

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

Comment number	Comments	Responses
STATEMENT OF SISTER ELLEN ROBERTSON		
BR-1	<p>I'm Sister Ellen Robertson. I'm an Adrian Dominican sister, and I speak as an individual. I would like to briefly address a couple of concerns on the environmental aspect, and basically I believe that the whole thing is being rushed, and with the knowledge we have of things that have happened in other parts of the world concerning nuclear--the materials that go into making nuclear arms.</p>	<p>The Department followed the Council on Environmental Quality regulations [40 CFR 1506.10 (c)] for the comment period on the Draft EIS. The Energy and Water Development Appropriations Act, 1984, allowed the Secretary of Energy to reduce the comment period to 30 days. The Secretary chose not to exercise this option and allowed the full 45-day review period as requested by several comment letters submitted during the scoping period.</p> <p>DOE has made every effort to involve the public in the NEPA process for L-Reactor through several public hearings and public comment periods, including the opportunity to comment on the adequacy of the EIS and the merits of the alternatives discussed in the EIS before it issues the final EIS. DOE will consider all substantive comments before it issues its Record of Decision on this EIS.</p>
BR-2	<p>The rushing into something that can potentially have an impact on people's lives, I believe, has to have serious consideration, and I would hope that the time would be given to study particularly those areas that were brought up in the study and have been brought up by other people as being very questionable concerning the effects on the groundwater and the Savannah River water and the environment that affects the people in the Savannah River Plant area, not just in the immediate area, but downwind.</p>	<p>As stated in Chapter 6 of the EIS, DOE has maintained an intensive surveillance program both onsite and offsite, including beyond the mouth of the Savannah River. DOE maintains sampling stations for air quality, sediment, soil, ground water, vegetation and food, drinking water, aquatic biota, and radionuclide and heavy-metal concentrations downriver from SRP to the mouth of the Savannah River and in several cities and counties in both South Carolina and Georgia to assure compliance with both state and Federal statutes and regulations in environmental protection.</p>
BR-3	<p>There has been a recent study on the effect this has on the unborn, and I would just like to make that recommendation.</p>	<p>See the response to comment AV-8 regarding health effects studies of the population around SRP.</p>
BR-4	<p>My other concern has to do with the need, which is addressed in the document, the need for reopening the L-Reactor. I believe it's a moral question, and the bishops, the National Council of Catholic Bishops in the peace pastoral, "God's peace and our</p>	<p>The national policy on nuclear weapons, their deployment, and the need for increased weapons is beyond the scope of this EIS.</p>

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

Comment number	Comments	Responses
	<p>response," I would like to briefly read from the peace pastoral regarding the use of nuclear weapons for which the L-Reactor is being restarted in order to provide plutonium for more weapons that are going to be made.</p>	
	<p>This is a direct quotation.</p>	
	<p>"We do not perceive any situation in which the deliberate initiation of nuclear warfare on however restricted a scale can be morally justified. Nonnuclear attacks by another state must be resisted by other than nuclear means. Therefore, a serious moral obligation exists to abolish nuclear defense strategies as soon as possible."</p>	
	<p>Thank you.</p>	

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

Comment number	Comments	Responses
STATEMENT OF SISTER MIRIAM BAUERLIN		
	<p>I'm Sister Miriam Bauerlin, a Franciscan, from Maryland.</p>	
	<p>I just want to speak to two points. They are in the area of health and safety.</p>	
BS-1	<p>I read in the newspaper that materials from nuclear weapons that are either unused and will always be unused because they are outmoded can be used for future weapons. I just would like to see that commented on, if that is a possibility.</p> <p>The person who spoke, and I don't remember his name, was a person who is involved in nuclear weaponry.</p>	<p>See the response to comment BL-19 regarding utilization of material from retired weapons to meet new defense nuclear material requirements.</p>
BS-2	<p>Secondly, in regards to the environmental safety, what attention has been given to the security and safety of the states of South Carolina and Georgia in light of the recent Beirut tragedy this country has suffered from a terrorist attack? It would seem to me that although it may be somewhat far reaching to think about that, it could be a possibility of an air, kamikaze-type suicidal attack or other modes that the terrorists can dream up, and therefore, really put Georgia and South Carolina and a few other states totally out of commission.</p> <p>That's it.</p>	<p>See the response to comment BG-9 regarding emergency response planning.</p>

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

Comment number	Comments	Responses
	<p>THE GEORGIA CONSERVANCY</p>	
	<p>Coastal Office 4405 Paulsen Street Savannah, Georgia 31405 (912) 355-4840</p>	
	<p>STATEMENT OF HANS NEUHAUSER AT THE DEPARTMENT OF ENERGY'S PUBLIC HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT ON THE PROPOSED RESTART OF THE L-REACTOR AT DOE'S SAVANNAH RIVER PLANT</p>	
	<p>Savannah, GA November 4, 1983</p>	
	<p>Mr. Chairman, I am Hans Neuhauser, Coastal Director of The Georgia Conservancy. I appreciate the opportunity to present additional testimony on the proposed restart of the L-Reactor. These comments are being made on behalf of The Georgia Conservancy. They are also intended to supplement comments made earlier at previous hearings on this issue and in other communications.</p>	
	<p>Central to the final decision on the restart of the L-Reactor is the question of need. We would like to make it clear that we are not debating the issue of whether there is or is not a need for all the products of the L-Reactor at this time. Nor are we debating the United States' foreign policy, particularly in regard to the role that nuclear weapons play in determining the credibility of this country's relationship with the Soviet Union. We can only assume that the needs are legitimate and that appraisals independent of the Department of Energy and the Administration will verify the conclusions presented in the classified Appendix A.</p>	

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

Comment number	Comments	Responses
BT-1	Assuming that the needs truly exist, then we have to ask whether the immediate restart of the L-Reactor is the only means by which those needs can be met. Are there other ways in which the needs can be met and have less impact on the health, safety and welfare of the citizens of Georgia and South Carolina, and which will have less adverse impact on the environment?	See the responses to comments AB-2 and BL-15 regarding need and production alternatives.
BT-2	After all, we should not have to accept the contamination of our surface and ground water with cesium, cobalt, tritium, and other radioactive and toxic materials if there is a reasonable alternative.	<p>DOE is committed to conducting its operations in a way that ensures the health and safety of the public and the protection of the environment. Thus, considerations affecting the decision to restart L-Reactor operation will include practicable mitigation measures to minimize adverse effects and still meet national defense needs.</p> <p>As noted in Section 4.1.1.5, water quality samples from the Savannah River indicate little variation in measured indicator parameters and chemical constituents between monitoring stations upstream, adjacent to, and downstream from SRP. The EIS assesses nonradiological liquid releases directly to onsite streams and those released to onsite streams via a ground-water path from seepage basins (Sections 4.1.1.5 and 5.1.1.2). Section 5.1.2.7 of the EIS discusses the doses to the public from L-Reactor-related radiological liquid releases. Any radio-cesium and radiocobalt that is remobilized in Steel Creek and transported to the Savannah River will be within EPA drinking water standards (Section 4.1.2.4). Also see the response to comment AA-1 regarding cooling-water mitigation alternatives, the response to comment AA-2 regarding radiocesium and radiocobalt concentrations, and the response to comment AJ-1 regarding seepage basins.</p>
BT-3	We should not have to accept the destruction of 1000 acres of wetlands and important, if not critical, habitat for at least three endangered species if there is a reasonable alternative.	Impacts to wetlands and endangered species are addressed in Sections 4.1.1.4, 4.4.2, 5.2.4, and Appendix I of the EIS. None of the habitats that will be impacted by the restart of L-Reactor have been designated as "critical" by the U.S. Fish and Wildlife Service. Also see the response to comment AA-1 regarding cooling-water mitigation alternatives and the response to comment AY-2 regarding presentation of current information on the status of endangered species in this EIS.

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

Comment number	Comments	Responses
BT-4	We should not have to accept the release of radioactive substances into the air we breathe if there is a reasonable alternative.	The radioactive materials produced and utilized at SRP are contained and handled in an environmentally safe manner. Any radioactive releases to the environment that do occur as a result of normal operations are maintained well below allowable limits. The SRP operating philosophy is to reduce such releases to levels "as low as reasonably achievable" in accordance with DOE guidelines contained in DOE 5480.1A, <u>Environmental Protection, Safety, and Health Protection Program for DOE Operations.</u>
BT-5	We should not have to accept increased risks to our health, our safety and our environment if there is a reasonable alternative.	The EIS contains thorough discussions of risks to the public health and safety and to the environment as a result of the restart of L-Reactor. As contained in the EIS, any exposure of the public to radiation resulting from L-Reactor restart would be minimal compared to the exposure from natural or other manmade radiation sources. The risks due to possible reactor accidents are also small.
BT-6	Is there such a reasonable alternative? The Draft EIS, which is supposed to thoroughly discuss alternatives, does not provide enough information on the viability of alternative approaches. Several alternatives have been presented by others that appear to be able to meet, or approximate, production needs while simultaneously reducing the environmental impacts and risks. One promising alternative is that presented by Dr. Thomas Cochran, a senior staff scientist with the Natural Resources Defense Council. Dr. Cochran's alternative, presented earlier in this sequence of hearings, has four major components:	See the responses to comments BL-15, BL-20, and BL-21 regarding production alternatives. Section 2.1.2.2 of the EIS provides additional information on the environmental effects of N-Reactor operating at a 5-percent plutonium-240 content.
	(1) accelerate the timetable for the use of the Mark-15 fuel lattice at SRP by one year,	
	(2) initiate production of "less than 6 percent plutonium 240" at the Hanford, Washington N-Reactor,	
	(3) accelerate the starting date for the Purex reprocessing plant at Hanford, Washington by two months and	
	(4) include in production calculations the excess plutonium that has been produced over and above goals.	

