Table M-2. DOE responses to comments on Draft EIS

Comment number	Comments	Responses
	STATEMENT OF TIM LAMBERT Tim Lambert Rt 3 Box 510 Dahlonega, GA 30533 To: M. J. Sires III, I am concerned about the impact the L-Reactor at Savannah River Plant. If you could send me a copy of the Environmental Impact Statement on this issue, it will help me to assess the problem at hand.	
AA-1	From all the information I have so far gathered on the L-Reactor, it seems as though more stringent criteria must be met before it goes on line. For one, cooling towers should be built to reduce thermal pollution. This type of pollution is quite serious, especially when discharged into the delicate swamp ecosystem around the SRP.	Section 4.4.2 of the EIS, which discusses cooling-water mitigation alternatives, has been revised based on public comments received on the draft EIS. Specifically, Section 4.4.2 has been revised to provide a detailed discussion of additional combinations of various cooling-water systems. In Section 4.4.2, each of the cooling-water mitigation systems is evaluated for attaining the thermal discharge limits of the State of South Carolina. Section 4.4.2 and a revised Appendix I, Floodplain/Wetland Assessment, discuss the wetland impacts of each of the systems considered. The Department of Energy has been reviewing and evaluating alternative cooling-water systems for L-Reactor. Based on these reviews and evaluations, and consultations with representatives of the State of South Carolina regarding a mutually agreed upon compliance approach, a preferred cooling-water mitigation alternative is identified in this EIS. The preferred cooling-water alternative is to construct a 1000-acre lake before L-Reactor resumes operation, to redesign the reactor outfall, and to operate L-Reactor in a way that assures a balanced biological community in the lake. The Record of Decision prepared by the Department on this EIS will state the cooling-water mitigation measures that will be taken which will allow L-Reactor operation to be in compliance with the conditions of an NPDES permit to be issued by the State of South Carolina.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
AA-2	I am also concerned about the amount of radioactive wastes, already in the Savannah river when the L-Reactor is put back into use.	The remobilization and transport of radiocesium and radiocobalt from Steel Creek for the direct discharge of L-Reactor cooling water is discussed in Chapter 4 and Appendix D. As discussed in Section 4.1.2.4, the radiological effects from these releases will be very small. The concentrations from these releases in potable water from the Beaufort-Jasper and Cherokee Hill water-treatment plants are calculated to be less than 1/2200th and 1/4160th of the EPA drinking-water standards for cesium-137 and cobalt-60, respectively. The concentrations that might result from the implementation of the Department's preferred cooling-water alternative (1000-acre lake) are estimated to be no greater than those from direct discharge. Based on an average river flow rate of 294 cubic meters per second and tritium release values listed in Table 4-10, tritium concentrations in Beaufort-Jasper and Port Wentworth water will be 39 picocuries per liter and 1034 picocuries per liter from L-Reactor operation in the first and tenth years, respectively. These are 0.2 and 5.2 percent, respectively, of the EPA drinking-water standard of 20,000 picocuries per liter. Section 5.2.6 of the EIS discusses the estimated cumulative radionuclide concentrations in the Savannah River and in Port Wentworth and Beaufort-Jasper drinking water from routine operation. The total radiation exposures from the restart of L-Reactor when added to existing exposures is expected to be about one-twelfth of the EPA drinking water standard for the Beaufort-Jasper system.
AA-3	I believe if the Savannah River Plant had to operate under the same standards as private plants in South Carolina, these two problems would be taken care of.	As discussed in the responses above, the proposed restart of L-Reactor will be in compliance with an NPDES permit issued by the State of South Carolina, and the release of radioactive material will result in radiation doses that are well below natural background radiation or applicable standards. Chapter 7 of the EIS presents the Federal and state environmental protection regulations that are applicable to the restart of L-Reactor. The restart of L-Reactor will comply with all regulations. These regulations include those developed under the Clean Air Act and Clean Water Act that any "private plant" would have to meet, as well as the requirements of the Department of Energy

Comment number	Comments	Responses
		such as those for hazardous waste and radioactive releases. The Department's requirements in these areas do not differ from applicable requirements of other governmental agencies. For example, the SRP hazardous waste management program meets the technical requirements of the EPA hazardous waste regulations, and the Department's radiation protection standards are comparable to those of the Nuclear Regulatory Commission (10 CFR 20) for a production facility (i.e., 500 millirem to the whole body in any one calendar year).
	Please send the Environmental Impact Study to the above address. Thank you. Sincerely, Tim Lambert	

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF RUTH THOMAS Environmentalists, Inc. Founded 1972 October 6, 1983 Mr. M. J. Sires, III Assistant Manager for Health, Safety and Environment U. S. Department of Energy Savannah River Operations Office P. O. Box A Aiken, South Carolina 29801 Dear Mr. Sires: PRELIMINARY COMMENTS ON THE L-REACTOR DRAFT ENVIRONMENTAL IMPACT STATEMENT Those of us in Environmentalists, Inc. who are working on a review of the Draft Environmental Impact Statement (Draft EIS) regarding the proposed restart of the L-Reactor have decided to submit two sets of comments related to this Department of Energy report. By sending in preliminary comments now, the preparers of the Draft EIS and their advisors will have more time to incorporate additions and corrections into the Final Environmental Impact Statement. (Final EIS)	
AB-1	It is our understanding that representatives of the Department of Energy (DOE) and state agencies have had meetings to discuss possible changes to the working Draft EIS. We suggest that consideration be given to having meetings between representatives of DOE and representatives of commenting organizations, including Environmentalists, Inc. (E.I.)	As required by the provisions of the Energy and Water Development Appropriations Act, 1984, DOE prepared this Environmental Impact Statement on an expedited basis "...in consultation with State officials of South Carolina and Georgia...." DOE conducted a 45-day public comment period and held four public hearings to receive comments on the Draft EIS. Also see the response to comment AB-21.
AB-2	THE NEED FOR THE L-REACTOR The Draft EIS provides very little information related to the issue of whether the operation of the L-Reactor is needed at this time. Statements regarding the proposal to produce more	The need for the proposed restart of L-Reactor for the Department of Energy to meet its statutory production requirements is discussed qualitatively in Chapter 1. The production alternatives for L-Reactor are discussed qualitatively in Chapter 2.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	plutonium and increase the country's nuclear stockpile are based on classified information (Appendix A).	The discussion on the need for L-Reactor and production options is, by necessity, qualitative and limited because quantitative information on defense material requirements, inventories, production capacity, and projected material shortages or adverse impacts on weapon system deployments is classified. A quantitative discussion of the need for restarting L-Reactor is provided for the DOE decisionmaker in a classified appendix (Appendix A).
AB-3	The Draft EIS does not include a discussion of the different views which exist regarding the question of what role nuclear weapons build up plays in maintaining peace. There are people who believe that increasing our stockpile of atomic weapons is not a beneficial action for this country to take. Senators Hollings, Hart and Cranston are among the U.S. legislators who have voted to reduce nuclear arms stockpiles. John Glenn, a staunch supporter of a strong military, opposes the MX and favors a nuclear freeze.	Under the Atomic Energy Act of 1954, the Department of Energy is responsible for developing and maintaining the capability to produce all nuclear materials required for the U.S. weapons program. In accordance with the Atomic Energy Act, approval of proposals for defense nuclear materials by the President and subsequent authorization and appropriation by Congress constitute the legal authority and mandate for the Department of Energy to provide the required defense nuclear materials. The national policy on nuclear weapons, their deployment, and the need for increased weapons is beyond the scope of this EIS.
AB-4	The Draft EIS does not provide evidence which makes the "systematic" balancing of costs vs benefits possible, yet this is a requirement of the National Environmental Policy Act of 1969 (NEPA). If the DOE is to justify the plan to operate the L-Reactor, the agency must first supply the evidence necessary to support the statement that the benefits offset the environmental costs.	The EIS presents a detailed description of the environmental consequences associated with the proposed restart of L-Reactor operation as well as qualitative and quantitative (Appendix A - classified) discussions of the need for defense nuclear materials and production alternatives to the restart of L-Reactor. In addition, mitigation alternatives are discussed in Chapter 4. The EIS, therefore, presents the information necessary for the decisionmakers.
	PRODUCTION ALTERNATIVES	
AB-5	On page 2-1 in the Draft EIS, the statement is made that none of the production options or combinations of options to the restart of the L-Reactor can provide the needed atomic weapons materials. The information provided on this subject is not adequate to fulfill the requirements of the NEPA, specifically Section 102 (C) (iii) and (D). These provisions in Section 102 of the NEPA refer to alternatives to the proposed action under consideration. In their	Chapter 2 of this EIS contains additional information on production alternatives. Also see the response to comment AB-4 regarding information contained in the EIS on need and production alternatives. Section 104 of the National Environmental Policy Act provides that the Act does not eliminate any duties already imposed by other "specific statutory obligations." The discussion on the need for L-Reactor and production options is, by necessity,

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	decision of July 25, 1971,[1] Circuit Judges Wright, Tamm and Robinson stated that the phrase "to the fullest extent possible" applies to all of the requirements in Section 102 of the NEPA law, and thus inquiry into the subject of production alternatives needs to be more thoroughly carried out in the Final EIS.	qualitative and limited because quantitative information on defense material requirements, inventories, production capacity, and projected material shortages or adverse impacts on weapon system deployments is classified. Disclosure of classified material is not governed by Section 102 of NEPA. Pursuant to the amendments to the National Environmental Policy Act of 1969 in 1975, Section 102(2)(D) is now Section 102(2)(E).
AB-6	The discussions of production alternatives refer to only a few information sources. When a connection is made between the text and a reference listed at the end of a section, the pages in the document are not identified. Of the nine references listed on page 2-30, five of them are du Pont reports and one was done by United Nuclear, Inc. The state agencies we contacted do not have these reference sources. In the past, I have been unable to obtain a majority of du Pont reports related to EIS prepared by DOE. These six references may also be unavailable to the public. We object to the use of reports as references when such reports are not made available to those reviewing draft or final Environmental Impact Statements.	The EIS uses an appropriate format for identifying reference materials. All references are identified clearly in the text and at the end of each chapter. All documents referenced in the EIS are available for public review in the DOE public reading rooms in Aiken, South Carolina, and Washington, DC, as stated in the Federal Register Notice (48 FR 44244) and the Foreword of the EIS.
AB-7	In Volume 2 of the Draft EIS, the testimony and scoping letters of individuals, government agencies and citizens' organizations are printed with information identifying where the responses to comments and questions are located in the Draft EIS. A sampling of these responses showed us that the identified presentations in the text frequently do not adequately address the concerns expressed by those commenting. For example, the Draft EIS only presented information about two of the production alternatives which were recommended for consideration by the Natural Resources Defense Council (NRDC). It is unclear why the remaining four options were not considered.	An intitial scope of the EIS was developed based upon the comments received on the L-Reactor Environmental Assessment, the February 9, 1983 Senate Armed Services Committee Hearing, and during the 90-day extended public review/comment period on the record of the February 9th hearing. Based on the comments received during the scoping period for this EIS, a final scope was determined. All comments received during the scoping period were considered; however, only substantive comments received during the scoping period resulted in changes to the content of the Draft EIS.

