

April 2005

Committee Evaluation of Barnwell operation

Committee members:

Stephen Byrne

David Peterson

Reviewed by the full Governors Nuclear Advisory Council

Background:

The 235 acre Barnwell Low Level Radioactive Waste (LLRW) disposal facility is located in Barnwell County, South Carolina. The facility is owned by the state of South Carolina and facilitated through the Budget and Control Board. Chem Nuclear Systems LLC (Chem Nuclear) has a 99-year land lease from the State of South Carolina to operate the site. Chem Nuclear also holds the license, renewable every five years, to operate the site issued by South Carolina Department of Health and Environmental Control (DHEC). Rates for disposal are set by the Budget and Control Board (B&CB). South Carolina is a member of the Atlantic Interstate Low Level Radioactive Waste Compact (Atlantic Compact) along with Connecticut and New Jersey; activities of the compact are governed by the Atlantic Compact Commission. The state Public Service Commission (PSC) determines reasonable operating cost upon which Chem Nuclear is permitted to earn a return. Approximately 92% of waste volume delivered comes from power reactors.

Executive Summary:

The Committee found that the Barnwell site is being effectively managed by the state and Chem Nuclear. No issues with DHEC's regulatory responsibilities surfaced. The Chairman of the Atlantic Compact Commission and the staff appear to have the best interest of the state in mind. The Budget and Control Board through the South Carolina Energy Office has the authority to make confidential pricing decisions under special circumstances. This activity is, as far as we can tell, unaudited and the state would best be served by periodic independent oversight of this process. Waste disposed of at the facility is, by legislation, being phased out to out-of-compact generators with no out-of-compact waste allowed after June 2008. There will be disposal space available at the Barnwell facility that will go unused under current legislation. Probably the biggest issue of concern was the need to repay the extended care fund; the legislature has on two occasions used monies from that fund for shortfalls elsewhere, almost \$90 million has been removed from the fund to date.

Recommendations:

- 1) The State should repay money removed from the extended care fund.
- 2) The extended care fund should be treated as a trust fund and the associated legislation changed such that the fund can no longer be used to makeup shortfalls elsewhere.
- 3) A periodic audit should be performed of a selection of special pricing arrangements made by the Budget and Control Board to ensure that they are in the best interest of the State.
- 4) A plan should be devised for another entity to assume control of the facility from Chem Nuclear should they decide to cease their operations at the site.
- 5) Consideration should be given to maximize revenue to the state by utilizing all available volume at the site; this would likely involve a change to the legislation.
- 6) Consideration should be given to allowing out of compact military class 'B' and 'C' waste beyond 2008. Monies raised from this use could be earmarked to repay the extended care fund.

The Barnwell committee of the Governor's Nuclear Advisory Council evaluated Barnwell operations at the request of the Council Chairperson consistent with the enabling legislation of the council. This is similar to an evaluation of Savannah River Site activities performed by another council committee. Our evaluation was performed by reviewing the legislation and interviews of associated parties. Interviews were conducted with members of the Budget and Control Board, the SC Energy Office, the Governor's Office, the Atlantic Compact Commission Chairman and the site operator. Throughout the interview process no concerns were raised about DHEC's regulatory activities at the site and, therefore, DHEC personnel were not interviewed. The one issue that was of concern to all parties was the status of the Barnwell extended care fund. This fund had \$49.3 million removed in 2002 and \$38.5 million removed in 2001. There is a bill pending in the legislature that would repay \$25 million to the fund. Even if this \$25 million installment is made, a repayment plan for the remaining \$63 million does not exist. Any delay in repayment to the fund compounds the problem of funds available at site closure; this issue was presented to the Budget and Control Board in an August 6, 2002 report from consultant firm Bradburne, Briller & Johnson LLC. This report is available via the Energy Office website. All parties felt that it is important that the fund also be protected in the future; this would require redesignation of the fund (as a true trust) presumably through legislation. The fund currently stands at approximately \$24 million. It is important to note that a separate true trust exist to fund site decommissioning activities and is characterized as adequate in the 2000 site closure plan. Currently a surcharge on waste funds this trust.

