45	45	-	-	-	610	-	-	-	12,190	3	-
1a.4.6	Plant energy budget	-	-	-	-	-	-	1,371	206	1,577	1,577	-	-	-	-	-	-	-	-	-	-
1a.4.7	NRC Fees	-	-	-	-	-	-	706	71	776	776	-	-	-	-	-	-	-	-	-	-
1a.4.8	Emergency Planning Fees	-	-	-	-	-	-	313	31	344	-	344	-	-	-	-	-	-	-	-	-

Table E-1
LaSalle County Station, Unit 1
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
Period 1a Period-Dependent Costs (continued)																					
1a.4.9	Site O&M Costs	-	-	-	-	-	-	125	19	144	144	-	-	-	-	-	-	-	-	-	-
1a.4.10	Spent Fuel Pool O&M	-	-	-	-	-	-	762	114	877	-	877	-	-	-	-	-	-	-	-	-
1a.4.11	ISFSI Operating Costs	-	-	-	-	-	-	44	7	51	-	51	-	-	-	-	-	-	-	-	-
1a.4.12	Security Staff Cost	-	-	-	-	-	-	457	69	526	526	-	-	-	-	-	-	-	-	-	12,264
1a.4.13	Utility Staff Cost	-	-	-	-	-	-	31,082	4,662	35,745	35,745	-	-	-	-	-	-	-	-	-	423,400
1a.4	Subtotal Period 1a Period-Dependent Costs	-	792	2	1	-	34	35,736	5,433	41,997	40,726	1,271	-	-	610	-	-	-	12,190	3	435,664
1a.0	TOTAL PERIOD 1a COST	-	792	2	1	-	34	59,769	9,098	69,695	46,114	23,581	-	-	610	-	-	-	12,190	3	471,554
PERIOD 1b - SAFSTOR Limited DECON Activities																					
Period 1b Direct Decommissioning Activities																					
Decontamination of Site Buildings																					
1b.1.1.1	Reactor Building	2,820	-	-	-	-	-	-	1,410	4,230	4,230	-	-	-	-	-	-	-	-	49,197	-
1b.1.1.2	Auxiliary Building	311	-	-	-	-	-	-	155	466	466	-	-	-	-	-	-	-	-	5,731	-
1b.1.1.3	Off Gas Building	139	-	-	-	-	-	-	69	208	208	-	-	-	-	-	-	-	-	2,566	-
1b.1.1.4	Turbine Building	1,631	-	-	-	-	-	-	816	2,447	2,447	-	-	-	-	-	-	-	-	30,081	-
1b.1.1	Totals	4,901	-	-	-	-	-	-	2,450	7,351	7,351	-	-	-	-	-	-	-	-	87,576	-
1b.1	Subtotal Period 1b Activity Costs	4,901	-	-	-	-	-	-	2,450	7,351	7,351	-	-	-	-	-	-	-	-	87,576	-
Period 1b Collateral Costs																					
1b.3.1	Decon equipment	763	-	-	-	-	-	-	114	877	877	-	-	-	-	-	-	-	-	-	-
1b.3.2	Process liquid waste	167	-	67	322	-	317	-	218	1,090	1,090	-	-	-	1,137	-	-	-	68,232	222	-
1b.3.3	Small tool allowance	-	75	-	-	-	-	-	11	86	86	-	-	-	-	-	-	-	-	-	-
1b.3.4	Spent Fuel Capital and Transfer	-	-	-	-	-	-	3,000	450	3,450	-	3,450	-	-	-	-	-	-	-	-	-
1b.3	Subtotal Period 1b Collateral Costs	930	75	67	322	-	317	3,000	793	5,503	2,053	3,450	-	-	1,137	-	-	-	68,232	222	-
Period 1b Period-Dependent Costs																					
1b.4.1	Decon supplies	1,260	-	-	-	-	-	-	315	1,576	1,576	-	-	-	-	-	-	-	-	-	-
1b.4.2	Insurance	-	-	-	-	-	-	105	11	116	116	-	-	-	-	-	-	-	-	-	-
1b.4.3	Property taxes	-	-	-	-	-	-	1,155	116	1,271	1,271	-	-	-	-	-	-	-	-	-	-
1b.4.4	Health physics supplies	-	421	-	-	-	-	-	105	527	527	-	-	-	-	-	-	-	-	-	-
1b.4.5	Heavy equipment rental	-	99	-	-	-	-	-	15	113	113	-	-	-	-	-	-	-	-	-	-
1b.4.6	Disposal of DAW generated	-	-	2	1	-	48	-	12	63	63	-	-	-	857	-	-	-	17,148	4	-
1b.4.7	Plant energy budget	-	-	-	-	-	-	342	51	393	393	-	-	-	-	-	-	-	-	-	-
1b.4.8	NRC Fees	-	-	-	-	-	-	176	18	194	194	-	-	-	-	-	-	-	-	-	-
1b.4.9	Emergency Planning Fees	-	-	-	-	-	-	78	8	86	-	86	-	-	-	-	-	-	-	-	-
1b.4.10	Site O&M Costs	-	-	-	-	-	-	31	5	36	36	-	-	-	-	-	-	-	-	-	-
1b.4.11	Spent Fuel Pool O&M	-	-	-	-	-	-	190	29	219	-	219	-	-	-	-	-	-	-	-	-
1b.4.12	ISFSI Operating Costs	-	-	-	-	-	-	11	2	13	-	13	-	-	-	-	-	-	-	-	-
1b.4.13	Security Staff Cost	-	-	-	-	-	-	114	17	131	131	-	-	-	-	-	-	-	-	-	3,058
1b.4.14	Utility Staff Cost	-	-	-	-	-	-	7,749	1,162	8,912	8,912	-	-	-	-	-	-	-	-	-	105,560
1b.4	Subtotal Period 1b Period-Dependent Costs	1,260	520	2	1	-	48	9,951	1,865	13,647	13,330	317	-	-	857	-	-	-	17,148	4	108,618
1b.0	TOTAL PERIOD 1b COST	7,091	595	69	322	-	364	12,951	5,108	26,501	22,734	3,767	-	-	1,995	-	-	-	85,381	87,801	108,618
PERIOD 1c - Preparations for SAFSTOR Dormancy																					
Period 1c Direct Decommissioning Activities																					
1c.1.1	Prepare support equipment for storage	-	432	-	-	-	-	-	65	496	496	-	-	-	-	-	-	-	-	3,000	-
1c.1.2	Install containment pressure equal. lines	-	42	-	-	-	-	-	6	48	48	-	-	-	-	-	-	-	-	700	-
1c.1.3	Interim survey prior to dormancy	-	-	-	-	-	-	733	220	953	953	-	-	-	-	-	-	-	-	13,416	-
1c.1.4	Secure building accesses									a											

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Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
1c.1.5	Prepare & submit interim report	-	-	-	-	-	-	69	10	79	79	-	-	-	-	-	-	-	-	-	583
1c.1	Subtotal Period 1c Activity Costs	-	473	-	-	-	-	802	301	1,576	1,576	-	-	-	-	-	-	-	-	17,116	583
Period 1c Additional Costs																					
1c.2.1	Spent Fuel Pool Isolation	-	-	-	-	-	-	9,690	1,453	11,143	11,143	-	-	-	-	-	-	-	-	-	-
1c.2	Subtotal Period 1c Additional Costs	-	-	-	-	-	-	9,690	1,453	11,143	11,143	-	-	-	-	-	-	-	-	-	-
Period 1c Collateral Costs																					
1c.3.1	Process liquid waste	158	-	64	305	-	300	-	206	1,033	1,033	-	-	-	1,078	-	-	-	64,659	210	-
1c.3.2	Small tool allowance	-	4	-	-	-	-	-	1	4	4	-	-	-	-	-	-	-	-	-	-
1c.3.3	Spent Fuel Capital and Transfer	-	-	-	-	-	-	3,000	450	3,450	-	3,450	-	-	-	-	-	-	-	-	-
1c.3	Subtotal Period 1c Collateral Costs	158	4	64	305	-	300	3,000	657	4,487	1,037	3,450	-	-	1,078	-	-	-	64,659	210	-
Period 1c Period-Dependent Costs																					
1c.4.1	Insurance	-	-	-	-	-	-	105	11	116	116	-	-	-	-	-	-	-	-	-	-
1c.4.2	Property taxes	-	-	-	-	-	-	1,155	116	1,271	1,271	-	-	-	-	-	-	-	-	-	-
1c.4.3	Health physics supplies	-	139	-	-	-	-	-	35	173	173	-	-	-	-	-	-	-	-	-	-
1c.4.4	Heavy equipment rental	-	99	-	-	-	-	-	15	113	113	-	-	-	-	-	-	-	-	-	-
1c.4.5	Disposal of DAW generated	-	-	0	0	-	6	-	2	8	8	-	-	-	107	-	-	-	2,132	0	-
1c.4.6	Plant energy budget	-	-	-	-	-	-	342	51	393	393	-	-	-	-	-	-	-	-	-	-
1c.4.7	NRC Fees	-	-	-	-	-	-	176	18	194	194	-	-	-	-	-	-	-	-	-	-
1c.4.8	Emergency Planning Fees	-	-	-	-	-	-	78	8	86	-	86	-	-	-	-	-	-	-	-	-
1c.4.9	Site O&M Costs	-	-	-	-	-	-	31	5	36	36	-	-	-	-	-	-	-	-	-	-
1c.4.10	Spent Fuel Pool O&M	-	-	-	-	-	-	190	29	219	-	219	-	-	-	-	-	-	-	-	-
1c.4.11	ISFSI Operating Costs	-	-	-	-	-	-	11	2	13	-	13	-	-	-	-	-	-	-	-	-
1c.4.12	Security Staff Cost	-	-	-	-	-	-	114	17	131	131	-	-	-	-	-	-	-	-	-	3,058
1c.4.13	Utility Staff Cost	-	-	-	-	-	-	2,147	322	2,468	2,468	-	-	-	-	-	-	-	-	-	27,040
1c.4	Subtotal Period 1c Period-Dependent Costs	-	237	0	0	-	6	4,349	628	5,220	4,903	317	-	-	107	-	-	-	2,132	0	30,098
1c.0	TOTAL PERIOD 1c COST	158	714	64	305	-	306	17,840	3,039	22,426	18,659	3,767	-	-	1,184	-	-	-	66,791	17,326	30,681
PERIOD 1 TOTALS		7,249	2,101	135	628	-	704	90,561	17,244	118,622	87,507	31,115	-	-	3,788	-	-	-	164,362	105,130	610,852
PERIOD 2a - SAFSTOR Dormancy with Wet Spent Fuel Storage																					
Period 2a Direct Decommissioning Activities																					
2a.1.1	Quarterly Inspection									a											
2a.1.2	Semi-annual environmental survey									a											
2a.1.3	Prepare reports									a											
2a.1.4	Bituminous roof replacement	-	-	-	-	-	-	136	20	156	156	-	-	-	-	-	-	-	-	-	-
2a.1.5	Maintenance supplies	-	-	-	-	-	-	503	126	629	629	-	-	-	-	-	-	-	-	-	-
2a.1	Subtotal Period 2a Activity Costs	-	-	-	-	-	-	639	146	785	785	-	-	-	-	-	-	-	-	-	-
Period 2a Collateral Costs																					
2a.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	33,000	4,950	37,950	-	37,950	-	-	-	-	-	-	-	-	-
2a.3	Subtotal Period 2a Collateral Costs	-	-	-	-	-	-	33,000	4,950	37,950	-	37,950	-	-	-	-	-	-	-	-	-
Period 2a Period-Dependent Costs																					
2a.4.1	Insurance	-	-	-	-	-	-	1,688	169	1,857	1,685	172	-	-	-	-	-	-	-	-	-
2a.4.2	Property taxes	-	-	-	-	-	-	5,892	589	6,481	2,202	4,279	-	-	-	-	-	-	-	-	-
2a.4.3	Health physics supplies	-	305	-	-	-	-	-	76	381	381	-	-	-	-	-	-	-	-	-	-
2a.4.4	Disposal of DAW generated	-	-	4	2	-	85	-	22	113	113	-	-	-	1,532	-	-	-	30,639	7	-
2a.4.5	Plant energy budget	-	-	-	-	-	-	1,098	165	1,263	632	632	-	-	-	-	-	-	-	-	-
2a.4.6	NRC Fees	-	-	-	-	-	-	807	81	888	888	-	-	-	-	-	-	-	-	-	-
2a.4.7	Emergency Planning Fees	-	-	-	-	-	-	400	40	440	-	440	-	-	-	-	-	-	-	-	-
2a.4.8	Site O&M Costs	-	-	-	-	-	-	500	75	575	575	-	-	-	-	-	-	-	-	-	-

Table E-1
LaSalle County Station, Unit 1
SAFSTOR Decommissioning Cost Estimate
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Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 2a Period-Dependent Costs (continued)																					
2a.4.9	Spent Fuel Pool O&M	-	-	-	-	-	-	3,054	458	3,512	-	3,512	-	-	-	-	-	-	-	-	-
2a.4.10	ISFSI Operating Costs	-	-	-	-	-	-	176	26	202	-	202	-	-	-	-	-	-	-	-	-
2a.4.11	Security Staff Cost	-	-	-	-	-	-	1,831	275	2,106	-	2,106	-	-	-	-	-	-	-	-	49,123
2a.4.12	Utility Staff Cost	-	-	-	-	-	-	9,440	1,416	10,856	6,138	4,718	-	-	-	-	-	-	-	-	121,137
2a.4	Subtotal Period 2a Period-Dependent Costs	-	305	4	2	-	85	24,886	3,392	28,675	12,614	16,061	-	-	1,532	-	-	-	30,639	7	170,260
2a.0	TOTAL PERIOD 2a COST	-	305	4	2	-	85	58,526	8,488	67,410	13,399	54,011	-	-	1,532	-	-	-	30,639	7	170,260
PERIOD 2b - SAFSTOR Dormancy with Dry Spent Fuel Storage																					
Period 2b Direct Decommissioning Activities																					
2b.1.1	Quarterly Inspection									a											
2b.1.2	Semi-annual environmental survey									a											
2b.1.3	Prepare reports									a											
2b.1.4	Bituminous roof replacement	-	-	-	-	-	-	278	42	320	320	-	-	-	-	-	-	-	-	-	-
2b.1.5	Maintenance supplies	-	-	-	-	-	-	1,032	258	1,290	1,290	-	-	-	-	-	-	-	-	-	-
2b.1	Subtotal Period 2b Activity Costs	-	-	-	-	-	-	1,310	300	1,610	1,610	-	-	-	-	-	-	-	-	-	-
Period 2b Collateral Costs																					
2b.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	9,000	1,350	10,350	-	10,350	-	-	-	-	-	-	-	-	-
2b.3	Subtotal Period 2b Collateral Costs	-	-	-	-	-	-	9,000	1,350	10,350	-	10,350	-	-	-	-	-	-	-	-	-
Period 2b Period-Dependent Costs																					
2b.4.1	Insurance	-	-	-	-	-	-	3,214	321	3,535	3,453	81	-	-	-	-	-	-	-	-	-
2b.4.2	Property taxes	-	-	-	-	-	-	4,103	410	4,513	4,513	-	-	-	-	-	-	-	-	-	-
2b.4.3	Health physics supplies	-	597	-	-	-	-	-	149	746	746	-	-	-	-	-	-	-	-	-	-
2b.4.4	Disposal of DAW generated	-	-	8	3	-	172	-	44	228	228	-	-	-	3,085	-	-	-	61,704	14	-
2b.4.5	Plant energy budget	-	-	-	-	-	-	1,126	169	1,295	1,295	-	-	-	-	-	-	-	-	-	-
2b.4.6	NRC Fees	-	-	-	-	-	-	1,655	165	1,820	1,820	-	-	-	-	-	-	-	-	-	-
2b.4.7	Emergency Planning Fees	-	-	-	-	-	-	821	82	903	-	903	-	-	-	-	-	-	-	-	-
2b.4.8	Site O&M Costs	-	-	-	-	-	-	1,026	154	1,180	1,180	-	-	-	-	-	-	-	-	-	-
2b.4.9	ISFSI Operating Costs	-	-	-	-	-	-	361	54	415	-	415	-	-	-	-	-	-	-	-	-
2b.4.10	Security Staff Cost	-	-	-	-	-	-	13,744	2,062	15,805	7,261	8,544	-	-	-	-	-	-	-	-	368,374
2b.4.11	Utility Staff Cost	-	-	-	-	-	-	10,621	1,593	12,215	-	12,215	-	-	-	-	-	-	-	-	152,761
2b.4	Subtotal Period 2b Period-Dependent Costs	-	597	8	3	-	172	36,669	5,204	42,653	20,496	22,158	-	-	3,085	-	-	-	61,704	14	521,135
2b.0	TOTAL PERIOD 2b COST	-	597	8	3	-	172	46,979	6,854	54,613	22,106	32,508	-	-	3,085	-	-	-	61,704	14	521,135
PERIOD 2c - SAFSTOR Dormancy without Spent Fuel Storage																					
Period 2c Direct Decommissioning Activities																					
2c.1.1	Quarterly Inspection									a											
2c.1.2	Semi-annual environmental survey									a											
2c.1.3	Prepare reports									a											
2c.1.4	Bituminous roof replacement	-	-	-	-	-	-	1,342	201	1,543	1,543	-	-	-	-	-	-	-	-	-	-
2c.1.5	Maintenance supplies	-	-	-	-	-	-	4,980	1,245	6,226	6,226	-	-	-	-	-	-	-	-	-	-
2c.1	Subtotal Period 2c Activity Costs	-	-	-	-	-	-	6,322	1,446	7,769	7,769	-	-	-	-	-	-	-	-	-	-
Period 2c Period-Dependent Costs																					
2c.4.1	Insurance	-	-	-	-	-	-	15,149	1,515	16,664	16,664	-	-	-	-	-	-	-	-	-	-
2c.4.2	Property taxes	-	-	-	-	-	-	19,798	1,980	21,778	21,778	-	-	-	-	-	-	-	-	-	-
2c.4.3	Health physics supplies	-	2,875	-	-	-	-	-	719	3,593	3,593	-	-	-	-	-	-	-	-	-	-
2c.4.4	Disposal of DAW generated	-	-	41	16	-	830	-	214	1,100	1,100	-	-	-	14,880	-	-	-	297,592	68	-
2c.4.5	Plant energy budget	-	-	-	-	-	-	5,432	815	6,247	6,247	-	-	-	-	-	-	-	-	-	-
2c.4.6	NRC Fees	-	-	-	-	-	-	7,230	723	7,953	7,953	-	-	-	-	-	-	-	-	-	-
2c.4.7	Site O&M Costs	-	-	-	-	-	-	4,949	742	5,692	5,692	-	-	-	-	-	-	-	-	-	-