[1]United States Court of Appeals for the District of Columbia Circuit, Nos. 24,839 and 24,871, Calvert Cliffs' Coordinating Committee, Inc., et al vs United States Atomic Energy Commission and United States of America, July 25, 1971.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
AB-8	To comply with NEPA, the following production alternatives must be studied and the findings presented in the Final EIS. [NEPA, Section 102, (D)]:	
	"1. Accelerating the recovery of nuclear materials from the retirement of obsolete warheads.	The timing of the retirement of old warheads is the responsibility of the Department of Defense (DOD) and not the Department of Energy (DOE). The availability of material from retired weapons is included in the determination of material supply for new weapons in the NWSM. DOE recovers this material when the old warheads are made available from DOD, and uses this material to meet new material requirements.
	2. Accelerating development of a new production reactor.	Environmental, safety, and design studies are being initiated for a new production reactor (NPR). However, no funds have been appropriated for construction. A site and a reactor concept will be selected following completion of these studies. The NPR, even if built under an accelerated schedule, will not be available to produce the needed plutonium in the time required and is, therefore, not a reasonable alternative.
	3. Accelerating development of special isotope separation	The Department of Energy is currently proceeding with the development of the special isotope separation process as a method to convert fuel-grade plutonium to weapons-grade plutonium. This process has been demonstrated only in the laboratory. A significant period of time (greater than 7 years) will be required to scale from the present laboratory scale process up to a full production facility. Such a scale-up, even in the case of a maximum acceleration (1-2 years savings), would not produce the needed plutonium in the time required. This process, therefore, is not considered a reasonable alternative.
	4. Acquiring plutonium from a foreign source."[2]	The prospect of obtaining plutonium from foreign sources has been explored and is not considered a reliable source for meeting plutonium needs.

[2]The scoping letter of Natural Resources Defense Council, August 9, 1983. Volume 2 of the Draft EIS, pages 103-104.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
AB-9	The classified Appendix A was again cited as a document which contained supporting information. (page 2-22) Either this Appendix needs to be reclassified or another reference or references identified as the basis of statements and conclusions in the Final EIS. In NRDC's comments related to production alternatives, the organization's attorney points out that "the Draft EIS must provide and disclose to the public, to the fullest extent possible, the following information: 1. Identification of each material production alternative through 1995. 2. Identification by year of the Plutonium-equivalent production capability of each alternative. 3. Identification for each year of the Plutonium-equivalent inventory, stockpile, and future requirements. 4. Indication of precisely which, if any, weapons systems or warheads would have to be delayed if the L-Reactor operation was postponed one, two, three or four years. 5. Indication of whether and how a delay in L-Reactor operation of one or two years would affect the production of warheads already scheduled to 1988, or Plutonium contingency needs in the "out years."[3] There appears to be little in the Draft EIS regarding these five subjects, particularly in terms of specific information. The lack of adequate identification of evidence to support the agency's statements and conclusions regarding Plutonium production and related matters needs to be corrected in the Final EIS in addition to providing more detailed information about weapons inventories and production schedules.	See the response to comment AB-2 regarding the disclosure of classified information in Appendix A. The national policy on nuclear weapons, their deployment, and the need for increased weapons is beyond the scope of this EIS.

[3]NRDC's Comments, Volume 2 of the Draft EIS, page 104.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	SAFETY SYSTEM ALTERNATIVES	
AB-10	The Draft EIS includes presentations on five alternatives for mitigating the detrimental effects of accidents. There is, however, no explanation of why the authors did not make use of reports on actual accidents at the Savannah River Plant (SRP) in comparing various systems for reducing the harm which could result from accidents. Since the operation of the L-Reactor would increase the need for reprocessing, for the disposal of low-level radioactive waste, the conversion of liquid waste to a solid, transportation to a repository and permanent disposal of high-level waste, the records of SRP accidents related to all of these are indispensable sources of evidence for those evaluating safety system options and considering the potential which SRP facilities have for damaging the environment. In our Freedom of Information request of August 25, 1983, we asked for materials regarding tritium releases from the SRP, including the most recent leak on July 16, 1983. According to the DOE, there are approximately two hundred documents related to the routine and accidental discharges of this one source of radioactive pollution.[4] Despite the existence of hundreds of reports about tritium and many additional ones related to radioactive gases and fallout originating from SRP facilities, these information sources do not appear to be among the references used in the preparation of the Draft EIS.	Actual reactor accidents are described in Section 4.2.1.2 and Appendix G; they were considered in the evaluation of safety system alternatives. Only once in the history of SRP reactor operation was the confinement system required to function to confine airborne activity; this was the melting of a source rod in 1970 (see Section 4.2.1.2 and Appendix G). The confinement system worked as designed and offsite exposure was negligible. The use of this accident in a comparison of various alternatives for the mitigation of accident consequences would have shown little or no difference in the effectiveness of the alternative concepts. Therefore, the maximum credible accident was selected to measure the benefits attributable to each alternative reactor safety system that is considered. A new Section 5.1.2.9 has been incorporated into this EIS which discusses the most probable incremental risks of non-reactor support facilities due to the increased throughput of L-Reactor product. Hypothetical reactor accidents described in the EIS represent the upper limit of offsite radiological consequences from any process operation at SRP. In the approximately 30 years of operation of SRP reactors, there never has been a release of radioactivity that resulted in offsite doses that exceeded applicable Federal guidelines. The EIS addresses and references accident releases related to reactor operation in Section 4.2.1.2 and Appendix G. Most tritium release incidents at SRP were not related to L-Reactor operation or its support facilities but to other facilities not in the scope of this EIS.

[4]October 4, 1983 letter from Ernest S. Chaput of DOE to Environmentalists, Inc. regarding its Freedom of Information request, FOI-SR-49.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
AB-11	There is no explanation in the Draft EIS of why reports on SRP accidents and routine releases were not chosen as information sources. The Safety System Section as well as other presentations in the Draft EIS lack evidence regarding studies of SRP workers, such as those related to the approximately 400 employees whose urine tests showed that they had the radioactive substance plutonium in their bodies.[5]	The estimates of radioactive releases to the environment resulting from L-Reactor startup and operation under normal operating and accident conditions are, to the extent possible, based on actual SRP operating experience, as documented in the reports cited as references in the EIS. (See EIS, Volume 1, Section 4.1.2; Volume 2, Appendix G.) Exposures of SRP workers to internal and external radiation are carefully monitored and controlled through a health physics program designed to maintain occupational doses "as low as reasonably achievable" (ALARA), as outlined by the U.S. Department of Energy in DOE 5480.1A, Environmental Protection, Safety, and Health Protection Program for DOE Operations. Occupational doses at SRP to date have been well below the DOE limits of 5 rem per year to an individual. Furthermore, occupational doses associated with reactor operations have decreased from an average of 200 person-rem per reactor-year during the period from 1960 through 1968 to an average of 69 person-rem per reactor-year during the period from 1976 through 1980 as a result of the ALARA operating philosophy. Of the 411 production workers who have shown positive evidence of assimilation of transuranic elements (through October 1983), including plutonium, only 6 have exceeded 50 percent of a Maximum Permissible Body Burden (MPBB), as defined by the International Commission on Radiological Protection ("Report of ICRP Committee II on Permissible Dose for Internal Radiation." Health Physics, Volume 3, 1960). The maximum individual assimilation was 90 percent of MPBB. During the entire operation of SRP, only one worker has exceeded the occupational exposure limit of 5 rem per year. No biological effects are expected from exposures of this magnitude. An ongoing health study of SRP workers has shown no evidence of unusual health effects that could be attributed to radiation exposure.

