

## APPENDIX H

### SCOPING COMMENTS AND RESPONSES

Pursuant to the National Environmental Policy Act of 1969, the U.S. Department of Energy (DOE) announced its intent to prepare an environmental impact statement (EIS) on cooling water systems for C- and K-Reactors and the D-Area coal-fired powerhouse at the Savannah River Plant (SRP) in the Federal Register on July 29, 1985 (50 FR 145). The Notice of Intent solicited comments and suggestions from interested agencies, organizations, and the general public for consideration in preparing the EIS. Comments were received by mail and at a scoping meeting held in Aiken, South Carolina, on August 19, 1985. Written comments were received until August 31, 1985.

During the public comment period, 12 individuals, agencies, and organizations presented written or oral comments--two individuals provided written comments at one of the public scoping meetings and more detailed written comments following the scoping meetings. Individuals, agencies, and organizations providing comments are listed on Table H-1.

The comments received at the public scoping meeting or in writing during the public comment period are presented in Table H-2. Table H-2 also provides responses to the comments raised by individuals, agencies, and organizations on the scope of the EIS.

Table H-3 provides a summary listing of the topics contained in the comments, with references to the appropriate chapters and sections of the proposed EIS outline.

Copies of the oral statements and scoping letters have been made available for public inspection at the DOE Public Reading Room located at the University Library, 2nd Floor, University of South Carolina, Aiken Campus, University Parkway, Aiken, South Carolina, and the Freedom of Information Reading Room, Room 1E-190, Forrestal Building, 1000 Independence Avenue, SW, Washington, DC.

Table H-1. Index of Agencies, Organizations, and Individuals Submitting Scoping Comments

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A	Sheppard N. Moore, Chief of NEPA Review Staff for Region IV, U.S. Environmental Protection Agency	H-3
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C	Mr. W. P. Bebbington	H-6
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Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
	<p>STATEMENT OF MR. SHEPPARD MOORE                      Chief, NEPA Review Staff                      Environmental Protection Agency                      Region IV                      Atlanta, Georgia</p>	
	<p>My name is Sheppard N. Moore. I'm chief of the NEPA Review Staff at Region IV, U.S. Environmental Protection Agency, Atlanta, Georgia. We at EPA are pleased to see that the Department of Energy is preparing an environmental impact statement as part of the decisionmaking process concerning cooling water systems at the Savannah River Plant. EPA has a long history of involvement with environmental matters at SRP, and we look forward to working with DOE and the State of South Carolina during the preparation of this EIS.</p>	
A-1	<p>Relevant to the proposed EIS, EPA believes that the environmental and nonenvironmental issues identified by DOE in their news announcement dated July 29th, 1985, for this EIS are important. Of the issues listed by DOE, EPA is particularly concerned with potential wetland impacts, water quality issues, and radionuclide effects as well as fishery implications, air quality, drinking water quality, and the cumulative effects. Recommended additions to the DOE list are possible floodplain, groundwater, and noise impacts.</p>	<p>A discussion of impacts associated with floodplain/wetlands, groundwater, and noise will be presented in Chapter 4 of the EIS. Appendix F will present a wetlands/floodplains assessment pursuant to Executive Orders 11988 and 11990, and DOE's regulations for compliance with floodplain/wetlands environmental review requirements (10 CFR 1022).</p>
A-2	<p>Since one of our major concerns at EPA is the protection of wetlands, we wish to emphasize that any wetland acreage that may be lost should be quantified and characterized for each action alternative. Avoidance of impacts and mitigation for unavoidable impacts should be addressed for wetlands as well as other areas.</p>	<p>Wetland acreage that will be gained or lost will be quantified and characterized for each cooling water alternative in Chapter 4 and Appendix F of the EIS.</p>
A-3	<p>We appreciate the numerous alternatives considered by DOE for the cooling effluent of C- and K-Reactors and the D-Area coal-fired power plant. In our view, at least two and preferably three feasible action alternatives should be addressed in the EIS in similar detail for each facility so that the EIS will be a decisionmaking document and a final preferred alternative can be selected. Similarly, the no-action alternative should be thoroughly addressed.</p>	<p>Chapter 4 of the EIS will discuss the environmental impacts of the reasonable cooling water alternatives for the C-Reactor, K-Reactor, and the D-Area coal-fired powerhouse. In addition, the no-action alternative will be addressed.</p>
	<p>I appreciate the opportunity to be here. I guess my main purpose is to hear what you and the others have to say. Thank you.</p>	

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Comment number	Comments	Responses
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ADDITIONAL STATEMENTS OF MR. MOORE  
EVENING PUBLIC SCOPING MEETING

Since I spoke this morning and gave you a copy of my written statement, I won't repeat that. I do want to say for the people that are here this evening that were not here this morning that I appreciate the opportunity to be here. I want to thank you for inviting EPA and the State to participate in this meeting.

I would like to add one thing to what Pat had to say about the slide on NEPA. It's true that NEPA requires that the Federal decisionmakers factor the environment into their decision-making process, but I think the really important benefit from NEPA is the public involvement.

I'm a little disappointed at the number of people here tonight, and I would like to encourage anyone that is here that has something to say that from experience I can say that government does listen to what people say. That's what NEPA has done for us is provided the mechanism for public involvement and how we, the government, carry out their business.