A point of contention surfaced through the interviews relative to the practice of negotiating special rates with generators by either the B&CB or the site operator. These rates can differ from the published rate schedules. We found that the practice was allowed by statute; this same statute also compels the B&CB to keep the details of these deals confidential for 12 months. The site operator is allowed to “market” the site via these special rates, but must get B&CB approval. We would recommend that a periodic audit of a selection of these special rate arrangements be performed to ensure that the practice is maximizing revenue to the state and that no conflicts of interest exist. The parent company of the site operator is, by statute, excluded from any of these negotiated special rates.

Another mildly contentious issue was the 29% rate of return that Chem Nuclear is allowed on operating cost. Some felt this may be too high or encourages the wrong thing, namely increased volume. We did not take issue with the 29% for the following reasons:

- It is based on allowed operating cost not revenue.
- There is no recovery on items like income tax.
- Some items like amortization of intangible assets are pass thru.
- It is a matter of public record and is reviewed and authorized by the state Public Service Commission.
- It is derived from a model used in the Northwest Compact.
- There is a complaint and hearing process in the Compact legislation such that the B&CB, the Atlantic Compact or any generator can challenge allowable costs.

The Barnwell site is the only current option for disposal of class ‘B’ and class ‘C’ waste outside the Northwest Compact. The Envirocare facility in Utah was recently sold and the new owners assured the State of Utah that they had no intention, for the foreseeable future, to pursue a license for anything other than class ‘A’ waste. The only other possibility on the horizon is a proposed LLRW facility in Texas. The military is concerned that they will not have disposal capability for ‘B’ & ‘C’ waste after 2008. This may present an opportunity for the states of South Carolina, Connecticut and New Jersey. One possible option would involve a change in the legislation to allow Barnwell to accept Atlantic Compact waste and military waste after 2008 and use the additional revenue exclusively to repay the extended care fund. Another possible option would similarly change the legislation and trade consideration for keeping military bases open in the three states for space at Barnwell. The recommendation to open the site to any form of non-compact waste is not made lightly and is primarily to see that the extended care fund is repaid. This recommendation is also made without knowledge of any plans that State agencies may have to use Barnwell as an economic development tool in locating nuclear industries here.

The Atlantic Compact, in 2002, had an evaluation done by an outside consultant relative to early license termination by Chem Nuclear. The evaluation concluded that DHEC had broad latitude to keep the site open and that a new operator could be found and operations turned over in 12 to 18 months or the state could operate the site. It is possible that the current operator would seek legal resolution if DHEC prevented site closure. Chem Nuclear periodically submits site closure plan updates to DHEC as required by the license. The most recent plan on file is the 2000 closure plan. Once the site closure plan is implemented (2-5 years) Chem Nuclear would seem to have a legitimate argument to turn the facility back to the state. The B&CB could assume operation of the facility on behalf of the State. The council would recommend against having an oversight agency like DHEC run day to day operations at Barnwell. The 12 to 18 month time frame seems optimistic given the likelihood of intervention in the license transfer process. We would recommend that the evaluation for early site closure be revisited and include assumptions that may have changed since the enabling legislation for the site was promulgated. For instance, it was assumed that in-compact nuclear plants would operate for 40 years and then begin prompt decommissioning; however, all plants in South Carolina have been granted a 20-year license extension and it is likely that all plants in the compact will do the same. A method of mothballing retired nuclear power plants for 40 – 60 years to allow radioactivity to decay (reduce) is now being evaluated by utilities. This method called “SAFSTOR” would simply guard and monitor plants after power operations cease and prior to starting the decommissioning process. Options like part time operation of the site and having a consortium of users under DHEC oversight run the facility should be considered.

Both the site operator and the Atlantic Compact Commission have performed evaluations of required space and feel that there will be significant space (~1 million cubic feet) unused at site closure. Space reserved for in-compact and in-state generators is more than adequate even after decommissioning of the plants is complete. While the Atlantic Compact Commission would not favor any changes to volumes set aside for in-compact generators in the Atlantic Compact Act, the state should consider the fact that unused space is lost revenue.