[5] In 1974, Du Pont's supervisor of the Works Technical Department at SRP publicly admitted that employees had been misled about the health effects of plutonium. Allendale County Citizen, Nov. 27, 1974.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
AB-12	I found no discussion of why theoretical reports, such as the BEIR III report, were chosen in preference to evidence directly related to the SRP. When the BEIR report and other general type references were used in the Draft EIS, the preparers failed to identify the pages in them which contained the specific information connected to the text.	The preparers used the BEIR III report as a basis for establishing a relationship between radiological doses calculated in the EIS and any resulting health effects in terms of excess cancer fatalities. Estimates of radiation health effects presented in the BEIR III report are based on the observed incidence of cancer-induced fatalities that resulted from exposure to high radiation levels. This data base included information derived from studies of Japanese survivors of the atomic bombs dropped on Nagasaki and Hiroshima, and from medical procedures that result in high radiation doses. The basic problem addressed in the BEIR III report was how to extrapolate from health effects observed at high levels of radiation to estimates of health effects that might be associated with very low levels of radiation, such as those resulting from L-Reactor operation. The BEIR III report in this sense is largely a statistical study of empirical data, rather than a theoretical report. The BEIR III report was selected for use in deriving the health effects reported in the EIS in preference to evidence directly related to SRP because there have been no observable health effects resulting from SRP operations, in terms of excess cancer fatalities, that can be quantified or identified. Specific page references in BEIR III are not cited in the EIS because the evaluation of health-effects estimators requires a careful review of the entire BEIR III report and an assessment of the alternative approaches presented in relation to the problem of extrapolating high-radiation-level health effects to low-radiation levels.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	COOLING-WATER ALTERNATIVES	
AB-13	Despite recognizing that the discharge of hot water from the L-Reactor would cause environmental damage and despite the fact that this thermal pollution violates the water quality regulations of South Carolina, those preparing the Draft EIS appear to favor the direct discharge to Steel Creek since they have identified this as the "reference case," on page 4-81. It is unclear just what "benefits" are being balanced against destruction of swampland and non-compliance with South Carolina's regulations. The lack of adequate and specific documentation regarding cooling alternatives contributes to the presentation of misleading information.	Section 4.1 of the EIS describes the impacts that would result from the direct discharge of L-Reactor cooling water to Steel Creek, and Section 4.4.2 describes over 30 potential cooling-water mitigation alternatives. In accordance with the Council on Environmental Quality's regulations implementing the procedural provisions of NEPA, this final EIS identifies and discusses the Department of Energy's preferred cooling-water alternative, which is to construct a 1000-acre lake before L-Reactor resumes operation, to redesign the reactor outfall, and to operate L-Reactor in a way that assures a balanced biological community in the lake. Also, see the responses to comments AA-1 and AB-4 regarding cooling-water mitigation alternatives and the balancing of "cost vs. benefits." *Specific information in Section 4.4.2 and Appendix I of the EIS* is provided on cooling-water alternatives. The EIS includes the following topics for each of the cooling-water mitigation alternatives considered: o Capital and operating costs o Schedule o Estimated number of construction personnel o Production efficiency o Conceptual designs, location, areal extent, and requirements for rerouting plant services and roads o Thermal effects at several locations in Steel Creek o Wetland and upland habitat eliminated o Rate of delta growth o Cooling withdrawal rate from the Savannah River and resulting entrainment and impingement losses o Impacts to endangered species o Potential impacts to historic/archeological sites o Release and remobilization of radionuclides o Thermal discharge standards.
AB-14	For example, the mistaken impression is given that Savannah River operations have had little or no effect on reducing the diversity of species, a situation known to reduce the biological stability of an area. On page 4-18, the statement is made that "no major changes in the presence of species have occurred from past Savannah River operations at their stations (7	Section 4.1.1.4 describes the effects of direct discharge of cooling water from L-Reactor on species diversity; these effects concur with findings published by Parker, Hirshfield, and Gibbons (1973).

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	studies by researchers with the Academy of Natural Sciences of Philadelphia-ANSP) or are expected to occur from the addition of heat and cooling water from the L-Reactor." This statement conflicts with the findings of a 1971 survey by Parker, Hirshfield and Gibbons. According to this study, only 8 plant, 5 fish and 2 reptile species remain in the heated area of Pond C whereas the unheated portions of Par Pond has 34 species of aquatic plants, 23 species of fish and 9 species of reptiles.[6] One of the 1971 report's researchers, J. Whitfield, co-authored an article with Rebecca Sharitz which summarizes the research of numerous investigators at the Savannah River Ecology Laboratory over a five year period.[6] The Draft EIS includes this study, "Thermal Alteration of Aquatic Ecosystems" as a reference for Volume 1 (pages 3-70 and 4-144) and Volume 2 (page C-80).	The studies by ANSP were conducted on the Savannah River. The studies by Parker, Hirshfield, and Gibbons were conducted on Par Pond. Because these are two different systems, there is no conflict in the results and conclusions of the different studies.
AB-15	It is important that the Final EIS resolve the problem of conflicting and misleading information on the subject of thermal pollution. Another lesson to be learned from the Gibbons-Sharitz report is that a study which clearly identifies its references is much easier to understand and review. We recommend that a similar type of documentation be used in the Final EIS.	See the responses to comments AB-13 and AB-14 regarding data on thermal discharge contained in the EIS. Also see the response to comment AB-6 regarding EIS references.
	ENVIRONMENTAL IMPACTS More time is needed to review sections of the Draft EIS related to such areas of inquiry as radioactive releases, equipment failures, seepage basins, accidents, worker exposures, etc., before specific and detailed comments can be prepared. The following failures, however, have been identified:	
AB-16	1. Failure to use a method of identifying reference materials so that a connection is made between the text and the passage in the particular document(s) which support statements and conclusions in the EIS.	See the response to comment AB-6 regarding EIS references.

[6]Gibbons, J. W. and R. R. Sharitz, 1974. "Thermal Alteration of Aquatic Ecosystems," American Scientist, Vol. 62, page 663.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
AB-17	2. Preparing dose estimates without adequate consideration for the detrimental effects which people of the area have experienced as a result of the radioactive gases and fallout which have originated from the complex of nuclear facilities at the SRP over the past 25 years or more.	The intent of the EIS is to address the environmental impacts associated with L-Reactor restart and operation as required under NEPA. Concentrations of radioactivity in air, water, and soil in the region due to releases from SRP in the past are measured as part of the annual environmental monitoring program. These concentrations, along with the doses to maximally exposed individuals and the general population offsite due to SRP radioactive releases to the environment, are reported in the annual SRP environmental monitoring reports. The resulting doses are well within established limits and represent a very small fraction of background radiation doses. No detrimental effects due to SRP radioactive releases have been observed, and analyses indicate none should be expected beyond those reported in the EIS for L-Reactor restart and operation.
AB-18	3. Failure to adequately identify the routine releases of K-85, tritium and Carbon-14 which have been discharged from reprocessing plants and the added amount due to the proposed operation of the L-Reactor.	Routine releases of K-85, tritium, and C-14 due to the proposed operation of L-Reactor, including those associated with facilities that support L-Reactor operation, such as the separations facilities, are reported in the EIS (See Volume 1, Sections 4.1.2 and 5.1.2).
AB-19	4. Failure to provide data collected from studies of SRP workers.	See the response to comment AB-11 regarding data from studies of SRP workers.
	CONCLUSION	
AB-20	Lawrence Benedict, in his testimony of August 5, 1983, stated that the Georgia Conservancy and Citizen's for a Clean Environment were concerned about the possibility that the NUS Corporation might work on the EIS related to the proposed restart of the L-Reactor.[7] He pointed out that the NUS Corporation had prepared the Finding of No Significant Impact and the "flawed" Environmental Assessment.	Judge Jackson of the United States District Court for the District of Columbia, in his Summary Judgment decision on July 15, 1983, found "that document, submitted by the contractor to DOE in May 1982, in draft and revised, constituted the basis for DOE's finding of no significant impact; 47 Fed. Reg. 35, 691, on August 23, 1982 . . . The Court finds the conclusion (the finding of no significant impact prepared by DOE) alone to be arbitrary and an abuse of discretion . . . the antecedent studies appear to be both candid and thorough, and as to DOE itself evince the hard look at environmental consequences required of it."

[7]Draft EIS, Volume 2, page K-56.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	Since the Finding of No Significant Impact was denounced by a U.S. District Court Judge as "unreasonable, arbitrary and an abuse of discretion," it is unclear why the NUS Corporation was chosen to prepare the Environmental Impact Statement.	The Decision went on to say "DOE's own environmental homework reflected in and represented primarily by its Environmental Assessment, provides extensive information on the anticipated consequences of the resumption of L-Reactor's operations. Plaintiffs do not object to any paucity of data so much as they do to the fact that, once published with its finding of no significant impact, the EA ends the process . . . " As a point of clarification, DOE contracted with NUS Corporation to assist in the preparation of the Environmental Assessment - L-Reactor Operation, Savannah River Plant (DOE/EA-0195). The EA is a DOE document prepared under DOE guidance, direction, and review. DOE determined its content and approach. The Finding of No Significant Impact on the resumption of L-Reactor operation was a DOE decision document prepared solely by DOE personnel. NUS Corporation played no part in this decision process.
	Please send copies of our Preliminary Comments to the preparers of the Draft EIS, whose names are listed on pages LP-2 through LP-14 in Vol. 2.	
AB-21	On behalf of Environmentalists, Inc., I request that a discussion meeting be arranged as soon as possible between consultants with NUS Corporation, State/Federal officials and representatives of commenting organizations, including Environmentalists, Inc. The purpose of the Meeting would be to address the defects of the Draft EIS which if repeated in the Final EIS would prevent the document from being in compliance with the National Environmental Policy Act. Sincerely, Ruth Thomas, Authorized Representative Environmentalists, Inc. 1339 Sinkler Road Columbia, SC 29206 Tel. 803- 782-3000	As contained in DOE's letter to Ms. Thomas of October 21, representatives of DOE were available at the public hearings on the Draft EIS during the week of October 31, 1983 to discuss any questions following the hearing sessions. Also see the response to comment AB-1 regarding the requirements for consultations with the States of South Carolina and Georgia and the receipt of comments on the Draft EIS.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses

STATEMENT OF ROBERT F. BURNETT

UNITED STATES
NUCLEAR REGULATORY COMMISSION
Washington, DC 20555

October 11, 1983

Mr. M. J. Sires, III
Assistant Manager for Health,
Safety and Environment
U.S. Department of Energy
Savannah River Operations Office
P. O. Box A
Aiken, South Carolina 29801

Dear Mr. Sires:

We have reviewed the draft Environmental Impact Statement for the Savannah River Plant and from a safeguards perspective, have no comments.