Table E-1
LaSalle County Station, Unit 1
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 2c Period-Dependent Costs (continued)																					
2c.4.8	Security Staff Cost	-	-	-	-	-	-	30,469	4,570	35,040	35,040	-	-	-	-	-	-	-	-	-	619,800
2c.4.9	Utility Staff Cost	-	-	-	-	-	-	52,801	7,920	60,721	60,721	-	-	-	-	-	-	-	-	-	723,100
2c.4	Subtotal Period 2c Period-Dependent Costs	-	2,875	41	16	-	830	135,829	19,198	158,788	158,788	-	-	-	14,880	-	-	-	297,592	68	1,342,900
2c.0	TOTAL PERIOD 2c COST	-	2,875	41	16	-	830	142,151	20,644	166,557	166,557	-	-	-	14,880	-	-	-	297,592	68	1,342,900
PERIOD 2 TOTALS		-	3,776	53	20	-	1,088	247,655	35,987	288,580	202,062	86,518	-	-	19,497	-	-	-	389,935	89	2,034,296
PERIOD 3a - Reactivate Site Following SAFSTOR Dormancy																					
Period 3a Direct Decommissioning Activities																					
3a.1.1	Prepare preliminary decommissioning cost	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,300
3a.1.2	Review plant dwgs & specs.	-	-	-	-	-	-	543	81	624	624	-	-	-	-	-	-	-	-	-	4,600
3a.1.3	Perform detailed rad survey									a											
3a.1.4	End product description	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
3a.1.5	Detailed by-product inventory	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,300
3a.1.6	Define major work sequence	-	-	-	-	-	-	885	133	1,018	1,018	-	-	-	-	-	-	-	-	-	7,500
3a.1.7	Perform SER and EA	-	-	-	-	-	-	366	55	421	421	-	-	-	-	-	-	-	-	-	3,100
3a.1.8	Perform Site-Specific Cost Study	-	-	-	-	-	-	590	89	679	679	-	-	-	-	-	-	-	-	-	5,000
3a.1.9	Prepare/submit License Termination Plan	-	-	-	-	-	-	483	73	556	556	-	-	-	-	-	-	-	-	-	4,096
3a.1.10	Receive NRC approval of termination plan									a											
Activity Specifications																					
3a.1.11.1	Re-activate plant & temporary facilities	-	-	-	-	-	-	870	130	1,000	900	-	100	-	-	-	-	-	-	-	7,370
3a.1.11.2	Plant systems	-	-	-	-	-	-	492	74	565	509	-	57	-	-	-	-	-	-	-	4,167
3a.1.11.3	Reactor internals	-	-	-	-	-	-	838	126	964	964	-	-	-	-	-	-	-	-	-	7,100
3a.1.11.4	Reactor vessel	-	-	-	-	-	-	767	115	882	882	-	-	-	-	-	-	-	-	-	6,500
3a.1.11.5	Sacrificial shield	-	-	-	-	-	-	59	9	68	68	-	-	-	-	-	-	-	-	-	500
3a.1.11.6	Moisture separators/reheaters	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
3a.1.11.7	Reinforced concrete	-	-	-	-	-	-	189	28	217	109	-	109	-	-	-	-	-	-	-	1,600
3a.1.11.8	Main Turbine	-	-	-	-	-	-	246	37	283	283	-	-	-	-	-	-	-	-	-	2,088
3a.1.11.9	Main Condensers	-	-	-	-	-	-	246	37	283	283	-	-	-	-	-	-	-	-	-	2,088
3a.1.11.10	Pressure suppression structure	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
3a.1.11.11	Drywell	-	-	-	-	-	-	189	28	217	217	-	-	-	-	-	-	-	-	-	1,600
3a.1.11.12	Plant structures & buildings	-	-	-	-	-	-	368	55	423	212	-	212	-	-	-	-	-	-	-	3,120
3a.1.11.13	Waste management	-	-	-	-	-	-	543	81	624	624	-	-	-	-	-	-	-	-	-	4,600
3a.1.11.14	Facility & site closeout	-	-	-	-	-	-	106	16	122	61	-	61	-	-	-	-	-	-	-	900
3a.1.11	Total	-	-	-	-	-	-	5,267	790	6,057	5,519	-	538	-	-	-	-	-	-	-	44,633
Planning & Site Preparations																					
3a.1.12	Prepare dismantling sequence	-	-	-	-	-	-	283	42	326	326	-	-	-	-	-	-	-	-	-	2,400
3a.1.13	Plant prep. & temp. svces	-	-	-	-	-	-	2,800	420	3,220	3,220	-	-	-	-	-	-	-	-	-	-
3a.1.14	Design water clean-up system	-	-	-	-	-	-	165	25	190	190	-	-	-	-	-	-	-	-	-	1,400
3a.1.15	Rigging/Cont. Cntrl Envlps/tooling/etc.	-	-	-	-	-	-	2,200	330	2,530	2,530	-	-	-	-	-	-	-	-	-	-
3a.1.16	Procure casks/liners & containers	-	-	-	-	-	-	145	22	167	167	-	-	-	-	-	-	-	-	-	1,230
3a.1	Subtotal Period 3a Activity Costs	-	-	-	-	-	-	14,153	2,123	16,276	15,738	-	538	-	-	-	-	-	-	-	77,559
Period 3a Period-Dependent Costs																					
3a.4.1	Insurance	-	-	-	-	-	-	382	38	421	421	-	-	-	-	-	-	-	-	-	-
3a.4.2	Property taxes	-	-	-	-	-	-	500	50	550	550	-	-	-	-	-	-	-	-	-	-
3a.4.3	Health physics supplies	-	346	-	-	-	-	-	87	433	433	-	-	-	-	-	-	-	-	-	-
3a.4.4	Heavy equipment rental	-	396	-	-	-	-	-	59	455	455	-	-	-	-	-	-	-	-	-	-
3a.4.5	Disposal of DAW generated	-	-	1	1	-	29	-	7	38	38	-	-	-	514	-	-	-	10,287	2	-
3a.4.6	Plant energy budget	-	-	-	-	-	-	1,371	206	1,577	1,577	-	-	-	-	-	-	-	-	-	-
3a.4.7	NRC Fees	-	-	-	-	-	-	249	25	274	274	-	-	-	-	-	-	-	-	-	-

Table E-1
LaSalle County Station, Unit 1
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 3a Period-Dependent Costs (continued)																					
3a.4.8	Site O&M Costs	-	-	-	-	-	-	125	19	144	144	-	-	-	-	-	-	-	-	-	-
3a.4.9	Security Staff Cost	-	-	-	-	-	-	2,802	420	3,223	3,223	-	-	-	-	-	-	-	-	-	65,179
3a.4.10	Utility Staff Cost	-	-	-	-	-	-	19,293	2,894	22,187	22,187	-	-	-	-	-	-	-	-	-	258,629
3a.4	Subtotal Period 3a Period-Dependent Costs	-	742	1	1	-	29	24,722	3,805	29,300	29,300	-	-	-	514	-	-	-	10,287	2	323,807
3a.0	TOTAL PERIOD 3a COST	-	742	1	1	-	29	38,875	5,928	45,575	45,038	-	538	-	514	-	-	-	10,287	2	401,366
PERIOD 3b - Decommissioning Preparations																					
Period 3b Direct Decommissioning Activities																					
Detailed Work Procedures																					
3b.1.1.1	Plant systems	-	-	-	-	-	-	559	84	642	578	-	64	-	-	-	-	-	-	-	4,733
3b.1.1.2	Reactor internals	-	-	-	-	-	-	472	71	543	543	-	-	-	-	-	-	-	-	-	4,000
3b.1.1.3	Remaining buildings	-	-	-	-	-	-	159	24	183	46	-	137	-	-	-	-	-	-	-	1,350
3b.1.1.4	CRD housings & NIs	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
3b.1.1.5	Incore instrumentation	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	1,000
3b.1.1.6	Removal primary containment	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
3b.1.1.7	Reactor vessel	-	-	-	-	-	-	428	64	493	493	-	-	-	-	-	-	-	-	-	3,630
3b.1.1.8	Facility closeout	-	-	-	-	-	-	142	21	163	81	-	81	-	-	-	-	-	-	-	1,200
3b.1.1.9	Sacrificial shield	-	-	-	-	-	-	142	21	163	163	-	-	-	-	-	-	-	-	-	1,200
3b.1.1.10	Reinforced concrete	-	-	-	-	-	-	118	18	136	68	-	68	-	-	-	-	-	-	-	1,000
3b.1.1.11	Main Turbine	-	-	-	-	-	-	245	37	282	282	-	-	-	-	-	-	-	-	-	2,080
3b.1.1.12	Main Condensers	-	-	-	-	-	-	246	37	283	283	-	-	-	-	-	-	-	-	-	2,088
3b.1.1.13	Moisture separators & reheaters	-	-	-	-	-	-	236	35	271	271	-	-	-	-	-	-	-	-	-	2,000
3b.1.1.14	Radwaste building	-	-	-	-	-	-	322	48	370	333	-	37	-	-	-	-	-	-	-	2,730
3b.1.1.15	Reactor building	-	-	-	-	-	-	322	48	370	333	-	37	-	-	-	-	-	-	-	2,730
3b.1.1	Total	-	-	-	-	-	-	3,864	580	4,443	4,018	-	425	-	-	-	-	-	-	-	32,741
3b.1	Subtotal Period 3b Activity Costs	-	-	-	-	-	-	3,864	580	4,443	4,018	-	425	-	-	-	-	-	-	-	32,741
Period 3b Additional Costs																					
3b.2.1	Site Characterization	-	-	-	-	-	-	6,086	1,826	7,912	7,912	-	-	-	-	-	-	-	-	29,730	10,672
3b.2	Subtotal Period 3b Additional Costs	-	-	-	-	-	-	6,086	1,826	7,912	7,912	-	-	-	-	-	-	-	-	29,730	10,672
Period 3b Collateral Costs																					
3b.3.1	Decon equipment	763	-	-	-	-	-	-	114	877	877	-	-	-	-	-	-	-	-	-	-
3b.3.2	DOC staff relocation expenses	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
3b.3.3	Pipe cutting equipment	-	1,100	-	-	-	-	-	165	1,265	1,265	-	-	-	-	-	-	-	-	-	-
3b.3	Subtotal Period 3b Collateral Costs	763	1,100	-	-	-	-	1,130	449	3,442	3,442	-	-	-	-	-	-	-	-	-	-
Period 3b Period-Dependent Costs																					
3b.4.1	Decon supplies	23	-	-	-	-	-	-	6	29	29	-	-	-	-	-	-	-	-	-	-
3b.4.2	Insurance	-	-	-	-	-	-	211	21	232	232	-	-	-	-	-	-	-	-	-	-
3b.4.3	Property taxes	-	-	-	-	-	-	251	25	276	276	-	-	-	-	-	-	-	-	-	-
3b.4.4	Health physics supplies	-	191	-	-	-	-	-	48	239	239	-	-	-	-	-	-	-	-	-	-
3b.4.5	Heavy equipment rental	-	198	-	-	-	-	-	30	228	228	-	-	-	-	-	-	-	-	-	-
3b.4.6	Disposal of DAW generated	-	-	1	0	-	16	-	4	22	22	-	-	-	292	-	-	-	5,834	1	-
3b.4.7	Plant energy budget	-	-	-	-	-	-	687	103	790	790	-	-	-	-	-	-	-	-	-	-
3b.4.8	NRC Fees	-	-	-	-	-	-	125	12	137	137	-	-	-	-	-	-	-	-	-	-
3b.4.9	Site O&M Costs	-	-	-	-	-	-	63	9	72	72	-	-	-	-	-	-	-	-	-	-
3b.4.10	Security Staff Cost	-	-	-	-	-	-	1,405	211	1,616	1,616	-	-	-	-	-	-	-	-	-	32,679
3b.4.11	DOC Staff Cost	-	-	-	-	-	-	4,781	717	5,498	5,498	-	-	-	-	-	-	-	-	-	58,560
3b.4.12	Utility Staff Cost	-	-	-	-	-	-	9,673	1,451	11,124	11,124	-	-	-	-	-	-	-	-	-	129,669
3b.4	Subtotal Period 3b Period-Dependent Costs	23	390	1	0	-	16	17,196	2,638	20,264	20,264	-	-	-	292	-	-	-	5,834	1	220,907

Table E-1
LaSalle County Station, Unit 1
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
3b.0	TOTAL PERIOD 3b COST	786	1,490	1	0	-	16	28,275	5,492	36,060	35,635	-	425	-	292	-	-	-	5,834	29,731	264,320
PERIOD 3 TOTALS		786	2,232	2	1	-	45	67,150	11,420	81,636	80,673	-	963	-	806	-	-	-	16,121	29,734	665,686
PERIOD 4a - Large Component Removal																					
Period 4a Direct Decommissioning Activities																					
Nuclear Steam Supply System Removal																					
4a.1.1.1	Recirculation System Piping & Valves	21	77	18	11	26	99	-	62	315	315	-	-	503	503	-	-	-	116,652	1,846	-
4a.1.1.2	Recirculation Pumps & Motors	11	43	14	22	54	156	-	68	370	370	-	-	1,416	1,178	-	-	-	211,420	1,136	-
4a.1.1.3	CRDMs & NIs Removal	48	177	492	88	-	166	-	172	1,143	1,143	-	-	-	5,536	-	-	-	141,063	4,118	-
4a.1.1.4	Reactor Vessel Internals	168	2,076	4,559	1,306	-	7,062	227	6,672	22,070	22,070	-	-	-	2,128	1,753	652	-	452,885	26,158	1,178
4a.1.1.5	Vessel & Internals GTCC Disposal	-	-	-	-	-	11,118	-	1,668	12,786	12,786	-	-	-	-	-	-	671	109,910	-	-
4a.1.1.6	Reactor Vessel	-	4,397	1,485	481	-	1,769	227	4,707	13,065	13,065	-	-	-	17,632	-	-	-	1,799,953	26,158	1,178
4a.1.1	Totals	248	6,770	6,568	1,908	80	20,371	454	13,350	49,749	49,749	-	-	1,919	26,978	1,753	652	671	2,831,883	59,417	2,357
Removal of Major Equipment																					
4a.1.2	Main Turbine/Generator	-	480	2,215	424	2,633	-	-	800	6,551	6,551	-	-	124,489	-	-	-	-	5,601,986	8,748	-
4a.1.3	Main Condensers	-	921	1,579	302	1,877	-	-	715	5,393	5,393	-	-	88,729	-	-	-	-	3,992,800	16,783	-
Cascading Costs from Clean Building Demolition																					
4a.1.4.1	Reactor Building	-	983	-	-	-	-	-	147	1,130	1,130	-	-	-	-	-	-	-	-	11,163	-
4a.1.4.2	Auxiliary Building	-	408	-	-	-	-	-	61	469	469	-	-	-	-	-	-	-	-	4,733	-
4a.1.4.3	Off Gas Building	-	71	-	-	-	-	-	11	82	82	-	-	-	-	-	-	-	-	920	-
4a.1.4.4	Turbine Building	-	597	-	-	-	-	-	90	687	687	-	-	-	-	-	-	-	-	7,337	-
4a.1.4	Totals	-	2,059	-	-	-	-	-	309	2,368	2,368	-	-	-	-	-	-	-	-	24,153	-
Disposal of Plant Systems																					
4a.1.5.1	Auxiliary Steam	-	108	2	4	24	-	-	31	169	169	-	-	1,250	-	-	-	-	50,766	1,862	-
4a.1.5.2	CSCS Equipment Cooling	-	6	-	-	-	-	-	1	7	-	-	7	-	-	-	-	-	-	122	-
4a.1.5.3	Circulating Water	-	175	-	-	-	-	-	26	201	-	-	201	-	-	-	-	-	-	3,464	-
4a.1.5.4	Circulating Water - RCA	-	225	4	8	50	-	-	65	353	353	-	-	2,599	-	-	-	-	105,533	3,802	-
4a.1.5.5	Clean Condensate Storage	-	83	-	-	-	-	-	12	95	-	-	95	-	-	-	-	-	-	1,677	-
4a.1.5.6	Clean Condensate Storage - RCA	-	25	0	0	3	-	-	7	36	36	-	-	150	-	-	-	-	6,112	419	-
4a.1.5.7	Condensate	-	841	42	78	487	-	-	299	1,748	1,748	-	-	25,514	-	-	-	-	1,036,129	15,392	-
4a.1.5.8	Condensate Booster	-	867	94	174	1,082	-	-	415	2,632	2,632	-	-	56,706	-	-	-	-	2,302,853	16,068	-
4a.1.5.9	Condensate Polishing Demineralizer	-	819	10	18	111	-	-	225	1,182	1,182	-	-	5,808	-	-	-	-	235,877	14,440	-
4a.1.5.10	Containment Combustible Gas Control	-	85	1	2	13	-	-	24	124	124	-	-	671	-	-	-	-	27,268	1,436	-
4a.1.5.11	Cycled Condensate Storage	-	269	4	7	46	-	-	76	403	403	-	-	2,421	-	-	-	-	98,310	4,774	-
4a.1.5.12	Drywell Instrument Nitrogen	-	61	1	2	12	-	-	18	94	94	-	-	646	-	-	-	-	26,238	1,070	-
4a.1.5.13	Extraction Steam	-	322	11	20	125	-	-	103	582	582	-	-	6,547	-	-	-	-	265,890	5,933	-
4a.1.5.14	Feedwater	-	534	26	48	297	-	-	188	1,093	1,093	-	-	15,570	-	-	-	-	632,298	9,816	-
4a.1.5.15	Feedwater Heater Vents & Drains	-	2,557	74	137	854	-	-	795	4,418	4,418	-	-	44,739	-	-	-	-	1,816,866	46,568	-
4a.1.5.16	Gland Steam	-	229	3	6	36	-	-	64	338	338	-	-	1,878	-	-	-	-	76,265	4,100	-
4a.1.5.17	HVAC-River\Lake Screen House	-	8	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	151	-
4a.1.5.18	HVAC-Service Building	-	12	-	-	-	-	-	2	14	-	-	14	-	-	-	-	-	-	221	-
4a.1.5.19	Hydrogen & Carbon Dioxide	-	110	2	4	23	-	-	32	171	171	-	-	1,214	-	-	-	-	49,318	1,878	-
4a.1.5.20	Main Steam	-	125	1	3	17	-	-	34	179	179	-	-	866	-	-	-	-	35,179	2,211	-
4a.1.5.21	Misc Bldgs Floor Drains	-	0	-	-	-	-	-	0	1	-	-	1	-	-	-	-	-	-	9	-
4a.1.5.22	Screen Wash	-	25	-	-	-	-	-	4	29	-	-	29	-	-	-	-	-	-	506	-
4a.1.5.23	Service Air	-	11	-	-	-	-	-	2	13	-	-	13	-	-	-	-	-	-	222	-
4a.1.5.24	Standby Gas Treatment	-	51	2	3	20	-	-	17	93	93	-	-	1,049	-	-	-	-	42,596	932	-
4a.1.5.25	Station Heat Recovery	-	252	4	6	40	-	-	70	373	373	-	-	2,104	-	-	-	-	85,433	4,310	-
4a.1.5.26	Switchgear Heat Removal	-	10	-	-	-	-	-	1	11	-	-	11	-	-	-	-	-	-	180	-
4a.1.5.27	Turbine Bldg Closed Cooling Water	-	471	14	26	164	-	-	148	823	823	-	-	8,615	-	-	-	-	349,869	8,388	-
4a.1.5.28	Turbine Building Equip Drains	-	87	2	3	20	-	-	25	137	137	-	-	1,035	-	-	-	-	42,020	1,562	-