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

Comment number	Comments	Responses
	<p>Would this or some other combination of production programs meet the needs? The Draft EIS is insufficient in that it does not discuss these alternatives thoroughly enough to allow a prudent judgement. (For example, the Draft EIS notes that the environmental impact of the Hanford N-Reactor operation would have no incremental effect (p. 2-5). Is this true or is this statement made in the same spirit as the "no significant impact" due to the restart of the L-Reactor, which was rejected by all three branches of our government? The details necessary to decide are lacking.)</p>	
BT-7	<p>The Draft EIS is also insufficient because it is contradictory. Examples: The Draft claims (page S-5) that the withdrawal of water for SRP will not affect the availability of water for offsite users. But data presented later (e.g., page 3-28) clearly indicate the growth of a cone of depression in the aquifers under SRP. Savannah has a cone of depression and citizens are well aware that the cone of depression affects the availability of water.</p>	<p>Every pumping well, onsite or offsite, has a local cone of depression. At SRP, these local cones for wells pumping from the Tuscaloosa Aquifer might reach depths of about 12 meters. However, the cones at SRP diminish in depression very rapidly with distance from the pumping wells (Section F.4.3); they are reduced to very small levels before reaching the nearest offsite consumers of Tuscaloosa ground water.</p> <p>As noted in this EIS, the ground-water flux flowing through the Tuscaloosa Formation at and near the Savannah River Plant (Sections F.3.1 and F.4.2) has been conservatively calculated to be 51 cubic meters per minute (Section F.4.2). The total pumpage rate for this area in 1989, including the withdrawal for L-Reactor operation, the FMF and DWPf would be about 37.9 cubic meters per minute (Section 5.2.3). The expected ground-water usage in the area will not exceed available inflow in the foreseeable future. Thus, the SRP usage is unlikely to appreciably affect water levels in offsite Tuscaloosa wells.</p> <p>The declines in water levels in Tuscaloosa monitoring wells are related primarily to increased pumping at SRP, although some of these declines are apparently associated with reduced winter precipitation. Because pumping rates at SRP are expected to be relatively stable over the next six years [23.8 cubic meters per second in 1982, compared to 25.4 and 26.4 cubic meters per second projected for 1985 and 1989, respectively (Section 5.1.1.4 and 5.2.3)] the declines in water levels in the Tuscaloosa Aquifer at SRP are expected to be arrested. As pumping rates change at SRP, new equilibrium piezometric surfaces will develop very rapidly; near equilibrium levels are expected to occur in about 100 days. Thus, pumping at SRP does not appear to have been depleting the aquifer.</p>

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

Comment number	Comments	Responses
		<p>Ground-water withdrawal due to L-Reactor restart, including incremental pumping by support facilities and other SRP facilities, is expected to decrease the water levels in municipal wells at Jackson and Talatha below 1982 levels by 0.4 and 0.1 meter respectively. These projected declines are about one-half the water level fluctuations in Tuscaloosa wells that were observed in 1973 due to increases in winter precipitation. Long-term cyclic changes in Tuscaloosa Aquifer water levels of 2 meters have been observed in wells near SRP (Section F.2.3.2).</p>
BT-8	<p>Likewise, the Draft EIS claims (p. 4-4) that safety considerations override production considerations. Yet, on page S-9, safety system alternatives are rejected because their application will not allow production schedules to be met.</p>	<p>The safety system mitigation alternatives identified in the EIS are for the mitigation of potential consequences from hypothetical reactor accidents, which have a very low estimated probability of occurrence and associated risk. Based on benefit, cost, and technical feasibility, this final EIS has identified the reference case confinement system as the preferred safety system alternative.</p>
BT-9	<p>The Draft EIS is insufficient because it does not contain adequate data. Examples: the impact of a major accident on water quality downstream is not adequately described.</p>	<p>The impact of potential accidents is discussed in Section 4.2. of the EIS.</p>
BT-10	<p>Nor are the operating details of the Reactor Safety Advisory Committee. Who are they? Are they independent or are they toadies of DOE? What authorities do they have?</p>	<p>The Reactor Safety Advisory Committee is comprised of two members of the corporate management of E. I. du Pont de Nemours and Company from the Wilmington, Delaware, offices, two members of the management of the Savannah River Laboratory who are not directly responsible for SRP reactor operations, and three independent consultants who are knowledgeable in the field of nuclear reactor safety. The committee meets several times a year to advise du Pont management on policies and practices related to the safety of SRP reactor operations.</p>
BT-11	<p>The Draft EIS is inadequate because it makes assertions and reaches conclusions without adequate justification. Examples: the adequacy of protection of the public from transportation accidents (p. 4-68) is asserted but without sufficient detail to justify the conclusion.</p>	<p>Section 4.3.1 of the EIS discusses the transportation of material to and from the L-Area, and to and from the SRP site as a result of L-Reactor operation. Safety of the public is ensured through attention to (1) containment of radioactive material, (2) control of radiation loads, (3) prevention of criticality, and (4) protection against theft or sabotage. Criteria vary according to the material being shipped and are covered in the appropriate Department of Transportation, NRC and DOE regulations. Also see the response to comment AY-10 regarding transportation of radioactive materials.</p>

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

Comment number	Comments	Responses
BT-12	Details of the cost and time requirements for building cooling towers are not presented.	The EIS in Section 4.4.2 provides data with respect to costs and implementation schedules for all cooling-water mitigation alternatives considered. The cost and schedule data presented are the best estimates currently available.
BT-13	The Draft EIS is inadequate because it does not consider all the prudent and logical alternatives. Examples: the alternative sources of production has already been mentioned.	Alternative sources of weapons grade plutonium are assessed in Section 2.1 of this EIS. As discussed in this section, no production options or combinations of options can provide the needed defense nuclear materials in the near-term time frame. See also the response to comment BL-15 regarding the L-Reactor restart and partial production options.
BT-14	Alternative oversight mechanisms and authorities are not identified or discussed.	See the response to comment BQ-2 regarding existing oversight mechanisms.
BT-15	These and other inadequacies of the Draft EIS clearly indicate to us that DOE has not done its job. Perhaps things would be different if DOE believed in the legitimacy of the EIS process instead of having to be dragged into it kicking and screaming by Congress, the Administration and the Courts.	DOE has prepared this EIS in compliance with the requirements of the Energy and Water Development Appropriations Act, 1984, and the National Environmental Policy Act of 1969, as amended.
* BT-16	What would we like to see in the Final EIS? In addition to the correction of the above-mentioned deficiencies, we would recommend the following commitments be adopted by DOE. (1) Accelerate production from other alternative sources, assuming that the environmental risks are negligible. (2) Defer the restart of the L-Reactor until such time as the following can be implemented: (i) construction of a cooling water alternative such as cooling towers that would eliminate scalding water discharge into Steel Creek and the numerous environmental impacts that such a discharge creates. (ii) Increase the level of containment at the L-Reactor, especially to provide containment for radioactive gases that can currently escape unaffected by existing controls.	See the response to comment BM-1 regarding the Department of Energy's Record of Decision on this EIS. All of the commitments suggested will be considered by the decisionmaker in arriving at the Record of Decision. Sufficient information on environmental impacts of the alternatives and options is provided in this EIS to enable the decisionmakers to make a reasoned decision. Also see the responses to comments AB-2 and BL-15 regarding need and production options, the response to comment AA-1 regarding cooling water mitigation alternatives, the response to comment BF-7 regarding containment, and the response to comment BQ-2 regarding existing oversight mechanisms.

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

Comment number	Comments	Responses
	<p>(iii) accelerate the closure of all the seepage basins and provide alternative treatment for the L-Reactor waste, so as to avoid further contamination of the ground water and</p>	
	<p>(iv) establish an Independent oversight group consisting of Federal, State and citizen representatives who would work to insure that both the L-Reactor and SRP as a whole would operate in the safest and most environmentally benign method possible.</p>	
BT-17	<p>In conclusion, let me state some of our disappointments. We are disappointed in the inadequacy of the Draft EIS. The present one is not adequate to make wise judgments. We are disappointed in the continuation of the double standard for the L-Reactor. Safety and environmental control standards for the commercial nuclear power industry are not required for the government's L-Reactor. This is especially ironic when one realizes that plans for a new production reactor include cooling towers and a containment dome, but the ancient L-Reactor is deemed not to need them.</p>	<p>See the responses to comments AF-1 and BF-7 regarding differences between SRP and commercial nuclear reactors</p>
BT-18	<p>We are disappointed in the continued desire of DOE to restart the L-Reactor right away when other alternatives appear to be available.</p> <p>And finally, we are disappointed that DOE has not participated in the EIS process in good faith. Many citizens with many different viewpoints have participated in good faith. Is it too much to ask that our government, as represented by DOE, do the same? We do not seek to delay for the sake of delay. We seek delay only until such time as needed safety and environmental quality controls can be implemented.</p>	<p>See the response to comment BT-13 regarding production alternatives.</p>
	<p>Thank you.</p>	

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

Comment number	Comments	Responses
BU-1	<p style="text-align: center;"> SAVANNAH AREA CHAMBER OF COMMERCE "We Mean Business" 301 West Broad Street Savannah, Georgia 31499 (912) 233-3067 </p> <p style="text-align: center;"> STATEMENT FOR THE DEPARTMENT OF ENERGY PUBLIC HEARING ON DRAFT ENVIRONMENTAL IMPACT STATEMENT ON REACTIVATION OF L-REACTOR OF SAVANNAH RIVER PLANT </p> <p style="text-align: center;"> BY KEN MATTHEWS for SAVANNAH AREA CHAMBER OF COMMERCE </p> <p style="text-align: center;"> November 4, 1983 </p>	<p> I am Ken Matthews, a member of the Natural Resources and Energy Management Committee of the Savannah Area Chamber of Commerce. On behalf of our organization, I want to thank you for this opportunity to react to the Draft Environmental Impact Statement prepared by the Department of Energy for the proposed restart of the L-Reactor at the Savannah River Plant near Aiken, South Carolina. </p> <p> As we have told you on previous occasions, we have grave concerns over the Department of Energy's plans for the reactivation and expansion of facilities of the Savannah River Plant. As lay people, however, we feel that we may be unable to adequately evaluate the detailed scientific and technical information contained in the draft Environmental Impact Statement. </p> <p> In accordance with the requirements of the Council on Environmental Quality DOE has attempted to make this EIS as readable as possible for the lay reader, given the technical complexity of the subject. In addition, the Summary has been revised specifically to be readable by the lay public. </p>

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

Comment number	Comments	Responses
BU-2	Clearly, an independent, credible analysis is needed to allay our concerns. As you will recall, these concerns centered around the cumulative effects of the present and proposed facilities of the Savannah River Plant as well as those of contiguous operations such as Georgia Power Company's Plant Vogtle and the Allied General Nuclear Processing Facility in Barnwell, South Carolina.	Section 5.2 of the EIS describes the cumulative effects of present and proposed SRP facilities and those of other nuclear operations in the vicinity of SRP.
BU-3	We are also concerned about the effective control of radioactive substances in the existing facility as they might affect the quality of groundwater, riverwater, and the air.	Releases of radioactive materials from L-Reactor and its support facilities are described in Sections 4.1 and 5.1 of this EIS. Releases from the entire Savannah River Plant are controlled to the extent practicable. Materials that are released have a very small radiological impact on the offsite population. The amounts of releases and their radiological impacts on the population within an 80-kilometer radius and on downstream consumers of Savannah River water are published in an annual series of reports available to the public, entitled: <u>Environmental Monitoring in the Vicinity of the Savannah River Plant</u> . The most recent of these reports, for 1982, is DOE document DPSPU-83-30-1.
BU-4	We have therefore asked that the Georgia Environmental Protection Division and the federal Nuclear Regulatory Commission be requested to review the draft Environmental Impact Statement. We feel that these organizations have the technical expertise and political independence to make an informed evaluation of the EIS that could be accepted by lay people as well as political leadership. Until these agencies have had the opportunity to conduct the independent analysis of the EIS that we have proposed to allay our concerns, we would ask that the reactivation of the L-Reactor be delayed.	The Georgia Department of Natural Resources, the South Carolina Department of Health and Environmental Control, the Nuclear Regulatory Commission, and other Georgia, South Carolina, and Federal agencies received copies of the EIS. As required by the Energy and Water Development Appropriations Act, 1984, the EIS was developed in consultation with the States of Georgia and South Carolina. DOE provided working drafts of the EIS to the states, met with their representatives, and incorporated their comments into the EIS.
	Once again, we appreciate this opportunity to express our views and assure you that we recognize and fully support the interests of the United States with regards to national defense. However, we ask that the nuclear development in and around the Savannah River Plant not be expanded further without a very thoughtful, independent analysis of the issues that have been raised and their potential effects on the communities and people of the Savannah River Basin.	