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<p>STATEMENT OF MR. BART RUITER SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL</p>		
<p>My name is Bart Ruitter. I am with the Department of Health and Environmental Control.</p>		
<p>On January 3, 1984, the South Carolina Department of Health and Environmental Control entered into a Consent Order with the United States Department of Energy Savannah River Plant. This Consent Order allowed the Savannah River Plant temperature requirements in the National Pollutant Discharge Elimination System (NPDES) permit to be temporarily superseded by those requirements contained in the Order. Outfalls affected by this Order are specifically C-Reactor, P-Reactor, K-Reactor, and D-Area powerhouse.</p>		
<p>In this Consent Order, SRP agreed to, one, complete comprehensive studies on the thermal effects of all operations at the Savannah River Plant upon the waters of the State of South Carolina; two, complete and submit the thermal mitigation studies to DHEC within nine months of the signing of the Consent Order; three, implement the alternative approved by DHEC under a schedule to be established by DHEC in a subsequent order; and four, submit and actively support appropriate funding requests to accomplish any actions resulting from the thermal studies.</p>		
<p>To date, we are currently near completion in establishing an implementation schedule under an amendment to the Consent Order with SRP which takes into account the National Environmental Policy Act process.</p>		
B-1	<p>As SRP proceeds through this NEPA process and eventually selects a final alternative for the mitigation of thermal restrictions on the above outfalls, the selected alternatives for C-Reactor, K-Reactor, P-Reactor, and D-Area powerhouse must meet the specified limitations of the NPDES permit and/or temperature limits that are consistent with the requirements or intent of the Clean Water Act and the South Carolina Water Classifications and Standards.</p>	<p>The ability of each of the cooling water alternatives considered in the EIS to meet applicable regulatory requirements will be discussed in Chapters 2 and 4.</p>
<p>Thank you for allowing the Department to express its comments.</p>		

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Comment number	Comments	Responses
STATEMENT OF MR. W. P. BEBBINGTON		
	<p>I have submitted a letter containing more specific comments than I intend to make here. I wish, now, to direct the attention of the audience and the other participants to some important general facts regarding the Savannah River Plant and its history.</p>	Comments noted.
	<p>The 200,000-acre site was purchased with taxpayers' money in 1950 to ensure that the public would be adequately protected from possible harm from the nuclear operations within the site and that there would be adequate protection of the operations against incursions.</p>	
	<p>It was recognized at the outset that, while the operators could and would be expected to hold releases of radioactive and other undesirable wastes to levels that were as low as practical, very large amounts of heat would necessarily be discharged from the reactors. The heat would be released as heated water, and the Savannah River had to be protected against biological damage from it. By placing the reactors near the center of the site and allowing the water to flow to the river through the beds of existing small streams, the temperature of the water, when it entered the river, would be low enough to preclude damage.</p>	
	<p>To verify that there was no thermal damage to the river, Dr. Ruth Patrick and her team of limnologists from the Academy of Natural Sciences of Philadelphia were commissioned to determine exactly and comprehensively the condition of the river before plant startup and to monitor it carefully for changes while the plant operated. Dr. Patrick has stated repeatedly and unequivocally that thermal effluents from SRP have had no adverse effects on the river.</p>	
	<p>The streams that carry reactor cooling water to the river are small, rise on the site, and have no significant economic, recreational, or unique ecological values. The hot water has destroyed vegetation and discouraged animal life; but, as was demonstrated in Steel Creek after L-Reactor was shut down, the damage is not permanent.</p>	
	<p>Most of the land of the site is outside the restricted production areas. This land has not been neglected and allowed to deteriorate. Hundreds of millions of trees were planted and</p>	

Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
	<p>managed as a productive forest. The University of Georgia established there a field laboratory of ecology under the overall direction of Dr. Eugene P. Odum, one of the nation's most revered ecologists. Later, the site was designated as the first National Environmental Research Park. It has attracted students and faculty from many universities for summer and longer residences. A former director of the Savannah River Ecology Laboratory said, "If it hadn't been for AEC support, there wouldn't be a science of ecology." The well-protected site has become an important wildlife refuge.</p>	
	<p>After three decades of plant operation without public harm and with great ecological benefit, the State of South Carolina has intruded with costly, unnecessary, and indeed environmentally detrimental demands that can be met only at great public expense at a time when there is a terribly urgent need to reduce the federal deficit.</p>	
	<p>The cost of the L-Reactor lake project will not be 25 or 40 million dollars but, when delay times and productivity losses are taken into account, in the hundreds of millions of dollars. The reactor will never again operate as efficiently as it once did because the State has demanded that the cooling lake not be treated as such but as a natural recreational lake. This hearing is the beginning of proceedings aimed at applying to C- and K-Reactors and to the D-Area coal-fired powerhouse similarly costly and unnecessary changes.</p>	
	<p>I ask the State of South Carolina, in the interest of responsible concern for the American people, to withdraw its demands and allow SRP to continue its efficient, safe and environmentally benign operations. Failing this, I ask the Department of Energy to take no action as its decision and defend it vigorously up through the courts, if necessary.</p>	
	<p>Thank you very much.</p>	

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Comment number	Comments	Responses
<p>LETTER FROM MR. W. B. BEBBINGTON</p>	<p>Thank you for the opportunity to comment on the "Scoping of an Environmental Impact Statement on cooling-water systems at the Savannah River Plant."</p>	<p>Comments noted.</p>
	<p>It should be recognized at the outset that the important issues under consideration, here, are political and bureaucratic <u>not</u> environmental. There is, in the document [6450-01] that defines the purpose of the August 19 public meeting, no reference to past, present or potential future harm to the environment surrounding SRP caused by operations within it. The absence of such harmful effects has been documented in public reports of comprehensive routine and special scientific monitoring over the past quarter century of the plant's existence.</p>	
	<p>In 1950 about 200,000 acres of land was purchased by the United States government on which to build the Savannah River Plant. The large site was acquired to provide isolation of the production facilities and to ensure that those facilities would not harmfully affect surrounding private lands, and most importantly, not damage biologically the Savannah River. Accordingly, the facilities of greatest environmental concern, the reactors and separations plants, were sited near the center of the plant, several miles from the river and the boundary fences. The channels of insignificant streams that rise within the plant, streams that were not then, are not now, will not be in the future of any economic, recreational or unique ecological importance, were used to convey reactor cooling water to the river. The river was seen to be the most important natural resource that might be vulnerable to harm, and the Academy of Natural Sciences of Philadelphia under the direction of the eminent Limnologist, Dr. Ruth Patrick, was commissioned in 1951, years before plant startup, to monitor comprehensively the biological condition of the river. The work of ANSP continues, today, and Dr. Patrick has repeatedly and unequivocally stated that there has been no biological damage from the thermal effluents of SRP. Vegetation in the streambeds was damaged, to be sure, but not irrevocably as was shown by the recovery of Steele Creek during the years that L-Reactor was shut down.</p>	
	<p>The matters with which we are now concerned stem from the actions taken to refurbish and restart L-Reactor at SRP as</p>	