Sincerely,

George W. McCershing for,
Robert F. Burnett, Director
Division of Safeguards
Office of Nuclear Material
Safety and Safeguards

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF DAVID G. JENNINGS	
	Woodstorks and the L-Reactor: An Evaluation of the Draft EIS	
	Introduction	
AD-1	In the draft Environmental Impact Statement for the startup of the L-Reactor, the Savannah River Plant (SRP) wetlands are mentioned as important feeding sites for a nearby colony of endangered American Woodstorks. No discussion follows of the impact of removing a large percentage of these wetlands (due to thermal pollution of Steel Creek) from use as foraging areas for the Woodstorks. It is my feeling that the wetlands of the Savannah River Plant, including Steel Creek, should be considered critical habitat for the American Woodstork. By critical habitat it is meant that, without these wetlands as a major foraging area, there is a strong possibility that the Birdsville Woodstork Rookery would fail due to lack of a sufficient food base.	Appendix C, Section C.3.2 of this EIS presents more detailed information than was available for the preparation of the draft EIS. According to the U.S. Fish and Wildlife Service, critical habitat is presently considered neither prudent nor determinable for the breeding population of the wood stork in the United States. The basis for this determination is given in 48FR 8403. Critical habitat means (1) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with Section 4 of the Endangered Species Act, on which are found those physical or biological features (i) essential to the conservation of the species and (ii) which may require special management considerations or protection, and (2) specific areas outside the geographical area occupied by a species at the time it is listed in accordance with the provisions of Section 4 of the Endangered Species Act upon a determination by the Secretary of the Interior that such areas are essential for the conservation of the species (44 FR 47863). Based on existing data, there is no conclusive evidence that the loss of observed wood stork foraging sites in the Steel Creek delta would result in the failure of the Birdsville colony. Prior to the fledging of the 1983 season young of the Birdsville rookery, 64 percent of the observed instances of foraging occurred on the SRP. Thirty-three percent occurred at two sites near Beaver Dam Creek, which is affected by SRP powerhouse operations. The remaining 31 percent of the observed instances of foraging at seven sites occurred at Beaver Dam Creek (11 percent), the Steel Creek delta (14 percent), and Pen Branch (6 percent). These seven sites are not available during periods of plant operations, such as cold-water testing of the L-Reactor. Observed instances of prefledging foraging off the SRP from 18 foraging sites accounted for 36 percent of the total.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
AD-2	This rookery failed to produce young in 1981--probably due to a drought reducing the number of wetlands available. This suggests that adequate foraging sites may be the limiting factor for the colony. If so, the destruction or alteration of what appears to be the best available feeding areas could preclude the future success of this colony.	Nestling abandonment by wood storks in Florida has been associated with periods of high water or extreme drought (Kushlan et al., 1975). The reproductive success of the wood stork is affected by the number of fish per area of wetlands (i.e., the density of prey organisms) or by severe drought that reduces both habitat and food availability (Ogden and Patty, 1981). Storks of the Birdsville rookery abandoned their nestlings at approximately 3 to 4 weeks of age during 1981. The drought at that time is assumed to be responsible for the abandonment at the Birdsville colony. Foraging sites in the Savannah River swamp system at the SRP ranked statistically higher than other sites in a comparison of the mean number of storks observed at all SRP sites (29.8) with those observed at other sites (8.4) before fledging. This comparison used only those sites identified before fledging. After fledging, juveniles were recorded with adults at foraging sites not located at SRP. Juveniles did not use SRP foraging sites.
AD-3	It should be stressed at the outset that all questions and tentative conclusions in this report can be drawn from data presented in the draft Environmental Impact Statement (DEIS), statements (such as the flushing of cold water through Steel Creek) from the Environmental Assessment, and other public documents. More data needs to be gathered--or released if it has already been gathered--in order to make an intelligent decision of the issue.	Listing of the wood stork as an endangered species occurred February 28, 1984, after the Draft EIS for L-Reactor was completed. Beginning in April 1983, studies on the wood stork were initiated. The design of the wood stork study program and preliminary results of the program were provided to the FWS during an informal consultation process. Data from the wood stork program has been included in this Final EIS in Appendix C, Section C.3.2. A biological assessment for the wood stork was formally transmitted to the FWS at the end of March 1984. The Department is currently awaiting the review of this assessment by the FWS. The Department anticipates that as a result of the FWS review, the FWS will concur in the Department's conclusion that while operation of L-Reactor might affect portions of the wood stork's SRP foraging habitat, operation of L-Reactor and other ongoing and planned operations will not affect the continued existence of this species.

David G. Jennings

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	Situation: Woodstorks using the Savannah River Plant (and Steel Creek in particular).	
	Problem: Woodstorks are now or will soon be listed as an endangered species. Will the startup of the L-Reactor have a significant (and negative) impact on the local population of Woodstorks?	
	Answer: UNKNOWN. But, predictions can be made based on data gathered for the required Environmental Impact Statement.	
	Questions and considerations that may reveal how important (or unimportant) the Savannah River Plant (SRP) swamps are to the Birdsville Woodstork Rookery include:	
AD-4	1. Is the average distance to a non-SRP feeding site about the same as to the SRP swamps (45 km)--or are the storks traveling significantly further to the SRP sites? Distance traveled could be an indication of the quality and importance of the feeding site. If the birds are traveling long distances to SRP, in contrast to short distances for alternate off-plant feeding sites, it seems clear that the SRP wetlands are considered a high quality area by the Woodstorks.	The average distance to sites is not necessarily correlated with the importance of the foraging site to the wood stork. Storks travel to sites with available food. At the Birdsville colony, storks travelled an average of 22.8 kilometers before the fledging of young and 25.0 kilometers after the fledging of young. This difference was not statistically significant. Wood storks did not travel farther to feed as the breeding season progressed. It is hypothesized that the elevation of feeding sites (from 30 to 100 meters above mean sea level) and the drought controlled how far the Birdsville storks travelled to feed. That is, foraging sites at higher elevations become unavailable before foraging sites at lower elevations. The wood storks travelled to the higher sites first no matter what the distance from the colony (up to 60 kilometers) and then to lower sites. Low water levels and concentrated fish are probably the principal reason that wood storks forage in the Savannah River swamp wetlands on the SRP. Preferred feeding sites will probably be used as long as they are within the 50- to 60-kilometer daily radius from the wood stork colony.
AD-5	2. Comparison of the average number of Woodstorks seen feeding at a SRP feeding site vs. the average number seen at off-plant sites. If there is a significant difference (DEIS, C-37; 26.4 individuals vs. 6.6) this may also be an indication of the value of the SRP swamps to the local Woodstork population.	See the responses to comments AD-1 and AD-2 regarding the use of wetlands and Steel Creek as foraging sites.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
AD-6	3. Availability (species and numbers of individuals) of prey items in the Steel Creek sites as compared to off-plant sites. If prey items are more abundant, importance of the site as a foraging area should be recognized.	Data on fish are presented in Section 3.6 and Appendix C of the EIS, and will also be presented in the biological assessment submitted to the U.S. Fish and Wildlife Service.
AD-7	4. Total number of Woodstorks using SRP wetlands on any single day. The Draft EIS (DEIS, page C-38) shows 147 individuals using SRP on July 14. One hundred forty seven out of 238 total breeding adults in the rookery is over 60% of the population. Were anywhere near this number seen at any off-plant feeding site?	Ten, 63, and 74 adult wood storks (a total of 147) were recorded feeding at sites 013, 022, and 024, respectively, in swamps near Beaver Dam Creek on July 13, 1983. Site 025, 7.5 kilometers west of the Birdsville colony, had approximately 30 adult wood storks feeding on July 27, 1983. Therefore, approximately twice as many adult wood storks were recorded foraging at site 024 at Beaver Dam Creek on the SRP than the highest number of adult wood storks recorded at off-plant foraging sites.
AD-8	5. Long term (but within a single season) availability of the site for foraging. Many off-plant sites are probably small temporary wetlands that can only be utilized by Woodstorks for a short period of time before drying up. The SRP wetlands and creeks, however, retain a base flow of water throughout the summer making them a dependable foraging area for the entire breeding period.	Most non-SRP foraging sites were dry shortly (1 to 2 weeks) after wood storks were initially observed at these foraging sites. Two of nine SRP foraging sites at Beaver Dam Creek were dry by mid-August 1983. Seven other SRP foraging sites were temporarily lost when plant operations caused water depths to exceed 32 cm.
AD-9	6. Fledgling success rate of this colony[1] in contrast to published fledgling rates for Florida populations. *If the Birdsville colony is able to produce young at a higher* than normal rate then, recognizing that this is an endangered species, it should not be disturbed--nor should its food base be disrupted.	The mean number of young wood storks per nest in the Birdsville rookery ranged from zero in 1981 to 2.19 in 1983. In highly successful years, such as 1983, the Birdsville rookery has *produced more wood storks than colonies of a similar size in* southern Florida (the mean equals 0.7 young per nest).

[1]Unknown, not included in the DEIS.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
AD-10	7. Predicted future land use patterns and their effect on the non-SRP sites. Most of the non-SRP areas used by the Birdsville Woodstork Rookery probably occur on private lands. These sites may be in danger of conversion into agricultural lands over the next decade or so. The SRP swamps, on the other hand, are part of the buffer area around the reactors and should not be affected by changing land use patterns.	The cypress swamp surrounding the Birdsville rookery is privately owned. At present, the Georgia Department of Natural Resources leases the land and patrols the rookery. The ownership and future land use of all habitats used by wood storks of the Birdsville rookery is unknown. However, some habitats will probably be lost due to agricultural or other land-use practices. The SRP does provide isolation and protection from disturbances by the public.
	Additional Questions Generated by Study of the Draft EIS	
AD-11	1. Why were no Woodstorks recorded using the Steel Creek area after July 12? Had the colony dispersed or were cold water releases (as mentioned in the Environmental Assessment as being SOP for the reactor on its "standby" status) responsible for the Woodstorks absence?[1] If raised water levels were created artificially this suggests a strong bias in the data in terms of the actual amount of usage that Steel Creek might have received without the raised water levels. If this is the case, why weren't the fluctuating water levels mentioned in the DEIS as a possible source of bias in the data?	After July 12, 1983, it is hypothesized that wood storks were absent from the Steel Creek delta because of high water. On July 12, 1983, or soon thereafter, the water depth at site 012 in the Steel Creek delta increased to 48 centimeters (from 18 centimeters) due to reactor operations and testing (K- and L-Reactors). Depths at site 012 remained between 44 and 48 centimeters through September 1983. Wood storks abandoned feeding sites at Steel Creek during periods of high water. During these high-water-level conditions, fish that were originally concentrated in shallow pools dispersed from the Steel Creek delta. This condition is taken into consideration in calculating frequencies of foraging (Appendix C, Table C-9). Thus the data are not biased. Variations in water levels are also discussed in the FEIS.
AD-12	2. On page 3-52 of the DEIS it says that the SRP wetlands appear to be important post breeding feeding habitat. Table C-7 shows heavy usage of SRP swamps during June and July. Page C-37 states that birds were nesting in July of 1980. On what data was the "post breeding" conclusion drawn?	The statement in Section 3.6.1.4 of the Draft EIS that "the Steel Creek delta and Beaver Dam Creek appear to represent important feeding habitat for post-breeding wood storks from the rookery" is incorrect. The word "post-breeding" has been deleted.