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

Comment number	Comments	Responses
	STATEMENT OF	
	SISTER CHARLENE WALSH, R.S.M. 207 E. Liberty St. Savannah, GA	
	DRAFT ENVIRONMENTAL IMPACT STATEMENT, L-REACTOR OPERATION, SAVANNAH RIVER PLANT November 4, 1983	
	I would like to make two comments under the heading: Health and Safety.	
	In the DRAFT ENVIRONMENTAL IMPACT STATEMENT, L-REACTOR OPERATION, SAVANNAH RIVER PLANT-Vol. 1, September, 1983, there is a twelve (12) page section devoted specifically to STUDIES AND MONITORING PROGRAMS connected with the Savannah River Plant.	
	Here are listed hundreds of monitoring sites and programs for tracing the radionuclide content of air, water from five streams that flow to the Savannah River, ground water, soil, grass samples, other vegetation, milk, food, drinking water for Port Wentworth and two South Carolina counties, atmosphere, rainwater...	
	Besides these hundreds of checks for radionuclide content, there are federal and state monitoring programs for harmful nonradiological materials in the air, surface water, aquatic organisms, and ground water.	
	There is mention of ongoing studies relating to cooling-water intake and discharge, wetland effects, effects on fisheries, endangered species, and five archeological sites.	
	All this and more to reassure us that we have Mother Nature well under control. I am not reassured! Why this great expenditure of money, time, and scientific expertise, I ask, unless the dangers to us are equally great?	

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

Comment number	Comments	Responses
BV-1	<p>One paragraph from this section of the Environmental Impact Statement stays in my heart and contributes to my opposition to the restart of the L-Reactor and to the SRP. The last paragraph on 6-8 refers to two studies being conducted on SRP workers--a morbidity and mortality study of radiation workers and a health effects study of plutonium workers. I quote: "Both ... are in the early data collection and validation phase. Because these are comprehensive studies, results will not be available for several years."</p> <p>When the studies are complete, the damage will have been done! Citizens of Georgia and South Carolina need only recall the reassurances given the citizens of Nevada, Utah, and Arizona, and the errors exposed by a subsequent Congressional Oversight Committee. I call for such an oversight committee to be assigned this project.</p> <p>My second point relates to Health and Safety also. It has to do with the daily health and safety of the poor. The plutonium produced by the restart of the L-Reactor will be used to carry out the Pentagon's plans for producing weapons with first strike capability. Billions of dollars will continue to be spent as the arms race continues! The virtue of patriotism causes me to challenge the restart of the L-Reactor with the words of the Pope and Catholic Bishops of the world at the Second Vatican Council: "The arms race is one of the greatest curses on the human race and the harm it inflicts upon the poor is more than can be endured."</p>	<p>At the levels of radiation exposure received by Savannah River Plant radiation workers, no detectable health effects are expected; this belief is based on studies by the National Academy of Sciences Committee on the Biological Effects of Ionizing Radiation (<u>The Effects on Populations of Exposures to Low Levels of Ionizing Radiation</u>, National Academy of Sciences, Washington, DC, 1980). However, to ensure that no unexpected health effects are overlooked, studies are under way of the morbidity and mortality of SRP workers and of health effects of plutonium workers. Appendix B of the EIS addresses the effects of low-level exposure to radiation.</p> <p>DOE has asked the Centers for Disease Control, Atlanta, Georgia, to convene a panel to review the SRP epidemiological studies. This panel, which includes epidemiologists from the health departments of Georgia and South Carolina, held its first meeting to review ongoing studies on October 25 and 26, 1983. DOE plans to continue the ongoing studies and to implement any additional studies recommended by the panel.</p>

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

Comment number	Comments	Responses
STATEMENT OF CHARLES MILMINE, INDIVIDUAL		
	<p>Good morning. I am here this morning to address this hearing because I feel it is the responsible thing for me to do. I am afraid that I do it with the feeling that the DOE will little note nor long remember what I and some others will try to contribute to the decision-making process.</p>	
	<p>I address you again with a feeling of inadequacy. I make no claim to being a nuclear physicist. That is not to say that I do not seek better understandings and truth in this area.</p>	
	<p>Education and communication are two of my interests. As one vitally interested in the decisions you make, I am perhaps as interested in the decision process as I am in the decisions themselves.</p>	
	<p>We live in a time of great technological change. Quite often decisions regarding the use of this technology are made by men and women like yourselves who have been entrusted with the authority, whether by political design or political default.</p>	
	<p>The assumption of this authority carries with it the assumption of implied power. It is the arrogant display of this power that promotes my interest in the environmental consequences of the restart of the L-Reactor. I am still of the belief that our government is instituted among men deriving its power from the consent of the governed. I am concerned that as a result of our actions and inactions we may become a government of technocrats, by technocrats and for the people.</p>	
	<p>I find that I must repeat my request for a genuine effort on your part to reach the technologically disenfranchised. The citizens who are not here because they have little comprehension of the start up of the L-Reactor are the critical mass I wish you would concern yourselves with.</p>	
	<p>I am not suggesting that you continue to passively respond to requests for information. I maintain that most citizens are</p>	

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

Comment number	Comments	Responses
BW-1	<p>either too intimidated by that process or just don't know how to formulate a question. I would like to see an active educational effort using existing facilities, such as science centers, schools and public television. The objective of your educational efforts would be to achieve a critical mass of people that is capable of asking intelligent questions and providing constructive suggestions.</p> <p>I feel that this educational effort has to be a positive one. Sitting back and answering requests for information is certainly the path of least resistance. However, it is bound to lead to frustration within the critical mass and the result could be counterproductive from your point of view. I wonder if the return on your investment would not be greater on an active education program than on the passive investment in education you are now making.</p>	<p>To the extent practicable, due to cost and security, DOE has attempted to distribute information to the public about the activities of the Savannah River Plant. During the last 6 years, DOE has published four EISs and two EAs with numerous references that are publicly available, as well as many studies by the Savannah River Ecology Laboratory and the Savannah River Laboratory.</p>
BW-2	<p>To avoid the criticism you fear from people who think you are "promoting nuclear energy and promoting nuclear matters," whatever they are, I repeat my suggestion for the formation of a citizen's committee given the responsibility of overseeing the educational effort.</p>	<p>See the response to comment BQ-2 regarding existing oversight mechanisms.</p>
BW-3	<p>I also believe that this or another citizen committee should be involved in reviewing your environmental monitoring program. I see too much in-house or closely-controlled monitoring proposed. I also see the names of a select few outside organizations doing repetitive monitoring. I understand that some of the data from the monitoring find their way into scientific journals where sampling techniques and results are scrutinized. I am more concerned about those data that do not make it to the journals for, perhaps, national security reasons. I am also concerned that the monitoring of the citizens (health, etc.) is not done on a regular scientific basis.</p> <p>You have said that you did not think it was a wise use of the taxpayers' money to have one government agency review the work of another. One person commented here back in May that she did not mind her money being used for that purpose, and I concur.</p>	<p>The States of South Carolina and Georgia and the EPA conduct monitoring in the vicinity of the SRP. The results of their monitoring are consistent with SRP data. Section 5.2 describes cumulative effects from SRP facilities and other plants within the immediate vicinity of SRP.</p> <p>All documents referenced in this EIS are available for public review in the DOE public reading rooms in Aiken, South Carolina, and Washington, D.C. Also see the response to comment BW-1 and the response to comment AB-2 regarding disclosure of classified information.</p> <p>DOE will comply with all applicable Federal and state regulations on environmental protection. DOE is committed to consider, evaluate, and implement measures to improve safety and health protection at SRP; this includes long-term</p>

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

Comment number	Comments	Responses
	<p>I always thought that a system of checks and balances was a good idea in our government.</p>	<p>epidemiological studies that currently are being evaluated by the Centers for Disease Control, Atlanta.</p> <p>Also see the response to comment BQ-2 regarding existing oversight mechanisms.</p>
BW-4	<p>I wonder if the citizen's committee could not assist in reviewing the data from the monitoring program. I'm talking about reviewing field sampling techniques and interpretation of data. I notice, for instance, that you say that the Environmental Assessment listed a figure of 46 curies of cesium that would be washed out of Steel Creek in the first 14 years of operation. Now, improved estimates indicate there would be on the order of 14 curies. I would like to know why the estimate was changed. I would also like to know how and why the estimate was changed. I would feel better that there will not be similar changes in estimates in the future. I would just feel better if an independent reviewing authority was involved.</p>	<p>See Section D.4.3 of the EIS.</p>
BW-5	<p>In sum, I remain concerned about the critical mass of people who are not here today. I have two constructive suggestions to remedy the situation. One: Embark on an active and balanced educational effort aimed at involving more intelligent people in the decisions you are entrusted to make. Two: I repeat my suggestion of a citizen's committee with oversight responsibilities for some of your operations with the objective of lending credibility to your decisions.</p>	<p>See the response to comment BW-1 regarding publicly available information and the response to comment BQ-2 regarding independent monitoring by the States of South Carolina and Georgia.</p>
<p>Respectfully Submitted,</p>		
<p>Charles E. Milmine</p>		
<p>2427 Easy St. Savannah, GA 31406-4229 (912) 355-5522</p>		

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

Comment number	Comments	Responses
STATEMENT BY		
JAMES D. HOWARD P.O. Box 13687 Savannah, Georgia 31416		
4 November 1983		
Concerning The L-Reactor Environmental Impact Statement		
	<p>I am deeply troubled as are many others in coastal Georgia with the operations at the Savannah River Plant (SRP). Although I am speaking in response to immediate concerns about the restart of the "L" reactor, this also relates to the overall SRP operation.</p>	
BX-1	<p>I do not believe the present modus operandi of SRP is as safe an operation as it easily could be. Specifically, I believe the L-reactor and all other reactors should be retrofitted with containment domes and cooling towers and an adequate permanent waste storage facility.</p>	<p>See the responses to comments AA-1 and AB-13 regarding information provided in the EIS on cooling-water mitigation alternatives, the response to comment BA-5 regarding high-level radioactive waste, and the response to comment BF-7 regarding differences between SRP and commercial nuclear reactors.</p>
	<p>You of the Department of Energy (DOE) claim the towers and domes are not needed because of the size and type of reactors at SRP. However, we both know that if any agency other than the federal government put a reactor in operation they would be forced to take these safety precautions. Surely if it is necessary to have a multi-billion dollar defense budget, part of which will create more nuclear weapons material and associated high-level nuclear wastes, it is reasonable to expect that the production of that material be done in the safest way possible.</p>	
BX-2	<p>A second point that concerns me is the propensity of your agency (DOE) and its predecessor organization (AEC and ERDA) for not telling the truth to the American people. In the case of the SRP operation you claim the operation is safe and clean but there is very little in your past history to justify believing you can be trusted to tell the truth or to believe</p>	<p>See the response to comment BQ-2 regarding independent monitoring.</p>

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

Comment number	Comments	Responses
	<p>that you will not mislead us if it is more convenient. For this reason I believe there should be an independent oversight committee established to oversee and monitor the present and future operations of the SRP.</p>	