Table E-1
LaSalle County Station, Unit 1
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Disposal of Plant Systems (continued)																					
4a.1.5.29	Turbine Building Floor Drains	-	34	0	0	3	-	-	9	46	46	-	-	150	-	-	-	-	6,104	598	-
4a.1.5.30	Turbine Generator	-	178	9	17	103	-	-	63	370	370	-	-	5,416	-	-	-	-	219,950	3,324	-
4a.1.5.31	Turbine Oil	-	529	21	26	112	50	-	167	904	904	-	-	5,855	519	-	-	-	280,058	9,595	-
4a.1.5	Totals	-	9,111	327	594	3,642	50	-	2,925	16,649	16,269	-	380	190,804	519	-	-	-	7,790,930	165,027	-
4a.1.6	Scaffolding in support of decommissioning	-	2,111	39	9	43	14	-	543	2,758	2,758	-	-	2,054	128	-	-	-	103,876	43,646	-
4a.1	Subtotal Period 4a Activity Costs	248	21,451	10,728	3,237	8,275	20,434	454	18,642	83,468	83,089	-	380	407,994	27,624	1,753	652	671	20,321,470	317,774	2,357
Period 4a Collateral Costs																					
4a.3.1	Process liquid waste	25	-	12	56	-	56	-	36	185	185	-	-	-	200	-	-	-	11,978	39	-
4a.3.2	Small tool allowance	-	266	-	-	-	-	-	40	305	275	-	31	-	-	-	-	-	-	-	-
4a.3	Subtotal Period 4a Collateral Costs	25	266	12	56	-	56	-	76	491	460	-	31	-	200	-	-	-	11,978	39	-
Period 4a Period-Dependent Costs																					
4a.4.1	Decon supplies	58	-	-	-	-	-	-	15	73	73	-	-	-	-	-	-	-	-	-	-
4a.4.2	Insurance	-	-	-	-	-	-	528	53	580	580	-	-	-	-	-	-	-	-	-	-
4a.4.3	Property taxes	-	-	-	-	-	-	626	63	688	619	-	69	-	-	-	-	-	-	-	-
4a.4.4	Health physics supplies	-	1,656	-	-	-	-	-	414	2,069	2,069	-	-	-	-	-	-	-	-	-	-
4a.4.5	Heavy equipment rental	-	2,090	-	-	-	-	-	313	2,403	2,403	-	-	-	-	-	-	-	-	-	-
4a.4.6	Disposal of DAW generated	-	-	16	6	-	318	-	82	422	422	-	-	-	5,708	-	-	-	114,158	26	-
4a.4.7	Plant energy budget	-	-	-	-	-	-	1,631	245	1,875	1,875	-	-	-	-	-	-	-	-	-	-
4a.4.8	NRC Fees	-	-	-	-	-	-	824	82	906	906	-	-	-	-	-	-	-	-	-	-
4a.4.9	Site O&M Costs	-	-	-	-	-	-	156	23	180	180	-	-	-	-	-	-	-	-	-	-
4a.4.10	Liquid Radwaste Processing Equipment/Services	-	-	-	-	-	-	480	72	552	552	-	-	-	-	-	-	-	-	-	-
4a.4.11	Security Staff Cost	-	-	-	-	-	-	2,891	434	3,324	3,324	-	-	-	-	-	-	-	-	-	77,481
4a.4.12	DOC Staff Cost	-	-	-	-	-	-	14,402	2,160	16,563	16,563	-	-	-	-	-	-	-	-	-	179,875
4a.4.13	Utility Staff Cost	-	-	-	-	-	-	24,153	3,623	27,776	27,776	-	-	-	-	-	-	-	-	-	324,339
4a.4	Subtotal Period 4a Period-Dependent Costs	58	3,745	16	6	-	318	45,690	7,579	57,413	57,344	-	69	-	5,708	-	-	-	114,158	26	581,696
4a.0	TOTAL PERIOD 4a COST	332	25,462	10,755	3,299	8,275	20,808	46,144	26,296	141,371	140,892	-	479	407,994	33,532	1,753	652	671	20,447,610	317,839	584,052
PERIOD 4b - Site Decontamination																					
Period 4b Direct Decommissioning Activities																					
4b.1.1	Remove spent fuel racks	832	82	166	157	-	1,030	-	734	3,001	3,001	-	-	-	9,726	-	-	-	872,665	1,631	-
Disposal of Plant Systems																					
4b.1.2.1	Aux Diesel Bldg Floor Drains	-	4	-	-	-	-	-	1	5	-	-	5	-	-	-	-	-	-	86	-
4b.1.2.2	Auxiliary Diesel Generator	-	52	-	-	-	-	-	8	59	-	-	59	-	-	-	-	-	-	1,006	-
4b.1.2.3	Containment Monitoring	-	20	0	0	1	-	-	5	27	27	-	-	78	-	-	-	-	3,169	392	-
4b.1.2.4	Control Rod Drive	-	194	2	3	19	-	-	52	270	270	-	-	1,006	-	-	-	-	40,845	3,622	-
4b.1.2.5	Diesel Oil	-	43	-	-	-	-	-	6	50	-	-	50	-	-	-	-	-	-	823	-
4b.1.2.6	Electrical	-	273	-	-	-	-	-	41	314	-	-	314	-	-	-	-	-	-	5,201	-
4b.1.2.7	Electrical - Contaminated	-	676	9	17	105	-	-	188	995	995	-	-	5,509	-	-	-	-	223,712	11,889	-
4b.1.2.8	Electrical - RCA	-	4,641	86	155	962	-	-	1,337	7,182	7,182	-	-	50,427	-	-	-	-	2,047,847	79,254	-
4b.1.2.9	Fire Protection	-	116	-	-	-	-	-	17	134	-	-	134	-	-	-	-	-	-	2,339	-
4b.1.2.10	Fire Protection - RCA	-	664	13	23	143	-	-	192	1,035	1,035	-	-	7,493	-	-	-	-	304,287	11,294	-
4b.1.2.11	Fuel Pool Cooling & Cleanup	-	732	22	41	254	-	-	229	1,279	1,279	-	-	13,307	-	-	-	-	540,403	13,138	-
4b.1.2.12	HVAC-Auxiliary Building	-	198	5	9	55	-	-	60	326	326	-	-	2,889	-	-	-	-	117,333	3,260	-
4b.1.2.13	HVAC-Diesel Generator Room	-	7	-	-	-	-	-	1	8	-	-	8	-	-	-	-	-	-	127	-
4b.1.2.14	HVAC-Off Gas Building	-	20	0	1	5	-	-	6	31	31	-	-	237	-	-	-	-	9,643	326	-
4b.1.2.15	HVAC-Primary Containment	-	865	19	36	225	-	-	257	1,403	1,403	-	-	11,773	-	-	-	-	478,116	14,924	-
4b.1.2.16	HVAC-Radwaste Building	-	5	0	0	2	-	-	2	10	10	-	-	110	-	-	-	-	4,453	97	-
4b.1.2.17	HVAC-Turbine Building	-	731	15	28	177	-	-	215	1,166	1,166	-	-	9,260	-	-	-	-	376,037	11,966	-
4b.1.2.18	High Pressure Core Spray	-	316	29	36	134	94	-	131	739	739	-	-	7,014	889	-	-	-	364,579	5,729	-

Table E-1
LaSalle County Station, Unit 1
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Disposal of Plant Systems (continued)																					
4b.1.2.19	Instrument Air	-	5	-	-	-	-	-	1	5	-	-	5	-	-	-	-	-	-	94	-
4b.1.2.20	Instrument Air - RCA	-	134	1	2	12	-	-	36	185	185	-	-	629	-	-	-	-	25,528	2,372	-
4b.1.2.21	Low Pressure Core Spray	-	151	13	17	62	43	-	62	347	347	-	-	3,225	410	-	-	-	167,703	2,731	-
4b.1.2.22	Nuclear Boiler	-	1,533	109	129	409	415	-	579	3,174	3,174	-	-	21,452	3,922	-	-	-	1,222,966	28,205	-
4b.1.2.23	Off Gas	-	598	34	37	101	139	-	209	1,118	1,118	-	-	5,271	1,319	-	-	-	332,284	10,737	-
4b.1.2.24	Primary Containment Vent & Purge	-	406	19	35	219	-	-	142	821	821	-	-	11,470	-	-	-	-	465,819	7,544	-
4b.1.2.25	Process Radiation Monitoring	-	20	0	0	1	-	-	5	26	26	-	-	42	-	-	-	-	1,697	393	-
4b.1.2.26	Process Sampling	-	27	0	0	2	-	-	7	36	36	-	-	90	-	-	-	-	3,660	528	-
4b.1.2.27	Radioactive Waste Disposal	-	1,459	54	57	189	174	-	450	2,383	2,383	-	-	9,882	1,711	-	-	-	548,907	26,040	-
4b.1.2.28	Reactor Bldg Closed Cooling Water	-	339	21	37	230	-	-	127	753	753	-	-	12,027	-	-	-	-	488,418	5,945	-
4b.1.2.29	Reactor Building Equipment Drains	-	64	2	2	7	7	-	19	101	101	-	-	344	68	-	-	-	19,878	1,152	-
4b.1.2.30	Reactor Building Floor Drains	-	6	0	0	0	0	-	2	8	8	-	-	17	2	-	-	-	897	108	-
4b.1.2.31	Reactor Core Isolation Cooling	-	214	8	9	24	33	-	67	354	354	-	-	1,237	309	-	-	-	77,945	3,847	-
4b.1.2.32	Reactor Recirculation	-	40	1	1	2	3	-	11	57	57	-	-	103	26	-	-	-	6,479	732	-
4b.1.2.33	Reactor Water Clean-up	-	831	28	23	37	110	-	247	1,276	1,276	-	-	1,958	1,041	-	-	-	172,819	14,701	-
4b.1.2.34	Residual Heat Removal	-	1,546	135	171	633	456	-	635	3,575	3,575	-	-	33,146	4,305	-	-	-	1,732,275	28,360	-
4b.1.2.35	Service Air - RCA	-	234	2	4	25	-	-	63	328	328	-	-	1,326	-	-	-	-	53,837	3,994	-
4b.1.2.36	Service Water	-	48	-	-	-	-	-	7	55	-	-	55	-	-	-	-	-	-	938	-
4b.1.2.37	Service Water - RCA	-	683	22	40	247	-	-	216	1,208	1,208	-	-	12,930	-	-	-	-	525,074	11,877	-
4b.1.2.38	Standby Liquid Control	-	51	1	1	7	-	-	14	73	73	-	-	341	-	-	-	-	13,830	854	-
4b.1.2	Totals	-	17,944	651	915	4,287	1,475	-	5,645	30,917	30,286	-	631	224,591	14,002	-	-	-	10,370,440	316,624	-
4b.1.3	Scaffolding in support of decommissioning	-	3,166	58	14	65	20	-	814	4,138	4,138	-	-	3,080	192	-	-	-	155,814	65,468	-
Decontamination of Site Buildings																					
4b.1.4.1	Reactor Building	2,568	3,069	300	338	239	838	-	2,377	9,729	9,729	-	-	12,516	15,511	-	-	-	2,051,621	99,078	-
4b.1.4.2	Auxiliary Building	287	56	8	9	2	24	-	166	553	553	-	-	100	459	-	-	-	49,865	6,152	-
4b.1.4.3	Off Gas Building	129	28	6	7	1	17	-	78	266	266	-	-	46	326	-	-	-	34,435	2,805	-
4b.1.4.4	Turbine Building	1,521	629	77	88	98	207	-	1,005	3,624	3,624	-	-	5,149	3,809	-	-	-	584,008	38,010	-
4b.1.4	Totals	4,506	3,783	391	442	340	1,086	-	3,626	14,173	14,173	-	-	17,812	20,105	-	-	-	2,719,928	146,046	-
4b.1	Subtotal Period 4b Activity Costs	5,338	24,975	1,266	1,527	4,692	3,611	-	10,820	52,228	51,597	-	631	245,483	44,025	-	-	-	14,118,850	529,770	-
Period 4b Additional Costs																					
4b.2.1	License Termination Survey Planning	-	-	-	-	-	-	940	282	1,222	1,222	-	-	-	-	-	-	-	-	-	6,240
4b.2.2	ISFSI License Termination	-	57	1	38	-	153	749	171	1,168	-	1,168	-	-	2,905	-	-	-	244,104	3,498	1,280
4b.2	Subtotal Period 4b Additional Costs	-	57	1	38	-	153	1,689	453	2,391	1,222	1,168	-	-	2,905	-	-	-	244,104	3,498	7,520
Period 4b Collateral Costs																					
4b.3.1	Process liquid waste	85	-	40	192	-	189	-	123	629	629	-	-	-	679	-	-	-	40,768	132	-
4b.3.2	Small tool allowance	-	445	-	-	-	-	-	67	511	511	-	-	-	-	-	-	-	-	-	-
4b.3.3	Decommissioning Equipment Disposition	-	-	114	31	127	40	-	45	356	356	-	-	6,000	373	-	-	-	303,507	88	-
4b.3	Subtotal Period 4b Collateral Costs	85	445	154	223	127	229	-	234	1,496	1,496	-	-	6,000	1,053	-	-	-	344,275	221	-
Period 4b Period-Dependent Costs																					
4b.4.1	Decon supplies	1,352	-	-	-	-	-	-	338	1,690	1,690	-	-	-	-	-	-	-	-	-	-
4b.4.2	Insurance	-	-	-	-	-	-	935	94	1,029	1,029	-	-	-	-	-	-	-	-	-	-
4b.4.3	Property taxes	-	-	-	-	-	-	1,109	111	1,220	1,220	-	-	-	-	-	-	-	-	-	-
4b.4.4	Health physics supplies	-	2,738	-	-	-	-	-	684	3,422	3,422	-	-	-	-	-	-	-	-	-	-
4b.4.5	Heavy equipment rental	-	3,674	-	-	-	-	-	551	4,225	4,225	-	-	-	-	-	-	-	-	-	-
4b.4.6	Disposal of DAW generated	-	-	24	9	-	495	-	128	657	657	-	-	-	8,878	-	-	-	177,563	41	-
4b.4.7	Plant energy budget	-	-	-	-	-	-	2,282	342	2,624	2,624	-	-	-	-	-	-	-	-	-	-
4b.4.8	NRC Fees	-	-	-	-	-	-	1,461	146	1,607	1,607	-	-	-	-	-	-	-	-	-	-
4b.4.9	Site O&M Costs	-	-	-	-	-	-	277	42	319	319	-	-	-	-	-	-	-	-	-	-
4b.4.10	Liquid Radwaste Processing Equipment/Services	-	-	-	-	-	-	850	128	978	978	-	-	-	-	-	-	-	-	-	-
4b.4.11	Security Staff Cost	-	-	-	-	-	-	950	142	1,092	1,092	-	-	-	-	-	-	-	-	-	25,457