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	<p>authorized by Congress in 1980. Operation of the reactor was declared necessary by October 1983 to meet the needs of national defense. The Department of Energy was obliged to meet this goal. The reactor was rehabilitated and brought up to the technological state of the other operating reactors with the intent to operate it as it had operated for fourteen years, previously, and as two other reactors, K and C, were continuing to operate. Near the end of 1982, anti-nuclear activist groups abetted by State officials instigated a succession of delays and ultimately, through a bit of Congressional trickery, the requirement that the cooling water from L-Reactor be passed through a new 1000-acre lake enroute to the Savannah River. Ostensibly, this lake was to forestall damage to "wetlands;" in fact it will permanently inundate most of the area of concern and destroy much productive forest in addition. The direct cost of the lake was to have been \$25 million, but has risen to \$40 million. The overall addition to the national deficit and cost to the taxpayers, taking into account delays, interest charges and permanent productivity losses will be in the hundreds of millions of dollars, <u>with, on balance, a detrimental environmental effect.</u> If the reactor starts up in October, as is now hoped, it will have been delayed two years.</p> <p>With regard to C and K reactors and the D-Area coal-fired power house, we are now at the point where the L-Reactor fiasco began more than three years ago. No existing environmental harm is alleged, only the need to comply with a "Consent Order" dated January 3, 1984, three decades after the beginning of safe, efficient and environmentally harmless operation of SRP. We taxpayers need to be protected against the squandering of more hundreds of millions of dollars merely to enhance the egos or further the special interests of politicians and activists.</p> <p>It is stated on page 7 of the notice of this meeting that, "As required by the Council on Environmental Quality regulations for implementing the National Environmental Policy Act, the EIS will also consider 'no action.'" I urge that "no action" be given first consideration and that the matter be shelved without even the preparation of another redundant, unnecessary and costly Environmental Impact Statement.</p>	

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Comment number	Comments	Responses
	<p>STATEMENT OF MS. FRANCES HART ENERGY RESEARCH FOUNDATION</p>	
	<p>I am Frances Hart, and I represent the Energy Research Foundation. We appreciate the opportunity to address this hearing on the subject of the scope of the proposed environmental impact statement concerning cooling water systems for thermal discharges from the C- and K-Reactors and from the D-Area coal-fired power plant.</p>	
	<p>The issue of environmental impacts of cooling water systems at SRP was discussed and analyzed at length as part of this NPDES permit reissuance process which began in 1982 and during the L-Reactor EIS process.</p>	
	<p>A permit demanding compliance of the Clean Water Act requirements was issued by DHEC for SRP's operating reactors in January of 1984, along with the Consent Order allowing the continuation of direct discharge of cooling water for an unspecified time. DOE was required to prepare a comprehensive study of the impacts of thermal discharges and recommend alternative systems which would comply with the Clean Water Act.</p>	
	<p>Nearly a year ago, in October of 1984, DOE published this report called "Thermal Mitigation Study, Compliance with the Federal and South Carolina Water Quality Standards," which analyzed various cooling water options. We reviewed that report and believe that recirculating mechanical draft cooling towers and once-through mechanical draft cooling towers with holding pond systems -- these are alternatives C-4, C-5, K-5, and K-6 -- would be acceptable for C- and K-Reactors. Although DOE is required to analyze all reasonable options during the EIS process, we would urge that any option chosen provide at least as much environmental protection as do these options.</p>	
	<p>It may not have been clear as early as 1981, when these original NPDES permits for the operating reactors at SRP expired, that new cooling water systems would have to be installed. But this necessity must have become obvious soon thereafter when negotiations with DHEC over new permits began, and South Carolina's Attorney General ruled that SRP's streams were part of the state.</p>	

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Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
D-1	<p>It is unfortunate that the EIS process was not begun at that time and that these years have passed without implementation of some sort of mitigation. Beginning the EIS process now has the obvious side effect of delaying still further the long-awaited cooling systems. We believe that complying with the National Environmental Policy Act is a valuable objective and, therefore, that the delay is perhaps warranted, even at this late date.</p> <p>However, because it seems unlikely that substantive new information will be generated during further study of possible alternatives beyond that already offered in the L-Reactor EIS and NPDES comments, we would urge that the preparation of this particular environmental impact statement be expedited as much as is possible within the law, given the substantial information and public comments already generated in these other related processes.</p>	<p>The Department of Energy will expedite the preparation of the EIS to the extent permitted by its regulations for implementing the procedural provisions of the National Environmental Policy Act.</p>
D-2	<p>The EIS is designed to play an integral role in the decision-making process, a role which cannot be very meaningful after the fact. Hopefully, DOE will initiate the EIS process at the beginning of future projects as the law requires, rather than after extensive study has taken place and time has elapsed, to ensure that the process itself can be meaningful and that timely compliance with other legal requirements will be possible.</p>	<p>The preparation and completion of the Thermal Mitigation Study and Comprehensive Cooling Water Study were undertaken by the Department of Energy in fulfillment of and compliance with the Memorandum of Understanding and Consent Order with the State of South Carolina. The Department of Energy is currently undertaking the preparation of the environmental impact statement to fulfill its requirements pursuant to the National Environmental Policy Act--as identified in the current Consent Order with the South Carolina Department of Health and Environmental Control--in attaining compliance with South Carolina's Class B water classification standards.</p>

Thank you.