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

Comment number	Comments	Responses
	<p>Statement of the League of Women Voters of Georgia at the Public Regional Review of</p>	
	<p>DRAFT ENVIRONMENTAL IMPACT STATEMENT L-REACTOR OPERATION, SAVANNAH RIVER PLANT AIKEN, S.C.</p>	
	<p>Held at the DeSoto Hilton Hotel Savannah, Ga. November 4, 1983 9:00 a.m. and 6:00 p.m.</p>	
	GENTLEMEN:	
	<u>Introduction of myself</u>	
	<p>I am Geraldine LeMay, chairman of the Natural Resources Committee of the League of Women Voters of Savannah-Chatham County and formerly chairman of the Energy Committee of the League of Women Voters of Georgia. Mrs. Lee Wash, president of the Georgia League, has asked me to represent her in speaking for the state League at this hearing. Care for the environment is a major concern of the League, and the League of Women Voters of the U.S. In its policy toward energy development and implementation takes the position that "environmental protection is a primary consideration."</p>	
	<u>My previous appearances at Savannah River Plant hearings</u>	
	<p>This is my fourth time to represent the Georgia League of Women Voters at a public hearing on the proposed reactivation of the L-Reactor at the Savannah River Plant. My earlier comments were concerned with the need for an Environmental Impact Statement (EIS) and recommendations on the process of its development and desirable goals for the EIS. Today I am pleased that the draft EIS has now been issued. I have some comments on its findings.</p>	

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

Comment number	Comments	Responses
<u>Comments on the findings of the DEIS</u>		
1. Need for the operation of the L-Reactor		
BY-1	The report provides very little information related to the need for the operation of L-Reactor at this time. Statements regarding the need to produce more plutonium are based on classified information contained in Appendix A, which is not available to the general public, so no definite substantiation of need is provided by the DEIS.	See the response to comment AB-2 regarding information on need for defense nuclear materials in the EIS and the information available to decisionmakers.
2. Production alternatives		
BY-2	The study of production alternatives was not adequate. The draft did not even consider such an alternative as speeding up the recovery of obsolete warheads, a proposal advanced by Sen. Nunn and Rep. Thomas and approved by President Reagan. Recovery of plutonium from commercial power reactor spent fuel also was not considered as a viable alternative because of timing considerations and legislation prohibiting such use of fuel produced in commercial reactors. These alternatives deserve consideration since they might help to alleviate two problems connected with the nuclear energy program, by 1) increasing the supply of weapons grade materials and 2) reducing the size of the nuclear waste now in storage.	The conversion of spent commercial reactor fuel into weapons-grade plutonium is currently prohibited by law (Atomic Energy Act of 1954, as amended, 42 USC Section 2077(e)1). Legislative removal of this prohibition is not considered a reasonable alternative to the restart of L-Reactor as a source of weapons-grade plutonium. This policy determination was passed by Congress in December 1982 which reaffirmed the position of strict separation of nuclear defense and commercial activities established by the Atomic Energy Act in 1954. Moreover, when the House of Representatives was specifically asked in December 1982 to reject the prohibition drafted by the Senate, the House overwhelmingly refused to do so by a vote of 281 to 107 (U.S. Cong. Rec., Volume 128, pages H8816-8817, December 2, 1982). The anticipation that such a strong and recent statement of policy would be reversed in the near future is unreasonable. The recovery of material from retired warheads is included in the annual Nuclear Weapons Stockpile Memorandum. Additional information on production options has been added to Sections 1.1 and 2.1 of this EIS.
3. Water pollution at the SRP		
BY-3	The DOE states that organic solvents have seeped from chemical settling basins at the SRP and have contaminated groundwater supplies at the plant and that traces of the contaminants have also been found in the Tuscaloosa Aquifer, a major source of drinking water for Georgia and South Carolina. The Senate, with Senator Thurmond as principal sponsor, has ordered the expenditure of funds to clean up the pollution, to phase out some	See the responses to comments AJ-1 and BG-4 regarding the use of seepage basins and DOE commitments for ground-water protection.

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

Comment number	Comments	Responses
	<p>seepage basins now in use and to build a new treatment plant properly to process waste water, this to be done within twenty-four months of the final approval of the project. In line with this directive, if it is decided to place the L-Reactor back in operation, the DOE, with proper concern for the health of the people of the area, should delay its start-up, with the added volume of waste water this will bring, until after the waste water treatment plant is operable and the use of seepage basins is reduced.</p>	
	<p>4. Public safety and environmental protection</p>	
BY-4	<p>The DOE is required by law to consider seriously all options to minimize damage to the public health and to the environment. To this end it has been suggested that cooling towers and a containment dome should be built at L-Reactor, and Senator Mattingly earlier expressed concern about an L-Reactor without such safety features. The draft EIS dismisses such suggested alternatives, saying either they will not allow DOE to meet production schedules or that they are too costly. Congress has, however, shown by its action on the wastewater treatment plant that it considers justifiable the expenditure of funds to enhance public safety and environmental protection.</p>	<p>The EIS presents the analyses for all mitigation alternatives, including cooling and safety systems, in Sections 4.4.1 and 4.4.2 of the EIS. Also see the responses to comments AA-1 and AB-13 regarding information contained in this EIS on cooling-water mitigation alternatives, the response to comment BF-7 regarding a containment dome, and the response to BM-1 regarding the Department of Energy's Record of Decision on this EIS.</p>
	<p><u>Requests for action</u></p>	
BY-5	<p>1. To provide the protection which is due to all citizens in South Carolina and Georgia living in an area where air and water quality could be affected by the L-Reactor reactivation the DOE facilities should be required to meet the federal and state environmental standards which apply to commercial reactors.</p>	<p>See the responses to comments AA-3, and BF-7 regarding DOE's commitment to comply with applicable federal and state regulations and the differences between SRP reactors and commercial light-water reactors.</p>
BY-6	<p>2. If the final decision is to reactivate L-Reactor, before start-up all feasible steps to avoid damage to the environment should be taken.</p>	<p>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 environmental protection regulations.</p>
BY-7	<p>3. To avoid the criticism or the actuality of a biased approach DOE should establish an independent oversight committee in line with the recommendations made by the plaintiffs in a lawsuit about the EIS. Such a committee would oversee studies and mitigation measures. The need for such a committee is made</p>	<p>See the response to comment BQ-2 regarding independent monitoring by the States of South Carolina and Georgia, and the response to comment AB-20 regarding the opinion of the U.S. District Court and the preparation of the <u>Finding of No Significant Impact</u>.</p>

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

Comment number	Comments	Responses
BY-8	<p>especially desirable because the DOE used for the preparation of the DEIS the same company which conducted the earlier environmental assessment, whose conclusion of no significant impact from the reactivation of the L-Reactor was termed by U.S. District Judge Thomas P. Jackson "unreasonable" and an "abuse of discretion."</p> <p><u>My conclusion</u></p> <p>If the EIS does point to the likelihood of serious harm to people and to the physical environment, the L-Reactor should not be put back into operation. The health and safety of the people who live and work in the area should be accepted as infinitely more valuable than the millions of dollars invested in an idle nuclear reactor. The L-Reactor should not again be placed in operation if doing so will lower the quality of life for the people who live in its immediate area in South Carolina and Georgia and along the Savannah River below the plant site.</p> <p style="text-align: right;">Geraldine LeMay</p>	<p>See the response to comment BM-1 regarding the Department of Energy's Record of Decision on this EIS.</p>

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

Comment number	Comments	Responses
BZ-1	<p>Statement of Virginia Brown, citizen, before the Department of Energy at a Public Hearing at Savannah, Georgia, November 4, 1983, on the Environmental Impact Statement regarding the restart of the L-Reactor at the Savannah River Plant, Aiken, South Carolina.</p> <p>I am not reassured by the message in the recently released EIS on the reactivation of the L-Reactor. It seems to me to accept the fact that reactivation will damage the surrounding environment; to send the message that little can be done about it; and to say that, even if something could be done, nothing will be.</p>	<p>The purpose of the Environmental Impact Statement is to analyze the environmental consequences of the proposed restart of L-Reactor in accordance with the Energy and Water Development Appropriations Act, 1984, and the National Environmental Policy Act (NEPA) of 1969, as amended.</p> <p>DOE will prepare its Record of Decision based on the EIS and on other studies on the need for defense nuclear materials. DOE will consider all alternatives in reaching its decision, including environmentally preferable alternatives and preferences for alternatives based on the technical, economic, and statutory mission of the agency; DOE will also determine whether all practicable means to avoid environmental effects from the selected alternative have been adopted. DOE will comply with all applicable Federal and state regulations on environmental protection.</p>
	<p>Recently, I read, in the Christian Science Monitor, a page and half of interview¹ with a modern American farmer. Better than I can, myself, his words express my consternation with the drift of philosophy that is evidencing itself in recent years among certain segments of United States society.</p>	
	<p>NOTE 1: Letters from an American farmer, 1983, Wendell Berry, Port Royal, KY, to Christian Science Monitor staff writer, Robert Marquand, Jr.</p>	

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

Comment number	Comments	Responses
BZ-2	<p>This farmer was assessing the impact that an energy producing plant would have on his locality. He said, in part,</p> <p>"(The people who are in charge of the plant) activities do not live here and so do not have to worry about its safety. Their indifference to its impact, and their indifference to its safety has been a matter of public record from the beginning.</p> <p>"Safe use of any technology should be personally guaranteed by the members of the board of trustees and directors--that is, they should be personally liable to prosecution if their guarantees fail.</p> <p>"(The fact) that dangerous power--nuclear and otherwise--can be used without such guarantees not only constitutes an intolerable threat to public health and welfare, but is a kind of technological politics that is totalitarian in implication.</p> <p>"Free enterprise is defensible only when used by people wholeheartedly committed to the welfare of their neighbors, neighbors being any who live within reach of the consequences of one's acts. The interest of neighbors should take precedence over the interests of stockholders, business partners and allies, preferred customers, etc. One of the duties of our government, as constituted, is to assure that precedence."</p>	<p>The Savannah River Plant is owned by the U.S. Government and operated by Du Pont without fee. Ninety-seven percent of the SRP employees, including DOE and Du Pont management personnel reside in the 13 counties surrounding the Plant. Safety and environmental factors are major components of operating the SRP. The SRP is operated in the safest possible manner with releases controlled to as low as reasonably achievable levels that are well within applicable standards. The owners/operators understand the responsibility for safety and prudent operation of the SRP.</p>

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

Comment number	Comments	Responses
<p>THE LEAGUE OF WOMEN VOTERS OF SAVANNAH-CHATHAM 321 E. York St. Savannah, Georgia 31401</p>		
<p>STATEMENT BEFORE THE DEPARTMENT OF ENERGY AT A PUBLIC HEARING AT SAVANNAH, GEORGIA, NOVEMBER 4, 1983, ON THE ENVIRONMENTAL IMPACT STATEMENT REGARDING THE RESTART OF THE L-REACTOR AT THE SAVANNAH RIVER PLANT, AIKEN, SOUTH CAROLINA</p>		
<p>I am Virginia Brown, member of the Environmental Quality Committee of the League of Women Voters of Savannah-Chatham.</p>		
<p>The League of Women Voters "believes that government should be responsive to the will of the people...allowing them to share in the solution of...problems which affect the general welfare."</p>		
CA-1	<p>The Savannah-Chatham League believes that, in the case of the Savannah River Plant, the original decision to build this plant in our area was not made locally; that the decision was made without the participation of those who would be directly affected environmentally. That lack of citizen input on decision-making should not continue, the League believes. Further development of the plant, such as reactivation of the L-Reactor should only be accomplished after local people have shared in that decision.</p>	<p>Any decision to operate L-Reactor will be made in accordance with the provisions of the National Environmental Policy Act including those which involve public participation.</p>
CA-2	<p>The League also wonders if the manufacture of additional nuclear fuel for weapons of war is conducive to the promotion of world peace to which principle the League is committed.</p>	<p>The national policy on nuclear weapons, their deployment, and the need for increased weapons is beyond the scope of this EIS.</p>
CA-3	<p>In April of 1982, a national public opinion poll reported that 58 percent of the sample surveyed agreed with this statement: "Protecting the environment is so important that requirements and standards cannot be too high, and continuing environmental improvements must be made regardless of cost."</p>	<p>The Department of Energy will consider all factors--cost, schedule, environmental impacts including health and safety, national security, and DOE's statutory mission in formulating its Record of Decision.</p>