Table E-1
LaSalle County Station, Unit 1
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Burial Volumes Class B Cu. Feet	Burial Volumes Class C Cu. Feet	Burial Volumes GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 4b Period-Dependent Costs (continued)																					
4b.4.12	DOC Staff Cost	-	-	-	-	-	-	16,451	2,468	18,919	18,919	-	-	-	-	-	-	-	-	-	217,543
4b.4.13	Utility Staff Cost	-	-	-	-	-	-	27,655	4,148	31,803	31,803	-	-	-	-	-	-	-	-	-	388,800
4b.4	Subtotal Period 4b Period-Dependent Costs	1,352	6,412	24	9	-	495	51,969	9,321	69,584	69,584	-	-	-	8,878	-	-	-	177,563	41	631,800
4b.0	TOTAL PERIOD 4b COST	6,775	31,888	1,445	1,798	4,819	4,488	53,658	20,828	125,699	123,899	1,168	631	251,483	56,861	-	-	-	14,884,790	533,529	639,320
PERIOD 4d - Delay before License Termination																					
Period 4d Direct Decommissioning Activities																					
Period 4d Period-Dependent Costs																					
4d.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4d.4.2	Property taxes	-	-	-	-	-	-	482	48	530	530	-	-	-	-	-	-	-	-	-	-
4d.4.3	Health physics supplies	-	69	-	-	-	-	-	17	86	86	-	-	-	-	-	-	-	-	-	-
4d.4.4	Disposal of DAW generated	-	-	0	0	-	5	-	1	7	7	-	-	-	96	-	-	-	1,923	0	-
4d.4.5	Plant energy budget	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4d.4.6	NRC Fees	-	-	-	-	-	-	176	18	194	194	-	-	-	-	-	-	-	-	-	-
4d.4.7	Site O&M Costs	-	-	-	-	-	-	120	18	139	139	-	-	-	-	-	-	-	-	-	-
4d.4.8	Utility Staff Cost	-	-	-	-	-	-	991	149	1,140	1,140	-	-	-	-	-	-	-	-	-	14,080
4d.4	Subtotal Period 4d Period-Dependent Costs	-	69	0	0	-	5	1,769	251	2,095	2,095	-	-	-	96	-	-	-	1,923	0	14,080
4d.0	TOTAL PERIOD 4d COST	-	69	0	0	-	5	1,769	251	2,095	2,095	-	-	-	96	-	-	-	1,923	0	14,080
PERIOD 4e - License Termination																					
Period 4e Direct Decommissioning Activities																					
4e.1.1	ORISE confirmatory survey	-	-	-	-	-	-	151	45	197	197	-	-	-	-	-	-	-	-	-	-
4e.1.2	Terminate license									a											
4e.1	Subtotal Period 4e Activity Costs	-	-	-	-	-	-	151	45	197	197	-	-	-	-	-	-	-	-	-	-
Period 4e Additional Costs																					
4e.2.1	License Termination Survey	-	-	-	-	-	-	10,410	3,123	13,533	13,533	-	-	-	-	-	-	-	-	191,885	3,120
4e.2	Subtotal Period 4e Additional Costs	-	-	-	-	-	-	10,410	3,123	13,533	13,533	-	-	-	-	-	-	-	-	191,885	3,120
Period 4e Collateral Costs																					
4e.3.1	DOC staff relocation expenses	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
4e.3	Subtotal Period 4e Collateral Costs	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
Period 4e Period-Dependent Costs																					
4e.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4e.4.2	Property taxes	-	-	-	-	-	-	382	38	420	420	-	-	-	-	-	-	-	-	-	-
4e.4.3	Health physics supplies	-	942	-	-	-	-	-	235	1,177	1,177	-	-	-	-	-	-	-	-	-	-
4e.4.4	Disposal of DAW generated	-	-	1	0	-	19	-	5	25	25	-	-	-	340	-	-	-	6,795	2	-
4e.4.5	Plant energy budget	-	-	-	-	-	-	210	31	241	241	-	-	-	-	-	-	-	-	-	-
4e.4.6	NRC Fees	-	-	-	-	-	-	539	54	593	593	-	-	-	-	-	-	-	-	-	-
4e.4.7	Site O&M Costs	-	-	-	-	-	-	95	14	110	110	-	-	-	-	-	-	-	-	-	-
4e.4.8	Security Staff Cost	-	-	-	-	-	-	540	81	620	620	-	-	-	-	-	-	-	-	-	11,957
4e.4.9	DOC Staff Cost	-	-	-	-	-	-	3,856	578	4,434	4,434	-	-	-	-	-	-	-	-	-	47,430
4e.4.10	Utility Staff Cost	-	-	-	-	-	-	4,617	693	5,310	5,310	-	-	-	-	-	-	-	-	-	57,793
4e.4	Subtotal Period 4e Period-Dependent Costs	-	942	1	0	-	19	10,239	1,730	12,931	12,931	-	-	-	340	-	-	-	6,795	2	117,180
4e.0	TOTAL PERIOD 4e COST	-	942	1	0	-	19	21,931	5,068	27,960	27,960	-	-	-	340	-	-	-	6,795	191,887	120,300
PERIOD 4 TOTALS		7,107	58,360	12,201	5,097	13,094	25,320	123,502	52,444	297,126	294,847	1,168	1,110	659,477	90,829	1,753	652	671	35,341,120	1,043,256	1,357,752

Table E-1
LaSalle County Station, Unit 1
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
PERIOD 5b - Site Restoration																					
Period 5b Direct Decommissioning Activities																					
Demolition of Remaining Site Buildings																					
5b.1.1.1	Reactor Building	-	5,664	-	-	-	-	-	850	6,514	-	-	6,514	-	-	-	-	-	-	64,472	-
5b.1.1.2	Auxiliary Building	-	3,692	-	-	-	-	-	554	4,246	-	-	4,246	-	-	-	-	-	-	43,048	-
5b.1.1.3	Diesel Generator Room	-	468	-	-	-	-	-	70	538	-	-	538	-	-	-	-	-	-	6,000	-
5b.1.1.4	Off Gas Building	-	648	-	-	-	-	-	97	745	-	-	745	-	-	-	-	-	-	8,484	-
5b.1.1.5	Turbine Building	-	5,501	-	-	-	-	-	825	6,326	-	-	6,326	-	-	-	-	-	-	68,584	-
5b.1.1.6	Turbine Pedestal	-	2,881	-	-	-	-	-	432	3,313	-	-	3,313	-	-	-	-	-	-	30,829	-
5b.1.1	Totals	-	18,854	-	-	-	-	-	2,828	21,682	-	-	21,682	-	-	-	-	-	-	221,416	-
Site Closeout Activities																					
5b.1.2	Grade & landscape site	-	149	-	-	-	-	-	22	171	-	-	171	-	-	-	-	-	-	499	-
5b.1.3	Final report to NRC	-	-	-	-	-	-	184	28	212	212	-	-	-	-	-	-	-	-	-	1,560
5b.1	Subtotal Period 5b Activity Costs	-	19,003	-	-	-	-	184	2,878	22,065	212	-	21,853	-	-	-	-	-	-	221,916	1,560
Period 5b Additional Costs																					
5b.2.1	Concrete Crushing	-	776	-	-	-	-	4	117	897	-	-	897	-	-	-	-	-	-	3,936	-
5b.2.2	ISFSI Demolition and Site Restoration	-	1,604	-	-	-	-	24	244	1,872	-	1,872	-	-	-	-	-	-	-	21,545	80
5b.2	Subtotal Period 5b Additional Costs	-	2,380	-	-	-	-	28	361	2,769	-	1,872	897	-	-	-	-	-	-	25,481	80
Period 5b Collateral Costs																					
5b.3.1	Small tool allowance	-	212	-	-	-	-	-	32	244	-	-	244	-	-	-	-	-	-	-	-
5b.3	Subtotal Period 5b Collateral Costs	-	212	-	-	-	-	-	32	244	-	-	244	-	-	-	-	-	-	-	-
Period 5b Period-Dependent Costs																					
5b.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5b.4.2	Property taxes	-	-	-	-	-	-	998	100	1,098	-	-	1,098	-	-	-	-	-	-	-	-
5b.4.3	Heavy equipment rental	-	4,728	-	-	-	-	-	709	5,437	-	-	5,437	-	-	-	-	-	-	-	-
5b.4.4	Plant energy budget	-	-	-	-	-	-	274	41	315	-	-	315	-	-	-	-	-	-	-	-
5b.4.5	Site O&M Cost	-	-	-	-	-	-	249	37	287	-	-	287	-	-	-	-	-	-	-	-
5b.4.6	Security Staff Cost	-	-	-	-	-	-	1,274	191	1,465	-	-	1,465	-	-	-	-	-	-	-	27,619
5b.4.7	DOC Staff Cost	-	-	-	-	-	-	9,384	1,408	10,792	-	-	10,792	-	-	-	-	-	-	-	110,391
5b.4.8	Utility Staff Cost	-	-	-	-	-	-	4,478	672	5,149	-	-	5,149	-	-	-	-	-	-	-	54,154
5b.4	Subtotal Period 5b Period-Dependent Costs	-	4,728	-	-	-	-	16,657	3,158	24,542	-	-	24,542	-	-	-	-	-	-	-	192,164
5b.0	TOTAL PERIOD 5b COST	-	26,322	-	-	-	-	16,869	6,429	49,620	212	1,872	47,536	-	-	-	-	-	-	247,397	193,804
PERIOD 5 TOTALS		-	26,322	-	-	-	-	16,869	6,429	49,620	212	1,872	47,536	-	-	-	-	-	-	247,397	193,804
TOTAL COST TO DECOMMISSION		15,142	92,792	12,392	5,746	13,094	27,157	545,737	123,523	835,583	665,300	120,674	49,609	659,477	114,920	1,753	652	671	35,911,540	1,425,606	4,862,391

Table E-1
LaSalle County Station, Unit 1
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			

TOTAL COST TO DECOMMISSION WITH 17.35% CONTINGENCY:	$835,583	thousands of 2009 dollars
TOTAL NRC LICENSE TERMINATION COST IS 79.62% OR:	$665,300	thousands of 2009 dollars
SPENT FUEL MANAGEMENT COST IS 14.44% OR:	$120,674	thousands of 2009 dollars
NON-NUCLEAR DEMOLITION COST IS 5.94% OR:	$49,609	thousands of 2009 dollars
TOTAL LOW-LEVEL RADIOACTIVE WASTE VOLUME BURIED (EXCLUDING GTCC):	117,325	cubic feet
TOTAL GREATER THAN CLASS C RADWASTE VOLUME GENERATED:	671	cubic feet
TOTAL SCRAP METAL REMOVED:	51,885	tons
TOTAL CRAFT LABOR REQUIREMENTS:	1,425,606	man-hours

End Notes:
n/a - indicates that this activity not charged as decommissioning expense.
a - indicates that this activity performed by decommissioning staff.
0 - indicates that this value is less than 0.5 but is non-zero.
a cell containing " - " indicates a zero value

Table E-2
LaSalle County Station, Unit 2
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
PERIOD 1a - Shutdown through Transition																					
Period 1a Direct Decommissioning Activities																					
1a.1.1	SAFSTOR site characterization survey	-	-	-	-	-	-	398	119	517	517	-	-	-	-	-	-	-	-	-	-
1a.1.2	Prepare preliminary decommissioning cost	-	-	-	-	-	-	64	10	74	74	-	-	-	-	-	-	-	-	-	545
1a.1.3	Notification of Cessation of Operations									a											
1a.1.4	Remove fuel & source material									n/a											
1a.1.5	Notification of Permanent Defueling									a											
1a.1.6	Deactivate plant systems & process waste									a											
1a.1.7	Prepare and submit PSDAR	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
1a.1.8	Review plant dwgs & specs.	-	-	-	-	-	-	64	10	74	74	-	-	-	-	-	-	-	-	-	545
1a.1.9	Perform detailed rad survey									a											
1a.1.10	Estimate by-product inventory	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
1a.1.11	End product description	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
1a.1.12	Detailed by-product inventory	-	-	-	-	-	-	74	11	85	85	-	-	-	-	-	-	-	-	-	629
1a.1.13	Define major work sequence	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
1a.1.14	Perform SER and EA	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,299
1a.1.15	Perform Site-Specific Cost Study	-	-	-	-	-	-	247	37	284	284	-	-	-	-	-	-	-	-	-	2,095
Activity Specifications																					
1a.1.16.1	Prepare plant and facilities for SAFSTOR	-	-	-	-	-	-	243	36	280	280	-	-	-	-	-	-	-	-	-	2,061
1a.1.16.2	Plant systems	-	-	-	-	-	-	206	31	237	237	-	-	-	-	-	-	-	-	-	1,746
1a.1.16.3	Plant structures and buildings	-	-	-	-	-	-	154	23	177	177	-	-	-	-	-	-	-	-	-	1,307
1a.1.16.4	Waste management	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
1a.1.16.5	Facility and site dormancy	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
1a.1.16	Total	-	-	-	-	-	-	801	120	922	922	-	-	-	-	-	-	-	-	-	6,791
Detailed Work Procedures																					
1a.1.17.1	Plant systems	-	-	-	-	-	-	59	9	67	67	-	-	-	-	-	-	-	-	-	496
1a.1.17.2	Facility closeout & dormancy	-	-	-	-	-	-	59	9	68	68	-	-	-	-	-	-	-	-	-	503
1a.1.17	Total	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	999
1a.1.18	Procure vacuum drying system	-	-	-	-	-	-	5	1	6	6	-	-	-	-	-	-	-	-	-	42
1a.1.19	Drain/de-energize non-cont. systems									a											
1a.1.20	Drain & dry NSSS									a											
1a.1.21	Drain/de-energize contaminated systems									a											
1a.1.22	Decon/secure contaminated systems									a											
1a.1	Subtotal Period 1a Activity Costs	-	-	-	-	-	-	2,172	386	2,558	2,558	-	-	-	-	-	-	-	-	-	15,038
Period 1a Additional Costs																					
1a.2.1	ISFSI Expansion	-	-	-	-	-	-	10,400	1,560	11,960	-	11,960	-	-	-	-	-	-	-	-	-
1a.2	Subtotal Period 1a Additional Costs	-	-	-	-	-	-	10,400	1,560	11,960	-	11,960	-	-	-	-	-	-	-	-	-
Period 1a Collateral Costs																					
1a.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	9,000	1,350	10,350	-	10,350	-	-	-	-	-	-	-	-	-
1a.3	Subtotal Period 1a Collateral Costs	-	-	-	-	-	-	9,000	1,350	10,350	-	10,350	-	-	-	-	-	-	-	-	-
Period 1a Period-Dependent Costs																					
1a.4.1	Insurance	-	-	-	-	-	-	876	88	964	964	-	-	-	-	-	-	-	-	-	-
1a.4.2	Property taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1a.4.3	Health physics supplies	-	396	-	-	-	-	-	99	495	495	-	-	-	-	-	-	-	-	-	-
1a.4.4	Heavy equipment rental	-	396	-	-	-	-	-	59	455	455	-	-	-	-	-	-	-	-	-	-
1a.4.5	Disposal of DAW generated	-	-	2	1	-	34	-	9	45	45	-	-	-	610	-	-	-	12,190	3	-
1a.4.6	Plant energy budget	-	-	-	-	-	-	1,371	206	1,577	1,577	-	-	-	-	-	-	-	-	-	-
1a.4.7	NRC Fees	-	-	-	-	-	-	471	47	518	518	-	-	-	-	-	-	-	-	-	-
1a.4.8	Emergency Planning Fees	-	-	-	-	-	-	313	31	344	-	344	-	-	-	-	-	-	-	-	-

Table E-2
LaSalle County Station, Unit 2
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 1a Period-Dependent Costs (continued)																					
1a.4.9	Site O&M Costs	-	-	-	-	-	-	125	19	144	144	-	-	-	-	-	-	-	-	-	-
1a.4.10	Spent Fuel Pool O&M	-	-	-	-	-	-	762	114	877	-	877	-	-	-	-	-	-	-	-	-
1a.4.11	ISFSI Operating Costs	-	-	-	-	-	-	44	7	51	-	51	-	-	-	-	-	-	-	-	-
1a.4.12	Security Staff Cost	-	-	-	-	-	-	6,245	937	7,182	7,182	-	-	-	-	-	-	-	-	-	157,471
1a.4.13	Utility Staff Cost	-	-	-	-	-	-	31,082	4,662	35,745	35,745	-	-	-	-	-	-	-	-	-	423,400
1a.4	Subtotal Period 1a Period-Dependent Costs	-	792	2	1	-	34	41,289	6,278	48,395	47,124	1,271	-	-	610	-	-	-	12,190	3	580,871
1a.0	TOTAL PERIOD 1a COST	-	792	2	1	-	34	62,862	9,573	73,263	49,682	23,581	-	-	610	-	-	-	12,190	3	595,909
PERIOD 1b - SAFSTOR Limited DECON Activities																					
Period 1b Direct Decommissioning Activities																					
Decontamination of Site Buildings																					
1b.1.1.1	Reactor Building	2,820	-	-	-	-	-	-	1,410	4,230	4,230	-	-	-	-	-	-	-	-	49,197	-
1b.1.1.2	Auxiliary Building	1,385	-	-	-	-	-	-	692	2,077	2,077	-	-	-	-	-	-	-	-	24,021	-
1b.1.1.3	IRSF Building	67	-	-	-	-	-	-	33	100	100	-	-	-	-	-	-	-	-	1,210	-
1b.1.1.4	Service Building	92	-	-	-	-	-	-	46	139	139	-	-	-	-	-	-	-	-	1,692	-
1b.1.1.5	Solid Radwaste Building	417	-	-	-	-	-	-	208	625	625	-	-	-	-	-	-	-	-	7,355	-
1b.1.1.6	Turbine Building	1,484	-	-	-	-	-	-	742	2,227	2,227	-	-	-	-	-	-	-	-	27,018	-
1b.1.1	Totals	6,265	-	-	-	-	-	-	3,132	9,397	9,397	-	-	-	-	-	-	-	-	110,493	-
1b.1	Subtotal Period 1b Activity Costs	6,265	-	-	-	-	-	-	3,132	9,397	9,397	-	-	-	-	-	-	-	-	110,493	-
Period 1b Collateral Costs																					
1b.3.1	Decon equipment	763	-	-	-	-	-	-	114	877	877	-	-	-	-	-	-	-	-	-	-
1b.3.2	Process liquid waste	176	-	71	339	-	334	-	229	1,148	1,148	-	-	-	1,198	-	-	-	71,877	234	-
1b.3.3	Small tool allowance	-	96	-	-	-	-	-	14	111	111	-	-	-	-	-	-	-	-	-	-
1b.3.4	Spent Fuel Capital and Transfer	-	-	-	-	-	-	3,000	450	3,450	-	3,450	-	-	-	-	-	-	-	-	-
1b.3	Subtotal Period 1b Collateral Costs	939	96	71	339	-	334	3,000	808	5,586	2,136	3,450	-	-	1,198	-	-	-	71,877	234	-
Period 1b Period-Dependent Costs																					
1b.4.1	Decon supplies	1,420	-	-	-	-	-	-	355	1,774	1,774	-	-	-	-	-	-	-	-	-	-
1b.4.2	Insurance	-	-	-	-	-	-	105	11	116	116	-	-	-	-	-	-	-	-	-	-
1b.4.3	Property taxes	-	-	-	-	-	-	1,155	116	1,271	1,271	-	-	-	-	-	-	-	-	-	-
1b.4.4	Health physics supplies	-	505	-	-	-	-	-	126	632	632	-	-	-	-	-	-	-	-	-	-
1b.4.5	Heavy equipment rental	-	99	-	-	-	-	-	15	113	113	-	-	-	-	-	-	-	-	-	-
1b.4.6	Disposal of DAW generated	-	-	2	1	-	49	-	13	65	65	-	-	-	876	-	-	-	17,516	4	-
1b.4.7	Plant energy budget	-	-	-	-	-	-	342	51	393	393	-	-	-	-	-	-	-	-	-	-
1b.4.8	NRC Fees	-	-	-	-	-	-	117	12	129	129	-	-	-	-	-	-	-	-	-	-
1b.4.9	Emergency Planning Fees	-	-	-	-	-	-	78	8	86	-	86	-	-	-	-	-	-	-	-	-
1b.4.10	Site O&M Costs	-	-	-	-	-	-	31	5	36	36	-	-	-	-	-	-	-	-	-	-
1b.4.11	Spent Fuel Pool O&M	-	-	-	-	-	-	190	29	219	-	219	-	-	-	-	-	-	-	-	-
1b.4.12	ISFSI Operating Costs	-	-	-	-	-	-	11	2	13	-	13	-	-	-	-	-	-	-	-	-
1b.4.13	Security Staff Cost	-	-	-	-	-	-	1,557	234	1,791	1,791	-	-	-	-	-	-	-	-	-	39,260
1b.4.14	Utility Staff Cost	-	-	-	-	-	-	7,749	1,162	8,912	8,912	-	-	-	-	-	-	-	-	-	105,560
1b.4	Subtotal Period 1b Period-Dependent Costs	1,420	604	2	1	-	49	11,336	2,136	15,548	15,231	317	-	-	876	-	-	-	17,516	4	144,820
1b.0	TOTAL PERIOD 1b COST	8,623	700	73	340	-	382	14,336	6,077	30,531	26,764	3,767	-	-	2,074	-	-	-	89,394	110,731	144,820
PERIOD 1c - Preparations for SAFSTOR Dormancy																					
Period 1c Direct Decommissioning Activities																					
1c.1.1	Prepare support equipment for storage	-	432	-	-	-	-	-	65	496	496	-	-	-	-	-	-	-	-	3,000	-
1c.1.2	Install containment pressure equal. lines	-	42	-	-	-	-	-	6	48	48	-	-	-	-	-	-	-	-	700	-