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Comment number	Comments	Responses
	STATEMENT OF MR. KARL HERDE	
	<p>I am retired from the Atomic Energy Commission. I retired five years ago. I came here in 1951 as the first environmentalist for the Atomic Energy Commission. I served 23 years in that capacity; and, during that time, the emphasis always with the Atomic Energy Commission was with regard to the taxpayers' dollars.</p>	
	<p>As a guardian of the taxpayers' dollars and a taxpayer myself, along with the few hundred million other taxpayers, I would like to say that we have had enough. The costs are just unjustified.</p>	
	<p>I am also a member of the Antique Automobile Association of America. We have a motto there for antique cars: If they are not broke, don't fix them.</p>	
	<p>Experience has proven that there is nothing wrong with the way the reactors have been operated out there at the Savannah River Plant. I want to completely endorse my friend Mr. Bebbington on what he just said in the second talk ahead of this one.</p>	
	<p>I'm an environmental biologist by training and experience. I started my biological work with the Atomic Energy Commission back actually with Du Pont at the Hanford Plant in the State of Washington. There, I was a group leader in environmental biology for five years before coming here. When I came here, I came by way of Washington, in which they very definitely gave me the indoctrination that we are guardians of the taxpayers' dollars.</p>	
	<p>We are to see that every dollar spent of government money is to get just as much value out of it as if it were our own dollars. That theory still should exist. I'm afraid it doesn't. We are willing to help build up the deficit by requiring costs that are unjustified.</p>	
	<p>Earlier, we built nine big plants and completed the plants roughly in a square-mile area for less than 3 billion dollars. We have not come close to that now. Our liaison negotiations with the contractor, the Du Pont Company, were every thousand dollars that we could save was a thousand dollars earned for the government. Every \$100,000 was that much more.</p>	

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	<p>As an environmentalist, we look toward saving dollars. I still think that that should be the utmost concern in the plan and method of our Department of Energy.</p>	
	<p>I have my reservations, but I think I should make this statement. I actually hope that our Congressmen are smart enough that they won't allow this expenditure. I know that the plant needs to go on and I know, from a biology standpoint, we need to be safe; but I'm an environmentalist. I am not a lobbyist. I am not an activist, but I certainly want the environment to be kept intact.</p>	
	<p>Our authority back in the early days was respected authority. The three main authorities we had were the Reactor Safeguard Committee, the National Academy of Science, and the International Commission on Radiation Protection. We met the standards of those three organizations. We were doing a good job. Those three organizations are all made up of men of prestige. There were not would-be environmentalists, self-made environmentalists, in the group. They were all college-trained and college-experienced people, and those three organizations guided our destiny and guided well.</p>	
	<p>Using our minor tributaries and streams was regarded by people who were looking after the taxpayers' dollars as good business, as good logic, as good empirical use of the streams. Our empirical experience over the past 30 years has proven that theory to be right. It's just as right now as it ever was.</p>	
	<p>The streams have adjusted to the higher temperature, and to change them now is rather futile. One thing about the stream, though, a stream has its own capacity to restore itself.</p>	
	<p>It doesn't need the restoration, the decontamination, and so forth that a cooling tower is going to take. A cooling tower can become a sight in the environment.</p>	
	<p>I would like for some of you to take a trip up on the upper part of the Ohio River up in the region of West Virginia and Pennsylvania. Look along that river. There are a bunch of old, rusty monsters, towers, cooling towers, that have been completely abandoned and have been left there to become a part of the environment. I don't like that kind of an environment. I don't want to see that kind of environment on our Savannah River.</p>	

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Comment number	Comments	Responses
E-1	<p>I think we know that our streams will clean up themselves and will become fertile and productive biological streams within two or three years. In a very few years, a stream will produce good fishing again without any effort on the part of man. All he has to do is let mother nature take over.</p> <p>I want to say the pond costs us 40 million dollars and is killing off every species, every plant and animal species, of that thousand acres of land to save or maybe better the environment of one or two individual species. If that makes sense, I'm crazy.</p> <p>Now, the cooling towers will be the same thing. You will ruin more of the environment than you will correct by installing the cooling towers.</p> <p>So let's hope that our Congress takes the right action on that, and I think it should be up to Congress or a bill to be presented to our courts.</p>	<p>Chapters 2 and Chapter 4 of the EIS present and discuss both adverse and beneficial impacts of the cooling water alternatives considered.</p>

Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
STATEMENT OF MS. DORCAS ELLEDGE		
	<p>I appreciate the opportunity to say a few words to you. I have been to many of the meetings concerning the L-Reactor and read as much as I could understand of the books relating to that.</p>	
	<p>I still compliment the Department of Energy for doing something about the L-Reactor, a better way than putting scalding water in a stream that would have destroyed life. I don't know the best way. I'm not an engineer, as I've said before.</p>	
	<p>I don't know the best way to cool the water and to restore life to these streams that have been killed by the scalding waters from the reactors now in operation. But I do feel that it is an obligation of the Department of Energy and any governmental agency to protect life as we know it on earth.</p>	
	<p>To do less and to do nothing in this case will eventually affect our life, and it might well put South Carolinians and Georgians and anyone else visiting this state on the endangered species list.</p>	
	<p>I do feel that South Carolina citizens and Georgians and all those affected by the operation of the Savannah River Plant deserve protection, equal protection, with all citizens in the United States.</p>	
	<p>I believe we make nuclear weapons to protect our safety. I believe the obligation also in the making of them is paramount with the United States Government.</p>	
F-1	<p>And I do urge you to pick the best solution to the problem that DHEC has required of you. To do nothing doesn't sound like a solution to me, and that is one of the alternatives.</p>	<p>The consideration in the EIS of "No Action" is required pursuant to regulations of the Council on Environmental Quality for implementing the procedural provisions of the National Environmental Policy Act (40 CFR 1500-1508).</p>
	<p>And I thank you very much.</p>	