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

Comment number	Comments	Responses
CA-4	<p>The League urges decision makers to heed this expression of concern.</p> <p>The League of Women Voters believes that "special attention must be given to solving waste disposal problems associated with nuclear energy sources."¹</p> <p>We are concerned about the "waste" that is to come out of the plant as heat in water discharges to pollute nearby streams; the "waste" that comes out of the plant of both chemical and radioactive discharges to pollute the air and water; and the "waste" that comes out as radioactive solids with no proved, safe storage techniques to keep it from eventually polluting the environment.</p> <p>To lessen the impacts of the above listed environmental impacts, the League supports the use of adequate safeguards including containment of air and water pollution; cooling of discharged hot water before being channeled into the natural water courses; and, delaying of the restart until some reliable, safe way is found to store nuclear wastes.</p>	<p>The impacts of nonradiological and radiological releases from L-Reactor are described in detail in Sections 4.1.1 and 4.1.2 of the EIS. The "wastes," in the form of heat in water discharges and chemical and radioactive discharges, are regulated by state and Federal permits. As noted in Section 5.1.2.8, the volume of high-level radioactive waste to be generated by chemical processing of L-Reactor material was considered in the EIS for the Defense Waste Processing Facility (DOE, 1982). DOE will comply with all applicable state and Federal regulations on environmental protection. Also see the response to comment AV-2 regarding high-level radioactive waste.</p>
	<p>¹ IMPACT ON ISSUES, 1982-1984, the League of Women Voters of the United States, copyrighted 1982.</p>	

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

Comment number	Comments	Responses
STATEMENT OF WOLFGANG BENGTSSON		
	<p>The Savannah River Plant doesn't have to restart L-Reactor operations. My reasons for this statement are:</p>	
CB-1	<p>The plutonium produced during L-Reactor operations is supposed to be used as nuclear explosive in mostly middle range Euro-missiles. To me the resumption of L-Reactor operations means an intimidating attempt during the still lasting Geneva negotiations. It anticipates a failure in those negotiations between the United States of America and the USSR. The responsible party for the restart of the L-Reactor, currently the Reagan administration, seems to prepare a build up of nuclear warheads to hasten the deployment of missiles in case of a failure of the US-USSR-negotiations on Euro-missiles. This might--in my opinion--harden the position of the Russian party and goad them to prepare similar action to produce more warheads. This path is well known as a part of the so called arms race and might well precipitate an evitable disaster.</p>	<p>The national policy on nuclear weapons, their deployment, and the need for increased weapons is beyond the scope of this EIS.</p>
	<p>Even after a temporal failure in Geneva in serious and genuine negotiations there is no need, in my opinion, to restart L-Reactor operation. By the way, from my point of view, there is neither a sign of failure nor one of genuine negotiations at Geneva. But nuclear material might be gained by reworking discarded warheads and reprocessing the aged nuclear explosives. Reprocessing nuclear waste of working nuclear power plants will give an additional amount of plutonium. From my knowledge all the requirements to match this scenario are fulfilled. Therefore enough nuclear explosives for truly necessary missiles are available without restarting a very special plutonium producing reactor.</p>	
CB-2		<p>See the responses to comments BL-19 and BY-2 regarding utilization of material from retired weapons and commercial reactors.</p>
CB-3	<p>Another factor might provide against the L-Reactor's restart. The more "fresh" plutonium is produced for nuclear warheads the more aged material due to the radioactive decay has to be taken care of. Care in this case means storage over centuries. But there is no secure storage possibility. Even after glassification--which by now is still in a process of research and approval and has led to no reassuring results--the radioactive waste still produces heat and, thus, is able to change geological properties of the storage site. Storage in water basins or</p>	<p>The plutonium from retired weapons systems is routinely reused in new weapons systems.</p> <p>As described in Section 5.1.2.8 of the EIS, the high-level radioactive wastes associated with L-Reactor operation will be stored temporarily in existing multibarrier waste tanks at the Savannah River Plant. The concentration of fissionable material in SRP waste is below that required to produce a critical mass. Beginning in 1990, this waste will be solidified into</p>

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

Comment number	Comments	Responses
	<p>artificial pools is not a secure possibility, either. This is obvious because of its dependence on stirring and cooling which again may fail related to electrical and other problems. If the cooling and stirring system or either of them fails to work properly, the critical mass of radionuclides is readily achieved.</p> <p>All this leads to my opinion that a restart of L-Reactor operations in general and especially at this very crucial period of this century is unnecessary and might even be disastrous.</p>	<p>borosilicate glass waste forms in the Defense Waste Processing Facility. The engineering design and assessment for the waste forms and for the DWPF are essentially complete; groundbreaking for the DWPF was held on November 8, 1983. The borosilicate glass waste forms will be placed in temporary storage onsite and then placed in a deep-mined Federal geologic repository. Heat production from the relatively dilute SRP high-level wastes is quite low, about 100 to 500 watts for each ton-and-a-half DWPF borosilicate glass waste canister.</p>

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

Comment number	Comments	Responses
STATEMENT OF WIEBKE BENGTTSSON		
	<p>I am worried about the environmental aspects and the affection on public health, that a restart of the L-Reactor would have. Moreover I am very concerned about the emergency plans which will come into action after a reactor accident.</p>	
CC-1	<p>A high radiocaesium concentration in surface sediments of the Steel Creek down to the delta are reported in the EIS (>10 pCurie per square meter). At the Savannah River, sediments have essentially higher concentration of radiocaesium downstream of the SRP than upstream. It is not very reasonable to believe that the concentration will drop with the resumption of L-Reactor operations. In natural habitats there is an enrichment of radionuclides in plants and animals as passing along the food chain. As a mother of a three month old baby I am worried about the effects of radioactive nutrition on my children and on their children. Our knowledge about the critical level of radionuclides in food equals almost zero, but we know that nuclear radiation has a powerful impact on lethal and sublethal mutations in animals. Moreover the authors of the EIS admit that the radiation released from SRP at normal operation <u>without a working L-Reactor</u> is more than double the amount of <u>all other nuclear facilities</u>. After a restart of the L-Reactor the level of radiation is not likely to decrease. Although this is so-called low level radiation there is no proof that this radiation is not dangerous. In the very few research studies on this subject there is an indication, that long term exposure to low level radiation affects the genotype of animals. The alteration in chromosomal appearance and behavior during cell division may occur not until the first generation after the exposure. In a situation when we do not know if low level radiation.....another low radiation source.</p>	<p>Bioaccumulation is discussed in Appendixes B and D and is also taken into account in the dose calculations presented in Section B.3. According to the practice of the Nuclear Regulatory Commission, infants are assumed to eat small amounts of fish and should receive a negligible dose from this pathway.</p>
CC-2	<p>See the response to comment BF-6 regarding radiation protection standards and the estimated maximum annual health effects associated with L-Reactor and its support facilities.</p>	<p>See the response to comment BF-6 regarding radiation protection standards and the estimated maximum annual health effects associated with L-Reactor and its support facilities.</p>
CC-3	<p>I think there is still another very important reason to--at least--postpone the restart of the L-Reactor. What I learned from EIS about the emergency plans which come into action after a reactor's failure is that they are classified or at least not easy to get for the public. In case of an accident people will panic if they do not know the proper emergency plan. If there should be the need of an evacuation authorities might not be</p>	<p>All emergency plans developed for offsite responses to SRP incidents are readily available from cognizant Federal, state, and local agencies. Federal plans encompassing the responsibilities of the Federal Emergency Management Agency, the Inter-agency Radiological Assistance Plan, and Emergency Management Plans for the Department of Energy can be obtained from the DOE Savannah River Operations Office. State general and</p>

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

Comment number	Comments	Responses
	<p>able to handle the throng. According to the EIS there is only one hospital where the personnel might be able to deal with radioactive decontamination.</p>	<p>site-specific plans for the SRP can be obtained from the Georgia Emergency Management Agency or the South Carolina Emergency Preparedness Division. County plans can be obtained from each county emergency preparedness director. None of these plans is classified. Persons residing within the emergency planning zones will be informed of the planning for responses to radiological emergencies in their areas. Workshops will be conducted to delineate responsibilities and appropriate actions to be taken. Each plan will include the identification of services available, including decontamination, first aid, shelters, hospitals, and security. Agreements with and training for organizations providing special services are part of the plans. Several hospitals in the SRP area are capable of handling contaminated patients.</p>
CC-4	<p>But I want to stress the fact that there is no possibility of dealing with radiation diseases. There is no cure from exposure to radiation in case of an SRP-accident. How are people supposed to be treated who have a radiation disease? They should know it. But by now there are almost no information about that according to the EIS.</p>	<p>No acute offsite effects should result from either routine operation of L-Reactor or hypothetical accidents. See Section G.3.3.1 of the EIS.</p>
CC-5	<p>The public should have full access to all emergency and evacuation plans. As long there is no full information about those plans the restart of the L-Reactor should be put off.</p>	<p>See the responses to comments AY-11 and CC-3 regarding emergency response plans and where these can be obtained.</p>
	<p>... and how a possible accident may affect their personal health.</p>	

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

Comment number	Comments	Responses
<p>STATEMENT OF WILLIAM McLAUGHLIN ON DRAFT ENVIRONMENTAL IMPACT STATEMENT L-REACTOR OPERATION</p>		
<p>DeSoto Hilton Hotel November 4, 1983</p>		
<p>My name is William McLaughlin. I have presented testimony on the need for a complete and environmentally sound Environmental Impact Statement on the L-Reactor in Augusta, and here in Savannah. I congratulate the Department of Energy for its thoroughness in complying with the letter of the law. That law being the National Environmental Policy Act of 1969-NEPA. I continue to be impressed at the great amount of effort that has gone into the rebuttal of those speaking in favor of the Environmental Impact Statement, as well as those speaking in favor of specific Environmental Impact Statement recommendations.</p>		
CD-1	<p>But I am very frustrated and angry at what I perceive as a total violation and disregard for the spirit of this same law. I feel as if the Department of Energy has decided that the L-Reactor will re-commence operation as soon as humanly possible--with no real regard for its effects on the land and people of South Carolina and Georgia. All of the legitimate, public generated, environmental and health concerns have been negated and nullified on paper, in the Draft Environmental Impact Statement. I am sorry to inform this committee that it is not going to be that easy.</p>	<p>The Department of Energy has prepared the EIS to analyze the environmental impacts of the proposed restart of L-Reactor. Subjects for the scope of the EIS that were substantive and relevant to the proposed action were included in the EIS. Comments that were outside the scope of the EIS or not related to the NEPA process were not included.</p>
CD-2	<p>The results and recommendations of the Environmental Assessment were not adequate. Neither are the results and recommendations of the Environmental Impact Statement, which are remarkably similar to the Environmental Assessment.</p> <p>Once again, I come before this committee. Now, however, I feel completely powerless and disenfranchised from the act of presenting any seriously considered environmental input into the proposed decision to restart the L-Reactor.</p>	<p>Many areas of discussion in the Environmental Assessment have been expanded in this EIS, including production alternatives and need, a delay of L-Reactor restart, current fisheries data, data for accident calculations, safety mitigation alternatives, and detailed data on cooling-water alternatives. DOE will base its decision on the restart of L-Reactor on the final EIS and on other studies on the need for defense nuclear materials. The decision process will consider the environmentally preferable alternatives and preferences for alternatives based on the technical, economic, and statutory missions of the agency.</p>

