have to be addressed during dismantlement.

The no action alternative would involve keeping the defueled S3G and D1G Prototype reactor plants in protective storage indefinitely. Since there is some residual radioactivity with long half-lives, such as nickel-59, in the defueled reactor plant, this alternative would leave some radioactivity at the Kesselring Site indefinitely.

The Naval Reactors Program distributed the Draft Environmental Impact Statement on the Disposal of the S3G and D1G Prototype Reactor Plants in July 1997. Comments from 14 individuals and agencies were received in either oral or written statements at a public hearing or in comment letters. Approximately one-third of the commenters expressed a preference for the Naval Reactors' preferred alternative, prompt dismantlement. Based on U.S. Environmental Protection Agency (EPA) review of the Draft Environmental Impact Statement, EPA rated the proposed project as ''LO'' (Lack of Objection). All of the comments and Naval Reactors' responses are included in an appendix to the Final Environmental Impact Statement, distributed in November 1997.

From an environmental perspective, no single alternative stands out as environmentally preferable. The radiation exposure to the general public would be small and comparable for all three alternatives. Occupational exposure would be higher for the prompt dismantlement alternative, however, this expected exposure would be comparable in magnitude to the radiation exposure routinely received during current operation and maintenance activities of Naval prototype reactor plants. Non-radiological environmental, health and safety impacts associated with all of the alternatives would also be small and consistent with ongoing Kesselring Site operations. Based on current conditions, any of the alternatives could be accomplished within Federal and State requirements, in both the short term and the long term. However, 30 years from now, changing conditions associated with the regulatory environment, and the availability of trained personnel and waste disposal facilities could result in unforeseeable complications or delays. Such future unforeseeable conditions cause additional uncertainty in the impacts associated with the deferred dismantlement and no action alternatives. Naval Reactors has identified the prompt dismantlement alternative as the preferred alternative since it is consistent with the Naval Reactors' record of managing waste efficiently and minimizing its generation. Prompt dismantlement would allow Naval Reactors to utilize an experienced work force that is presently located at the Kesselring Site. Prompt dismantlement can be accomplished safely, economically, and with a high degree of certainty that the environmental impacts would be small.

As discussed in the Final Environmental Impact Statement, the Naval Reactors Program implements a large number of conservative engineering practices in its operations. These conservative engineering practices will serve to ensure that environmental impacts will be very small. No additional mitigative measures have been identified which are needed to further reduce the small impacts which were described in the Final Environmental Impact Statement. Accordingly, all practicable means to avoid or minimize environmental harm from the preferred alternative have been adopted.

Issued at Arlington, VA, this 20th day of January 1998.

F.L. Bowman,

Admiral, U.S. Navy, Director, Naval Nuclear Propulsion Program.

[FR Doc. 98–1946 Filed 1–27–98; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Record of Decision, Shutdown of the River Water System at the Savannah River Site, Savannah River Operations Office, Aiken, South Carolina

AGENCY: U.S. Department of Energy.

ACTION: Record of Decision.

SUMMARY: The U.S. DOE has decided to implement the No Action alternative identified in the Final Environmental Impact Statement for the Shutdown of the River Water System (RWEIS) at the Savannah River Site (SRS). Under this alternative, DOE will continue to operate and maintain the system and maintain the water level of L-Lake.

DOE will assess the need for future environmental remediation alternatives for L-Lake under existing Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) commitments. Characterization activities associated with CERCLA closure are expected to begin in the year 2000 and be completed in several years. This characterization will inform any required remedial action. Pending these activities, DOE will continue to operate the RWS. If during continued operation of the RWS a system component fails, DOE will take appropriate emergency actions. DOE will then determine if the system is too costly to repair (by comparing this cost to estimated shutdown costs and future possible remediation costs under the CERCLA). If DOE determines that the RWS is too costly to repair, it will reevaluate all relevant commitments and the information in the RWEIS, to determine necessary actions to shut down the RWS. However, the RWS is in good condition and not expected to fail over this period of time.

This RWEIS evaluates three alternatives for the disposition of the RWS at the SRS. The RWS is a 50-mile underground concrete piping structure and pumping system that was built in the early 1950s to provide cooling water for the SRS' five nuclear production reactors. The RWEIS alternatives cover the spectrum of reasonable options as follows:

(1) Continue operation of the RWS (No Action Alternative);

(2) Shut down and maintain the RWS for potential restart (Preferred Alternative); and

(3) Shut down and deactivate the RWS with no maintenance for potential restart.

Based on the RWEIS evaluation of the potential environmental impacts, as well as the costs, energy consumption, and regulatory implications of the alternatives, DOE has selected the No Action alternative and will continue to operate the RWS. Other than potential CERCLA remediation activities, if DOE continued to operate and maintain the RWS indefinitely the No-Action Alternative would require the greatest commitment of money and energy resources. The RWS would continue to supply 5,000 gpm to L-Lake from the Savannah River. To do so, DOE would spend approximately $1,084,000 annually to provide RWS surveillance and maintenance and $494,000 annually for electrical energy to pump the water uphill from the river. Finally, DOE would continue to dredge the RWS intake canal to keep it clear of debris. However, there is great uncertainty regarding the cost of remedial action under CERCLA. Therefore, until characterization is completed, it will not be evident whether shutting down or continuing to operate and maintain the RWS is economically the most prudent course of action.

In its present configuration, the RWS circulates water from the Savannah River to a 1000 acre man-made lake known as L-Lake. L-Lake no longer serves to mitigate thermal effluents from L-Reactor because it no longer operates. RWS flow is necessary to maintain the full pool water level of L-Lake.

Low-levels of radionuclides were released to Steel Creek before L-Lake was constructed. As a result, contaminated sediments are largely confined to the former Steel Creek stream bed and floodplain that exists under L-Lake. The methods for any needed environmental remediation of these low-level radionuclide releases to Steel Creek, as well as those to other SRS streams, will be determined under the Federal Facility Agreement (FFA). This agreement, between DOE, the U.S. Environmental Protection Agency (EPA), and the South Carolina Department of Health and Environmental Control (SCDHEC), provides a commitment and schedule for the comprehensive remediation of contamination at the SRS, including SRS streams and lakes.