[1]Woodstorks require areas with lowered water levels, where their prey (fish) have been concentrated. By adding water to Steel Creek, the water levels may have been raised to too high a level for Woodstorks to forage successfully.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
AD-13	3. On page C-37 it states that a total of 386 Woodstorks were seen on SRP wetlands in the summer of 1983, but in Table C-7 a total of 394 birds are listed as being counted on the SRP swamps in the three week period June 23-July 14. What was the total number of Woodstorks seen on SRP in the summer of 1983? Would the number of Woodstorks seen on Steel Creek have been higher if the water level had not been manipulated (assuming for the moment that it was)?	A total of 478 observations of wood storks was recorded on the SRP from June 21 to September 29, 1983, using ground and aerial surveys. This total includes individuals that were observed before and after fledging. Of this total, 66 percent occurred in the Beaver Dam Creek swamp, 21 percent occurred in the Steel Creek delta, and 13 percent occurred in Pen Branch and Four Mile Creek swamp areas. Wood storks were also followed to foraging sites from the Birdsville rookery. Of the 740 observed instances of foraging, 64 percent occurred in non-SRP areas. Of the 36 percent of the observations on the SRP, 22 percent occurred in Beaver Dam Creek, 11 percent occurred in the Steel Creek delta, and 3 percent occurred north of Pen Branch delta. These data have been included in Appendix C of this EIS and will be included in the biological assessment and consultation process with the U.S. Fish and Wildlife Service. Also see the response to comment AD-11 regarding the number of wood storks and water levels.
AD-14	4. Was the low number of Woodstorks seen using the SRP wetlands during 1981 and 1982 due to low numbers of these birds using the area or was it due to the lack of an intensive daily search for Woodstorks.	No aerial surveys were conducted for wood storks during 1981 and 1982. The low numbers of storks observed might be related to the survey methods, which were limited to ground surveys (mostly at Steel Creek) at selected areas in the Savannah River swamp system on the SRP.
AD-15	5. Is it possible that the observed number of Woodstorks seen using the SRP swamps in 1983 is a minimum number, due to variation in the timing of surveys? For instance, if a feeding site is surveyed early in the morning it may show fewer birds than a similar survey conducted in the early afternoon--after thermals[1] have had a chance to develop.	Aerial surveys were conducted for wood storks at SRP between 9:00 a.m. and 8:00 p.m. (one exception was 7:45 a.m. on July 30, 1983, in which three wood storks were recorded) until the Birdsville colony dispersed on August 25, 1983. After the colony dispersed, aerial surveys of the Savannah River swamp system were conducted between 8:30 and 9:30 a.m. (one exception was 6:00 p.m. on September 6, 1983) until September 29, 1983. The time distribution of SRP aerial surveys before the Birdsville colony dispersed was as follows: Time of survey — Percent of surveys 9:01 a.m. - 12:00 noon — 32 12:01 p.m. - 3:00 p.m. — 24 3:01 p.m. - 6:00 p.m. — 40 6:01 p.m. - 9:00 p.m. — 4

[1]Woodstorks, like other soaring birds, use thermals (columns of heated rising air) to make it easier to travel long distances. Thermals do not normally develop until mid to late morning.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	Attributes of the Birdsville Woodstork Rookery which make its individuals more valuable than a comparable number of nesting Woodstorks from a Florida colony:	
AD-16	1. The colony plays an important role in maintaining diversity of the species' gene pool. Congress has recognized that preservation of the world's genetic diversity is an important goal. Preservation of the diversity within a species is also recognized as necessary.[1] The Birdsville rookery is the northernmost colony of Woodstorks in the world. It is a generally accepted fact that populations on the edges of a species' geographic range often contain different genes--or at least different gene frequencies--than similar populations in the center of their range.	The Birdsville rookery was established in 1980 and perhaps as early as 1977. This colony is not recognized as a subspecies of the wood stork. Because wood storks do not breed until they are 4 years old, the adults of this colony probably originated in Florida. If this population is reproductively segregated from Florida colonies, genetic differences might become apparent in the future; however, in 1983 the adult wood storks from Birdsville can be assumed to be genetically similar to storks at the center of their population in Florida.
AD-17	2. There is a definite value in having scattered breeding colonies of a rare species to minimize the impact of a local catastrophe (such as a hurricane wiping out the wintering Whooping Cranes, or a prolonged drought in Florida disrupting breeding of the Florida populations of Woodstorks.	The wood stork colony at Birdsville, Georgia, is 167 kilometers north of the next active stork colony and 140 kilometers inland. Local catastrophes such as hurricanes, tornadoes, and severe thunderstorms can destroy nestlings and eggs during the breeding season. Scattered rather than localized breeding colonies of wood storks will reduce stork mortality due to natural catastrophes.

[1]The Endangered Species Act covers protection of subspecies and local populations.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses

STATEMENT OF JOHN C. SNEDECKER

LYRIC, INC.
John C. Snedeker, President
12 Wilmington Island Road
Savannah GA 31410
912-897-4764

4 November 1983

US Department of Energy
Savannah River Operations Office
PO Box A
Aiken, SC 29801

Att: Mr. M. J. Sires, III
Assistant Manager for Health, Safety and Environment

Re: Draft Environmental Impact Statement
DOE/EIS-0108D, dated September 1983
"L-Reactor Operation---"

Dear Mr. Sires:

We welcome this opportunity to submit comments on the subject Draft EIS.

We understand that the pertinent comments being solicited at this time pertain to the environmental consequences of the re-start of the L-Reactor, and that the need for the re-start has already been established. For the record, however, we feel that it is important to stress that the requirement to increase the output of weapons-grade plutonium and tritium was identified in 1980 by the National Security Council (NSC) in the context of modernizing our defense systems; that the increased requirements were defined in the FY 1981-83 Nuclear Weapons Stockpile Memorandum (NWSM) approved by President Carter in October 1980; and re-affirmed in the FY 1983-88 NWSM approved by President Reagan in November 1982.

We wish to commend the Department of Energy and all of the people who contributed to the Draft EIS for a very thorough and highly professional effort. It addresses all of the environmental concerns in depth, and provides a very adequate basis

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	for concluding that the re-start of the L-Reactor will not have an adverse effect on the environment beyond the parameters inherent in the operation of the Savannah River Plant as a whole. While we understand the desire of the editors of the EIS to cover all possible concerns that might be surfaced by people with a legitimate environmental interest (and that could include the entire population of the affected area), we are somewhat troubled by the inclusion of such detail about the plant operation itself. After all, the Savannah River Plant is a major defense installation, not a research facility, and there are many aspects of its operation that should be revealed only to those with a "need to know". The EIS, in our opinion, goes somewhat beyond that limit.	
AE-1	The radiological impacts, including assessments of the results of various accident scenarios, are obviously the principal concern of people in the affected areas. While the data is voluminous and reassuring, the summaries could have been presented in a more "up-front" manner for the lay reader. This is an editorial rather than a technical comment.	The Summary of the EIS has been revised in an attempt to provide a more readable summation for the lay reader.
AE-2	The non-radiological impacts are very thoroughly discussed, and are certainly acceptable on a cost/benefit basis. Having been trained as an engineer, we are conscious of the desirability of conservation of energy, and/or the use of waste energy wherever possible. The thermal energy discharged from the L-Reactor, and presumably from the other reactors as well, is tremendous. The thermal effect on the Steel Creek drainage basin appears to be the major non-radiological impact, and one that cannot be mitigated within the time-frame of the re-start mandate. The localized scope of the impact is acceptable on a cost/benefit basis, but it should be possible to develop productive uses for the thermal energy. Co-generation is mentioned in the EIS as one way of mitigating the thermal impact in time. We would urge the DOE to explore such ways of using the thermal energy in an economically efficient manner. This suggestion is made on a long term basis, and not as a constraint on the approval of the EIS.	Thermal cogeneration as a cooling-water alternative is discussed in Section 4.4.2. of the DEIS. As discussed in Section 4.4.2, thermal cogeneration as a cooling-water mitigation alternative for L-Reactor is not considered economically or technically feasible at this time.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	In summary, we feel that the environmental impacts of the re-start of the L-Reactor have been very adequately assessed, and that the data does not indicate any unacceptable or potentially dangerous conditions arising from its operation. We sincerely hope that the Draft EIS will be approved expeditiously, and that the present legal and legislative constraints on the re-start of the L-Reactor will be removed in an equally expeditious manner. Very truly yours, John C. Snedeker President of LYRIC, INC., Savannah-based management consultants specializing in the aerospace, defense, and high technology industries.	