M-204

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

Comment number	Comments	Responses
CD-3	<p>With that in mind, I present the following, within the context only of the letter of the 1969 NEPA law.</p> <p>I feel that the environmental integrity of the ecology of SRP demands 1) cooling towers, 2) a containment dome, 3) proper waste storage facilities, and 4) an independent oversight committee of total SRP operations. The Department of Energy has not found any of these to be necessary for a safe startup.</p> <p>On that last point, an oversight committee, I would like to publicly offer myself as a potential member of that committee. Representative Lindsey Thomas first proposed this committee and I have personally made this same request of him. I shall be waiting to hear from both of you.</p>	<p>See the response to comment AA-1 regarding cooling water alternatives, the response to comment BF-7 regarding containment, the response to comment BA-5 regarding waste storage facilities, and the response to comment BQ-2 regarding existing oversight mechanisms.</p>
	<p>We are all here to face up to a responsibility. A responsibility to ourselves and future generations. We must not allow the L-Reactor to commence operations without adequate safety precautions.</p>	

M-205

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

Comment number	Comments	Responses
STATEMENT OF MIRIAM LITCHFIELD		
CE-1	<p>My name is Miriam Litchfield. I testified at the last hearing in Savannah concerning the Environmental Assessment of the L- Reactor startup. This evening I find myself having the same doubts, fears, and frustrations as I had last May. It seems little has changed. Yes, you did comply with the law and complete a draft Environmental Impact Statement, but what major changes did you make after hearing our concerns? You made no provisions for cooling towers, a containment dome, waste storage facilities, or an independent oversight committee. An Environmental Impact Statement is not just a formality made to appease concerned citizens. I congratulate you for finally submitting a draft Environmental Impact Statement, but wish I could also congratulate you for taking our concerns and making them a part of that statement.</p>	<p>See the responses to comments AA-1 and AB-13 regarding cooling-water mitigation alternatives, the response to comment BF-7 regarding containment, the response to comment BA-5 regarding waste storage facilities, and the response to comment BQ-2 regarding existing oversight mechanisms.</p>

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

Comment number	Comments	Responses
STATEMENT OF L. NOREENE PARKER		
November 3, 1983		
I, L. Noreene Parker, strongly object to the restarting of the L-Reactor.		
CF-1	I believe that at least the responsibility & the accountability of the DOE on this project, should be to strictly adhere to the present regulations governing nuclear facilities, since even these are, at best questionable and poor in protecting and informing innocent citizens.	See the responses to comments AA-3 and AF-1 regarding DOE's commitment to comply with applicable Federal and state environmental protection requirements and the differences between SRP and commercial reactors.
CF-2	The environmental and health damage that we know will occur is totally unacceptable and inexcusable, but the admitted projected damage that will occur is only the tip of the iceberg. The unadmitted and unmonitored accidents, the lack of proper inspections, and the total unwillingness to properly inform the public and to adhere to even the necessary precautions for ensuring environmental and public safety is an ongoing horror that should not be forced on to the people of this or any other area.	Routine and accidental radioactive releases have been documented, and potential radiation doses to the public have been calculated. In all cases, the radiation doses have been within radiation protection standards. Over the years, increased instrumentation, improved mitigation devices, and stricter procedural controls have reduced the magnitude and frequency of such releases. An annual report on the magnitude and dose effects of both routine and accidental releases is made available to the public.
CF-3	There is no acceptable excuse for such a harmful and dangerous development to be given any exemption or any lenient considerations when it comes to precautionary measures regarding release of contaminants, containment domes, or cooling towers. In reopening even the simplest of commercial facilities, the current building codes and regulations must be adhered to; and old facilities must be brought up to standard. This simple rule should not allow for the release of harmful contaminants, the destruction of the environment and the needless endangering of the public on a slow and continuous basis.	See the response to comment AA-1 regarding cooling-water mitigation alternatives, and the response to comment BF-7 regarding containment and radiation protection standards.
		Although L-Reactor was constructed about 30 years ago, the thick concrete walls of the main reactor building and the stainless-steel equipment inside have shown little or no deterioration. About 60 percent of the 204-million-dollar restart cost is for improvements in the safety and operating

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

Comment number	Comments	Responses
CF-4	<p>I urge you to live up to your public responsibilities to protect the public from this type of intentional, irreversible destruction that we are powerless to protect ourselves against. We are struggling to protect and build on our natural resources in this prolific marine area. Building contaminants in our rivers, reefs, fish, and wildlife is not only harmful and ignorant; but also very dangerous to the economy of this area which depends on the aquifer for its water, and the rivers and ocean here for seafood and recreation.</p>	<p>systems and effluent controls that have been developed and installed in the other SRP reactors since L-Reactor was placed on standby. These improvements, along with the restoration and upgrading work, will bring L-Reactor up to the standards of the other reactors. Inspections and testing before startup will verify equipment performance and reliability.</p>
M-208	<p>I wish to continue to live in this area and I believe that it is the responsibility of all of us to protect and rebuild our environment for future generations and not to create incurable contaminants and horrors for future generations to face because of our negligence and lack of concern for the future.</p>	<p>The Department of Energy will take all reasonable measures to assure that the environment is protected. The releases from L-Reactor operation, as identified in Chapter 4 of the EIS, are well within applicable standards and are monitored by DOE, the EPA, and the States of South Carolina and Georgia. No effects on the marine life in the Savannah River estuary, or the Atlantic Ocean, and no offsite contamination of ground-water aquifers have been detected. <u>The ground-water protection program at SRP is being extensively studied; a separate NEPA review for this program will be undertaken.</u></p>
<p>ADDITIONAL COMMENTS MADE AT PUBLIC HEARING ON NOVEMBER 4, 1983</p>		
CF-5	<p>Another thing I would like to ask is: What will happen in case of an accident? Do we know in case something should occur? Will we have to pay for an accident, should it occur? What is the DOE doing to educate the public?</p>	<p>Indemnification of liability resulting from nuclear accidents involving DOE contractors would be in accordance with Section 170 of the Atomic Energy Act as amended. See also the response to comment AY-11 regarding emergency response planning.</p>
CF-6	<p>I am a scuba diver. I am not pleased with the solution. I would like to find out exactly what happens to the sediment when it is pumped out into the ocean? What happens to the low level radiation and to the low level waste if they are dumped in the ocean?</p>	<p>An evaluation of the fate of radioactivity released from SRP to the Savannah River upon reaching the ocean can best be done by examining the fate of fallout radioactivity resulting from past nuclear weapons testing. The amount of radioactivity from SRP reaching the ocean is only a very small fraction of that due to fallout. The total input of Cs-137 and Pu-239/240 to the Savannah River watershed from fallout is estimated to be 2800 and 55 curies, respectively, while the amounts of Cs-137 and Pu-239/240 released from SRP operations in the past are approximately 500 and 0.3 curies, respectively. Most of this radioactivity is retained by the watershed bound to soil or</p>

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

Comment number	Comments	Responses
CF-7	<p>I believe this will continue up the food chain and could possibly harm us, definitely harm us, according to many biologists, in the future.</p> <p>I don't want to see this occur.</p>	<p>sediment, and only a small fraction reaches the ocean. Measurements of radioactivity in water, sediments, and marine life along the coast of the eastern United States indicate that radioactivity associated with the Savannah River outflow is similar to that of other rivers, reflecting the dominance of fallout radioactivity. Off-shore corings reveal sediment profiles of radioactivity that parallel the periods during which nuclear weapons testing occurred. The natural sedimentation processes occurring at the outflow of a river into the ocean and the associated delta formation tends to continuously cover older sediments with the newer sediments. Additional information has been included in Section 3.7.1.1 of this Final EIS.</p> <p>The dose models used at SRP are generally accepted by agencies involved in dose calculations--EPA, DOE, NRC, and ICRP. These mathematical models trace the dispersion of radioactivity into the atmosphere and waters until the radioactivity is taken up by a plant or animal (or directly by man) The models then account for any biological reconcentration that occurs through subsequent food chain elements to man, and any human organ discrimination factors. Also see the response to comment AA-2 regarding the relationship of radiocesium and radiocobalt concentrations to EPA drinking water standards.</p>

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

Comment number	Comments	Responses
STATEMENT OF AMY DARDEN		
	<p>My name is Amy Darden. I am speaking tonight as a concerned citizen and as a biologist. The Department of Energy has been blatantly negligent in assessing the environmental impacts of restarting the L-Reactor.</p>	
CG-1	<p>In the entire history of the Savannah River Plant there has never been an independent study of the environmental and health effects of the radioactive isotopes released in the forms of gases and effluents. The Environmental Impact Statement is largely based on data collected by the DuPont Company. How can citizens be assured of the accuracy of data collected by the operating concern?</p>	<p>As discussed in Section 6.1.5 of the EIS, a series of health effect studies of the population around the Savannah River Plant have been made by Professor H. J. Sauer, who was originally with the University of Missouri and is now an independent contractor. Epidemiological studies of the SRP workers are being made by Oak Ridge Associated Universities and the Los Alamos National Laboratory. The Centers for Disease Control has also made some studies of the occurrence of a rare blood disease, <u>Polycythemia Vera</u>, in response to newspaper reports, since retracted, that this disease was unusually prevalent in the vicinity of SRP. Further, the Centers for Disease Control, in response to requests from DOE, has formed an independent panel to determine the need for any additional studies.</p> <p>The potential health effects due to SRP operations are predicted to be too small to be statistically detectable by health effects or epidemiological studies, particularly in the population outside SRP. Hence, primary reliance is placed on radiation monitoring and the calculation of expected health effects from monitored exposures. The States of South Carolina and Georgia and the EPA provide independent radiation monitoring offsite (see the response to comment BQ-2 for titles of the states' publications). As described in Appendix B, radiation doses are determined on the basis of the International Council on Radiation Protection Guides ICRP-2 and ICRP-30, while expected health effects are determined from those doses using the National Academy of Science's BEIR II and BEIR III reports. Similarly, the computer codes used to make necessary calculations are the XOQDOQ, GASPAR, and CRAC2 codes developed by the U.S. Nuclear Regulatory Commission.</p>