In accordance with the present FFA schedule, DOE will begin characterization of the L-Lake CERCLA unit in fiscal year 2000. DOE anticipates that this process will lead to an Interim Record of Decision (IROD) in Fiscal Year 2001. At that time DOE will decide whether L-Lake should be drawn down to facilitate characterization of future risks to human health and the environment. The characterization process and risk evaluation will lead to the selection of a preferred remedial alternative.

During these future draw down and characterization activities, DOE expects to stabilize exposed sediments and address the ''reasonable and prudent'' measures for protection of threatened and endangered species that the U. S. Fish and Wildlife Service (USFWS) has recommended as a result of the Endangered Species Act Section 7 consultation process.

FOR FURTHER INFORMATION CONTACT: *For RWEIS information:* Andrew R. Grainger, NEPA Compliance Officer, U.S. Department of Energy, Savannah River Operations Office, Building 773–42A, Rm. 212, Aiken, South Carolina 29802, *Telephone:* (800) 881–7292, *Attention:* RWEIS, *E-mail:* nepa@srs.gov

For general information on the DOE National Environmental Policy Act (NEPA) process: Ms. Carol M. Borgstrom, Director, Office of NEPA Policy and Assistance (EH–42), U.S. Department of Energy, 1000 Independence Avenue, S.W., Washington, D.C. 20585, *Telephone:* (202) 586–4600, or leave a message at (800) 472–2756.

SUPPLEMENTARY INFORMATION:

Background

Located in southwest South Carolina, the SRS occupies an area of approximately 300 square miles (800 square kilometers). The Savannah River forms the SRS's southwestern boundary for approximately twenty-seven miles (forty-three kilometers) on the South Carolina-Georgia border. The SRS is approximately twenty-five miles (forty kilometers) southeast of Augusta, Georgia and twenty miles (thirty-two kilometers) south of Aiken, South Carolina, the nearest major population centers. The U.S. Atomic Energy Commission (AEC), a DOE predecessor agency, established the SRS in the early 1950s for the production of nuclear materials to support the United States' national defense, research, and medical programs.

SRS produced these materials by irradiating nuclear fuel and targets in SRS' five production reactors (C-, K-, L-, P-, and R-Reactors). In the reactors, closed pipe loops contained water to cool the fuel assemblies by passing water directly across them. The water in this closed loop was then pumped to heat exchangers where heat was transferred from the closed system to a secondary-cooling system. This arrangement of closed loops minimized contamination of the environment.

The water for the secondary-cooling system was provided by the RWS. The RWS pumped river water from the Savannah River using intake canals and pumps to the heat exchangers in the reactor areas (C-, K-, L-, P-, and R-Reactor areas) by way of distribution piping and water-storage basins.[1] The RWS also pumped water to Par Pond, which was used to store additional secondary-cooling water for P- and R-Reactors.

After passing through the heat exchangers and absorbing the heat from the primary closed-loop cooling system, the heated water in the secondary-cooling system was returned to the Savannah River by way of several discharge canals and streams. After 1985, when construction of L-Lake was completed, heated secondary-cooling water was also returned to the Savannah River by way of L-Lake which dissipated the heat from the thermal effluent (hot water) from L-Reactor. Thus, in all, the RWS is composed of river water intake canals, intake pumps, distribution piping to the reactor areas, 186-Basins, discharge canals, receiving streams, and lakes (Par Pond and L-Lake).

At the end of the Cold War in 1992, SRS' mission emphasis shifted from the production of nuclear materials to cleanup and environmental restoration. Consequently, SRS' reactors were shut down, thereby decreasing the demand for RWS flow. From 1988 to 1996, demand for RWS flow and flow discharged to onsite streams decreased from 380,000 gallons per minute (gpm) to 5,000 gpm. Therefore, reflecting decreased water needs and DOE's mandate to reduce operating costs, a 5,000 gpm pump was installed in 1997 to replace a larger, and more costly to operate, 28,000 gpm pump.[2] Further, because of reduced RWS demand, and because SRS' reactors will not operate again, DOE identified the RWS as excess infrastructure, costly to operate and maintain, but with limited application. Accordingly, DOE prepared the RWEIS to examine the environmental impacts of RWS shutdown with the preference of eliminating the operational costs of this infrastructure, now only marginally useful.

NEPA Process

DOE prepared this Record of Decision pursuant to the regulations of the Council on Environmental Quality for implementing the National Environmental Policy Act (NEPA), 40 CFR Parts 1500–1508, and DOE's NEPA Implementing Procedures, 10 CFR Part 1021. This Record of Decision is based on DOE's Final RWEIS for the Shutdown of the River Water System at the Savannah River Site, Aiken, South Carolina (DOE/EIS–0268), for which DOE published a Notice of Intent to prepare on June 12, 1996, in the **Federal Register**, 61 Fed. Reg. 29744. The notice announced a public scoping period, ending on July 12, 1996, and solicited comments and suggestions on the EIS' scope. DOE held scoping meetings in North Augusta, South Carolina on June 27, 1996. Comments received during the scoping period and DOE's responses thereto were used to prepare an action plan, issued in August 1996, defining the scope and approach of the RWEIS. The action plan and reference materials cited in the RWEIS were made available for review in the DOE Public Reading Room, located at the University of South Carolina-Aiken Campus, Gregg-Graniteville Library, 2nd Floor,

[1] The water-storage basins are also known as 186-Basins.

[2] In the RWEIS, the No-Action Alternative impacts are assessed against the baseline provided by operation of the 5,000 gpm pump. DOE reviewed installation of the 5,000 gpm pump as a categorical exclusion (EEC–SS–G–96–003) in accordance with DOE's NEPA regulations. 10 CFR 1021. During assessment of the categorical exclusion, DOE determined that a 5,000 gpm pump would be sufficient to maintain L-Lake at 190 feet MSL and to provide the minimum operating needs of K- and L-Reactor areas without violating any SRS permits. Accordingly, the categorical exclusion was approved on June 6, 1996, and the pump installed thereafter.