Table E-2
LaSalle County Station, Unit 2
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Burial Volumes Class B Cu. Feet	Burial Volumes Class C Cu. Feet	Burial Volumes GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
1c.1.3	Interim survey prior to dormancy	-	-	-	-	-	-	733	220	953	953	-	-	-	-	-	-	-	-	13,416	-
1c.1.4	Secure building accesses									a											
1c.1.5	Prepare & submit interim report	-	-	-	-	-	-	29	4	33	33	-	-	-	-	-	-	-	-	-	244
1c.1	Subtotal Period 1c Activity Costs	-	473	-	-	-	-	762	295	1,530	1,530	-	-	-	-	-	-	-	-	17,116	244
Period 1c Additional Costs																					
1c.2.1	Spent Fuel Pool Isolation	-	-	-	-	-	-	6,460	969	7,429	7,429	-	-	-	-	-	-	-	-	-	-
1c.2	Subtotal Period 1c Additional Costs	-	-	-	-	-	-	6,460	969	7,429	7,429	-	-	-	-	-	-	-	-	-	-
Period 1c Collateral Costs																					
1c.3.1	Process liquid waste	158	-	64	305	-	300	-	206	1,033	1,033	-	-	-	1,078	-	-	-	64,659	210	-
1c.3.2	Small tool allowance	-	4	-	-	-	-	-	1	4	4	-	-	-	-	-	-	-	-	-	-
1c.3.3	Spent Fuel Capital and Transfer	-	-	-	-	-	-	3,000	450	3,450	-	3,450	-	-	-	-	-	-	-	-	-
1c.3	Subtotal Period 1c Collateral Costs	158	4	64	305	-	300	3,000	657	4,487	1,037	3,450	-	-	1,078	-	-	-	64,659	210	-
Period 1c Period-Dependent Costs																					
1c.4.1	Insurance	-	-	-	-	-	-	105	11	116	116	-	-	-	-	-	-	-	-	-	-
1c.4.2	Property taxes	-	-	-	-	-	-	1,155	116	1,271	1,271	-	-	-	-	-	-	-	-	-	-
1c.4.3	Health physics supplies	-	139	-	-	-	-	-	35	173	173	-	-	-	-	-	-	-	-	-	-
1c.4.4	Heavy equipment rental	-	99	-	-	-	-	-	15	113	113	-	-	-	-	-	-	-	-	-	-
1c.4.5	Disposal of DAW generated	-	-	0	0	-	6	-	2	8	8	-	-	-	107	-	-	-	2,132	0	-
1c.4.6	Plant energy budget	-	-	-	-	-	-	342	51	393	393	-	-	-	-	-	-	-	-	-	-
1c.4.7	NRC Fees	-	-	-	-	-	-	117	12	129	129	-	-	-	-	-	-	-	-	-	-
1c.4.8	Emergency Planning Fees	-	-	-	-	-	-	78	8	86	-	86	-	-	-	-	-	-	-	-	-
1c.4.9	Site O&M Costs	-	-	-	-	-	-	31	5	36	36	-	-	-	-	-	-	-	-	-	-
1c.4.10	Spent Fuel Pool O&M	-	-	-	-	-	-	190	29	219	-	219	-	-	-	-	-	-	-	-	-
1c.4.11	ISFSI Operating Costs	-	-	-	-	-	-	11	2	13	-	13	-	-	-	-	-	-	-	-	-
1c.4.12	Security Staff Cost	-	-	-	-	-	-	1,557	234	1,791	1,791	-	-	-	-	-	-	-	-	-	39,260
1c.4.13	Utility Staff Cost	-	-	-	-	-	-	2,147	322	2,468	2,468	-	-	-	-	-	-	-	-	-	27,040
1c.4	Subtotal Period 1c Period-Dependent Costs	-	237	0	0	-	6	5,733	838	6,815	6,498	317	-	-	107	-	-	-	2,132	0	66,300
1c.0	TOTAL PERIOD 1c COST	158	714	64	305	-	306	15,955	2,759	20,261	16,494	3,767	-	-	1,184	-	-	-	66,791	17,326	66,544
PERIOD 1 TOTALS		8,781	2,207	138	645	-	722	93,152	18,409	124,055	92,940	31,115	-	-	3,868	-	-	-	168,375	128,060	807,274
PERIOD 2a - SAFSTOR Dormancy with Wet Spent Fuel Storage																					
Period 2a Direct Decommissioning Activities																					
2a.1.1	Quarterly Inspection									a											
2a.1.2	Semi-annual environmental survey									a											
2a.1.3	Prepare reports									a											
2a.1.4	Bituminous roof replacement	-	-	-	-	-	-	604	91	694	694	-	-	-	-	-	-	-	-	-	-
2a.1.5	Maintenance supplies	-	-	-	-	-	-	504	126	630	630	-	-	-	-	-	-	-	-	-	-
2a.1	Subtotal Period 2a Activity Costs	-	-	-	-	-	-	1,108	217	1,324	1,324	-	-	-	-	-	-	-	-	-	-
Period 2a Collateral Costs																					
2a.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	38,000	5,700	43,700	-	43,700	-	-	-	-	-	-	-	-	-
2a.3	Subtotal Period 2a Collateral Costs	-	-	-	-	-	-	38,000	5,700	43,700	-	43,700	-	-	-	-	-	-	-	-	-
Period 2a Period-Dependent Costs																					
2a.4.1	Insurance	-	-	-	-	-	-	1,689	169	1,858	1,686	172	-	-	-	-	-	-	-	-	-
2a.4.2	Property taxes	-	-	-	-	-	-	5,893	589	6,482	2,203	4,279	-	-	-	-	-	-	-	-	-
2a.4.3	Health physics supplies	-	305	-	-	-	-	-	76	382	382	-	-	-	-	-	-	-	-	-	-
2a.4.4	Disposal of DAW generated	-	-	4	2	-	86	-	22	113	113	-	-	-	1,533	-	-	-	30,660	7	-
2a.4.5	Plant energy budget	-	-	-	-	-	-	1,099	165	1,264	632	632	-	-	-	-	-	-	-	-	-
2a.4.6	NRC Fees	-	-	-	-	-	-	716	72	788	788	-	-	-	-	-	-	-	-	-	-

Table E-2
LaSalle County Station, Unit 2
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Burial Volumes Class B Cu. Feet	Burial Volumes Class C Cu. Feet	Burial Volumes GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 2a Period-Dependent Costs (continued)																					
2a.4.7	Emergency Planning Fees	-	-	-	-	-	-	401	40	441	-	441	-	-	-	-	-	-	-	-	-
2a.4.8	Site O&M Costs	-	-	-	-	-	-	501	75	576	576	-	-	-	-	-	-	-	-	-	-
2a.4.9	Spent Fuel Pool O&M	-	-	-	-	-	-	3,056	458	3,514	-	3,514	-	-	-	-	-	-	-	-	-
2a.4.10	ISFSI Operating Costs	-	-	-	-	-	-	176	26	203	-	203	-	-	-	-	-	-	-	-	-
2a.4.11	Security Staff Cost	-	-	-	-	-	-	18,093	2,714	20,807	3,545	17,262	-	-	-	-	-	-	-	-	445,170
2a.4.12	Utility Staff Cost	-	-	-	-	-	-	9,447	1,417	10,864	2,512	8,352	-	-	-	-	-	-	-	-	121,220
2a.4	Subtotal Period 2a Period-Dependent Costs	-	305	4	2	-	86	41,070	5,824	47,291	12,436	34,854	-	-	1,533	-	-	-	30,660	7	566,390
2a.0	TOTAL PERIOD 2a COST	-	305	4	2	-	86	80,178	11,740	92,315	13,760	78,554	-	-	1,533	-	-	-	30,660	7	566,390
PERIOD 2b - SAFSTOR Dormancy with Dry Spent Fuel Storage																					
Period 2b Direct Decommissioning Activities																					
2b.1.1	Quarterly Inspection									a											
2b.1.2	Semi-annual environmental survey									a											
2b.1.3	Prepare reports									a											
2b.1.4	Bituminous roof replacement	-	-	-	-	-	-	985	148	1,133	1,133	-	-	-	-	-	-	-	-	-	-
2b.1.5	Maintenance supplies	-	-	-	-	-	-	822	206	1,028	1,028	-	-	-	-	-	-	-	-	-	-
2b.1	Subtotal Period 2b Activity Costs	-	-	-	-	-	-	1,808	353	2,161	2,161	-	-	-	-	-	-	-	-	-	-
Period 2b Collateral Costs																					
2b.3.1	Spent Fuel Capital and Transfer	-	-	-	-	-	-	9,000	1,350	10,350	-	10,350	-	-	-	-	-	-	-	-	-
2b.3	Subtotal Period 2b Collateral Costs	-	-	-	-	-	-	9,000	1,350	10,350	-	10,350	-	-	-	-	-	-	-	-	-
Period 2b Period-Dependent Costs																					
2b.4.1	Insurance	-	-	-	-	-	-	2,561	256	2,817	2,752	65	-	-	-	-	-	-	-	-	-
2b.4.2	Property taxes	-	-	-	-	-	-	3,269	327	3,596	3,596	-	-	-	-	-	-	-	-	-	-
2b.4.3	Health physics supplies	-	455	-	-	-	-	-	114	569	569	-	-	-	-	-	-	-	-	-	-
2b.4.4	Disposal of DAW generated	-	-	7	3	-	135	-	35	179	179	-	-	-	2,420	-	-	-	48,390	11	-
2b.4.5	Plant energy budget	-	-	-	-	-	-	897	135	1,031	1,031	-	-	-	-	-	-	-	-	-	-
2b.4.6	NRC Fees	-	-	-	-	-	-	1,169	117	1,286	1,286	-	-	-	-	-	-	-	-	-	-
2b.4.7	Emergency Planning Fees	-	-	-	-	-	-	654	65	719	-	719	-	-	-	-	-	-	-	-	-
2b.4.8	Site O&M Costs	-	-	-	-	-	-	817	123	940	940	-	-	-	-	-	-	-	-	-	-
2b.4.9	ISFSI Operating Costs	-	-	-	-	-	-	288	43	331	-	331	-	-	-	-	-	-	-	-	-
2b.4.10	Utility Staff Cost	-	-	-	-	-	-	3,565	535	4,100	4,100	-	-	-	-	-	-	-	-	-	54,583
2b.4	Subtotal Period 2b Period-Dependent Costs	-	455	7	3	-	135	13,220	1,749	15,568	14,453	1,115	-	-	2,420	-	-	-	48,390	11	54,583
2b.0	TOTAL PERIOD 2b COST	-	455	7	3	-	135	24,027	3,452	28,079	16,614	11,465	-	-	2,420	-	-	-	48,390	11	54,583
PERIOD 2c - SAFSTOR Dormancy without Spent Fuel Storage																					
Period 2c Direct Decommissioning Activities																					
2c.1.1	Quarterly Inspection									a											
2c.1.2	Semi-annual environmental survey									a											
2c.1.3	Prepare reports									a											
2c.1.4	Bituminous roof replacement	-	-	-	-	-	-	6,112	917	7,028	7,028	-	-	-	-	-	-	-	-	-	-
2c.1.5	Maintenance supplies	-	-	-	-	-	-	5,101	1,275	6,376	6,376	-	-	-	-	-	-	-	-	-	-
2c.1	Subtotal Period 2c Activity Costs	-	-	-	-	-	-	11,212	2,192	13,404	13,404	-	-	-	-	-	-	-	-	-	-
Period 2c Period-Dependent Costs																					
2c.4.1	Insurance	-	-	-	-	-	-	15,515	1,551	17,066	17,066	-	-	-	-	-	-	-	-	-	-
2c.4.2	Property taxes	-	-	-	-	-	-	20,276	2,028	22,303	22,303	-	-	-	-	-	-	-	-	-	-
2c.4.3	Health physics supplies	-	2,822	-	-	-	-	-	706	3,528	3,528	-	-	-	-	-	-	-	-	-	-
2c.4.4	Disposal of DAW generated	-	-	41	16	-	837	-	216	1,110	1,110	-	-	-	15,007	-	-	-	300,130	69	-
2c.4.5	Plant energy budget	-	-	-	-	-	-	5,563	834	6,398	6,398	-	-	-	-	-	-	-	-	-	-
2c.4.6	NRC Fees	-	-	-	-	-	-	6,922	692	7,614	7,614	-	-	-	-	-	-	-	-	-	-

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LaSalle County Station, Unit 2
SAFSTOR Decommissioning Cost Estimate
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Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Burial Volumes Class B Cu. Feet	Burial Volumes Class C Cu. Feet	Burial Volumes GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 2c Period-Dependent Costs (continued)																					
2c.4.7	Site O&M Costs	-	-	-	-	-	-	5,069	760	5,829	5,829	-	-	-	-	-	-	-	-	-	-
2c.4.8	Security Staff Cost	-	-	-	-	-	-	31,205	4,681	35,885	35,885	-	-	-	-	-	-	-	-	-	634,757
2c.4.9	Utility Staff Cost	-	-	-	-	-	-	22,113	3,317	25,430	25,430	-	-	-	-	-	-	-	-	-	338,537
2c.4	Subtotal Period 2c Period-Dependent Costs	-	2,822	41	16	-	837	106,662	14,785	125,163	125,163	-	-	-	15,007	-	-	-	300,130	69	973,294
2c.0	TOTAL PERIOD 2c COST	-	2,822	41	16	-	837	117,874	16,977	138,568	138,568	-	-	-	15,007	-	-	-	300,130	69	973,294
PERIOD 2 TOTALS		-	3,583	52	20	-	1,058	222,079	32,170	258,961	168,942	90,019	-	-	18,959	-	-	-	379,181	87	1,594,267
PERIOD 3a - Reactivate Site Following SAFSTOR Dormancy																					
Period 3a Direct Decommissioning Activities																					
3a.1.1	Prepare preliminary decommissioning cost	-	-	-	-	-	-	64	10	74	74	-	-	-	-	-	-	-	-	-	545
3a.1.2	Review plant dwgs & specs.	-	-	-	-	-	-	227	34	262	262	-	-	-	-	-	-	-	-	-	1,927
3a.1.3	Perform detailed rad survey									a											
3a.1.4	End product description	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
3a.1.5	Detailed by-product inventory	-	-	-	-	-	-	64	10	74	74	-	-	-	-	-	-	-	-	-	545
3a.1.6	Define major work sequence	-	-	-	-	-	-	371	56	426	426	-	-	-	-	-	-	-	-	-	3,143
3a.1.7	Perform SER and EA	-	-	-	-	-	-	153	23	176	176	-	-	-	-	-	-	-	-	-	1,299
3a.1.8	Perform Site-Specific Cost Study	-	-	-	-	-	-	247	37	284	284	-	-	-	-	-	-	-	-	-	2,095
3a.1.9	Prepare/submit License Termination Plan	-	-	-	-	-	-	203	30	233	233	-	-	-	-	-	-	-	-	-	1,716
3a.1.10	Receive NRC approval of termination plan									a											
Activity Specifications																					
3a.1.11.1	Re-activate plant & temporary facilities	-	-	-	-	-	-	364	55	419	377	-	42	-	-	-	-	-	-	-	3,088
3a.1.11.2	Plant systems	-	-	-	-	-	-	206	31	237	213	-	24	-	-	-	-	-	-	-	1,746
3a.1.11.3	Reactor internals	-	-	-	-	-	-	351	53	404	404	-	-	-	-	-	-	-	-	-	2,975
3a.1.11.4	Reactor vessel	-	-	-	-	-	-	321	48	370	370	-	-	-	-	-	-	-	-	-	2,724
3a.1.11.5	Sacrificial shield	-	-	-	-	-	-	25	4	28	28	-	-	-	-	-	-	-	-	-	210
3a.1.11.6	Moisture separators/reheaters	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
3a.1.11.7	Reinforced concrete	-	-	-	-	-	-	79	12	91	45	-	45	-	-	-	-	-	-	-	670
3a.1.11.8	Main Turbine	-	-	-	-	-	-	103	15	119	119	-	-	-	-	-	-	-	-	-	875
3a.1.11.9	Main Condensers	-	-	-	-	-	-	103	15	119	119	-	-	-	-	-	-	-	-	-	875
3a.1.11.10	Pressure suppression structure	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
3a.1.11.11	Drywell	-	-	-	-	-	-	79	12	91	91	-	-	-	-	-	-	-	-	-	670
3a.1.11.12	Plant structures & buildings	-	-	-	-	-	-	154	23	177	89	-	89	-	-	-	-	-	-	-	1,307
3a.1.11.13	Waste management	-	-	-	-	-	-	227	34	262	262	-	-	-	-	-	-	-	-	-	1,927
3a.1.11.14	Facility & site closeout	-	-	-	-	-	-	45	7	51	26	-	26	-	-	-	-	-	-	-	377
3a.1.11	Total	-	-	-	-	-	-	2,207	331	2,538	2,313	-	225	-	-	-	-	-	-	-	18,701
Planning & Site Preparations																					
3a.1.12	Prepare dismantling sequence	-	-	-	-	-	-	119	18	136	136	-	-	-	-	-	-	-	-	-	1,006
3a.1.13	Plant prep. & temp. svces	-	-	-	-	-	-	2,800	420	3,220	3,220	-	-	-	-	-	-	-	-	-	-
3a.1.14	Design water clean-up system	-	-	-	-	-	-	69	10	80	80	-	-	-	-	-	-	-	-	-	587
3a.1.15	Rigging/Cont. Cntrl Envlps/tooling/etc.	-	-	-	-	-	-	2,200	330	2,530	2,530	-	-	-	-	-	-	-	-	-	-
3a.1.16	Procure casks/liners & containers	-	-	-	-	-	-	61	9	70	70	-	-	-	-	-	-	-	-	-	515
3a.1	Subtotal Period 3a Activity Costs	-	-	-	-	-	-	8,835	1,325	10,160	9,935	-	225	-	-	-	-	-	-	-	32,497
Period 3a Period-Dependent Costs																					
3a.4.1	Insurance	-	-	-	-	-	-	382	38	421	421	-	-	-	-	-	-	-	-	-	-
3a.4.2	Property taxes	-	-	-	-	-	-	500	50	550	550	-	-	-	-	-	-	-	-	-	-
3a.4.3	Health physics supplies	-	329	-	-	-	-	-	82	411	411	-	-	-	-	-	-	-	-	-	-
3a.4.4	Heavy equipment rental	-	396	-	-	-	-	-	59	455	455	-	-	-	-	-	-	-	-	-	-
3a.4.5	Disposal of DAW generated	-	-	1	1	-	27	-	7	36	36	-	-	-	481	-	-	-	9,613	2	-
3a.4.6	Plant energy budget	-	-	-	-	-	-	1,371	206	1,577	1,577	-	-	-	-	-	-	-	-	-	-