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

Comment number	Comments	Responses
CG-2	<p>Nuclear facilities, whether bomb plants, commercial power plants, or government-owned reactors, have never been known for voluntarily releasing accurate and prompt information regarding accidents. The DuPont Company has been involved in the weapons industry since the early days of our nation's history when the manufacture of gunpowder was the primary defense industry. Savannah River Plant is operated to produce a capital gain for the operating concern. Can we entrust the safety of life in Georgia and South Carolina to self-inspection by the operating company? Isn't that a little like asking the fox to guard the chicken house? But it isn't chicken that is at stake; it is the well being of life in this area.</p>	<p>See the response to comment BQ-2 regarding independent monitoring. The Savannah River Plant is owned by the U.S. Government and operated by Du Pont without fee.</p>
CG-3	<p>Savannah River Plant is known to release more radioactive material per year than has been released by all commercial nuclear power plant accidents in all of time. Why is a facility that makes weapons grade material exempt from the same safety guidelines that commercial power plants are held to? Since 1968, when the L-Reactor was decommissioned, what new safety measures have been introduced and what new safety measures have been applied to the L-Reactor? Why are cooling towers and a containment dome deemed unnecessary?</p>	<p>Appendix J in the EIS describes the evolution of safety systems for SRP reactors. See the response to comment BF-7 regarding the need for a containment dome, the response to comment BF-6 regarding radioactive releases and standards, the response to comment CF-3 regarding restoration and upgrading of L-Reactor, and the responses to comments AA-1 and AA-3 regarding cooling-water mitigation measures and DOE's commitment to comply with all applicable Federal and state environmental protection regulations.</p>
CG-4	<p>The draft Environmental Impact Statement states that the radiation exposure to people from the L-Reactor operation is less than exposure from natural sources. The increase of cancer is insignificant. Yet according to the South Carolina Bureau of Vital Statistics infant mortality rates and cancer rates in counties adjacent to Savannah River Plant are four to ten times higher than other areas of the State.</p>	<p>Analysis of 1980 South Carolina fetal and neonatal death rates by counties demonstrated that the extreme high and low values observed occurred in counties with low populations and are, therefore, statistical anomalies not associated with distance from the Savannah River Plant.</p> <p>Studies conducted by Professor H. I. Sauer of the University of Missouri-Columbia (now retired) have revealed no evidence of unusual death rates from cancer or genetic effects, either for areas near SRP or for counties using downstream Savannah River water.</p> <p>Also see the response to comment CG-1 regarding prior health effects studies, ongoing epidemiological studies, and a review of these studies by an independent panel formed by the National Centers for Disease Control.</p>
CG-5	<p>What is an acceptable dose of radiation for plants, animals, or people? It takes only one radioactive particle, one cell, and one gene to initiate the cancer and/or the genetic mutation</p>	<p>See the response to comment CF-7 regarding radiation dose methodologies and biological reconcentration and the response to comments CG-1 regarding health effects and epidemiological studies.</p>

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

Comment number	Comments	Responses
	<p>cycle. Can the Department of Energy assure the citizens that there will be no increased incidence of genetic mutations and cancer from the radioactive matter released by the L-Reactor? With a half-life in the hundreds of years these particles are a direct threat to all types of life--whether they are inhaled or ingested. As humans, we are high on the food chain--Is there any guarantee that the food produced in this area, the fish and shellfish in the Savannah River, will be free from cancer causing contaminants?</p>	
CG-6	<p>The Savannah River Plant has been described as "the bomb that has already been dropped." Indeed, it is a disaster area and we are in the contaminated zone. We go through each day wondering how much more radioactive gases have been released into the air we breathe, how much is in our water, in the food we eat; how much cesium, plutonium, and other harmful elements have made their way into our bodies and the bodies of others. The L-Reactor has produced plutonium and tritium for nuclear warheads to defend our nation's citizens from foreign aggression.</p> <p>BUT WHO WILL PROTECT THE CITIZENS FROM THE L-REACTOR?</p> <p>ADDITIONAL COMMENTS MADE AT PUBLIC HEARING ON NOVEMBER 4, 1983</p>	<p>See the response to comment BF-6 regarding radioactive releases and standards.</p>
CG-7	<p>Since 1968, when L-Reactor was decommissioned what new safety measures have been introduced and what new safety measures have been applied to the L-Reactor? Why are cooling towers and containment domes deemed unnecessary? What about the integrity of the reactor vessel itself?</p>	<p>Appendix J of the EIS summarizes the evolution of SRP reactor safety. About 60 percent of the upgrading and restoration costs for L-Reactor has been expended for improvements in the safety and operating systems and effluent controls that have been developed and installed in other SRP reactors since L-Reactor was placed on standby. Stainless steel equipment, including the reactor vessel, have shown little or no deterioration. Also see the responses to comments AA-1 and AB-13 regarding cooling-water mitigation alternatives, and the response to comment BF-7 regarding containment.</p>

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

Comment number	Comments	Responses
	<p>I would like to quote just a little bit about plutonium itself. This from Dr. Helen Caldicott's book, <u>Nuclear Madness</u>. I highly recommend it to the DOE.</p>	
	<p>"Plutonium is one of the most carcinogenic agents in the world, named after the god Pluto, god of the underworld. Less than one-millionth of a gram is enough to cause cancer."</p>	
	<p>To put this into perspective, a gram is 1/252nd of a pound. In other words, 252 grams to a pound, and one-millionth of a gram is carcinogenic.</p>	
	<p>"Because plutonium has properties similar to those of iron, it combines readily with the iron-transporting proteins in the blood and is conveyed to the storage cells in the liver and bone marrow. Here, too it irradiates nearby cells, causing liver and bone cancer and leukemia."</p>	
CG-8	<p>It is essential an independent oversight committee be established to monitor the operation of the L-Reactor, not only to restore public confidence in the DOE, but also to assure the safety of people and the ecosystem of South Carolina and Georgia.</p>	<p>See the response to comment BQ-2 regarding existing oversight mechanisms.</p>
	<p>The decisions made by our generation regarding the startup of the L-Reactor will undoubtedly outlive us. It's a legacy that requires our complete and most sincere and deliberate attention.</p>	

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

Comment number	Comments	Responses
STATEMENT ON THE REACTIVATION OF THE L-REACTOR		
	<p>My name is Carolyn Tucker. I'm a resident of this city and am very concerned about the quality of life here, in particular, as well as about the quality of our entire environment in general.</p>	
CH-1	<p>It seems to me that the reactivation of the L-Reactor can in no way be advantageous to the residents of Savannah. If the L-Reactor begins operation, I can't help but think that the radioactive pollution in our river will ultimately increase. I also don't think that this additional reactor will in any way improve our groundwater supply. Since the L-Reactor has no cooling towers or containment domes, I can't help thinking that, in the event of an accident, our air quality will surely not be helped. Probably not many people in our area, if any, will find employment at the plant. In short, it seems that we have nothing to gain and quite a bit to lose if this restart begins as scheduled.</p>	<p>See the responses to comments AA-1 and AB-13 regarding cooling-water mitigation alternatives, the response to comment AA-2 regarding concentrations of radiocesium and radiocobalt, the responses to comments AJ-1 and BG-4 regarding seepage basins and <u>DOE commitments for ground-water protection</u>, the response to <u>comment BA-5 regarding radioactive waste disposal</u>, and the response to comment BF-7 regarding containment.</p>
CH-2	<p>But these are small considerations in the large scheme of things. The reason we're here tonight is because the L-Reactor is scheduled to be restarted after a decade and a half of moth-ball time. The reason the Reactor is being restarted is because we need more plutonium. We need more plutonium because we need newer and more modern nuclear weapons. We need more weapons because.... This is where the line of reasoning breaks down. Is there a need for bigger and better bombs? Don't we have more than enough now? It seems to me that the question of genuine need for additional plutonium should be addressed. The outrageous expense of the arms race and the cataclysmic results of nuclear war are two facts that should be dealt with when thinking about the L-Reactor, in addition to cooling towers and containment domes. Because in this instance, too, it seems that we have nothing to gain and everything to lose.</p>	<p>The national policy on nuclear weapons, their deployment, and the need for increased weapons is beyond the scope of this EIS.</p>
	<p>Thank you for your attention.</p>	
	<p>Carolyn A. Tucker November 4, 1983</p>	

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

Comment number	Comments	Responses
	<p>Statement to the Department of Energy on the Draft Environmental Impact Statement on the restart of the L-Reactor, SRP</p> <p>Savannah, Georgia November 4, 1983</p>	<p>I am Steve Johnson, a resident of Savannah, Georgia. I appreciate the opportunity for public comment and opinion in the decision-making process to restart the L-Reactor at the Savannah River Plant (SRP). I take very seriously my rights and responsibilities as a United States citizen. I see today's opportunity to comment as a privilege. I hope to offend no one today but I am compelled to speak out against the Department of Energy's handling of this major Federal action, which <u>may</u> have a very significant, long standing environmental impact without additional safeguards.</p>
		<p>Thanks to an act of Congress, specifically in my opinion to the actions of Senator Mack Mattingly, the DOE has conducted an "expedited" environmental impact statement in accordance with NEPA, 1969. Citizens of Georgia and South Carolina, who, like myself, have contributed so much to U.S. defense efforts throughout history, have always recognized what is involved in maintaining a sound defense posture. I agree wholeheartedly with Senator Sam Nunn who stated that "defense posture must be built on a firm foundation of public support and understanding." The previous actions of DOE to initially forego an EIS has <u>not</u> served this goal. My trust and confidence in their assurances of public safety is simply not there. There are too many questions which people who are experts in the field are not in agreement on, in terms of some of the public health and safety aspects of the proposed L-Reactor restart. This clearly erodes the tenuous support for the current Administration's desire to build up the nation's supply of nuclear defense</p>

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

Comment number	Comments	Responses
CI-1	<p>materials in an effort to demonstrate to the Soviet Union, our resolve to defend freedom.</p> <p>Precedence does exist demonstrating that our national security requirements and our public health and safety/environmental concerns can be met simultaneously. However, there are widely published historical examples to the contrary. The DOE has broken with its traditions of self regulation. In the EIS, it seems to say that the SRP operations do not have to by law comply with public health and safety regulations of the Nuclear Regulatory Commission, as commercial nuclear facilities do. Therefore, to use a euphemism, the cook cleans his own kitchen.</p>	<p>See the response to comment AA-3 regarding DOE's commitment to meet all applicable Federal and state environmental protection requirements, the responses to comments BF-7 and BF-8 regarding the differences between SRP and commercial reactors, and the response to comment BQ-2 regarding existing oversight mechanisms.</p>
CI-2	<p>Informed public confidence must be restored. Continued debate on alternatives within the existing proceedings will fail as long as DOE argues alternatives with the <u>overriding</u> considerations on production goals--"time and expense" to quote S.C. State Rep. Harriet Keyserling. Clearly, even the need for such production is <u>now</u> open for question. And why not? Sen. Sam Nunn talks about a "build down" proposal for arms control negotiations. As I understand it, two nuclear warheads (made of plutonium) will be disassembled for every one modernized warhead built. What would happen to that plutonium? I do not have the classified information to make an educated opinion; does Sen. Nunn?</p>	<p>The national policy on nuclear weapons, their deployment, and the need for increased weapons is beyond the scope of this EIS. Also see the response to comment BL-19 regarding use of material from retired weapons.</p>
CI-3	<p>I have been to each of these public hearings and reviewed the published records. I am proud to see that State and Federal officials representing the citizens of Georgia have voiced their concerns, and suggestions as to how to restore public confidence. I strongly support Congressman Lindsay Thomas' proposal for an independent oversight task force. The current proceedings certainly aid in the examination and assurance of public safety but too much, <u>much too much</u> doubt has been cast onto the reliability of existing mechanisms that assure national security requirements (production goals) and public safety concerns are and can be simultaneously met. Furthermore, Congressman Thomas is right in his concern that there is no long range plan for the study of the cumulative effects of all the nuclear facilities within the Savannah River Basins. I have the hope to settle in this region, raise a family and invest my money in business here. I believe I have a right to</p>	<p>See Section 5.2 of the EIS. These are the known plans for additional nuclear facilities in the Savannah River Basin.</p>