University Parkway, Aiken, South Carolina at (803) 641–3320.

DOE completed the draft RWEIS in November 1996, and on November 15, 1996, EPA published a Notice of Availability for the document in the **Federal Register**, 61 Fed. Reg. 58548. This notice started the public comment period for the draft RWEIS, which extended through December 30, 1996. DOE received comments by letter, electronic mail, and statements made during public hearings held in North Augusta, South Carolina on December 4, 1996, all of which were considered in preparing the final RWEIS. DOE completed distribution of the final RWEIS in May 1997, and on May 16, 1997, EPA published a Notice of Availability in the **Federal Register**, 61 Fed. Reg. 27024. This ROD is the culmination of and final step in the NEPA process for action on the RWS and announces DOE's selection of an alternative.

Alternatives Considered in Final RWEIS

No-Action Alternative

The No-Action Alternative does not change the current status quo and involves continued operation of the RWS using a 5,000 gpm pump. Under this alternative, L-Lake would maintain its water level at 190 feet MSL with makeup water provided by the RWS. Par Pond water level would continue to fluctuate naturally between 195 feet and 200 feet MSL. Under severe drought conditions, and if necessary, the RWS could be used to maintain Par Pond water level.

Proposed Action—Shut Down and Maintain Alternative

The Proposed Action—and Preferred Alternative, the Shut Down and Maintain Alternative—provides for shutdown and maintenance of the RWS in a standby condition that would allow restart. RWS shutdown would result in the L-Lake water level returning to the original Steel Creek stream bed over a ten year period. RWS shutdown would not change the status quo regarding Par Pond's water level; it would continue to fluctuate naturally between 195 feet and 200 feet MSL.

Under the Shut Down and Maintain Alternative, the RWS operational capacity would be preserved in a standby mode to account for unforeseen events, mission changes, or remedial action decisions. Maintaining the RWS in a standby condition [3] requires draining the system of water and placing the equipment in a protective state minimizing degradation.[4] Under this alternative, the RWS operation could be restored to provide water for future missions or, if necessary, to maintain Par Pond water level above 195 feet MSL in the unlikely event of a severe drought. In addition, the RWS could be restarted if the final outcome of the FFA process recommends refilling L-Lake with water to manage risk from contaminated sediments in the Steel Creek stream bed. During the interim, or in the event none of these potentialities are realized, shutdown of the RWS would eliminate operational costs associated with this system.

Shut Down and Deactivate Alternative

The Shut Down and Deactivate Alternative provides for the permanent cessation of RWS operation and does not preserve system capabilities, even in the most marginal state, for restart. DOE would shut down and deactivate the system in a secure, environmentally satisfactory condition and isolate all the intake pipes to prevent river water intrusion into the RWS. DOE would conduct no maintenance or surveillance on the RWS, with the exception of the L-Lake dam, which would be maintained until the Lake's water level returned to the original Steel Creek stream bed in approximately 10 years.

Under this alternative, L-Lake water level would return to the original Steel Creek stream bed. Par Pond water level would continue to fluctuate naturally between 195 feet and 200 feet MSL. Under severe drought conditions, the RWS could not be used to maintain Par Pond water level, even if necessary. Furthermore, the RWS could not be restarted if the final outcome of the FFA process recommended refilling L-Lake with water to manage risk from contaminated sediments in the Steel Creek stream bed.

Environmental Impacts of the Alternatives

Environmental Impacts of No Action Alternative

The No Action alternative would preserve the status quo and continue current operation of the RWS through a 5,000 gpm pump.[5] Under the No Action Alternative, L-Lake would remain at its normal water level of 190 feet MSL. Par Pond water level would continue to fluctuate naturally between 195 feet and 200 feet MSL.

Environmental Impacts of Shut Down and Maintain & Shut Down and Deactivate Alternatives

The environmental impacts of the Proposed Action—and Preferred Alternative, the Shut Down and Maintain Alternative—are the same as those of the Shut Down and Deactivate Alternative. Both alternatives call for DOE to shutdown the RWS. While the Proposed Action calls for DOE to preserve the RWS in a standby condition, the actions necessary to accomplish that goal do not entail environmental impacts beyond those associated with the shutdown action. Accordingly, the environmental impacts of either alternative are the same and DOE considers them together in the following paragraphs.

L-Lake

Under either the Shut Down and Maintain Alternative or the Shut Down and Deactivate Alternative, DOE would not augment water flow to L-Lake. L-Lake cannot maintain a water level of 190 feet MSL, its normal full pool water level, without flow augmentation from the RWS. Consequently, it would recede to the original Steel Creek stream bed conditions over a ten-year period.

As L-Lake recedes to the Steel Creek stream bed as a consequence of either shutdown alternative, habitat for amphibians, reptiles, semi-aquatic mammals, wading birds, and waterfowl would be gradually reduced and eliminated. Consequently, these species would be more vulnerable to predation. Eventually, alligators would be displaced due to the loss of habitat. Drawdown of L-Lake would result in the loss of nests, eggs, or hatchlings.

In addition, the reversion of L-Lake water level to the former Steel Creek stream bed would uncover lake bed sediments. As a result, these sediments could be susceptible to the forces of erosion, especially during storm events. In addition, the reversion of L-Lake

[3] This standby condition is also referred to as ''lay-up.''

[4] Placing the RWS in lay-up also allows maintaining portions of the system in a higher state of readiness in order to restore pumping capability more rapidly. Maintenance of certain portions of the RWS in such a condition might be warranted (1) where those portions are likely to be needed for future missions; (2) where they might be necessary to maintain Par Pond water levels in the event of a severe drought; or (3) where they might be necessary to refill L-Lake in the event of determination to do so as a result of the FFA process.