Table E-2
LaSalle County Station, Unit 2
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Burial Volumes Class B Cu. Feet	Burial Volumes Class C Cu. Feet	Burial Volumes GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Period 3a Period-Dependent Costs (continued)																					
3a.4.7	NRC Fees	-	-	-	-	-	-	214	21	236	236	-	-	-	-	-	-	-	-	-	-
3a.4.8	Site O&M Costs	-	-	-	-	-	-	125	19	144	144	-	-	-	-	-	-	-	-	-	-
3a.4.9	Security Staff Cost	-	-	-	-	-	-	233	35	268	268	-	-	-	-	-	-	-	-	-	6,257
3a.4.10	Utility Staff Cost	-	-	-	-	-	-	14,259	2,139	16,398	16,398	-	-	-	-	-	-	-	-	-	200,229
3a.4	Subtotal Period 3a Period-Dependent Costs	-	724	1	1	-	27	17,085	2,656	20,495	20,495	-	-	-	481	-	-	-	9,613	2	206,486
3a.0	TOTAL PERIOD 3a COST	-	724	1	1	-	27	25,920	3,982	30,655	30,429	-	225	-	481	-	-	-	9,613	2	238,983
PERIOD 3b - Decommissioning Preparations																					
Period 3b Direct Decommissioning Activities																					
Detailed Work Procedures																					
3b.1.1.1	Plant systems	-	-	-	-	-	-	234	35	269	242	-	27	-	-	-	-	-	-	-	1,983
3b.1.1.2	Reactor internals	-	-	-	-	-	-	198	30	227	227	-	-	-	-	-	-	-	-	-	1,676
3b.1.1.3	Remaining buildings	-	-	-	-	-	-	67	10	77	19	-	58	-	-	-	-	-	-	-	566
3b.1.1.4	CRD housings & NIs	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
3b.1.1.5	Incore instrumentation	-	-	-	-	-	-	49	7	57	57	-	-	-	-	-	-	-	-	-	419
3b.1.1.6	Removal primary containment	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
3b.1.1.7	Reactor vessel	-	-	-	-	-	-	179	27	206	206	-	-	-	-	-	-	-	-	-	1,521
3b.1.1.8	Facility closeout	-	-	-	-	-	-	59	9	68	34	-	34	-	-	-	-	-	-	-	503
3b.1.1.9	Sacrificial shield	-	-	-	-	-	-	59	9	68	68	-	-	-	-	-	-	-	-	-	503
3b.1.1.10	Reinforced concrete	-	-	-	-	-	-	49	7	57	28	-	28	-	-	-	-	-	-	-	419
3b.1.1.11	Main Turbine	-	-	-	-	-	-	103	15	118	118	-	-	-	-	-	-	-	-	-	872
3b.1.1.12	Main Condensers	-	-	-	-	-	-	103	15	119	119	-	-	-	-	-	-	-	-	-	875
3b.1.1.13	Moisture separators & reheaters	-	-	-	-	-	-	99	15	114	114	-	-	-	-	-	-	-	-	-	838
3b.1.1.14	Radwaste building	-	-	-	-	-	-	135	20	155	140	-	16	-	-	-	-	-	-	-	1,144
3b.1.1.15	Reactor building	-	-	-	-	-	-	135	20	155	140	-	16	-	-	-	-	-	-	-	1,144
3b.1.1	Total	-	-	-	-	-	-	1,619	243	1,862	1,684	-	178	-	-	-	-	-	-	-	13,718
3b.1	Subtotal Period 3b Activity Costs	-	-	-	-	-	-	1,619	243	1,862	1,684	-	178	-	-	-	-	-	-	-	13,718
Period 3b Additional Costs																					
3b.2.1	Site Characterization	-	-	-	-	-	-	2,550	765	3,315	3,315	-	-	-	-	-	-	-	-	12,457	4,471
3b.2	Subtotal Period 3b Additional Costs	-	-	-	-	-	-	2,550	765	3,315	3,315	-	-	-	-	-	-	-	-	12,457	4,471
Period 3b Collateral Costs																					
3b.3.1	Decon equipment	763	-	-	-	-	-	-	114	877	877	-	-	-	-	-	-	-	-	-	-
3b.3.2	DOC staff relocation expenses	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
3b.3.3	Pipe cutting equipment	-	1,100	-	-	-	-	-	165	1,265	1,265	-	-	-	-	-	-	-	-	-	-
3b.3	Subtotal Period 3b Collateral Costs	763	1,100	-	-	-	-	1,130	449	3,442	3,442	-	-	-	-	-	-	-	-	-	-
Period 3b Period-Dependent Costs																					
3b.4.1	Decon supplies	24	-	-	-	-	-	-	6	29	29	-	-	-	-	-	-	-	-	-	-
3b.4.2	Insurance	-	-	-	-	-	-	214	21	235	235	-	-	-	-	-	-	-	-	-	-
3b.4.3	Property taxes	-	-	-	-	-	-	253	25	279	279	-	-	-	-	-	-	-	-	-	-
3b.4.4	Health physics supplies	-	180	-	-	-	-	-	45	225	225	-	-	-	-	-	-	-	-	-	-
3b.4.5	Heavy equipment rental	-	201	-	-	-	-	-	30	231	231	-	-	-	-	-	-	-	-	-	-
3b.4.6	Disposal of DAW generated	-	-	1	0	-	15	-	4	20	20	-	-	-	269	-	-	-	5,373	1	-
3b.4.7	Plant energy budget	-	-	-	-	-	-	695	104	799	799	-	-	-	-	-	-	-	-	-	-
3b.4.8	NRC Fees	-	-	-	-	-	-	109	11	120	120	-	-	-	-	-	-	-	-	-	-
3b.4.9	Site O&M Costs	-	-	-	-	-	-	63	9	73	73	-	-	-	-	-	-	-	-	-	-
3b.4.10	Security Staff Cost	-	-	-	-	-	-	118	18	136	136	-	-	-	-	-	-	-	-	-	3,171
3b.4.11	DOC Staff Cost	-	-	-	-	-	-	3,332	500	3,832	3,832	-	-	-	-	-	-	-	-	-	43,343
3b.4.12	Utility Staff Cost	-	-	-	-	-	-	7,227	1,084	8,312	8,312	-	-	-	-	-	-	-	-	-	101,486
3b.4	Subtotal Period 3b Period-Dependent Costs	24	380	1	0	-	15	12,011	1,858	14,289	14,289	-	-	-	269	-	-	-	5,373	1	148,000

Table E-2
LaSalle County Station, Unit 2
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
3b.0	TOTAL PERIOD 3b COST	786	1,480	1	0	-	15	17,310	3,314	22,907	22,729	-	178	-	269	-	-	-	5,373	12,458	166,190
PERIOD 3 TOTALS		786	2,205	2	1	-	42	43,230	7,296	53,562	53,158	-	403	-	749	-	-	-	14,985	12,460	405,172
PERIOD 4a - Large Component Removal																					
Period 4a Direct Decommissioning Activities																					
Nuclear Steam Supply System Removal																					
4a.1.1.1	Recirculation System Piping & Valves	21	77	18	11	26	99	-	62	315	315	-	-	503	503	-	-	-	116,652	1,846	-
4a.1.1.2	Recirculation Pumps & Motors	11	43	14	22	54	156	-	68	370	370	-	-	1,416	1,178	-	-	-	211,420	1,136	-
4a.1.1.3	CRDMs & NIs Removal	48	177	492	88	-	166	-	172	1,143	1,143	-	-	-	5,536	-	-	-	141,063	4,118	-
4a.1.1.4	Reactor Vessel Internals	168	2,076	4,559	1,306	-	7,102	227	6,692	22,129	22,129	-	-	-	2,128	1,753	652	-	452,885	26,158	1,178
4a.1.1.5	Vessel & Internals GTCC Disposal	-	-	-	-	-	11,118	-	1,668	12,786	12,786	-	-	-	-	-	-	671	109,910	-	-
4a.1.1.6	Reactor Vessel	-	4,397	1,485	481	-	1,769	227	4,707	13,065	13,065	-	-	-	17,632	-	-	-	1,799,953	26,158	1,178
4a.1.1	Totals	248	6,770	6,568	1,908	80	20,410	454	13,370	49,809	49,809	-	-	1,919	26,978	1,753	652	671	2,831,883	59,417	2,357
Removal of Major Equipment																					
4a.1.2	Main Turbine/Generator	-	480	2,215	424	2,633	-	-	800	6,551	6,551	-	-	124,489	-	-	-	-	5,601,986	8,748	-
4a.1.3	Main Condensers	-	921	1,579	302	1,877	-	-	715	5,393	5,393	-	-	88,729	-	-	-	-	3,992,800	16,783	-
Cascading Costs from Clean Building Demolition																					
4a.1.4.1	Reactor Building	-	985	-	-	-	-	-	148	1,132	1,132	-	-	-	-	-	-	-	-	11,181	-
4a.1.4.2	Auxiliary Building	-	407	-	-	-	-	-	61	468	468	-	-	-	-	-	-	-	-	4,723	-
4a.1.4.3	IRSF Building	-	74	-	-	-	-	-	11	85	85	-	-	-	-	-	-	-	-	939	-
4a.1.4.4	Service Building	-	162	-	-	-	-	-	24	187	187	-	-	-	-	-	-	-	-	2,230	-
4a.1.4.5	Solid Radwaste Building	-	224	-	-	-	-	-	34	258	258	-	-	-	-	-	-	-	-	2,559	-
4a.1.4.6	Turbine Building	-	597	-	-	-	-	-	90	687	687	-	-	-	-	-	-	-	-	7,337	-
4a.1.4	Totals	-	2,449	-	-	-	-	-	367	2,816	2,816	-	-	-	-	-	-	-	-	28,970	-
Disposal of Plant Systems																					
4a.1.5.1	Acid & Caustic	-	17	-	-	-	-	-	2	19	-	-	19	-	-	-	-	-	-	317	-
4a.1.5.2	Auxiliary Steam	-	304	7	12	74	-	-	89	486	486	-	-	3,882	-	-	-	-	157,664	5,230	-
4a.1.5.3	CSCS Equipment Cooling	-	7	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	141	-
4a.1.5.4	Chemical Feed	-	34	-	-	-	-	-	5	39	-	-	39	-	-	-	-	-	-	638	-
4a.1.5.5	Circulating Water	-	158	-	-	-	-	-	24	182	-	-	182	-	-	-	-	-	-	3,125	-
4a.1.5.6	Circulating Water - RCA	-	218	3	6	36	-	-	61	324	324	-	-	1,874	-	-	-	-	76,117	3,663	-
4a.1.5.7	Clean Condensate Storage	-	146	-	-	-	-	-	22	168	-	-	168	-	-	-	-	-	-	2,875	-
4a.1.5.8	Clean Condensate Storage - RCA	-	68	1	1	8	-	-	18	96	96	-	-	429	-	-	-	-	17,422	1,131	-
4a.1.5.9	Condensate	-	721	39	72	449	-	-	262	1,542	1,542	-	-	23,501	-	-	-	-	954,377	13,200	-
4a.1.5.10	Condensate Booster	-	811	92	171	1,064	-	-	397	2,535	2,535	-	-	55,734	-	-	-	-	2,263,391	15,040	-
4a.1.5.11	Condensate Polishing Demineralizer	-	811	10	18	111	-	-	223	1,173	1,173	-	-	5,810	-	-	-	-	235,956	14,279	-
4a.1.5.12	Containment Combustible Gas Control	-	69	1	2	11	-	-	19	101	101	-	-	567	-	-	-	-	23,007	1,161	-
4a.1.5.13	Cycled Condensate Storage	-	480	11	21	131	-	-	144	788	788	-	-	6,857	-	-	-	-	278,483	8,725	-
4a.1.5.14	Drywell Instrument Nitrogen	-	59	1	2	12	-	-	17	90	90	-	-	613	-	-	-	-	24,892	1,048	-
4a.1.5.15	Extraction Steam	-	265	9	17	107	-	-	86	485	485	-	-	5,615	-	-	-	-	228,022	4,883	-
4a.1.5.16	Feedwater	-	457	24	45	277	-	-	165	968	968	-	-	14,520	-	-	-	-	589,682	8,412	-
4a.1.5.17	Feedwater Heater Vents & Drains	-	2,119	66	123	762	-	-	669	3,738	3,738	-	-	39,902	-	-	-	-	1,620,422	38,608	-
4a.1.5.18	Gland Steam	-	190	3	5	32	-	-	53	283	283	-	-	1,669	-	-	-	-	67,764	3,394	-
4a.1.5.19	HVAC-Machine Shop\TB Sandblast	-	29	0	1	5	-	-	8	44	44	-	-	270	-	-	-	-	10,961	531	-
4a.1.5.20	HVAC-River\Lake Screen House	-	21	-	-	-	-	-	3	24	-	-	24	-	-	-	-	-	-	422	-
4a.1.5.21	HVAC-Service Building	-	54	-	-	-	-	-	8	63	-	-	63	-	-	-	-	-	-	1,072	-
4a.1.5.22	Hydrogen & Carbon Dioxide	-	36	-	-	-	-	-	5	41	-	-	41	-	-	-	-	-	-	708	-
4a.1.5.23	Lake Makeup & Blowdown	-	214	-	-	-	-	-	32	246	-	-	246	-	-	-	-	-	-	4,257	-
4a.1.5.24	Main Steam	-	103	1	2	15	-	-	28	150	150	-	-	775	-	-	-	-	31,473	1,824	-
4a.1.5.25	Makeup Demineralizer	-	622	14	26	163	-	-	185	1,010	1,010	-	-	8,552	-	-	-	-	347,300	11,294	-
4a.1.5.26	Misc Bldgs Floor Drains	-	1,156	66	58	125	250	-	386	2,041	2,041	-	-	6,544	2,367	-	-	-	477,918	19,530	-