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

Comment number	Comments	Responses
C1-4	<p>know about the L-Reactor's impact. I intend to ask Congressman Thomas to follow through with his proposal, and I will ask Senators Nunn and Mattingly to back such efforts. My trust, confidence and understanding in this matter of national defense is confused by and lacking in the DOE's own evaluation of its operation's impact on my safety and surrounding environment and more importantly my children's.</p> <p>Independent oversight is essential in my opinion. Why else would we be sitting here listening to such public and expert concern and objection to the restart of the L-Reactor at SRP. Thank you for your time and again I hope I did not insult anyone here today with my comments.</p> <p style="text-align: center;">Respectfully,</p> <p style="text-align: center;">Steve A. Johnson, Ph.D. 608 East 57th St. Savannah, GA 31405</p>	<p>See the response to comment BQ-2 regarding existing oversight mechanisms.</p>

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

Comment number	Comments	Responses
STATEMENT OF EDWIN LONGWATER		
	<p>Let me begin by saying that I do not feel the least bit honored to be speaking to DuPont via the Department of Energy.</p> <p>I testified on May 26, 1983 and stated that I was a life time resident of Chatham County. I did consume a lot of shellfish and fish from near the mouth of the Savannah River at Tybee Island.</p> <p>In response DOE asserted that fish and crabs near the coast are routinely sampled for radioactive contamination as contained in the 1982 Annual Report.</p>	
CJ-1	<p>Looking through this report, shellfish were omitted! Why? Were they too radioactive all too often? It also gave the whole body dose for an adult in 1982. I was an infant in 1952 and grew up along this coast. What about my contamination? In this report it stated that these studies included 8 crab and four (4) oyster samples. Are you trying to get me to believe that this small of a sample along our twisted Savannah River is representative of all oysters along the river or were these samples picked because lower radiation would be found in some areas? I want a larger study done not by DuPont or DOE but an independent agency. After all, over and over in the Draft EIS are the words: "The responsibilities of DOE...to develop and maintain a capability to produce all nuclear materials required for the Defense programs of the U.S....As a matter of policy, national security requirements, not arbitrary constraints... shall be the limiting factor."</p>	<p>Current levels of radioactivity in oysters and crabs taken from the Savannah River Estuary are summarized in the 1982 annual report (Environmental Monitoring in the Vicinity of the Savannah River Plant, DPSPU 83-30-1, page 12). As stated in the report, cesium-137, other gamma emitters, and strontium-90 were below detection limits. The oysters were collected at Fort Pulaski, about 5 kilometers from the mouth of the Savannah River at Tybee Island, and the crabs were purchased from a shrimp boat that operated in the mouth of the Savannah River. Relatively large sample sizes were required because of the low levels of radioactivity. Each of the four oyster samples contained about 500 grams of oysters (approximately 400 oysters per sample). Fourteen crabs were combined into the eight crab samples. The results of the 1982 analyses on shellfish from the Savannah River Estuary are the same as for previous analyses on shellfish published in earlier annual reports of this series.</p> <p>The 1982 annual report referred to above (DPSPU 83-30-1, page 11) gave the whole body dose to a hypothetical adult who consumed fish containing 0.57 picocurie per gram of cesium-137 (the average cesium concentration in fish taken from the river just below SRP). The calculated doses to hypothetical teenagers and children eating fish with this same concentration of cesium-137 are smaller than for the hypothetical adult by factors of about 2 and 5, respectively. Shellfish taken from the</p>

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

Comment number	Comments	Responses
CJ-2	<p>Are we to allow DOE to clean their own kitchen? When DOE begins to talk about their environmental consequences why does the second paragraph deal with the 420 new jobs the L-Reactor will provide and the Increase in money coming through the surrounding area around SRP? I feel the people of Georgia and South Carolina do not deserve to have more contamination pushed down our throats.</p>	<p>Savannah River Estuary in 1982 contained less than one-fifth as much cesium-137 as the river fish assumed in the dose calculations.</p> <p>The 400 jobs discussed in the second paragraph of the Environmental Consequences Section of the Summary is only a part of the National Environmental Policy Act requirements to discuss the impact of this project.</p> <p>SRP operations are closely monitored by both state and Federal agencies to ensure compliance with all applicable statutes and regulations concerning environmental protection. See the response to comment BQ-2 regarding existing oversight mechanisms.</p>
CJ-3	<p>Going back to this study if that 98% of the 300 fish had no measurable amounts of radiation. What about those other 6 fish? Where were they found and how much did they contain? I might have eaten their brother or sister for lunch last year!</p>	<p>The 1982 edition of the <u>Environmental Monitoring in the Vicinity of the Savannah River Plant</u> provides the data concerning the measured levels of concentration in fish including the 2 percent for which there were detectable concentrations. As contained in Chapter 6 of the EIS, fish provided by the Georgia Department of Natural Resources are also analyzed.</p>
CJ-4	<p>In previous testimony I also stated that in 1974 in a single day 479,000 curies of tritium were released into the atmosphere. An Arizona facility 5 years later released a little more than half this amount; its license was revoked. Furthermore, between May 30 and June 3, 1961 SRP released the single largest amount of radiiodine ever reported in scientific literature for a U.S. facility, a release of 10 x that of TMI. What did DOE say to make me feel secure? "Some additional radioactive releases have occurred from reactor support operations. These have been documented and potential radiation doses to the public have been calculated. IN ALL CASES THE RADIATION DOSES HAVE BEEN WITHIN DOE STANDARDS--WHICH MEANS THAT RADIOLOGICAL HEALTH EFFECTS HAVE BEEN NEGLIGIBLE.</p> <p>EITHER DOE STANDARDS NEED REVISING OR DOE IN MY ESTIMATE IS NEGLIGIBLE.</p>	<p>See the response to comment BA-4 regarding the releases of tritium.</p>

Thank you.

Edwin Longwater

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

Comment number	Comments	Responses
<p>ADDITIONAL COMMENTS MADE AT PUBLIC HEARING OF NOVEMBER 4, 1983</p>		
CJ-5	<p>DOE then goes on to assure us, "which means that radiological health effects have been negligible."</p> <p>I state this not in agreement with all scientists. There are many scientists who feel that these effects are not negligible, that they are not safe at all.</p>	<p>See the response to comment BF-6 regarding radiation protection standards.</p>
CJ-6	<p>Either DOE standards need revising or the DOE, in my estimate, is in itself negligible.</p> <p>The EIS represents nothing more than an invalid conclusion based on unproven assumptions and faulty documentation and data collection, gross generalizations.</p> <p>In short, the Draft EIS is not sufficient. In talking with several individuals at the document table tonight, I asked about studies done on shellfish in this area, particularly oysters, since they are stationery along the riverbank. They don't move around such as crab and things like that.</p> <p>I found out three things: Either the studies were not conducted; their results were not published; or they did not know where I could find this information.</p>	<p>The purpose of this EIS is to analyze the potential environmental consequences of the L-Reactor restart and its alternatives. The assumptions used in the DEIS for relevant standards and for data collection and analysis are based on existing Federal regulations; almost all were derived outside DOE. Chapter 7 discusses these laws and regulations. Appendix B discusses the assumptions for radiation exposure and radiation dose analysis; it points out that exposure standards are based on recommendations of the International Council on Radiation Protection, the former Federal Radiation Council, EPA, and NRC; health effects assumptions are based on the recommendations of the National Academy of Sciences; and computer analysis assumptions are based on computer codes developed by NRC. An extensive reference list backs up the EIS.</p> <p>Except for a small amount of classified material, all the documentation has been made available.</p> <p>See also the response to CJ-1 regarding the sampling and analysis of shellfish.</p>

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

Comment number	Comments	Responses
STATEMENT OF JANIECE BRODHEAD		
November 4, 1983 9677 Whitefield Ave. Savannah, GA 31406		
To whom it may concern,		
CK-1	<p>As a mother of one child and another on the way, I feel it is my personal responsibility to speak out against the restart of the Savannah River Plant L-Reactor. We are already dealing with the severe ecological implications that nuclear buildup has placed on our environment with nuclear waste and storage. Restarting the L-Reactor will escalate these problems especially to those living downstream from Barnwell and drinking water in the Jasper-Beaufort, South Carolina area. The continued buildup of nuclear arms is insane when you realize that in nuclear war nobody wins. I'm sure that a world in which a nuclear bomb has been dropped, no matter what hemisphere or country, will be virtually uninhabitable, considering radiation fallout, temperature change, mutation of the food chain, etc.</p> <p>Please, for the sake of my children's safe future do not restart the L-Reactor and add to an arms race where everyone will lose.</p> <p>Sincerely,</p> <p>Janiece Brodhead</p>	<p>See the responses to comments AA-2 and BT-2 regarding radio-cesium and radiocobalt concentrations and water quality, and the response to comment BA-5 regarding radioactive waste disposal.</p> <p>The national policy on nuclear weapons, their deployment, and the need for increased weapons is beyond the scope of this EIS.</p>

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

Comment number	Comments	Responses
<p>Statement on the L-Reactor Draft Environmental Impact Statement November 4, 1983</p>		
CL-1	<p>As a citizen and business person from Savannah, Georgia, I wish to register my concern with the Draft EIS. I feel that there is a great need for an Independent study of the effects of starting the L-Reactor on the environment of the surrounding area. There needs to be an assessment done by people who do not have a vested interest in this reactor's operation. There are grave questions to be answered about the unusually high incidence of some health problems in the area surrounding the Savannah River Plant as it now operates. There is too great a risk to the population and the environment to start the reactor without such an independent study.</p>	<p>See the response to comment CG-1 regarding health effects and epidemiological studies, and the response to comment BQ-2 regarding existing oversight mechanisms.</p>
CL-2	<p>I am very concerned that there be adequate cooling towers, a containment dome and waste storage facilities before the reactor is started again. I have heard the Savannah River Plant called "the bomb that has already been dropped on South Carolina" because of the amount of radiation that the SRP already releases into the environment and I have every reason to believe that those of us down river could make the same statement. It is very important that there not be an increase in the pollution being released and something needs to be done about what already is coming our way.</p> <p>Again I ask that the seriousness of the potential problems of the restart of the reactor be given the most careful and reliable study and that the health of the living things, humans, animals, and plants, of our area be given the value we deserve.</p>	<p>Radiation levels and doses in the vicinity of SRP and down to Savannah are given in Sections 4.1.2, 5.1.2, and 5.2.6 and in Appendix B of the EIS. They are shown to be a very small percentage of background radiation. Also see the responses to comments AA-1 and AB-13 regarding cooling-water mitigation alternatives, the response to comment BF-7 regarding containment, the response to comment BA-5 regarding radioactive waste disposal, the response to comment BQ-2 regarding existing oversight mechanisms, and the response to comment BM-1 regarding DOE's Record of Decision.</p>
	<p>Sincerely,</p>	
	<p>Linda M. Jeanne 103 S. River Street Savannah, Georgia 31401</p>	

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