[5] As previously noted, the environmental impacts of the 5,000 gpm pump were evaluated under a categorical exclusion. On December 30, 1996, EPA provided comments on the Draft RWEIS and questioned the appropriateness of this categorical exclusion. EPA requested DOE to describe more thoroughly the impacts associated with the 5,000 gpm pump. In response to EPA's comment, those impacts were included in the Final RWEIS. A discussion demonstrating the appropriateness of the categorical exclusion may be found in the RWEIS at page E–61.

water level to the original Steel Creek stream bed could expose some sediments, primarily in the Steel Creek stream bed, that could contain low levels of contamination, primarily cesium-137.[6] Animals foraging in the L-Lake lake bed or Steel Creek stream bed could be exposed to these sediments via inhalation, ingestion, direct radiation exposure, and/or skin contact. Similarly, an on-site human working in the L-Lake bed lake could be exposed to the contaminants in sediments via inhalation, incidental ingestion, direct radiation exposure and/or skin contact. An off-site human could be exposed to contaminants in sediments through atmospheric or aqueous pathways via inhalation or ingestion from sediments that have been re-suspended in air or water. The off-site human would not be exposed to direct radiation.

Exposure to L-Lake lake bed contaminants is unlikely to pose a significant risk to SRS workers, the public, or the environment. The L-Lake lake bed contaminants would be unlikely to pose a significant risk to SRS workers because the concentration of the contaminants in the sediments is low and the amount of time that an SRS worker would be expected to spend in the lake bed would not yield an annual dose above DOE administrative limits (700 mrem). For example, an SRS worker spending eight hours per days for 250 days a year over a twenty-five year period would receive an annual dose of 41 mrem. The 41 mrem dose is well below DOE's 700 mrem administrative limit.

The L-Lake lake bed contaminants would be unlikely to pose a significant risk to the public because the public would not be exposed to direct radiation, which is the primary hazard associated with cesium-137. The probability of the maximally-exposed individual, located at the SRS site boundary, developing a fatal cancer as a result of 70 years exposure would be less than one in a million (5.6 X 10E–7). In DOE's judgment this risk is extremely small.

Finally, the L-Lake lake bed contaminants would be unlikely to pose a significant risk to the environment because erosion would be controlled and contaminated sediments would not pose a significant risk to foraging animals. Erosion would be controlled because, based on DOE's historic hydrologic data and models, L-Lake would probably recede during the growing season. As the Lake's water level slowly receded, wetland plants growing in the shore zone would recede down slope with the water. Seed banks along the shoreline would germinate and stabilize sediments in portions of the newly exposed shoreline. In addition, DOE would artificially seed the exposed L-Lake lake bed with appropriate vegetation in order to further stabilize the sediment. Thus, exposure to contaminants in the L-Lake due to erosion or resuspension of lake bed sediment would be minimized because the sediments would be protected from wave or wind agitation.

Furthermore, erosion and transport of contaminated L-Lake lake bed sediments would be reduced by the slow drawdown of the water level in the Lake, occurring over a ten year period, and by the resulting growth of stabilizing vegetation. Because of this slow drawdown and growth of stabilizing vegetation, suspension of sediments in the water column would be minimized. Further, DOE would maintain the Steel Creek dam during the drawdown to impede the transport of those sediments that became suspended in the water column. The Steel Creek dam would minimize the movement of contaminants suspended in the water column by creating a stilling basin to still the water and allow sediments to settle out of the water column.

Contaminants in L-Lake lake bed would not pose a significant risk to foraging animals either from radiological or non-radiological sources. As described in the RWEIS, radiological contaminants were screened against known background contaminant concentrations yielding estimated radiation dose rates, which were then compared to applicable standards. This comparison indicated that two radionuclides exceeded twice the background level, namely cesium-137 and Co-60. Cs-137 and Co-60 in L-Lake lake bed sediments would primarily cause risk from the direct exposure of penetrating gamma radiation. The concentrations of these radiological sources was used to estimate a dose rate to selected receptor species. The estimated radiation dose rates to selected receptor species are well below the applicable standards.

For non-radiological sources, it was recognized that L-Lake lake bed sediments would be exposed and that the sediments could become surface soil or facilitate vegetative growth. All samples detected in sediments were compared to screening levels for sediments, surface soils, and terrestrial plants. No sediment contaminants were present in average concentrations that exceeded available screening levels. Screening levels were not available for four non-radiological samples found in L-Lake sediment—beryllium, cobalt, thallium, and vanadium—which had an average concentration between two and three times their background levels. The potential risk of these contaminants (as well as all contaminants that were detected) were assessed by screening their respective concentrations against surface soil screening levels.

Assuming the sediments became surface soils, the average concentrations of beryllium, thallium, chromium, and vanadium were between two and three times their average background levels. Thallium was detected in five of forty-four samples and beryllium, chromium, and vanadium slightly exceeded twice its background screening level. This indicated that these contaminants either are not present in high concentrations or are not widespread because of the few occurrences in samples. Accordingly, they would not represent an unacceptable risk. The average concentration of cobalt was below its associated screening level.

Assuming the detected sediment concentrations were found in terrestrial plants, chromium, thallium and vanadium were between two and three times their background screening levels. Again, thallium was detected in five of 44 samples. It should also be noted that plants absorb chromium, thallium, and vanadium minimally from soils. Because of this fact and that L-Lake currently supports a healthy, diverse ecological community, it does not appear that effects to L-Lake plants from contaminants are occurring or would occur under the Proposed Action.

The screening process is discussed in greater detail in Appendix B of the RWEIS.

Par Pond

Par Pond water level would not be impacted by any of the alternatives considered in the RWEIS. Par Pond has not received makeup water from the RWS since January 1996, and has been allowed to fluctuate naturally between 195 feet and 200 feet MSL. Accordingly, ceasing operation of the RWS could not effect Par Pond water level because it is not currently receiving make-up water from the RWS.

[6] Cesium-137 is an external radiation hazard from direct exposure to gamma radiation which penetrates clothing and skin. Measurements taken under the surface of L-Lake show that cesium in the Lake sediments is largely concentrated in the original Steel Creek floodplain, currently beneath the surface of L-Lake. These measurements also show that a maximum (24-hour per day) radiation dose received by a human would be approximately 180 mrem per year above the typical radiation dose to which Americans are routinely exposed (approximately 360 mrem per year). The occupational dose limit for adults is 5,000 mrem per year, and this additional dose would not exceed that limit. 10 CFR § 20.1201.