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF J. KELLY NELSON, JR.	
	J. Kelly Nelson, Jr. Real Estate Appraisal Co. 1940 Blossom St. Columbia, SC 29205	
	YOU DON'T HAVE TO BE AN "EXPERT" TO PLAY A MEANINGFUL ROLE IN THE EIS PROCESS. A valuable contribution at this point would be a letter demanding that: 1. DOE facilities be required to comply with federal and state environmental standards applicable to commercial reactor sites; and 2. Steps be taken to avoid damage to the environment before startup. We urge you to write such a letter to DOE. If you have questions about the hearings, the draft EIS, or the L-Reactor, call me at 803-256-7298. YOUR INVOLVEMENT IS IMPORTANT. I request that:	
AF-1	1. DOE facilities be required to comply with federal and state environmental standards applicable to commercial reactor sites; and	As stated in response to comment AA-3, the restart of L-Reactor will be in compliance with all applicable Federal and state environmental protection requirements. Further, restart of L-Reactor will meet DOE radiation protection standards that are comparable to those of the Nuclear Regulatory Commission (10 CFR 20) for a production facility (i.e., 500 millirems to the whole body in any one calendar year). The need for specific engineered safety features for nuclear reactors varies according to the design and operating differences that exist between different types of reactors. Commercial light-water nuclear reactors that have containment domes, for example, have coolant conditions that are at high-pressure (over 2000 pounds per square inch) and at high temperatures (greater than 500°F). L-Reactor, which is used to

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
		produce defense nuclear materials, is of a different design than commercial light-water nuclear reactors; its coolant conditions are at considerably reduced pressure (5 pounds per square inch) and temperature (212°F). The differences that exist between different types of reactors is illustrated by the the Fort Saint Vrain gas-cooled reactor in Colorado, which has no containment dome ans was licensed by the NRC.
AF-2	2. Steps be taken to avoid damage to the environment before startup.	DOE will take all reasonable steps to mitigate the impacts from L-Reactor operation while meeting its mandate to produce nuclear materials. Compliance with the applicable Federal and state environmental protection requirements will ensure that appropriate mitigative actions are taken. In addition, the Department of Energy is cooperating with the Fish and Wildlife Service to develop a Habitat Evaluation Procedure (HEP) plan for the Steel Creek system with the implementation of the preferred thermal mitigation system for L-Reactor. The HEP will identify the value of habitat to be gained or lost with implementation of the preferred L-Reactor cooling-water alternative for use in assessing further mitigation. If required, DOE will implement additional mitigative measures that might be identified through the HEP process dependent on Congressional authorization and appropriation. Also see the response to comment AA-3 regarding compliance with applicable Federal and state environmental protection regulations.
	Please don't do anything to endanger lives or environment!	
	Don't sacrifice S.C. and GA. for the "good" of others--How about in New England, they would complain too much. I believe in arming the U.S. to keep Russia in its place, but not at the expense of lives, when we can do it correctly. (can do it safely) Should have invaded after WW II.	

Comment number	Comments	Responses
	STATEMENT OF MRS. ELLEN G. S. SPIRES 10-19-83 Mr. Melvin J. Sires, III U.S. Department of Energy Savannah River Operations Office Post Office Box A Aiken, South Carolina 29801 ATTN: EIS for L-Reactor Dear Sir: My name is Ellen G. Slice Spires. I live in Swansea, S.C. off RD 9. I am 22 years old. I have two children and a wonderful husband. At first I wasn't sure I should even write, thinking in terms of it happening anyway, no matter what I or anyone	
AG-1	else does. But then I thought about my first husband James A. Slice. We were married 3 years. He worked at SRP about 2 of these years. He started feeling tired and weak in the last part of May-1980. By June 12th, the doctor told me he had cancer of an unknown origin. He died Sept. 17, 1980. He had turned 24 Sept. 12, 1980.	James A. Slice worked as a carpenter for Du Pont Construction at SRP from December 1977 to February 1979 and from March 1980 to September 1980. He also worked for another construction firm at SRP from March 1979 to May 1979. He had no known exposure to suspect carcinogenic agents during his Du Pont service and had a total measured radiation exposure that was less than natural background radiation. It has not been possible to assign any initiating cause for his cancer, but available evidence makes it highly unlikely that it was work-related.
AG-2	You probably already think you know what I'm thinking and you're right. It really bothers me that the "L-Reactor is going to be started up again." The main reason I am writing this letter is to demand that DOE facilities be required to comply with federal and state environmental standards applicable to commercial reactor sites;	See the responses to comments AA-3 and AF-1 regarding DOE's commitment to comply with applicable Federal and state regulations and the differences between SRP reactors and commercial light-water reactors.
AG-3	and that steps be taken to avoid damage to the environment before startup; because what can you do when it's been done? Doesn't anyone care?	See the responses to comments AA-3 and AF-2 regarding DOE's commitment to comply with applicable Federal and state regulations and to take all reasonable steps to mitigate impacts.
	Mrs. Ellen G. S. Spires Rt. 2, Box 83-AA Swansea, SC 29160	

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF MARY LIRA AND WITOLD KOSICKI	
	Mr. Melvin J. Sires, III U.S. DOE Savannah River Oper. Office Aiken, SC 29801	
	Dear Sir,	
	Unless you can give substantive reasons to the contrary we demand that:	
AH-1	1. DOE facilities be required to comply with Federal and State environmental standards applicable to commercial reactor sites.	See the responses to comments AA-3 and AF-1 regarding DOE's commitment to comply with applicable Federal and state environmental regulations and the differences between SRP reactors and commercial light-water reactors.
AH-2	2. Steps be taken to avoid damage to the environment before startup of the facilities.	See the responses to comments AA-3 and AF-2 regarding DOE's commitment to comply with applicable Federal and state environmental regulations and to take all reasonable steps to mitigate impacts.
	Thank you for your attention, and hopefully your cooperation.	
	Mary Lira and Witold Kosicki 109 Ligustrum Lane Columbia, SC 29209	

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF MRS. JEAN MAY 935 Law Lane Mt. Pleasant, SC 29464 October 21, 1983 Mr. Melvin J. Sires III Assistant Mgr. for Health, Safety & Environment U.S. Department of Energy P. O. Box A Aiken, South Carolina 29801 Re: EIS for L-Reactor Dear Sir:	
A1-1	I am distressed to hear the possible start-up of the Savannah River Reactor in a manner that may be harmful to many... me included. It is my feeling that not only will its operation be a violation of some South Carolina Laws; but the Federal Government appears to agree to a harmful operation THAT COULD BE AVOIDED.	See the responses to comments AA-1 and AA-3 regarding cooling-water mitigation alternatives and DOE's commitment to comply with applicable Federal and state environmental protection regulations.
A1-2	As I understand it, there would be a direct discharge of about 176,000 gallons PER MINUTE of scalding water; that perhaps involved would be flushing of RADIOACTIVE Cesium into the Savannah River.	See the responses to comments AA-1 and AA-2 regarding cooling-water mitigation alternatives and the relationship of radiocesium and radiocobalt concentrations to EPA drinking-water standards.
A1-3	Please remember that the Savannah River is a source of drinking water for about 70,000 South Carolinians and Georgians down stream. TOXIC CHEMICAL LEAKAGE will be INCREASED in a freshwater that is source for much of the Southeast.	As noted in Sections 4.1.1.5 , 4.1.2.4, 5.1.1.2, and 5.2.6 of the EIS, the operation of L-Reactor will have little impact on the quality (chemical and radiological constituents) of Savannah River water. Nonradioactive discharges will meet the requirements on an NPDES permit issued by the State of South Carolina; radioactive discharges will meet applicable radiation protection standards.
A1-4	Please remember we think some of the impacts ARE AVOIDABLE! We do not think the health of many residents should be sacrificed for Business...maybe mean LARGER PROFITS if safety steps are by-passed.	DOE fully agrees that the health of residents should not be sacrificed. DOE's health standards are consistent with industry requirements (see also the response to comment AA-3). The health and safety of employees and residents are and have always been a primary consideration in operating the Savannah River Plant.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
		The Department of Energy is an agency of the U.S. Government and E. I. du Pont de Nemours and Company operates the SRP for DOE without fee.
	Please consider these comments and AVOID steps that may be detrimental to the health of many. Sincerely yours, Mrs. Jean D. May	

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF ROBERT H. DRIGGERS Under the Sun, Inc. P. O. Box 4486 Greenville, SC 29608 803/232-6715 Oct. 22, 1983 Mr. Melvin J. Sires, III U.S. Department of Energy Savannah River Operations Office P.O. Box A Aiken, SC 29801 Dear Mr. Sires: I will not be able to attend any of the public hearings that have been scheduled on the startup of the L-Reactor, but I did want to express my concerns about the effect that it may have on the surrounding environment.	
AJ-1	It is my understanding that the L-Reactor will increase the load on existing seepage basins by about 33%. These basins are currently leaking toxic chemicals into the Tuscaloosa water aquifer and it seems very short-sighted to compound the existing problem rather than working to correct it.	The EIS provides extensive discussions of the ground-water regime at SRP (Section 3.4.2 and Appendix F) and of the potential impacts to ground waters from the operation of L-Reactor and its support facilities in Chapters 4 and 5. This final EIS has been modified to reflect the current wastewater discharges to seepage/settling basins and to more clearly define the incremental impact of the L-Reactor restart on groundwater. The incremental increase--"33 percent"--in discharges to seepage basins does not in and of itself reflect a substantial impact to groundwater. In early 1983, DOE announced the detection of chlorinated hydrocarbons (27 micrograms per liter) in two wells in the A-Area, which produce from the Tuscaloosa Formation. Subsequent investigations of this reported contamination (Geraghty & and Miller, 1983) have concluded that this contamination of the Tuscaloosa Formation did not result from the vertical migration of chlorinated hydrocarbons through the clay units that overlie the Tuscaloosa. Investigations have concluded that the

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
		chlorinated hydrocarbons entered these wells by migration from shallow groundwater through defects in the cement grout of at least one production well and down the well to the Tuscaloosa Formation. The chlorinated hydrocarbons are primarily confined to the Tertiary sediments above the base of the Congaree Formation. Remedial actions to prevent the migration of these contaminants into defective well casings will confine the contaminants to the Tertiary groundwater system. Recent analysis of samples of production and monitoring wells have not detected chlorinated hydrocarbons in the Tuscaloosa Formation above the limit of detection (1 ppb). The absence of the detection of the chlorinated hydrocarbons in the Tuscaloosa Formation evidences the effectiveness of the confining clay units that overlie the Tuscaloosa Formation. The incremental increase in discharge to the M-Area settling basin from the restart of L-Reactor is not expected to further contaminate the Tuscaloosa Formation. Groundwater protection measures at the M- and A-Areas will consist of a remedial action program to remove contaminants in the Tertiary groundwater, and the phaseout of the M-Area settling basin by April 1985. The L-Reactor incremental discharges to the M-Area settling basin are not hazardous except for low pH. The incremental discharges to the settling basin until April 1985 are expected to cause only a minor and localized increase in the concentrations of contaminants that are entering the Tertiary groundwater system. With the implementation of the remedial action program, consisting of recovery wells and an air stripper, this incremental increase will be intercepted and removed. The restart of L-Reactor would also result in radioactive discharges to the L-Area seepage basin that are not hazardous, and incremental radioactive discharges to the existing Separations Area (F- and H-Areas) seepage basins. The present discharges to the F- and H-Area seepage basins are non-hazardous except for frequent periods of low pH and infrequent discharges of hazardous levels of mercury to the H-Area seepage basins. In