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LaSalle County Station, Unit 2
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(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
Disposal of Plant Systems (continued)																					
4a.1.5.27	Refrigeration	-	55	-	-	-	-	-	8	63	-	-	63	-	-	-	-	-	-	1,110	-
4a.1.5.28	Refrigeration - RCA	-	40	0	1	5	-	-	11	57	57	-	-	245	-	-	-	-	9,954	666	-
4a.1.5.29	Screen Wash	-	20	-	-	-	-	-	3	23	-	-	23	-	-	-	-	-	-	407	-
4a.1.5.30	Service Air	-	22	-	-	-	-	-	3	25	-	-	25	-	-	-	-	-	-	427	-
4a.1.5.31	Sewage Treatment	-	87	-	-	-	-	-	13	100	-	-	100	-	-	-	-	-	-	1,741	-
4a.1.5.32	Standby Gas Treatment	-	42	1	3	17	-	-	14	77	77	-	-	901	-	-	-	-	36,604	761	-
4a.1.5.33	Station Heat Recovery	-	581	18	31	195	-	-	181	1,007	1,007	-	-	10,223	-	-	-	-	415,159	10,039	-
4a.1.5.34	Switchgear Heat Removal	-	10	-	-	-	-	-	1	11	-	-	11	-	-	-	-	-	-	180	-
4a.1.5.35	Turbine Bldg Closed Cooling Water	-	415	14	25	157	-	-	133	744	744	-	-	8,238	-	-	-	-	334,542	7,401	-
4a.1.5.36	Turbine Building Equipment Drains	-	73	1	3	17	-	-	21	116	116	-	-	898	-	-	-	-	36,485	1,308	-
4a.1.5.37	Turbine Building Floor Drains	-	74	1	1	6	-	-	20	102	102	-	-	325	-	-	-	-	13,189	1,313	-
4a.1.5.38	Turbine Generator	-	212	10	19	115	-	-	74	431	431	-	-	6,046	-	-	-	-	245,513	3,970	-
4a.1.5.39	Turbine Oil	-	619	24	28	115	64	-	195	1,047	1,047	-	-	6,048	656	-	-	-	300,237	11,160	-
4a.1.5.40	Wastewater Treatment	-	129	-	-	-	-	-	19	148	-	-	148	-	-	-	-	-	-	2,499	-
4a.1.5	Totals	-	11,548	418	693	4,009	315	-	3,612	20,595	19,434	-	1,161	210,037	3,023	-	-	-	8,796,532	208,490	-
4a.1.6	Scaffolding in support of decommissioning	-	2,452	43	10	48	15	-	630	3,197	3,197	-	-	2,253	140	-	-	-	113,977	50,760	-
4a.1	Subtotal Period 4a Activity Costs	248	24,620	10,822	3,337	8,647	20,740	454	19,493	88,361	87,200	-	1,161	427,427	30,141	1,753	652	671	21,337,180	373,168	2,357
Period 4a Collateral Costs																					
4a.3.1	Process liquid waste	27	-	12	59	-	59	-	38	195	195	-	-	-	210	-	-	-	12,621	41	-
4a.3.2	Small tool allowance	-	310	-	-	-	-	-	47	357	321	-	36	-	-	-	-	-	-	-	-
4a.3	Subtotal Period 4a Collateral Costs	27	310	12	59	-	59	-	85	552	516	-	36	-	210	-	-	-	12,621	41	-
Period 4a Period-Dependent Costs																					
4a.4.1	Decon supplies	58	-	-	-	-	-	-	15	73	73	-	-	-	-	-	-	-	-	-	-
4a.4.2	Insurance	-	-	-	-	-	-	529	53	582	582	-	-	-	-	-	-	-	-	-	-
4a.4.3	Property taxes	-	-	-	-	-	-	627	63	690	621	-	69	-	-	-	-	-	-	-	-
4a.4.4	Health physics supplies	-	1,859	-	-	-	-	-	465	2,324	2,324	-	-	-	-	-	-	-	-	-	-
4a.4.5	Heavy equipment rental	-	2,094	-	-	-	-	-	314	2,409	2,409	-	-	-	-	-	-	-	-	-	-
4a.4.6	Disposal of DAW generated	-	-	17	7	-	349	-	90	463	463	-	-	-	6,261	-	-	-	125,217	29	-
4a.4.7	Plant energy budget	-	-	-	-	-	-	1,634	245	1,879	1,879	-	-	-	-	-	-	-	-	-	-
4a.4.8	NRC Fees	-	-	-	-	-	-	565	57	622	622	-	-	-	-	-	-	-	-	-	-
4a.4.9	Site O&M Costs	-	-	-	-	-	-	157	24	180	180	-	-	-	-	-	-	-	-	-	-
4a.4.10	Liquid Radwaste Processing Equipment/Services	-	-	-	-	-	-	481	72	553	553	-	-	-	-	-	-	-	-	-	-
4a.4.11	Security Staff Cost	-	-	-	-	-	-	2,623	393	3,016	3,016	-	-	-	-	-	-	-	-	-	70,296
4a.4.12	DOC Staff Cost	-	-	-	-	-	-	14,361	2,154	16,515	16,515	-	-	-	-	-	-	-	-	-	179,693
4a.4.13	Utility Staff Cost	-	-	-	-	-	-	23,813	3,572	27,385	27,385	-	-	-	-	-	-	-	-	-	321,359
4a.4	Subtotal Period 4a Period-Dependent Costs	58	3,953	17	7	-	349	44,790	7,516	56,690	56,621	-	69	-	6,261	-	-	-	125,217	29	571,348
4a.0	TOTAL PERIOD 4a COST	333	28,883	10,851	3,403	8,647	21,148	45,243	27,094	145,603	144,338	-	1,265	427,427	36,612	1,753	652	671	21,475,020	373,238	573,705
PERIOD 4b - Site Decontamination																					
Period 4b Direct Decommissioning Activities																					
4b.1.1	Remove spent fuel racks	832	82	166	157	-	1,030	-	734	3,001	3,001	-	-	-	9,726	-	-	-	872,665	1,631	-
Disposal of Plant Systems																					
4b.1.2.1	Aux Diesel Bldg Floor Drains	-	8	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	147	-
4b.1.2.2	Auxiliary Diesel Generator	-	69	-	-	-	-	-	10	79	-	-	79	-	-	-	-	-	-	1,341	-
4b.1.2.3	Containment Monitoring	-	21	0	0	2	-	-	6	28	28	-	-	81	-	-	-	-	3,296	407	-
4b.1.2.4	Control Rod Drive	-	185	2	3	18	-	-	50	258	258	-	-	961	-	-	-	-	39,042	3,464	-
4b.1.2.5	Diesel Oil	-	58	-	-	-	-	-	9	67	-	-	67	-	-	-	-	-	-	1,104	-
4b.1.2.6	Domestic Water	-	25	-	-	-	-	-	4	29	-	-	29	-	-	-	-	-	-	499	-
4b.1.2.7	Domestic Water - RCA	-	39	0	1	5	-	-	11	56	56	-	-	263	-	-	-	-	10,694	653	-

Table E-2
LaSalle County Station, Unit 2
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
Disposal of Plant Systems (continued)																					
4b.1.2.8	Electrical	-	518	-	-	-	-	-	78	596	-	-	596	-	-	-	-	-	-	9,872	-
4b.1.2.9	Electrical - Contaminated	-	749	10	18	114	-	-	208	1,099	1,099	-	-	5,977	-	-	-	-	242,742	13,169	-
4b.1.2.10	Electrical - RCA	-	5,152	94	168	1,047	-	-	1,480	7,941	7,941	-	-	54,830	-	-	-	-	2,226,676	87,927	-
4b.1.2.11	Fire Protection	-	214	-	-	-	-	-	32	246	-	-	246	-	-	-	-	-	-	4,263	-
4b.1.2.12	Fire Protection - RCA	-	1,033	22	39	244	-	-	303	1,641	1,641	-	-	12,787	-	-	-	-	519,289	17,581	-
4b.1.2.13	Fuel Pool Cooling & Cleanup	-	703	22	40	249	-	-	221	1,235	1,235	-	-	13,068	-	-	-	-	530,713	12,596	-
4b.1.2.14	HVAC-Auxiliary Building	-	261	7	12	76	-	-	79	434	434	-	-	3,972	-	-	-	-	161,301	4,427	-
4b.1.2.15	HVAC-Control Rm\Aux Equip Area	-	38	-	-	-	-	-	6	44	-	-	44	-	-	-	-	-	-	729	-
4b.1.2.16	HVAC-Diesel Generator Room	-	14	-	-	-	-	-	2	16	-	-	16	-	-	-	-	-	-	284	-
4b.1.2.17	HVAC-Off Gas Building	-	61	3	5	30	-	-	21	119	119	-	-	1,548	-	-	-	-	62,855	1,100	-
4b.1.2.18	HVAC-Primary Containment	-	800	19	35	219	-	-	240	1,313	1,313	-	-	11,460	-	-	-	-	465,384	13,770	-
4b.1.2.19	HVAC-Radwaste Building	-	97	2	4	23	-	-	28	154	154	-	-	1,200	-	-	-	-	48,728	1,667	-
4b.1.2.20	HVAC-Turbine Building	-	731	15	28	177	-	-	215	1,166	1,166	-	-	9,260	-	-	-	-	376,037	11,966	-
4b.1.2.21	High Pressure Core Spray	-	268	27	34	127	87	-	115	657	657	-	-	6,654	818	-	-	-	343,590	4,869	-
4b.1.2.22	Instrument Air	-	7	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	152	-
4b.1.2.23	Instrument Air - RCA	-	142	1	2	13	-	-	38	197	197	-	-	681	-	-	-	-	27,654	2,514	-
4b.1.2.24	Low Pressure Core Spray	-	128	12	15	59	40	-	54	308	308	-	-	3,069	376	-	-	-	158,310	2,315	-
4b.1.2.25	Nuclear Boiler	-	1,271	95	112	354	359	-	487	2,677	2,677	-	-	18,553	3,390	-	-	-	1,057,552	23,399	-
4b.1.2.26	Off Gas	-	504	30	34	90	126	-	179	962	962	-	-	4,693	1,189	-	-	-	297,108	9,052	-
4b.1.2.27	Primary Containment Vent & Purge	-	395	18	33	208	-	-	137	791	791	-	-	10,887	-	-	-	-	442,119	7,350	-
4b.1.2.28	Process Radiation Monitoring	-	13	0	0	1	-	-	3	17	17	-	-	33	-	-	-	-	1,355	253	-
4b.1.2.29	Process Sampling	-	46	0	1	4	-	-	12	64	64	-	-	210	-	-	-	-	8,527	895	-
4b.1.2.30	Radioactive Waste Disposal	-	2,225	85	93	328	261	-	693	3,685	3,685	-	-	17,201	2,582	-	-	-	919,500	39,849	-
4b.1.2.31	Radwaste Area Floor Drains	-	2	0	0	0	0	-	0	2	2	-	-	5	1	-	-	-	256	31	-
4b.1.2.32	Reactor Bldg Closed Cooling Water	-	355	21	37	231	-	-	131	774	774	-	-	12,081	-	-	-	-	490,626	6,182	-
4b.1.2.33	Reactor Building Equipment Drains	-	57	2	2	6	6	-	17	91	91	-	-	330	61	-	-	-	18,672	1,038	-
4b.1.2.34	Reactor Building Floor Drains	-	6	0	0	0	0	-	2	8	8	-	-	17	2	-	-	-	897	108	-
4b.1.2.35	Reactor Core Isolation Cooling	-	178	7	8	21	28	-	57	300	300	-	-	1,099	269	-	-	-	68,725	3,218	-
4b.1.2.36	Reactor Recirculation	-	102	9	11	35	34	-	42	232	232	-	-	1,858	321	-	-	-	104,233	1,910	-
4b.1.2.37	Reactor Water Clean-up	-	675	23	19	31	92	-	202	1,042	1,042	-	-	1,618	874	-	-	-	144,057	11,928	-
4b.1.2.38	Residual Heat Removal	-	1,324	129	163	608	429	-	567	3,220	3,220	-	-	31,857	4,053	-	-	-	1,657,265	24,347	-
4b.1.2.39	Service Air - RCA	-	325	3	6	37	-	-	88	459	459	-	-	1,953	-	-	-	-	79,314	5,520	-
4b.1.2.40	Service Water	-	82	-	-	-	-	-	12	95	-	-	95	-	-	-	-	-	-	1,595	-
4b.1.2.41	Service Water - RCA	-	749	24	44	271	-	-	237	1,325	1,325	-	-	14,208	-	-	-	-	577,006	12,979	-
4b.1.2.42	Standby Liquid Control	-	42	0	1	6	-	-	12	60	60	-	-	291	-	-	-	-	11,832	702	-
4b.1.2.43	Well Water	-	91	-	-	-	-	-	14	104	-	-	104	-	-	-	-	-	-	1,732	-
4b.1.2	Totals	-	19,765	682	968	4,633	1,462	-	6,103	33,612	32,319	-	1,293	242,706	13,935	-	-	-	11,095,350	348,903	-
4b.1.3	Scaffolding in support of decommissioning	-	3,678	64	15	71	22	-	944	4,795	4,795	-	-	3,380	210	-	-	-	170,965	76,140	-
Decontamination of Site Buildings																					
4b.1.4.1	Reactor Building	2,568	3,065	300	338	238	837	-	2,376	9,721	9,721	-	-	12,446	15,506	-	-	-	2,048,598	99,006	-
4b.1.4.2	Auxiliary Building	1,250	543	44	54	275	66	-	831	3,062	3,062	-	-	14,385	856	-	-	-	665,655	31,725	-
4b.1.4.3	IRSF Building	69	18	3	4	1	9	-	42	146	146	-	-	26	174	-	-	-	18,472	1,537	-
4b.1.4.4	Service Building	95	19	4	5	1	13	-	57	194	194	-	-	34	243	-	-	-	25,654	2,032	-
4b.1.4.5	Solid Radwaste Building	423	297	12	14	19	32	-	300	1,097	1,097	-	-	984	574	-	-	-	96,903	12,864	-
4b.1.4.6	Turbine Building	1,528	630	77	88	98	208	-	1,009	3,638	3,638	-	-	5,149	3,826	-	-	-	585,724	38,151	-
4b.1.4	Totals	5,933	4,573	440	502	630	1,165	-	4,615	17,858	17,858	-	-	33,023	21,181	-	-	-	3,441,006	185,317	-
4b.1	Subtotal Period 4b Activity Costs	6,765	28,097	1,353	1,642	5,334	3,679	-	12,396	59,267	57,974	-	1,293	279,109	45,052	-	-	-	15,579,990	611,991	-
Period 4b Additional Costs																					
4b.2.1	License Termination Survey Planning	-	-	-	-	-	-	940	282	1,222	1,222	-	-	-	-	-	-	-	-	-	6,240
4b.2.2	ISFSI License Termination	-	57	1	38	-	153	749	171	1,168	-	1,168	-	-	2,905	-	-	-	244,104	3,498	1,280
4b.2.3	Soil Remediation	-	29	1	216	-	706	-	216	1,168	1,168	-	-	-	13,453	-	-	-	1,119,288	367	-
4b.2	Subtotal Period 4b Additional Costs	-	86	2	254	-	859	1,689	669	3,559	2,391	1,168	-	-	16,358	-	-	-	1,363,392	3,865	7,520

Table E-2
LaSalle County Station, Unit 2
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes				Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
															Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet			
Period 4b Collateral Costs																					
4b.3.1	Process liquid waste	90	-	42	203	-	199	-	129	663	663	-	-	-	717	-	-	-	42,995	140	-
4b.3.2	Small tool allowance	-	515	-	-	-	-	-	77	592	592	-	-	-	-	-	-	-	-	-	-
4b.3.3	Decommissioning Equipment Disposition	-	-	114	31	127	40	-	45	356	356	-	-	6,000	373	-	-	-	303,507	88	-
4b.3	Subtotal Period 4b Collateral Costs	90	515	156	234	127	239	-	252	1,612	1,612	-	-	6,000	1,090	-	-	-	346,502	228	-
Period 4b Period-Dependent Costs																					
4b.4.1	Decon supplies	1,511	-	-	-	-	-	-	378	1,889	1,889	-	-	-	-	-	-	-	-	-	-
4b.4.2	Insurance	-	-	-	-	-	-	935	94	1,029	1,029	-	-	-	-	-	-	-	-	-	-
4b.4.3	Property taxes	-	-	-	-	-	-	1,109	111	1,220	1,220	-	-	-	-	-	-	-	-	-	-
4b.4.4	Health physics supplies	-	3,117	-	-	-	-	-	779	3,896	3,896	-	-	-	-	-	-	-	-	-	-
4b.4.5	Heavy equipment rental	-	3,674	-	-	-	-	-	551	4,225	4,225	-	-	-	-	-	-	-	-	-	-
4b.4.6	Disposal of DAW generated	-	-	27	10	-	558	-	144	740	740	-	-	-	10,002	-	-	-	200,042	46	-
4b.4.7	Plant energy budget	-	-	-	-	-	-	2,282	342	2,624	2,624	-	-	-	-	-	-	-	-	-	-
4b.4.8	NRC Fees	-	-	-	-	-	-	1,000	100	1,100	1,100	-	-	-	-	-	-	-	-	-	-
4b.4.9	Site O&M Costs	-	-	-	-	-	-	277	42	319	319	-	-	-	-	-	-	-	-	-	-
4b.4.10	Liquid Radwaste Processing Equipment/Services	-	-	-	-	-	-	850	128	978	978	-	-	-	-	-	-	-	-	-	-
4b.4.11	Security Staff Cost	-	-	-	-	-	-	6,219	933	7,152	7,152	-	-	-	-	-	-	-	-	-	144,643
4b.4.12	DOC Staff Cost	-	-	-	-	-	-	24,954	3,743	28,697	28,697	-	-	-	-	-	-	-	-	-	310,114
4b.4.13	Utility Staff Cost	-	-	-	-	-	-	41,070	6,161	47,231	47,231	-	-	-	-	-	-	-	-	-	546,171
4b.4	Subtotal Period 4b Period-Dependent Costs	1,511	6,791	27	10	-	558	78,696	13,504	101,098	101,098	-	-	-	10,002	-	-	-	200,042	46	1,000,929
4b.0	TOTAL PERIOD 4b COST	8,366	35,489	1,538	2,140	5,461	5,335	80,385	26,821	165,536	163,074	1,168	1,293	285,109	72,502	-	-	-	17,489,930	616,130	1,008,449
PERIOD 4e - License Termination																					
Period 4e Direct Decommissioning Activities																					
4e.1.1	ORISE confirmatory survey	-	-	-	-	-	-	151	45	197	197	-	-	-	-	-	-	-	-	-	-
4e.1.2	Terminate license									a											
4e.1	Subtotal Period 4e Activity Costs	-	-	-	-	-	-	151	45	197	197	-	-	-	-	-	-	-	-	-	-
Period 4e Additional Costs																					
4e.2.1	License Termination Survey	-	-	-	-	-	-	11,748	3,524	15,272	15,272	-	-	-	-	-	-	-	-	217,865	3,120
4e.2	Subtotal Period 4e Additional Costs	-	-	-	-	-	-	11,748	3,524	15,272	15,272	-	-	-	-	-	-	-	-	217,865	3,120
Period 4e Collateral Costs																					
4e.3.1	DOC staff relocation expenses	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
4e.3	Subtotal Period 4e Collateral Costs	-	-	-	-	-	-	1,130	169	1,299	1,299	-	-	-	-	-	-	-	-	-	-
Period 4e Period-Dependent Costs																					
4e.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4e.4.2	Property taxes	-	-	-	-	-	-	382	38	420	420	-	-	-	-	-	-	-	-	-	-
4e.4.3	Health physics supplies	-	1,037	-	-	-	-	-	259	1,296	1,296	-	-	-	-	-	-	-	-	-	-
4e.4.4	Disposal of DAW generated	-	-	1	0	-	19	-	5	25	25	-	-	-	340	-	-	-	6,795	2	-
4e.4.5	Plant energy budget	-	-	-	-	-	-	210	31	241	241	-	-	-	-	-	-	-	-	-	-
4e.4.6	NRC Fees	-	-	-	-	-	-	360	36	396	396	-	-	-	-	-	-	-	-	-	-
4e.4.7	Site O&M Costs	-	-	-	-	-	-	95	14	110	110	-	-	-	-	-	-	-	-	-	-
4e.4.8	Security Staff Cost	-	-	-	-	-	-	540	81	620	620	-	-	-	-	-	-	-	-	-	11,957
4e.4.9	DOC Staff Cost	-	-	-	-	-	-	3,856	578	4,434	4,434	-	-	-	-	-	-	-	-	-	47,430
4e.4.10	Utility Staff Cost	-	-	-	-	-	-	4,617	693	5,310	5,310	-	-	-	-	-	-	-	-	-	57,793
4e.4	Subtotal Period 4e Period-Dependent Costs	-	1,037	1	0	-	19	10,060	1,736	12,853	12,853	-	-	-	340	-	-	-	6,795	2	117,180
4e.0	TOTAL PERIOD 4e COST	-	1,037	1	0	-	19	23,089	5,475	29,621	29,621	-	-	-	340	-	-	-	6,795	217,867	120,300
PERIOD 4 TOTALS		8,700	65,409	12,391	5,544	14,108	26,502	148,717	59,390	340,760	337,033	1,168	2,559	712,536	109,454	1,753	652	671	38,971,740	1,207,234	1,702,454