Allowing Par Pond to fluctuate naturally was the product of prior analysis and decisions conducted under authority of NEPA and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). In response to safety concerns presented by a 1992 leak in the Par Pond dam, DOE prepared a NEPA document called a Special Environmental Analysis (SEA) to assess the environmental impacts of an emergency drawdown of the Par Pond water level from 200 feet MSL, its normal water level, to 181 feet MSL. The SEA reviewed the anticipated and observed environmental impacts of drawing down, repairing, and refilling Par Pond, including potential health and ecological impacts resulting from the possible exposure to radiocesium contaminated sediment. It concluded that ''consideration would be given to begin refilling operations as soon as possible, perhaps before dam repairs are completed, to minimize impacts on the Par Pond ecosystem.'' DOE, Special Environmental Analysis for Par Pond at the Savannah River Site, page 4, (April, 1992). In addition, the SEA summarized consequences of possible future repair, remedial, and refilling actions, and developed a Mitigation Action Plan (MAP) to reduce the impacts of the repair activity. Under authority of the SEA, DOE proceeded with the Par Pond drawdown and repair project.

Following the repair action, DOE prepared a Par Pond Interim Record of Decision (IROD) to provide a CERCLA remedial action to address the interim period following the dam repair until a final remedial action could be studied and selected. The IROD's selected remedy consisted of refilling and maintaining Par Pond to 200 +/-1 feet until a NEPA evaluation could be accomplished to evaluate the environmental impacts from reduced flow to Lower Three Runs Creek (the creek below Par Pond dam), fluctuating reservoir water level, and discontinuing of river water pumping to the reservoir. DOE, Interim Action Record of Decision, Remedial Alternative Selection, Par Pond Unit, WSRC–RP–93–1549 (January 26, 1995). EPA and SCDHEC approved the IROD in February 1995, and Par Pond was completely refilled by March 15, 1995.

In 1995, DOE prepared a NEPA Environmental Assessment (EA), Natural Fluctuation of Water Level in Par Pond and Reduced Water Flow in Steel Creek Below L-Lake at the SRS (DOE/EA–1070). The EA analysis showed that no significant impacts would likely result to the Par Pond ecosystem if the Pond's water level were maintained at 195 feet MSL or above. Hydrological models analyzed in the EA showed that even without RWS flow augmentation, the Par Pond water level is not likely to decrease below 196 feet MSL, even in drought conditions. Further, the EA analysis showed that elimination of RWS water flow and the accompanying reduction of Savannah River nutrients flowing through Par Pond would cause the Pond's ecosystem to revert to that typically found in reservoirs in the southeastern United States. Based on the analysis in the EA, DOE issued a Finding of No Significant Impact (FONSI) in August 1995 under which RWS water flow to Par Pond was eliminated. Under the FONSI, if Par Pond water level decreases to 195 feet MSL or below, DOE will resume water flow augmentation through the RWS. Since issuance of the FONSI, natural water flow into Par Pond has maintained the Pond above 199 feet MSL.

Under either of the RWEIS shutdown alternatives, the status quo would not be changed and RWS water would not augment natural water flow into Par Pond. Under the Shut Down and Maintain Alternative DOE would be able to restart the RWS and resume pumping to Par Pond if the water level drops below 195 feet MSL, as called for in the FONSI and consistent with the IROD. However, under the Shut Down and Deactivate Alternative, DOE would not have the capability to restart the RWS to augment water flow to Par Pond in the event a severe drought demanded such an action.

Other Impacts

Under either of the shutdown alternatives, DOE would need to find an alternate water supply for auxiliary equipment cooling and for fire protection water reserves. The alternate water supply would be approximately 400 gpm and be drawn from groundwater. This groundwater would be provided by existing wells at rates much less than was historically provided by these same wells during reactor operations.

RWS shutdown would result in increased survival of Savannah River larval fish and fish eggs because they would no longer be entrained at the RWS intake structures. In addition, RWS shutdown would return 225 acres of original wetlands inundated by the damming of Steel Creek and creation of L-Lake. This acreage is approximately the same amount of wetlands that exists along the present shoreline of L-Lake that would be lost as L-Lake water level recedes to the original Steel Creek stream bed.

Environmentally Preferable Alternative

The proposed action in this instance presents a situation where the environmentally preferable action is different based on whether a short-term or long-term period of reference is used. Based on the analysis in the RWEIS, DOE finds that in the short-term, the environmentally preferable alternative is the No-Action Alternative to preserve the status quo and continue current operation of the RWS through a 5,000 gpm pump. The No-Action Alternative would preserve L-Lake and prevent the return of the Lake's water level to the original Steel Creek stream bed. The preservation of the Lake would, in turn, preserve up to 1000 acres of aquatic habitat formed by it, and forestall the transition of this habitat to uplands and wetlands habitat.

However, in the long-term, the Shut Down and Maintain Alternative is the environmentally preferable alternative. Under this alternative, L-Lake water level would return to the original Steel Creek stream bed over a ten year period, which would allow for the gradual restoration of a more stable ecosystem, such as that in existence prior to construction of L-Lake. The pre-Lake ecosystem would be more stable because it is the indigenous ecosystem, and because it would not be susceptible to potential imbalances, such as those introduced by changes in L-Lake water level associated with repair or renovation of the Steel Creek dam.

Furthermore, the restored L-Lake ecosystem would benefit from the reemergence of 225 acres of wetlands inundated by the creation of L-Lake, an amount that approximately equals the amount of wetland acreage that would be lost along the shoreline of L-Lake as it gradually recedes. After these areas are exposed, they would naturally reestablish wetland characteristics with cycles of drying and flooding typical of other hardwood swamps on the SRS and in the southeast. As typical wetlands they would support diverse ecological communities.

In addition, while a decrease in aquatic productivity would be expected as a consequence of the return of L-Lake water level to the original Steel Creek stream bed, an increase in terrestrial productivity would occur concomitantly. As the L-Lake water level receded, grasses, forbs, shrubs, and trees indigenous to the ecosystem would re-colonize the L-Lake lake bed over time. In addition to flora, indigenous fauna would return to the ecosystem, and a variety of terrestrial and semi-aquatic animal species would inhabit

the area as L-Lake gradually receded to the original Steel Creek stream bed.