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
		addition, recent discharges to the H-area seepage basins have contained hazardous levels of chromium; however, these hazardous levels of chromium were primarily associated with the processing of radioactive waste in H-Area waste tanks and the processing of offsite fuel elements. The incremental increase to the F- and H-Area seepage basins due to L-Reactor operation is not expected to be hazardous except for low pH and occasional discharges of mercury to the H-Area seepage basins that will be less than 8.0 kilograms per year. The discharges to the L-, F-, and H-Area seepage basins are not expected to impact the Congaree and Tuscaloosa groundwaters. The green clay and the thick low permeability clay units at the base of the Congaree and upper Ellenton Formation will act as effective barriers to the downward migration of contaminants. Above the Congaree Formation, contaminants will migrate from the seepage basin to onsite streams. DOE plans to requests fiscal year 1986 Congressional funding for an effluent treatment facility to process the wastewater discharge to the F- and H-Area seepage basins. This final EIS contains a new Section 6.1.6 which discusses the draft "SRP Groundwater Protection Implementation Plan." This plan was recently developed to examine strategies and schedules for sitewide mitigative actions required to protect the groundwaters beneath the SRP. This plan has been reviewed by EPA and the State of South Carolina and is currently being revised. The final plan will be the subject of a separate NEPA review.
AJ-2	I'm also very disturbed that the DOE would choose to ignore and violate state water quality regulations by discharging water in excess of the allowed temperature.	See the responses to comments AA-1 and AB-13 regarding cooling-water mitigation alternatives.
AJ-3	This seeming disregard for the quality of the environment that we all share is one which I can't understand or accept. We all have a responsibility to pass on to our children a safe and healthy place to live. I urge you to use your position of responsibility to work for the improvement of environmental quality instead of contributing to its decline.	The SRP is not only a site for the production of defense nuclear materials, but it is also a National Environmental Research Park providing a significant area of protection from uncontrolled influence. A forest management program was begun in 1952 that consisted of planting old fields with loblolly, slash and longleaf pines. By 1978, more than 100,000,000

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
		trees had been planted. The deer population on the SRP is one of the largest in the Southeast due to the protection afforded by SRP. Additionally, species and vegetation enhancement programs have been undertaken on SRP. DOE is spending more than $50 million a year on environmental activities at SRP.
	Your decision in this matter will affect many people for generations to come. I hope you will think about them and have the courage to speak for their right to a healthy environment. Sincerely, Robert H. Driggers	

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF FRED M. REESE, JR. October 21, 1983 Mr. Melvin Sires, III U.S. Dept. of Energy Savannah River Operations Office P.O. Box A Aiken, SC 29801 Dear Mr. Sires:	
AK-1	As a South Carolinian, a patriotic American, a concerned world citizen, I write to express anger, hurt and disappointment for the callous way our environment safety is being compromised by the startup procedures presently underway for the SRP L-Reactor.	DOE has considered environmental safety extensively in L-Reactor restart preparations. Approximately 60 percent of the $204 million spent on L-Reactor renovation went to improve safety and environmental controls. Also, about $5 million has been spent to date on environmental analyses of the impact of the restart. Also see the response to comment AA-3 regarding DOE's commitment to comply with applicable Federal and state environmental protection regulations.
AK-2	It seems incredible to me that DOE policies are permitted to by-pass state and federal standards designed to represent public interest. It scares me to realize that "production schedule demands" can override conclusive evidence of need for further careful study of the environmental impact of L-Reactor start-up.	See the responses to comments AA-1 and AA-3 regarding issuance of an NPDES permit for thermal discharge and DOE's commitment to comply with applicable Federal and state regulations.
AK-3	It is a sad commentary on the democratic process when legitimate public concern and well documented violations of public policy can be put aside by DOE political imperatives. You are our best hope for requiring legitimate recognition of persistent concerns from area residents and all who care about a viable, safe and environmentally productive community. Please insist on consistent uniform standards for all agencies involved. For the sake of all of us.	DOE is following all provisions of the NEPA process.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	Sincerely, Fred M. Reese, Jr. 1732 Crestwood Columbia, SC	

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF MRS. R. W. WHISNANT	
	October 21, 1983	
	Dear Mr. Sires,	
	I am against the proposed resumption of operations of the L-Reactor at the Savannah River Plant. This would be very harmful to our environment.	
AL-1	DOE facilities need to be required to comply with federal and state environmental standards that apply to commercial reactor sites.	See the responses to comments AA-3 and AF-1 regarding DOE's commitment to comply with applicable Federal and state environmental regulations and the differences between SRP reactors and commercial light-water reactors.
AL-2	Steps must be taken to avoid damage to our environment before startup.	See the responses to comments AA-3 and AF-2 regarding DOE's commitment to comply with applicable Federal and state environmental regulations and to take all reasonable steps to mitigate impacts.
	Sincerely,	
	Mrs. R. W. Whisnant	

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF MRS. ZELDA NOLAND	
	Mr. Melvin J. Sires III	
	Dear Sirs:	
AM-1	I understand that Environmental experts in various fields of S.C. and other fields are now in the process of reviewing drafts of E.I.S. Hopefully they will assess alternatives and suggest the most desirable without regard to alleged Production Scheduling Demands.	The EIS describes two sets of alternatives--production alternatives in Chapter 2 and mitigation alternatives in Section 4.4. The Record of Decision on this final EIS will balance the possible gains from these alternatives against the losses that they entail in delaying or eliminating the plutonium production called for in the Nuclear Weapons Stockpile Memoranda signed by Presidents Carter and Reagan.
AM-2	If we don't insist that D.O.E. take these and all comments into account, if our experts recommendations remain unread and undefended in the appendix of the E.I.S., the progress we've made in forcing the Federal Government to take our interests and health and thoughts into account and to obey their own laws and ours will be called into question. I have worked for the environmentalist Energy Research Foundation and gotten several hundred names and their comments and letters too. I think	The EIS and NEPA process are designed to ensure that all interested citizens can have input into the decision process.
AM-3	every person should be vitally interested in this issue. I'm 68 years old and have a difficult time breathing all the fumes and smogs and etc. now.	Estimates of atmospheric releases from L-Reactor and its support facilities are given in Sections 4.1.1.6, 4.1.2.1, and 5.1.2.2. These releases result in ambient air concentrations that fall within all applicable state and Federal guidelines.
	I feel that if we don't wake up and try to do something about all this impact on our air and land and waters and vegetation we will all be wiped off the face of the Earth by our own indifference and won't have to wait on the Communists to do it.	
AM-4	I for one would like to see people more concerned about anything that harms Gods great world He loans us to use. I do hope you will consider all the things that were discussed and brought to the public's attention. Our fresh water sources are being polluted every day by plants and other industries and getting away with it. What good is a stiff fine if 10 years	See the response to comment AM-2 regarding the EIS and NEPA process.
AM-5	later we still have the pollutant in our water and food? Much of this impact is avoidable and we believe they should be avoided. Thank you for your attention.	Unavoidable and irreversible impacts for the reference case and preferred alternative are considered in Chapter 8 of this EIS. Also see the responses to comments AA-3 and AF-2 regarding DOE's commitment to comply with applicable Federal and state regulations and to take all reasonable steps to mitigate impacts.
	Sincerely,	
	Mrs. Zelda Noland	

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF CATHERINE C. BRADSHAW	
	Mr. M. J. Sires, III:	
	I strongly oppose the proposed resumption of L-Reactor operation at the Savannah River Plant in Aiken, S.C. Please include my position in the response to the Draft EIS.	Comment noted.
	Sincerely,	
	Catherine C. Bradshaw 206 Hurt St NE Atlanta, GA 30307 (404) 524-4190	