Table E-2
LaSalle County Station, Unit 2
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
PERIOD 5b - Site Restoration																					
Period 5b Direct Decommissioning Activities																					
Demolition of Remaining Site Buildings																					
5b.1.1.1	Reactor Building	-	5,667	-	-	-	-	-	850	6,518	-	-	6,518	-	-	-	-	-	-	64,458	-
5b.1.1.2	Auxiliary Building	-	3,686	-	-	-	-	-	553	4,239	-	-	4,239	-	-	-	-	-	-	42,962	-
5b.1.1.3	Capital Improvements 2009	-	1,314	-	-	-	-	-	197	1,511	-	-	1,511	-	-	-	-	-	-	20,778	-
5b.1.1.4	Chemical Feed Building	-	32	-	-	-	-	-	5	36	-	-	36	-	-	-	-	-	-	482	-
5b.1.1.5	Diesel Generator Room	-	468	-	-	-	-	-	70	538	-	-	538	-	-	-	-	-	-	6,000	-
5b.1.1.6	Discharge Structure	-	20	-	-	-	-	-	3	23	-	-	23	-	-	-	-	-	-	190	-
5b.1.1.7	IRSF Building	-	691	-	-	-	-	-	104	794	-	-	794	-	-	-	-	-	-	8,924	-
5b.1.1.8	ISFSI Haul Path	-	651	-	-	-	-	-	98	748	-	748	-	-	-	-	-	-	-	9,520	-
5b.1.1.9	Lake Screen House	-	1,102	-	-	-	-	-	165	1,267	-	-	1,267	-	-	-	-	-	-	13,877	-
5b.1.1.10	Main Access Facility	-	390	-	-	-	-	-	58	448	-	-	448	-	-	-	-	-	-	5,396	-
5b.1.1.11	Miscellaneous Yard Structures	-	1,946	-	-	-	-	-	292	2,238	-	-	2,238	-	-	-	-	-	-	27,034	-
5b.1.1.12	New Service Building	-	1,840	-	-	-	-	-	276	2,116	-	-	2,116	-	-	-	-	-	-	23,587	-
5b.1.1.13	Outfall Structure	-	8	-	-	-	-	-	1	9	-	-	9	-	-	-	-	-	-	113	-
5b.1.1.14	River Screen House	-	330	-	-	-	-	-	50	380	-	-	380	-	-	-	-	-	-	4,230	-
5b.1.1.15	Security Modifications	-	677	-	-	-	-	-	102	778	-	-	778	-	-	-	-	-	-	3,834	-
5b.1.1.16	Service Building	-	1,534	-	-	-	-	-	230	1,764	-	-	1,764	-	-	-	-	-	-	21,582	-
5b.1.1.17	Sewage Treatment Plant	-	36	-	-	-	-	-	5	41	-	-	41	-	-	-	-	-	-	591	-
5b.1.1.18	Sewage Treatment Plant Upgrades	-	263	-	-	-	-	-	39	302	-	-	302	-	-	-	-	-	-	3,306	-
5b.1.1.19	Solid Radwaste Building	-	2,029	-	-	-	-	-	304	2,333	-	-	2,333	-	-	-	-	-	-	23,167	-
5b.1.1.20	Training Center	-	1,222	-	-	-	-	-	183	1,406	-	-	1,406	-	-	-	-	-	-	16,863	-
5b.1.1.21	Turbine Building	-	5,501	-	-	-	-	-	825	6,326	-	-	6,326	-	-	-	-	-	-	68,584	-
5b.1.1.22	Turbine Pedestal	-	2,102	-	-	-	-	-	315	2,418	-	-	2,418	-	-	-	-	-	-	22,592	-
5b.1.1.23	Wastewater Treatment Plant	-	59	-	-	-	-	-	9	68	-	-	68	-	-	-	-	-	-	911	-
5b.1.1	Totals	-	31,566	-	-	-	-	-	4,735	36,300	-	748	35,552	-	-	-	-	-	-	388,980	-
Site Closeout Activities																					
5b.1.2	BackFill Site	-	522	-	-	-	-	-	78	600	-	-	600	-	-	-	-	-	-	1,485	-
5b.1.3	Grade & landscape site	-	149	-	-	-	-	-	22	171	-	-	171	-	-	-	-	-	-	499	-
5b.1.4	Final report to NRC	-	-	-	-	-	-	77	12	89	89	-	-	-	-	-	-	-	-	-	654
5b.1	Subtotal Period 5b Activity Costs	-	32,236	-	-	-	-	77	4,847	37,160	89	748	36,323	-	-	-	-	-	-	390,964	654
Period 5b Additional Costs																					
5b.2.1	Concrete Crushing	-	1,155	-	-	-	-	5	174	1,333	-	-	1,333	-	-	-	-	-	-	5,855	-
5b.2.2	ISFSI Demolition and Site Restoration	-	1,604	-	-	-	-	24	244	1,872	-	1,872	-	-	-	-	-	-	-	21,545	80
5b.2.3	Cofferdam Construction and Teardown	-	389	-	-	-	-	-	58	447	-	-	447	-	-	-	-	-	-	3,896	-
5b.2	Subtotal Period 5b Additional Costs	-	3,147	-	-	-	-	29	476	3,652	-	1,872	1,780	-	-	-	-	-	-	31,296	80
Period 5b Collateral Costs																					
5b.3.1	Small tool allowance	-	359	-	-	-	-	-	54	413	-	-	413	-	-	-	-	-	-	-	-
5b.3	Subtotal Period 5b Collateral Costs	-	359	-	-	-	-	-	54	413	-	-	413	-	-	-	-	-	-	-	-
Period 5b Period-Dependent Costs																					
5b.4.1	Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5b.4.2	Property taxes	-	-	-	-	-	-	998	100	1,098	-	-	1,098	-	-	-	-	-	-	-	-
5b.4.3	Heavy equipment rental	-	4,728	-	-	-	-	-	709	5,437	-	-	5,437	-	-	-	-	-	-	-	-
5b.4.4	Plant energy budget	-	-	-	-	-	-	274	41	315	-	-	315	-	-	-	-	-	-	-	-
5b.4.5	Site O&M Cost	-	-	-	-	-	-	249	37	287	-	-	287	-	-	-	-	-	-	-	-
5b.4.6	Security Staff Cost	-	-	-	-	-	-	1,274	191	1,465	-	-	1,465	-	-	-	-	-	-	-	27,619
5b.4.7	DOC Staff Cost	-	-	-	-	-	-	9,384	1,408	10,792	-	-	10,792	-	-	-	-	-	-	-	110,391
5b.4.8	Utility Staff Cost	-	-	-	-	-	-	4,478	672	5,149	-	-	5,149	-	-	-	-	-	-	-	54,154
5b.4	Subtotal Period 5b Period-Dependent Costs	-	4,728	-	-	-	-	16,657	3,158	24,542	-	-	24,542	-	-	-	-	-	-	-	192,164

Table E-2
LaSalle County Station, Unit 2
SAFSTOR Decommissioning Cost Estimate
(thousands of 2009 dollars)

Activity Index	Activity Description	Decon Cost	Removal Cost	Packaging Costs	Transport Costs	Off-Site Processing Costs	LLRW Disposal Costs	Other Costs	Total Contingency	Total Costs	NRC Lic. Term. Costs	Spent Fuel Management Costs	Site Restoration Costs	Processed Volume Cu. Feet	Burial Volumes Class A Cu. Feet	Class B Cu. Feet	Class C Cu. Feet	GTCC Cu. Feet	Burial / Processed Wt., Lbs.	Craft Manhours	Utility and Contractor Manhours
5b.0	TOTAL PERIOD 5b COST	-	40,470	-	-	-	-	16,763	8,535	65,768	89	2,621	63,059	-	-	-	-	-	-	422,260	192,898
PERIOD 5 TOTALS		-	40,470	-	-	-	-	16,763	8,535	65,768	89	2,621	63,059	-	-	-	-	-	-	422,260	192,898
TOTAL COST TO DECOMMISSION		18,267	113,873	12,583	6,210	14,108	28,324	523,942	125,800	843,106	652,162	124,923	66,021	712,536	133,030	1,753	652	671	39,534,280	1,770,102	4,702,065

TOTAL COST TO DECOMMISSION WITH 17.54% CONTINGENCY:	**$843,106**	**thousands of 2009 dollars**
TOTAL NRC LICENSE TERMINATION COST IS 77.35% OR:	**$652,162**	**thousands of 2009 dollars**
SPENT FUEL MANAGEMENT COST IS 14.82% OR:	**$124,923**	**thousands of 2009 dollars**
NON-NUCLEAR DEMOLITION COST IS 7.83% OR:	**$66,021**	**thousands of 2009 dollars**
TOTAL LOW-LEVEL RADIOACTIVE WASTE VOLUME BURIED (EXCLUDING GTCC):	**135,435**	**cubic feet**
TOTAL GREATER THAN CLASS C RADWASTE VOLUME GENERATED:	**671**	**cubic feet**
TOTAL SCRAP METAL REMOVED:	**67,666**	**Tons**
TOTAL CRAFT LABOR REQUIREMENTS:	**1,770,102**	**Man-hours**

End Notes:
n/a - indicates that this activity not charged as decommissioning expense.
a - indicates that this activity performed by decommissioning staff.
0 - indicates that this value is less than 0.5 but is non-zero.
a cell containing " - " indicates a zero value

ATTACHMENT 2

LaSalle County Station, Units 1 and 2
Radiological Decommissioning Projected SAFSTOR Cash Flow
(dollars, thousands)

Year	LCS Unit 1 Radiological Decommissioning Cost (July 31, 2009 dollars)	LCS Unit 1 Radiological Decommissioning Cost less Decommissioning Period Credit
2022	$33,216	$33,216
2023	$56,329	$55,224
2024	$3,405	$3,273
2025	$3,396	$3,200
2026	$3,396	$3,137
2027	$3,258	$2,951
2028	$2,740	$2,433
2029	$2,733	$2,379
2030	$2,733	$2,332
2031	$2,733	$2,287
2032	$2,740	$2,248
2033	$2,733	$2,198
2034	$2,733	$2,155
2035	$2,737	$2,116
2036	$4,279	$3,243
2037	$4,267	$3,171
2038	$4,267	$3,108
2039	$4,267	$3,047
2040	$4,279	$2,996
2041	$4,267	$2,929
2042	$4,267	$2,872
2043	$4,267	$2,815
2044	$4,279	$2,768
2045	$4,267	$2,706
2046	$4,267	$2,653
2047	$4,267	$2,601
2048	$4,279	$2,557
2049	$4,267	$2,500
2050	$4,267	$2,451
2051	$4,267	$2,403
2052	$4,279	$2,362
2053	$4,267	$2,310
2054	$4,267	$2,264
2055	$4,267	$2,220
2056	$4,279	$2,182
2057	$4,267	$2,134
2058	$4,267	$2,092
2059	$4,267	$2,051
2060	$4,279	$2,016

ATTACHMENT 2

LaSalle County Station Units 1 and 2
Radiological Decommissioning Projected SAFSTOR Cash Flow (continued)
(dollars, thousands)

Year	LCS Unit 1 Radiological Decommissioning Cost (July 31, 2009 dollars)	LCS Unit 1 Radiological Decommissioning Cost less Decommissioning Period Credit
2061	$4,267	$1,971
2062	$4,267	$1,933
2063	$4,267	$1,895
2064	$4,279	$1,863
2065	$4,267	$1,821
2066	$4,267	$1,785
2067	$4,267	$1,750
2068	$4,279	$1,721
2069	$4,267	$1,682
2070	$4,267	$1,649
2071	$4,267	$1,617
2072	$4,279	$1,590
2073	$4,267	$1,554
2074	$4,267	$1,524
2075	$21,188	$7,418
2076	$56,705	$19,463
2077	$110,424	$37,158
2078	$76,384	$25,200
2079	$56,674	$18,331
2080	$32,797	$10,400
2081	$18,759	$5,832
2082	$10,860	$3,310
2083	$108	$32
2084	$31	$9
Total	**$675,346**	**$335,107**
	Total Decommissioning Period Credit:	**$340,240**

ATTACHMENT 2

LaSalle County Station, Units 1 and 2
Radiological Decommissioning Projected SAFSTOR Cash Flow
(dollars, thousands)

Year	LCS Unit 2 Radiological Decommissioning Cost (July 31, 2009 dollars)	LCS Unit 2 Radiological Decommissioning Cost less Decommissioning Period Credit
2023	$2,210	$2,210
2024	$53,286	$52,242
2025	$40,737	$39,155
2026	$3,484	$3,283
2027	$3,484	$3,219
2028	$3,494	$3,164
2029	$2,992	$2,657
2030	$2,577	$2,244
2031	$2,577	$2,200
2032	$2,584	$2,162
2033	$2,577	$2,114
2034	$2,577	$2,073
2035	$2,580	$2,034
2036	$3,475	$2,686
2037	$3,466	$2,627
2038	$3,466	$2,575
2039	$3,466	$2,525
2040	$3,475	$2,482
2041	$3,466	$2,427
2042	$3,466	$2,379
2043	$3,466	$2,332
2044	$3,475	$2,293
2045	$3,466	$2,242
2046	$3,466	$2,198
2047	$3,466	$2,155
2048	$3,475	$2,118
2049	$3,466	$2,071
2050	$3,466	$2,030
2051	$3,466	$1,991
2052	$3,475	$1,957
2053	$3,466	$1,913
2054	$3,466	$1,876
2055	$3,466	$1,839
2056	$3,475	$1,808
2057	$3,466	$1,768
2058	$3,466	$1,733
2059	$3,466	$1,699
2060	$3,475	$1,670
2061	$3,466	$1,633

ATTACHMENT 2

LaSalle County Station Units 1 and 2
Radiological Decommissioning Projected SAFSTOR Cash Flow (continued)
(dollars, thousands)

Year	LCS Unit 2 Radiological Decommissioning Cost (July 31, 2009 dollars)	LCS Unit 2 Radiological Decommissioning Cost less Decommissioning Period Credit
2062	$3,466	$1,601
2063	$3,466	$1,570
2064	$3,475	$1,543
2065	$3,466	$1,509
2066	$3,466	$1,479
2067	$3,466	$1,450
2068	$3,475	$1,426
2069	$3,466	$1,394
2070	$3,466	$1,366
2071	$3,466	$1,340
2072	$3,475	$1,317
2073	$3,466	$1,288
2074	$3,466	$1,262
2075	$3,466	$1,238
2076	$15,944	$5,582
2077	$37,536	$12,884
2078	$113,035	$38,037
2079	$87,517	$28,872
2080	$74,579	$24,122
2081	$57,872	$18,351
2082	$11,454	$3,561
2083	$45	$14
2084	$13	$4
Total	**$661,879**	**$324,990**
	Total Decommissioning Period Credit:	**$336,889**

ATTACHMENT 3

LaSalle County Station, Units 1 and 2
NRC Funding Assurance Calculations
July 31, 2009
(dollars, thousands)

	LCS, Unit 1 NRC Generic Formula	**LCS, Unit 1 Site-Specific SAFSTOR Decommissioning Cost Estimate**
Required Minimum at July 31, 2009 (A)	$576,567	$675,346
Trust Fund Amount at July 31, 2009 (B)	$291,096	$291,096
Shutdown Date	4/17/2022	4/17/2022
Years to Shutdown (C)	12.721	12.721
Earnings Credit to shutdown (D) = (B) x ((1 + 2%) ^ (C) -1)	$83,390	$83,390
Projected Trust Fund Amount at shutdown (E) = (B) + (D)	$374,486	$374,486
Decommissioning Period Earnings Credit (F)	$27,840	$340,240
Total Projected Trust Fund Amount (G) = (E) + (F)	$402,326	$714,725
Difference (H) = (G) - (A)	($174,241)	$39,379
Prepayment Difference – Surplus/(Shortfall) (J) = (H) / (1 + 2%) ^ (C)	**($135,441)**	**$30,610**

	LCS, Unit 2 NRC Generic Formula	**LCS, Unit 2 Site-Specific SAFSTOR Decommissioning Cost Estimate**
Required Minimum at July 31, 2009 (A)	$576,567	$661,879
Trust Fund Amount at July 31, 2009 (B)	$284,257	$284,257
Shutdown Date	12/16/2023	12/16/2023
Years to Shutdown (C)	14.386	14.386
Earnings Credit to shutdown (D) = (B) x ((1 + 2%) ^ (C) -1)	$93,694	$93,694
Projected Trust Fund Amount at shutdown (E) = (B) + (D)	$377,951	$377,951
Decommissioning Period Earnings Credit (F)	$28,098	$336,889
Total Projected Trust Fund Amount (G) = (E) + (F)	$406,049	$714,840
Difference (H) = (G) - (A)	($170,518)	$52,962
Prepayment Difference – Surplus/(Shortfall) (J) = (H) / (1 + 2%) ^ (C)	**($128,246)**	**$39,832**