Other than potential CERCLA remediation activities, if DOE continued to operate and maintain the RWS indefinitely the No-Action Alternative would require the greatest commitment of money and energy resources. The RWS would continue to supply 5,000 gpm to L-Lake from the Savannah River. To do so, DOE would spend approximately $1,084,000 annually to provide RWS surveillance and maintenance and $494,000 annually for electrical energy to pump the water uphill from the river. Finally, DOE would continue to dredge the RWS intake canal to keep it clear of debris. However, there is great uncertainty regarding the cost of remedial action under CERCLA. Therefore, until characterization is completed, it will not be evident whether shutting down or continuing to operate and maintain the RWS is economically the most prudent course of action.

Associated Actions

DOE considered a number of actions that affect the selection of an alternative for the RWS, as well as the timing of implementing a selected alternative. The actions are described in the following paragraphs.

Remedial Action Process for L-Lake

Through the FFA, DOE, EPA, and SCDHEC established the procedure for environmental restoration activities at the SRS. The FFA integrates DOE responsibilities under the Resource Conservation and Recovery Act (RCRA) and CERCLA. In response to EPA and SCDHEC comments on the Draft RWEIS, DOE recommends further assessment of L-Lake under the FFA, possibly resulting in a Baseline Risk Assessment (BRA) and a Remedial Investigation/ Feasibility Study (RI/FS).

A BRA will assess the risk associated with the contaminants identified in the L-Lake sediment, primarily located in the original Steel Creek stream bed, and it will provide a quantified expression of risk for key receptors, such as humans or wildlife, which may be exposed to the contaminants. An RI/FS will gather data necessary to determine more exactly the nature and extent of contamination in L-Lake sediment, establish criteria for remediating the Lake, identify the preliminary alternatives for remedial actions, and support the technical and cost analyses of the remedial alternatives.

DOE believes that the analysis and data collection necessary to prepare a BRA and RI/FS is more accurately, easily, and economically obtained once L-Lake has returned to its original Steel Creek stream bed. This is because there are inherent difficulties in taking sediment samples while L-Lake is filled if additional samples are needed. Because shutdown of the RWS will present no unreasonable risk to human health or the environment, and because analysis of L-Lake sediment is more appropriate after the Lake has returned to the original Steel Creek stream bed, DOE anticipates that this process will be accomplished under an Interim Record of Decision (IROD). In accordance with the present FFA schedule, DOE will begin characterization of the L-Lake CERCLA unit in fiscal year 2000 and begin L-Lake draw down in Fiscal Year 2001. The characterization process and risk evaluation will lead to the selection of a preferred remedial alternative. It is DOE's intention to incorporate National Environmental Policy Act values in the IROD and supporting documents.

Remedial Action Process for Onsite Streams

Steel Creek, Four Mile Branch, Pen Branch, and Lower Three Runs, are listed in the FFA as RCRA/CERCLA units because each stream received contaminants from past operations. EPA and SCDHEC expressed concern about the effect on these units due to the installation of the 5,000 gpm pump because the installation of that pump reduced water flow capacity through the streams from 28,000 gpm to 5,000 gpm. The reduction in water flow through the SRS streams has increased the concentration of tritium transported to SRS streams from the seepage basins.

Increased tritium concentrations in site streams are the consequence of two factors. First, tritium from the seepage basins is carried with rainwater to site streams as it percolates through the soil at a fairly constant rate. Second, the RWS flow formerly diluted the tritium-containing rainwater as it percolated to the streams. Installation of the 5,000 gpm pump reduced RWS flow contribution to the streams and removed this dilution water. Consequently, installation of the 5,000 gpm pump had the effect of increasing tritium concentrations.

To respond to comments on the draft RWEIS, the Final RWEIS evaluated the impacts to workers, ecosystems, and the public due to the installation of the 5,000 gpm pump from the resulting increase in tritium concentrations. Workers and ecological receptors would be at risk due to increased tritium exposure through incidental ingestion and skin contact. The public could be at risk due to ingestion of increased concentrations of tritium in drinking water. However, the RWEIS risk assessment showed that a hypothetical future worker's annual dose would be below 1 mrem. The RWEIS environmental risk assessment showed that the highest annual dose to an ecological receptor would be 92 mrem. Both of these dose rates are well below accepted standards.

Drinking water taken from the Savannah River would not be impacted because installation of the 5,000 gpm did not increase the total amount of tritium released to the River. Because the flow rate of water in the Savannah River is typically over 10,000 cubic feet per second (compared to the 45 cubic feet per second reduction of flow from installation of the 5,000 gpm pump) and because the nearest domestic water plant intake is approximately 40 miles downstream from SRS, the on-site increased concentrations have an insignificant health impact to the public. In summary, the increased concentrations of tritium in site streams were determined to be acceptable because these concentrations did not pose an unacceptable risk to workers, the ecosystems or the public.

Steel Creek, Four Mile Branch, Pen Branch, and Lower Three Runs, as well as other SRS streams have received low-levels of radionuclides, including tritium, from past SRS operations. Therefore, all of them will be evaluated in accordance with the FFA and be the subject of a risk analysis based on hypothetical future residents and industrial workers.[7] DOE is scheduled to provide information to EPA and SCDHEC, which will assist in the characterization of each stream and the selection of a remedial alternative.

Water Requirements for Alternatives

Under the No-Action Alternative, the RWS would continue to supply existing operational cooling and make-up water requirements for the reactor areas and maintain L-Lake at 190 feet MSL. For either of the shutdown alternatives, DOE must supply 400 gpm of groundwater to replace that provided by the RWS to cool auxiliary equipment and to provide make-up water for fire protection reserves.

[7] These two hypothetical future groups could be at risk because the risk analysis assumes that they drink water from SRS streams before it is mixed with the Savannah River. A down stream receptor is not at risk because the Savannah River flow rate is significantly higher than SRS streams and, in effect, dilutes tritium to concentrations which do not pose a risk to human health.