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF MARY EMMA GLEFFE Columbia, S.C. 29209 828 Byron Road Oct. 26, 1983 Mr. Melvin J. Sires III U.S. Department of Energy Savannah River Operations Office Post Office Box A Aiken, South Carolina 29801 Dear Sirs:	
AO-1	I am concerned about the Savannah River Plant reopening and pouring all that contaminated water in the streams. Please take some kind of measures to keep our water supply free of chemicals that is harmful to the fish and wildlife and us human beings. Please take measures to protect us. Sincerely, Mary Emma Gleffe	Liquid nonradioactive releases from SRP operations are governed by a National Pollution Discharge Elimination System (NPDES) permit. This permit limits the nonradioactive releases to limits established by the EPA and State of South Carolina to protect the health and safety of the surrounding population. Wastewater discharges from the proposed L-Reactor restart are discussed in Sections 4.1.1.5 and 5.1.1.2 of the EIS. Radioactive liquid releases are governed by DOE radiation protection standards (DOE Order 5480.1A, Chapter 11) that are comparable to those of the Nuclear Regulatory Comission (10 CFR 20) for a production facility (i.e., 500 millirem to the whole body in any one calendar year). Sections 4.1.2, 5.1.2, and 5.2.6 of the EIS discuss liquid radioactive releases. Also see the response to comment AA-3 regarding DOE's commitment to comply with applicable federal and state environmental regulations.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF JANET T. ORSELLI Radiation Awareness Box 81 Folly Beach, SC 29439 October 21, 1983 Mr. M. J. Sires, III Assistant Manager for Health Safety and Environment U.S. Department of Energy Savannah River Operations Office P. O. Box A Aiken, South Carolina 29801 Dear Mr. Sires: COMMENTS ON THE L-REACTOR DRAFT ENVIRONMENTAL IMPACT STATEMENT	
AP-1	Our organization, Radiation Awareness, is very concerned about the numerous omissions, conflicting information and serious defects in the Draft Environmental Impact Statement (DEIS). From the outset, it is unclear to us why the NUS Corporation was chosen to prepare the DEIS, when their initial Finding of No Significant Impact was denounced as defective and unreasonable by a U.S. District Court Judge.	See the response to comment AB-20 regarding the opinion of the United States District Court and the preparation of the Finding of No Significant Impact.
	CUMULATIVE IMPACTS	
AP-2	During the scoping process, numerous individuals and state and federal agencies requested that the DEIS provide information regarding the routine and accidental releases of radioactivity over the 25-30 year operation of the Savannah River Plant. This information is not provided nor even addressed in the DEIS. As we stated in our scoping letter, "without this vital information, it would be impossible to seriously evaluate the total, cumulative health effects of the L-Reactor restart" (K-97). This data must be made available in the Final EIS.	The purpose of the EIS is to evaluate the environemental consequences of the proposed restart of L-Reactor. Routine and accidental releases of radioactivity from past operations at SRP are covered in the references listed in Chapters 4 and 5. In particular, Appendix A of Environmental Impact Statement, Waste Management Operations, Savannah River Plant (ERDA-1537) contains tabulations of radionuclide releases from the startup of the SRP through 1975. Annual releases since 1975 have been published in a series of publicly available annual reports entitled Environmental Monitoring in the Vicinity of the Savannah River Plant.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	THERMAL DISCHARGE	
AP-3	The DEIS's plan to discharge 176,000 gallons per minute of scalding water into Steel Creek, is totally unacceptable, and is a direct violation of state water quality standards. It appears that the DOE continues to assume it can exempt itself from the water quality regulations that it expects private industry to meet. DOE facilities must be required to comply with federal and state environmental standards, and therefore the Final EIS must provide a comprehensive study of viable, legal alternatives to the plan proposed in the DEIS.	See the responses to comments AA-1 and AA-3 regarding issuance of an NPDES permit for thermal discharge and DOE's commitment to comply with applicable federal and state regulations, and the response to comment AB-13 regarding information on cooling-water alternatives contained in the EIS.
	ECOLOGY	
AP-4	The DEIS's plan to destroy 1000 acres of valuable wetlands and turn Steel Creek stream into a non life-producing mudflat is also an unacceptable solution. The DEIS fails to address how the DOE plans to mitigate the fatal effects which the extremely high thermal temperatures will have on the majority of existing forms of aquatic and other endangered species. The DEIS states that forms of aquatic life such as snakes, turtles, fish larvae, will be destroyed and the endangered American alligator's habitat will be eliminated.	The mitigation of thermal impacts to aquatic and endangered species could be attained through the implementation of alternative cooling systems, which are described in Section 4.4.2 and Appendix I of the EIS. Also see the response to comment AA-1 regarding cooling-water alternatives. The National Marine Fisheries Service has concurred in DOE's determination that the restart of L-Reactor operation will not jeopardize the population of the shortnose sturgeon in the Savannah River. On February 25, 1983, the FWS issued a Biological Opinion on the American alligator (Alligator mississippiensis), which stated that the operation of L-Reactor as proposed (direct discharge, of cooling water) would not jeopardize the continued existence of this species. Since the issuance of this opinion, the Department of Energy has identified the discharge of cooling water to a 1000-acre cooling lake as its preferred cooling-water system for L-Reactor. An updated biological assessment that includes the Department's preferred cooling-water system was transmitted to the FWS at the end of March 1984. Currently, the Department is awaiting the review of this updated assessment by the FWS. The Department anticipates that the FWS review will not alter the prior opinion that the operation of L-Reactor would not jeopardize the continued existence of this species. Also, see the response to comment AD-3 regarding the wood stork.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
AP-5	In addition, the DEIS comments that the increase in water temperature could precipitate the onset of red sore, a bacterium-caused disease that would have serious detrimental effects on the already endangered American alligator. And the DEIS's plan for a winter startup would be fatal to adult alligators that overwinter in shallow water areas. The DEIS doesn't explain what mitigation measures it plans to instigate to protect this species.	Red sore disease is caused by the bacterium Aeromonas hydrophilla, a ubiquitous organism in surface waters in the southeast. Any increased incidence of red sore disease is more likely to be a result of stress on the host organism rather than changes in the bacterium. Alligators are expected to avoid the heated effluent by moving to peripheral unaffected wetland areas.
AP-6	The Final EIS must make this information available and provide information regarding the Biological Opinions obtained from the U.S. Fish and Wildlife Service.	Section 7.3 of this final EIS presents the current status of DOE's consultations with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service.
	GROUNDWATER CONTAMINATION	
AP-7	The DEIS fails to address or explain the causes for the serious contamination of the Tuscaloosa aquifer, and how the wastes will be handled in the future to prevent further contamination. Since the L-Reactor startup will increase by 33 percent the load on seepage basins which are currently leaking toxic chemicals into the aquifer, the question of how this problem will be corrected is a very crucial one. The DEIS tells us that the mitigation of this contamination will be the subject of a separate NEPA review. Our organization feels that this issue not be dismissed until a later date, but must be addressed in the Final EIS.	See the response to comment AJ-1 regarding seepage basins and ground-water contamination at SRP.
	THE NEED FOR THE L-REACTOR	
AP-8	The DEIS miserably fails to comply with the requirements of the National Environmental Policy Act in this area. The DEIS fails to adequately address alternatives to the L-Reactor restart and fails to explain why the restart is crucial at this time.	See the response to comment AB-2 regarding the discussion of need and production alternatives in the EIS.
	CONCLUSION	
	Please send copies of our comments to the preparers of the DEIS, whose names are listed on pages LP-2 through LP-14 in Volume 2.	

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
AP-9	On behalf of Radiation Awareness, I request that a discussion meeting be arranged as soon as possible between consultants with NUS Corporation, State/Federal officials and representatives of commenting organizations, including Radiation Awareness. The purpose of this meeting would be to discuss the failures of the DEIS, which if repeated in the Final EIS would prevent the document from complying with the National Environmental Policy Act. Sincerely, Janet T. Orsellf Research Consultant Radiation Awareness Box 81 Folly Beach, SC 29439 Tel. 803-588-2322	DOE conducted a 45-day public comment period and held four public hearings to receive comments on the Draft EIS. Representatives of DOE were available at the public hearings to discuss any questions following the hearing session.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF MARY G. DABBS October 25, 1983 Dear Mr. Sires, I oppose strongly the resumption of the L-Reactor operation at the Savannah River Plant in Aiken. Please include my position in your response to the decision. Thank you, Mary G. Dabbs 854 Barton Woods Rd, N.E. Atlanta, GA 30307	Comment noted.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF SHERRY W. CLEMENTS	
	Dear Mr. Aiken, I oppose strongly the resumption of the L-Reactor operation at the Savannah River Plant in Aiken! Please include my position in your response to the decision. Yours truly, Oct. 25, 1983 Sherry W. Clements	Comment noted.

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	LETTER OF AGNES H. EVERETT AND CHARLES H. EVERETT	
	Mrs. Charles Henry Everett 4211 Devine Street Columbia, South Carolina 29205	
	October 25, 1983	
	Mr. Melvin J. Sires, III DOE U.S.	
	Dear Mr. Sires,	
AS-1	My husband and I strongly urge--we'd like to demand--that DOE facilities be required to comply with Federal and state environmental standards applicable to commercial reactor sites. and	See the responses to comments AA-3 and AF-1 regarding DOE's commitment to comply with applicable Federal and state environmental regulations and the differences between SRP reactors and commercial light-water reactors.
AS-2	That steps be taken to avoid damage to the environment before start up.	See the responses to comments AA-3 and AF-2 regarding DOE's commitment to comply with applicable Federal and state environmental regulations and to take all reasonable steps to mitigate impacts.
AS-3	We do not want to see more pollution and creation of wastelands in our wetlands.	Comments noted.
	Sincerely,	
	Agnes H. Everett Charles H. Everett	

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	STATEMENT OF ROBERT J. MARSHALL LUTHERAN THEOLOGICAL SOUTHERN SEMINARY 4201 North Main Street Columbia, South Carolina 29203 October 27, 1983 Mr. Melvin J. Sires, III U.S. Department of Energy Savannah River Operations Office Post Office Box A Aiken, South Carolina 29801 Attn: EIS for L-Reactor I continue to be concerned about the way the planned start-up of the L-Reactor at the Savannah River Plant is being managed.	
AT-1	The most recent information indicates that hundreds of thousands of gallons of scalding water will be discharged into Steel Creek in violation of state regulations.	See the responses to comments AA-1 and AA-3 regarding cooling-water alternatives and DOE's commitment to comply with applicable Federal and state regulations, and the response to comment AB-13 regarding information on cooling-water alternatives contained in the EIS.
AT-2	A 33% increase in load will occur for seepage basins that are already leaking toxic chemicals into the Tuscaloosa aquifer. These and other facts represent significant impacts which need to be avoided.	See the response to comment AJ-1 regarding seepage basins and ground-water contamination at SRP.
AT-3	I am convinced that the Department of Energy has not considered adequately all of the options to its present plans. The Department must take public, written and detailed notice of the assessment now being made of the Environmental Impact Statement by many experts.	DOE began preparing the L-Reactor EIS based on comments received on an Environmental Assessment (DOE/EA-0195), comments from the public hearing conducted by the Senate Armed Services Committee on February 9, 1983 (Senate Hearing 98-18), and from the 90-day public review period on the hearing record of the Senate Armed Services Committee hearing (DOE/SR-OE-5007). The final scope of the EIS is based on the substantive comments

Table M-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
		received during the scoping period, including those received at four scoping hearings (Scoping Report for the Environmental Impact Statement, DOE/SR-OE-5008). In developing the EIS, DOE used standard methodologies and relied on scientific and other sources of information compiled from more than 100 publicly available documents that had been developed during the last 30 years, including data from ongoing studies. This final EIS includes discussions of concerns identified by Federal, state, and local agencies, private organizations, and individuals during the EIS public review process. This EIS is available to all interested agencies and the public. After the final EIS is available, DOE will issue a public Record of Decision based on the EIS.
	Please give careful consideration to the welfare of the people in the Southeast. Sincerely, Robert J. Marshall	