Table H-2. Scoping Comments and DOE Responses

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<p>STATEMENT OF MS. JEAN ROBINSON ON BEHALF OF W. F. LAWLESS</p>		
<p>My name is Jean Robinson. I'm presenting a statement for Professor W. F. Lawless who had to be out of town at this time. Professor Lawless is at Paine College in Augusta, Georgia. The statement is entitled Scoping Comments on SRP Cooling Water Systems EIS.</p>		
<p><u>General Comments</u></p>		
<p>To proceed with some general comments, the Department of Energy should be commended for asking for public scoping comments on the proposed Savannah River Plant cooling water systems environmental impact statement. Compared to the recent public imbroglio between the South Carolina DHEC and SRP, wherein DHEC had cited SRP for groundwater violations, and as well to past coverups of SRP reports by the Department of Energy, it's always refreshing to have government business conducted in the open. However, as important as this is, it can be significantly improved.</p>		
G-1	<p>The public does not have the technical capability nor the time to adequately explore nor keep track of the rather abstruse scientific studies of the environmental interactions and alternatives explored in this new environmental impact statement. That the public knows of, there are two such SRP environmental impact statements now underway.</p>	<p>As required by the regulations of the Council on Environmental Quality (40 CFR 1502.19), copies of the draft EIS will be provided to Federal and State agencies having special expertise with respect to any environmental impact that might be involved.</p>
<p>A publicly funded peer review committee should be created, using regional scientific and political talent, as a means of safeguarding the public's interest. Both DHEC and DOE, by their nature as political bureaucratic institutions, have more than enough administrative chores to worry about as it is, and an independent peer review panel would appropriately monitor scientific reports and construction projects with the rigor that escapes bureaucracies. If a peer review panel prevents the necessity of another 60-million-dollar clean-up similar to that now being spent to clean up the M-Area seepage basin fiasco, such a peer review panel could easily afford to attract talented participants.</p>		
<p>The public deserves more than playing DHEC against DOE to protect its interests and the environment. As the technological stakes increase, an independent scientific peer review panel</p>		

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Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
	<p>for the Savannah River Plant will add flexibility, improve technological solutions, and reduce the opportunity for environmental impacts, mistakes, and ineptitude. This technique has worked well with the NASA bureaucracy, and landed Americans on the moon. On the other hand, without peer review panels, the SRP has given us not only the M-Area seepage basin, but 67 other seepage basins at the Plant as well.</p>	
	<p><u>Specific Comments</u></p>	
G-2	<p>1. The DOE has not yet responded to information provided at the last Public Scoping Meeting on the reported statistically significant differences between strontium-90 concentrations found in milk around the SRP plant compared to the Southeastern average concentration of strontium-90 in milk.</p>	<p>Responses to comments received during the scoping period for the preparation of the environmental impact statement on waste management activities for groundwater protection will be included in that environmental impact statement.</p>
G-3	<p>2. The new EIS should consider treatment of the cooling water before it is released back to the environment.</p>	<p>The effluent from the cooling systems considered in the EIS will meet the State of South Carolina's Class B water classification standards. The effluent is expected to be similar to the water quality of the Savannah River, and other than for reduction of temperature, treatment of the cooling water will not be required.</p>
G-4	<p>3. Water quality analyses of water released into the environment from C- and K-Reactors and the D-Area coal-fired power plant should be published and compared to EPA drinking water standards. The D-Area basin overflow and outfall water quality characteristics should also be provided.</p>	<p>Water quality impacts of the alternatives will be assessed in Chapter 4 of the EIS.</p>
G-5	<p>4. The D-Area power plant air quality at the release point from its cooling tower should be included in the new EIS.</p>	<p>Air quality impacts of the alternatives for the D-Area powerhouse will be described in Chapter 4 of the EIS.</p>
G-6	<p>5. P-Reactor effluent, that is, thermal, water quality, air stream quality characteristics should be included in the new EIS. Also, a biological community comparison to Par Pond with a comparable sized pond to Par Pond should be made and included. An aquifer water quality analysis of water under Par Pond should be made and included in the proposed EIS.</p>	<p>A discussion of P-Reactor effluent and Par Pond is not within the scope of this EIS, as discussed in the <u>Federal Register</u> notice announcing the preparation of the EIS.</p>
G-7	<p>6. The South Carolina DHEC and DOE March 1985 agreement suggests the continued use of a raw water basin at the D-Area power plant. The advantages of having a lined basin and an unlined basin, as well as RCRA compliance, should be discussed in the new EIS for this basin and for the ponds at C- and K-Reactors.</p>	<p>The use of the raw water basin at the D-Area powerhouse does not involve hazardous waste; therefore, a discussion of having lined basins and compliance with RCRA is not an appropriate topic for inclusion in the EIS.</p>

Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
G-8	7. Water quality characteristics of the cooling water at its source should be provided. Coolant waste system diagrams and effluent system diagrams should be provided. Well construction and closure information as necessary should be provided.	Chapter 3 of the EIS will describe the existing surface-water hydrology and water quality of the streams that would be affected by the alternative cooling water systems. Also see the response to comment G-3. If well closures should be required due to construction of the alternative cooling water systems, the closure wells will be discussed in the EIS.
G-9	8. Cooling water tower effluent characteristics at the release point should be provided.	See the response to comment G-3.
G-10	9. All mathematical models should be detailed, statistical techniques discussed, and validation of all models, equations, or techniques discussed.  Thank you very much. That concludes his statement. And he wanted to let you know that he would be glad to submit a final copy by the 31st but wishes to make you copies of this because of some typographical errors.	Appendix B of the EIS and its referenced documents will discuss the models, assumptions, and validation of models used in the preparation of the EIS.
<p>ADDITIONAL COMMENTS CONTAINED IN LETTER FROM W. F. LAWLESS DATED AUGUST 29, 1985</p>		
G-11	No. 10, Airborne releases, including levels of dioxin, from the Beta-Gamma Incinerator (BGI) at the point of release should be quantified and reported. Provide calculated and actual release data, <u>from the point of release</u> , for each waste category, matching the BGI incinerator burn loads to normalize the predicted with actual data.	A discussion of airborne releases from the Beta-Gamma Incinerator is outside the scope of this EIS.
G-12	No. 11, The two high level radioactive waste (HLW) corrosion pitting reports (L-Reactor EIS, p. M 113-114) did not discuss corrosion pitting in HLW tanks 25-28. These 4 HLW tanks were not treated for corrosion pitting as were HLW tanks 38-51, since HLW tanks 25-28 were already radioactive when the corrosion pitting was discovered in the 14 HLW tanks completed later. Provide a corrosion pitting status report on HLW tanks 25-28 performance, and compare to the last 14 HLW tanks at SRP (tanks 38-51) that went into radioactive waste service after remedial action for corrosion pitting.	A discussion of high-level waste is outside the scope of this EIS.

Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
STATEMENT OF MR. SAM SCHILLACI		
	<p>I've been studying the Savannah River Plant for a long time, and I've got a good plan for its survival. I'm a former employee also with ten years of service with the Department of Energy. I had some mental problems because of stress, so the government "retired me." The stress was brought on because I didn't like all the waste, fraud, and abuse out there. But they dumped me in a hurry. For six months after they dumped me I went without a salary or any means of support. I had a lot of time to think, do things I've never done before, drink a lot, write, which I thoroughly enjoy, even though my grammar ain't so hot.</p> <p>Now, my plan for DOE is simple. It's the same (expletive deleted) plan I had. Set all the DOE employees, and hopefully all the government employees, free at a certain, hopefully surprise, moment. They all go home for five months without leave or salary. They could think, read, do anything they want to. They could grind and gnash their teeth if they want to. And at the end of the five-month period -- notice that I give them a little less time than I had; I'm lenient -- the ones that haven't done themselves in could come back and determine if those cooling ponds or whatever is needed out there at SRP. Let them think a little more. Now, if the government employees do that, I think the whole public sector would probably do the same thing. Just think of all the fun that we could have. 1929 all over again.</p> <p>Mr. Herde, you probably remember him. That's probably why he has grayer hair and his voice has a little more common sense in his tone of voice. And just think of all the neat movie stuff of 1929. Back to the future.</p> <p>Anyway, I'm not anti or pro nuclear or anything; I'm just pro myself, pro my God, which is different from your God, and a survivor. I hope more become self-reliant, learn to fight rather than this (expletive deleted) love we have now, and learn that the best plan is no plan. I will also shut up my mouth for a half million dollars, passage to New Zealand, and permanent silence to the Will Rogers Institute.</p> <p>After five months I hope the hot water is used for enemas for anybody who wants it. Thank you.</p>	<p>Comments noted.</p>

Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
STATEMENT OF MR. WILLIAM McDANIEL		
	<p>I have no written speech with me, but I do have a part of a tape that I would like to play. Of course, you can have a copy of the tape.</p>	
	<p>I think you are escalating out of control as far as reactors are concerned. This has very little bearing. I realize this, on the coolant system that you have here as far as water going back into the creeks and rivers and so on. I would like to play as much of this tape as I can. I appreciate this opportunity.</p>	
	<p>(Mr. McDaniel began playing the tape.)</p>	
	<p>Forbes, the magazine that calls itself a capitalist tool, last month proclaimed on its cover the failure of the U.S. Nuclear Power program ranked as the largest managerial disaster in business history. Forbes pointed out that we spent more on nuclear power than we did on the space program or the Vietnam War, and the magazine says, "Only the blind or the biased can now think that most of the money has been well spent."</p>	
	<p>Well, that's something that Amory and Hunter Lovins have been saying for years. They are husband and wife who put their energies together to create a vision of a non-nuclear energy future.</p>	
	<p>"Who would have guessed that a beer-drinking, country-music-loving cowboy would team up with a scrawny, four-eyed, physicist?"</p>	
	<p>The physicist and the cowboy, she is also a lawyer and political scientist, were married in 1979. They began traveling around the world, as Amory says, "Cross-pollinating the energy grapevine." They wrote books and consulted for governments and businesses in 15 countries.</p>	
	<p>They contend that the new nuclear plants will turn out more electricity than we really need at a cost no one can afford and that the money the utility companies spend on those plants would be better spent on helping the country become more energy-efficient. In other words, use the money to help make homes, factories, and office buildings do the same work with less energy. Then everybody is a winner. The answer can be as</p>	

Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
	<p>simple as installing better windows, designing better buildings and appliances.</p>	
	<p>At their home and research institute in Old Snowmass, Colorado, Amory and Hunter Lovins live their state-of-the-art ideas for saving energy. They built a 4,000-square-foot home, office, and indoor farm that takes the simple idea of a solar greenhouse and makes use of it on a grand scale. The 16-inch-thick curving walls provide more insulation than most people's roofs. The Lovins moved into the still-unfinished structure in January 1984. Soon after, they published a visitors' guide. More than 2600 people from around the world have to come to see their house.</p>	
	<p>"This is the space we donate as the headquarters of our non-profit group, Rocky Mountain Institute, where we and about a dozen colleagues try to foster the official use of resources."</p>	
	<p>Amory and Hunter Lovins use electricity for those things it does best. "Using nuclear power to heat a house," Amory Lovins has said, "is like cutting butter with a chain saw." Passive solar design, even at an altitude of 7100 feet in the Rocky Mountains, allows the Lovins to heat with sunlight year-round.</p>	
	<p>"This is the greenhouse?"</p>	
	<p>"No. This is basically the furnace of the house. These windows are, I think, the most advanced in commercial use anywhere. They insulate twice as well as typical shades and cost less. There is an invisibly thin film of plastic with special high-tech coatings on it which let the light in but don't let the heat get out, and then we fill up the space around that heat-mirror form with argon gas which insulates better than air."</p>	
	<p>"Design with nature," say the Lovins, who would have built differently in a different climate; but some of their basic design elements are just common sense. If you insulate more, you have to heat or cool less.</p>	
	<p>"There is about yea much polyurethane foam up on the roof, and there is 4 inches of it in the middle of the walls. Just (knocking sound) like that, and the house is also darn near airtight. We then laid it through what are called air-to-air heat exchangers."</p>	

Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
	<p>In all over the house, they have energy-efficient light bulbs.</p> <p>"It's an 18-watt bulb that screws into a regular socket and gives the same amount of light as a regular 75-watt bulb, so it's four times as efficient, lasts about thirteen times as long, and I think gives better light. It isn't a fluorescent folded up in there."</p> <p>The bulbs currently retail for \$18 to \$25 each. They are just coming onto the American market. Lovins' critics say that the bulbs are too expensive, won't fit in many home lighting fixtures, and are better for commercial lighting because they don't give full light instantly. Lovins also sees the benefits of commercial use, but he is not bothered by the warm-up time. He believes the price will come down and that the fixture problems will be solved.</p> <p>(Mr. McDaniel stopped playing the tape)</p> <p>I'm a member of two different groups, ecology groups. Of course, I'm a public citizen. The point I'm trying to get across is that, as I have stated here when I first came up here, things, in my opinion, are escalating out of proportion. Sometimes I think we should try to go back and erase the board and start all over, but then that cannot be done.</p>	
I-1	<p>I am still opposed to any type of radiation in regards to how high a level or how low a level it is, and I know we have certain amounts of radiation naturally. I think we have 82 percent of the oxygen that comes out of the Amazon Rivers in the New Guinea. But you add radiation onto x-rays that a person has had and nature itself, and then you are doubling and tripling it.</p> <p>The thing that bothers me most, which I see from research, is it's a mortality. You know the group I'm with. This is a research committee. It's a citizens' committee, and now we have taken a survey on mortality and cancer. I was so shocked when it went through my neighborhood. At least one or both people have died from cancer of some sort or the other, and the people around us are dying. I live on 2910 Carolina Avenue. Other members of this same group --</p>	<p>A discussion of the existing radiation environment at and in the Savannah River Plant Region will be presented in Chapter 3 of the EIS. Chapter 4 of the EIS will discuss the radiological impacts of the cooling water alternatives considered.</p>

Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
	(Mr. McDaniel's time for making his presentation expired)	
	Thank you. I appreciate it very much. I will see that you get a copy of the tape.	

Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
<p>STATEMENT OF ZOE G. TSAGOS LEAGUE OF WOMEN VOTERS OF NORTHERN BEAUFORT COUNTY</p>		
<p>The League of Women Voters of Northern Beaufort County appreciates this opportunity to participate, by our comments, in the preparation of an EIS on the type of cooling-water systems to be used for the C- and K- Reactors and the D-Area coal-fired power plant at the SRP.</p>		
<p>It is our understanding that a conditional National Pollutant Discharge Elimination System (NPDES) permit was issued to DOE for SRP by SCDHEC in January 1984. Compliance with NPDES provisions rests upon the issuance of an EIS which will note the environmental impact of thermal discharges from the above mentioned reactors and power plant and will outline the means proposed to mitigate the high temperature flow by the use of cooling systems so that the 90°F required by law can be attained before it reaches the Savannah River.</p>		
J-1	<p>Inasmuch as SCDHEC, according to the DOE statement on page 5 of the "Intent to Prepare an Environmental Impact Statement" document [6450-01] which we have received, has accepted either a cooling water system of "once-through cooling towers for C- and K-Reactors" or "recirculating cooling towers" as satisfying NPDES provisions, we support this SCDHEC position. We hope that DOE and SCDHEC will work towards whatever method is environmentally safest in thermal effluent management. An expedited EIS will help to bring this about with the least loss of time.</p>	See the response to comment D-1.
<p>We agree with Ms. Frances Hart in her presentation for the Energy Research Foundation at the August 19 DOE hearing in Aiken where she stated that if an alternative method is chosen, it should provide "at least as much environmental protection" as the SCDHEC acceptable cooling methods as presented above.</p>		
J-2	<p>We in Beaufort are as concerned as we have ever been about the quality of our drinking water which has as its source the Savannah River. We shall read with great interest the EIS analysis of "Environmental Issues" (p. 9) numbers: 6. "Radionuclide remobilization" and 9. "Cumulative thermal effects." Both changes can have an impact on the quality of downstream drinking water.</p>	Radionuclide remobilization and cumulative thermal effects will be assessed in Chapter 4 of the EIS for the cooling water alternatives.
<p>In conclusion, we urge DOE to continue holding hearings in Beaufort as well as Aiken. The number of people attending any</p>		

Table H-2. Scoping Comments and DOE Responses

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Comment number	Comments	Responses
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one hearing has varied; this is perhaps also true of Aiken. Because the decisions reached and changes made at SRP are of great environmental importance to us here, we must continue to be involved and to actively participate in hearings held in Beaufort.

Please include this submission in the Scoping Record.

Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
<p>STATEMENT OF ROGER L. BANKS U.S. DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE</p>		
<p>We have reviewed the above-referenced notice as presented in the <u>Federal Register</u> on July 29, 1985. The following comments are provided to you in accordance with the Fish and Wildlife Coordination Act and are intended to assist you during the preparation of the EIS.</p>		
K-1	<p>The environmental issues identified in the <u>Register</u> that you intend to analyze during the preparation of the EIS appear generally inclusive of the fish and wildlife resource issues of concern to the Service. It appears likely at this early stage in project planning that significant beneficial effects on wetland fish and wildlife resources will likely result from installation of the proposed cooling water alternatives. It also appears probable that significant adverse effects may result from siting of the cooling towers, holding ponds, and ancillary facilities.</p>	<p>The potential environmental effects resulting from the location of cooling water systems and ancillary facilities will be discussed in Chapter 4 of the EIS.</p>
K-2	<p>We would like to see the following issues emphasized and the extent of their probable effects quantified during subsequent studies:</p> <ol style="list-style-type: none"> <li data-bbox="412 892 1059 959">1. The effects of reduced thermal effluents on fish and wildlife resources in the receiving streams and contiguous wetland habitats.</li> <li data-bbox="412 979 991 1024">2. A comparison of habitat impacts resultant from alternative facilities siting plans.</li> <li data-bbox="412 1045 991 1090">3. Impingement and entrainment effects on fishery resources resultant from alternative plans.</li> </ol>	<p>Chapter 4 of the EIS will present the environmental consequences of the construction and operation of alternative cooling water systems, including the beneficial and adverse impacts to fish and wildlife resources, wetland habitats, and impingement and entrainment. Also see the response to comment K-1.</p>
K-3	<p>We recommend that the Habitat Evaluation Procedures (HEP) be considered as a means of comparing and quantifying the habitat effects of alternative plans considered in the EIS. Use of the HEP in this case could make economical use of the basic</p>	<p>A HEP study is being conducted to identify the value of habitat to be gained or lost for use in assessing further mitigation. The EIS will discuss the HEP study in Chapter 5.</p>

Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
	<p>framework of the ongoing L-Reactor HEP Mitigation Study. As a result of the L-Reactor HEP Study you have trained and experienced staff members capable of conducting a study within the time constraints of the EIS. In addition should the need for habitat mitigation be indicated after selection of the preferred alternative, HEP provides a means of mitigation cost-benefit analysis. Finally, the primary benefit of the HEP is in promoting interagency cooperation resulting in balanced planning decisions.</p>	
	<p>If you have any questions regarding our comments contact me at your convenience.</p>	

Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
STATEMENT OF J. W. MORRIS		
Thank you for the opportunity to comment on the scope of the planned Environmental Impact Statement (EIS) on the Savannah River Plant (SRP) Cooling Water Systems.		
I urge that the EIS deal carefully and thoroughly with a cost-benefit analysis of the construction and operation of the proposed cooling-water systems. Specifically, the following aspects should be considered:		
L-1	<ol style="list-style-type: none"> <li>1. The complete and continuing cost to the taxpayers of increasing the national debt to pay for,               <ol style="list-style-type: none"> <li>a. the proposed construction,</li> <li>b. the operational costs,</li> </ol>               and c. the increased production costs that will result from the proposed operating limits.             </li> <li>2. The benefits, if any, that can be expected from the proposed changes.</li> </ol>	Chapter 2 of the EIS will present the estimated costs associated with the cooling water alternatives considered. Chapter 2 of the EIS will summarize and Chapter 4 will discuss the adverse and beneficial impacts of the construction and operation of the cooling water alternatives.
L-2	<p>I urge also that the EIS review the overall environmental productivity of the SRP site, as a whole, and compare that productivity with the productivity that might have been expected from the SRP area had the project been located elsewhere, and with the incremental effects that may be expected from the proposed cooling-water systems. Such a review will show that the environmental productivity of the SRP site now is very high, and that the incremental benefits of the proposed actions are very low.</p> <p>The long-term costs of the proposed action will be very high to the nation's taxpayers, the benefits will be very small, and none of these benefits will accrue to the public since the SRP site is necessarily closed to the public.</p> <p>The basic intent of the Clean Water Act and of Water Quality Standards is to protect the public and to preserve environmental productivity. At SRP overall the public is presently well protected and environmental productivity is very high.</p>	Chapter 3 of the EIS will discuss the existing environment at the SRP site that will be affected by alternative cooling water systems, and Chapter 4 will discuss the environmental consequences of constructing and operating the systems. Since the cooling water systems will neither affect the entire SRP site nor can the systems be located elsewhere, the comparison of overall productivity as cited is considered outside the scope of the EIS.

Table H-2. Scoping Comments and DOE Responses

Comment number	Comments	Responses
	I urge the Federal government to exercise its responsibility to the total spectrum of U.S. taxpayers, and to pursue all possible means to implement "No Action" in the matter at hand.	

Table H-3. Scoping Topics and EIS Sections

Comment number	Scoping topic	EIS section
A-1	Environmental impacts	Ch. 4, App. F
A-2	Environmental impacts	Ch. 4, App. F
A-3	Cooling water alternatives	Ch. 4
B-1	Regulatory requirements	Ch. 2, Ch. 4
D-1	Regulatory requirements	Ch. 1, Ch. 5
D-2	Regulatory requirements	Ch. 1, Ch. 5
E-1	Environmental impacts	Ch. 2, Ch. 4
F-1	Cooling water alternatives, No-action alternative	Ch. 2, Ch. 4
G-1	Regulatory requirements	Ch. 1
G-2	Scoping comments	Ch. 1
G-3	Water quality impacts	Ch. 4
G-4	Water quality impacts	Ch. 4
G-5	Air quality impacts	Ch. 4
G-6	Regulatory requirements	Ch. 1
G-7	Raw water basin usage - RCRA compliance	Outside the scope of the EIS
G-8	Surface water hydrology and water quality, well closures	Ch. 3, Ch. 4
G-9	Water quality impacts	Ch. 4
G-10	Mathematical models	App. B, App. G
G-11	Beta-Gamma incinerator	Outside the scope of the EIS

Table H-3. Scoping Topics and EIS Sections (continued)

Comment number	Scoping topic	EIS section
G-12	High-level waste	Outside the scope of the EIS
I-1	Radiological releases	Ch. 3, Ch. 4
J-1	Regulatory requirements	Ch. 1, Ch. 5
J-2	Radionuclide remobilization, cumulative thermal effects	Ch. 4
K-1	Facility siting impacts	Ch. 4
K-2	Fish and wildlife resource impacts	Ch. 4
K-3	Habitat impacts	Ch. 4
L-1	Cost of alternatives, impacts of alternatives	Ch. 2, Ch.4
L-2	Affected environment, impacts of alternatives	Ch. 3, Ch. 4