L-Area Sanitary Wastewater Treatment Plant

The L-Area sanitary wastewater effluent mixes with RWS flow before reaching L-Lake. The L-Area Sanitary Wastewater Treatment Plant wastewater permit took credit for RWS blending flow in determining the extent of treatment necessary before the wastewater was discharged to L-Lake. To stop RWS flow, DOE must implement an alternate compliance method to manage L-Area sanitary wastewater.

Reactor 186-Basins Alternative Uses Study

In 1994, DOE analyzed the feasibility of using the SRS C-, L-, P-, and R-Reactor 186-Basins[8] and 904-Retention Basins[9] for aquacultural purposes. In March 1995 DOE advertised the availability of the Reactor 186-Basins for commercial use. DOE accepted one fish farming proposal that would have relied on ground water for make-up water, although this proposal was later withdrawn. At the present time, no future uses of the 186-Basins or the 904-Retention Basins are planned. DOE could accept similar proposals in the future regardless of the RWEIS alternative selected because the basins do not rely on the RWS for make-up water.

Decision

DOE selects the No Action Alternative of the RWEIS—Continue to Operate the RWS. Under this alternative, DOE will continue to operate and maintain the system as well as maintain the water level of L-Lake at its full pool water level of 190 feet MSL.

DOE will assess the need for future environmental remediation alternatives for L-Lake under existing CERCLA commitments. Characterization activities associated with CERCLA closure are expected to begin in the year 2000 and be completed in several years. This characterization will inform any required remedial action. Pending these activities, DOE will continue to operate the RWS. If during continued operation of the RWS a system component fails, DOE will take appropriate emergency actions. DOE will then determine if the system is too costly to repair (by comparing this cost to estimated shutdown costs and future possible remediation costs under CERCLA). If DOE determines that the RWS is too costly to repair, it will reevaluate all relevant commitments and the information in the RWEIS, to determine necessary actions to shut down the RWS. However, the RWS is in good condition and not expected to fail over this period of time.

In accordance with the present FFA schedule, DOE will begin characterization of the L-Lake CERCLA unit in fiscal year 2000. DOE anticipates that this process will lead to an Interim Record of Decision (IROD) in Fiscal Year 2001. At that time DOE will decide whether L-Lake should be drawn down to facilitate characterization of future risks to human health and the environment. The characterization process and risk evaluation will lead to the selection of a preferred remedial alternative. Not withstanding a major system failure, DOE has decided to operate and maintain the RWS until a preferred remedial alternative is selected.

DOE made this decision after considering the most recent operating and maintenance costs and estimated shutdown implementation costs. DOE has concluded the amount and uncertainty in shutdown implementation costs suggest the RWS should continue to be operated while DOE monitors RWS operating and maintenance costs to determine when continued operation becomes too costly. For example, if a portion of the system failed, DOE may elect to take an emergency action in accordance with 40 CFR 1506.11, if appropriate, and then determine if repair was too costly. If DOE determines that repair is too costly it will announce this decision in a future Record of Decision under the requirements of NEPA and CERCLA, as necessary.

Prior to drawdown, DOE will notify the USFWS to ensure all ''reasonable and prudent'' measures, which were recommended by USFWS during the Endangered Species Action consultation process to protection of threatened and endangered species, are still adequate and appropriate. DOE will also negotiate a schedule with USFWS for the review and completion of these measures.

During any future draw down and characterization activities DOE expects to stabilize exposed sediments and address the ''reasonable and prudent'' measures, discussed above.

DOE considers continued operation of the RWS to be environmentally preferable in the short-term because L-Lake remain as a lake with its ecology unaffected.

Comments on Final RWEIS

DOE received two letters commenting on the Final RWEIS. The first, a letter from EPA, Region IV, dated June 12, 1997, expressed concern that the RWEIS does not adequately consider injury or impacts to endangered species. To consider injury or impacts to these species DOE and USFWS entered into a formal consultation process regarding endangered species. The USFWS recommended specific ''reasonable and prudent'' measures to protect the bald eagle and wood stork during the L-Lake water level return to the original Steel Creek stream bed. DOE endorsed these reasonable and prudent measures. However, these measures will not be implemented at this time because the draw down of L-Lake will not occur as a result of this decision.

The letter from EPA, Region IV also expressed concern that the RWEIS did not adequately consider the ecological risks associated with shutdown of the RWS. However, as explained in the Environmental Impacts section, the RWEIS ecological risk assessment (ERA) concluded that significant potential risks to ecological receptors from contaminants is not likely.

Finally, as a general statement, the letter from EPA, Region IV stated that, ''This NEPA action should be coordinated to the fullest extent possible with FFA activities''. The selection of the No Action alternative has been made, in part, in response to this statement.

In addition, the RWEIS documented several measures that were taken to coordinate the NEPA with the FFA process, which include the following: (1) use of FFA criteria as contamination level screening limits to estimate future potential remedial action decisions; (2) movement of the L-Lake unit from Appendix G to Appendix C of the FFA in order to avoid the unnecessary generation of a Site Evaluation Report and expedite the FFA process; and (3) preservation of the ability to refill L-Lake under the RWEIS shut down and maintain alternative in the event that such action is determined to be necessary under the FFA.

The second letter, dated June 11, 1997, from the Office of Environmental Policy and Compliance within the Department of the Interior (DOI) addressed several concerns regarding the revised ecological risk assessment (ERA) provided in the RWEIS. Specifically, DOI commented that guidance DOE used to develop the RWEIS ERA ''is inadequate and inconsistent with the US EPA's guidance on ecological risk

[8] 186-Basins are water storage basins which are not contaminated.

[9] 904-Retention Basins are 50 million gallon basins that were designed to receive emergency cooling water in the event of a reactor accident.

assessment.'' To the contrary, DOE believes the RWEIS ERA was conducted in accordance with the most current EPA guidance.

The objective of the RWEIS ERA was to determine, as accurately as possible under the existing L-Lake characteristics, the probable outcome of a CERCLA ERA.[10] The RWEIS ERA is adequate because it used maximum contaminant concentrations in its risk assessments. In fact, all radiological risks were within dosimetry-based limits acceptable to the International Atomic Energy Agency. Where the maximum concentrations of some non-radiological contaminants showed a risk potential, either the average concentration of the contaminant was compared to background levels or, alternately, the contaminant concentration was compared with more contaminant-specific information available in accepted scientific literature. This procedure is part of the typical process of interpreting the results and uncertainties of an ERA and represents the general ERA approach recommended in the EPA guidance for Superfund. EPA, Ecological Risk Assessment for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Review Draft, (1996).

DOI also asserted that the ''[c]onclusions of no risk are inconsistent with actual research findings.'' DOI cited specific DOE studies sent to USFWS during the formal Endangered Species Act consultation. The studies DOI cited assessed DNA changes found in blood samples of various wildlife species present on the SRS. In response to this assertion, DOE notes that, in no case did any of the studies suggest that an observable change in a wildlife population would result from the exposure to low levels of radionuclides found in L-Lake. Accordingly, this supports the RWEIS ERA finding that significant potential risks to ecological receptors from contaminants are not likely.

Finally, DOI commented on various DOE studies showing the presence of elevated mercury concentrations in the SRS environment. However, DOI's comment does not reflect the fact that the presence of mercury in the SRS environment is not the result of releases attendant to SRS operations. Indeed, mercury is elevated throughout areas of the southeastern United States due to atmospheric deposition, not due to SRS operations. Reflecting and restating this fact, SCDHEC issued a fish consumption advisory for numerous lakes and rivers in South Carolina based on mercury concentrations in fish. Again, the presence of this mercury was not and cannot be correlated to any SRS operations. Accordingly, DOE has no control over and is not responsible for the atmospheric deposition of mercury at SRS, or in other areas of the southeastern United States. Consequently, a returning L-Lake water level to the original Steel Creek stream bed would not exacerbate this regional phenomenon or increase ecological risk.

[10] The CERCLA ERA will be used to aid the determination of a final remedial action at L-Lake. A final action is typically made only after the lake bed is characterized in detail using information such as groundwater hydrogeology, extent of groundwater contamination, and existing burial area contamination profiles. Presently, these areas are under as much as 50 feet of water and cannot be adequately characterized. As a result, a complete risk assessment cannot be performed and a final remedial alternative cannot be selected until L-Lake returns to the original Steel Creek stream bed.

Conclusion

After consideration of all relevant information and data, DOE selects the No Action alternative as the most appropriate action for the future of the River Water System at the Savannah River Site at this time. This operational decision is made in recognition of all beneficial and adverse environmental impacts, monetary costs, regulatory implications and commitments under the FFA, and dictates of relevant statutes.

Signed this 23rd day of December, 1997, at Aiken, South Carolina.

Greg Rudy,

Acting Manager, Savannah River Operations Office.

[FR Doc. 98–1947 Filed 1–27–98; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Hydrogen Technical Advisory Panel

AGENCY: Department of Energy.

ACTION: Notice of open meeting.

SUMMARY: Pursuant to the provisions of the Federal Advisory Committee Act (Pub. L. No. 92–463, 86 Stat. 770, as amended), notice is hereby given of the following advisory committee meeting: Hydrogen Technical Advisory Panel.

Date: Monday, March 2, 1998, 9:00 A.M.–4:30 P.M., Tuesday, March 3, 1998, 9:00 A.M.–3:30 P.M.

Place: Sheraton Premiere Hotel at Tysons Corners, 8631 Leesburg Pike, Vienna, Virginia 22182; Telephone: 800–572–7666.

FOR FURTHER INFORMATION CONTACT: Russell Eaton, Designated Federal Official, Department of Energy, Golden Field Office, 1617 Cole Blvd, Golden, CO 80401, Telephone: 303–275–4740.

SUPPLEMENTARY INFORMATION:

Purpose of the Panel: The Hydrogen Technical Advisory Panel (HTAP) will advise the Secretary of Energy who has the overall management responsibility for carrying out the programs under the Matsunaga Hydrogen Research, Development, and Demonstration Program Act of 1990, Pub. L. No. 101–566 and the Hydrogen Future Act of 1996, Public Law No. 104–271. The Panel will review and make any necessary recommendations to the Secretary on the following items: (1) The implementation and conduct of programs required by the Act, and (2) the economic, technological, and environmental consequences of the deployment of hydrogen production and use systems.

Tentative Schedule

Monday, March 2, 1998

9:00 AM, Introduction and Opening Comments—A. Lloyd
9:15, Opening Comments and Introduction of New Panelists—A. Lloyd/A. Hoffman
9:45, DOE Federal Report—R. Eaton
10:00, Report of the President's Committee of Advisors on Science and Technology (P–CAST), 11-Lab Study—S. Gronich
10:30, Break
10:45, Russian-American Fuel Cell Consortium (RAFCO)—R. Bradshaw
11:15, DOE's Fuel Cell Coordination Committee—R. Bradshaw
12:00 PM, Lunch
1:30, Strategic Directions Draft Plan—Bailey/Kamal/Zalosh
2:30, DOE Fuel Cell Program for Transportation—P. Patil
3:00, Break
3:15, California Hydrogen Business Council—D. Moard
3:30, Public Comments—Audience
4:00, HTAP Panel Comments—Panel
4:30, Adjourn
6:00, Reception

Tuesday, March 3, 1998

9:00 AM, HTAP Report to Congress—A. Lloyd
12:00 PM, Lunch
1:30, HTAP Report to Congress—Discussion
2:45, Public Comments
3:15, HTAP Panel Discussion and Roundup Panel
3:30, Adjourn

Public Participation: The meeting is open to the public. Written statements may be filed with the Committee either before or after the meeting. Individuals who wish to make oral statements pertaining to agenda items should contact Russell Eaton's office at the address or telephone number listed above. Requests must be received 5 days prior to the meeting and reasonable provision will be made to include the presentation in the agenda. The Designated Federal Official is empowered to conduct the meeting in a fashion that will facilitate the orderly conduct of business. Each individual wishing to make public comment will be provided a maximum of 5 minutes to present their comments.

Minutes: The minutes of this meeting will be available for public review and copying at the Freedom of Information Public Reading Room, 1E–190, Forrestal Building, 1000