

**CRESP Report 33**

**Rebounding From the Loss of a Major Employer:**

**DOE Regions in Idaho, South Carolina, Georgia and Washington**

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## **ABSTRACT**

The federal government's massive spending on nuclear weapons materials and research generated hundreds of thousands of jobs and pumped billions of dollars into a small number of regions during the 1940s and 1950s. This concentration of financial and physical resources caused the almost overnight formation of small urban centers in what formerly had been remote, rural areas, and made the economies of the regions that surround the Hanford, Savannah River and INEEL sites heavily dependent on nuclear related government funding. With the end of the Cold War and global agreement to reduce nuclear arsenals, these facilities have been made obsolete. More than 20,000 jobs have been recently eliminated and thousands more were lost at private companies providing support services to these facilities and the displaced workers and their families. Further reductions will likely occur within the next seven to ten years. These changes raise critical questions regarding the long-term economic future of the three DOE regions.

Our research confirmed that each of the regions is confronted with an economic dependency associated with continued DOE funding of the sites, but that Aiken and Benton counties are more dependent than the other six counties examined. Three of these counties are instead more economically dependent on their agricultural sectors. Research identified various impediments to attracting new industry and jobs that are sufficient in number and/or income to offset the lost DOE positions. These ranged from remoteness and lack of sufficient workforce, land or buildings in the INEEL region to Hanford's serious environmental stigma. Our research also identified serious undercurrents of DOE mistrust and a lack of regional economic focus in several areas that will likely hamper the ability to create more diverse economies. Weaknesses and disparities in the success of the CROs was also noted, along with inconsistencies in financial assistance for regional economic development initiatives.

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The federal government's massive spending on the research, development and manufacturing of nuclear materials for national defense generated hundreds of thousands of jobs and pumped billions of dollars into a small number of regional communities. More than 3,000 square miles of land was acquired to use for the design, production and testing of nuclear weapons during the 1940s and 1950s. Over the ensuing 40+ years, the Atomic Energy Commission and its successor the Department of Energy spent in excess of \$300 billion (1995 dollars) to construct and operate research and development and weapons production facilities, located principally in eight states (OEM 1995). This concentration of financial and physical resources caused the almost overnight formation of urban clusters in what formerly had been rural areas. Most of these areas, including the regions surrounding the three largest nuclear facilities at Savannah River, Hanford and INEEL, also became highly dependent on continuing financial support for the nuclear research and weapons production carried on at these sites.

With the end of the Cold War and global agreement to reduce nuclear arsenals, these weapons production and nuclear research facilities were made largely obsolete and the DOE's role was changed to one of environmental cleanup. In 1995 the U.S. Congress substantially reduced the DOE's budget, resulting in the loss of 20,650 jobs, or approximately 31 percent of the workforce, at these three sites and thousands more at private companies providing support services to these facilities, the displaced workers and their families.

Additional workforce downsizing, associated with the DOE's changing missions,

will likely cause further economic harm to the less urbanized regions surrounding these three nuclear weapons sites. Many communities will also face the prospect of double economic stress caused by the combination of existing conditions and the impact of the federal government's eventual closing of the sites. An even heavier economic hammer will fall on these three regions if the federal government moves forward with its proposed accelerated cleanup plan. Under this plan, the DOE would spend more now, with the objective of reducing the total long-term cost of cleaning these sites. Instead of spending a total of \$200-\$350 billion somewhat evenly over the period 1995 thru 2070 (DOE 1995), it now proposes to spend only \$110-\$156 billion during this same time frame. Half would be expended over the next 10 years and the other half spread out over the remaining 63 years (DOE 1997). As an example, the Savannah River site might receive an average of about \$1 billion a year thru the year 2006, after which time its funding could drop off to an average of only \$127 million to \$241 million a year.

Our research examined the impact of this loss of thousands of jobs on the still relatively rural regions surrounding these three large sites in Idaho, Washington and South Carolina, and specifically how various community leaders had reacted to the abrupt economic change. We also probed to determine what the longer term economic impact might be as the DOE moved toward the eventual closure of these facilities, and whether steps had been taken to make the areas more economically diverse and better able to sustain future losses in government funded employment. We expected that the affects of the downsizing would vary considerably between and within regions, due to differences in

socio-economic makeup and relative dependency on federal funding.

### **Theoretical Background**

The economic characteristics and possible impediments to creating a more diverse economy in these regions are directly related to one or more of the following factors:

- 1. The intrinsic geography or attributes of the local area. The importance or relevance of these factors are explained in part by theories related to industrial, service and retail location and in part by theories associated with rural development in western and southern areas of the United States.*

These theories provide reasoned explanations for why, for example, textile mills of major multinational firms would make up a large segment of Barnwell County's manufacturing sector. Barnwell, like many rural areas of South Carolina, provides the industry with low cost labor, liberal environmental regulation and ready access to major markets. They have also benefitted from new processes and technologies that allow widely scattered facilities such as these, to be managed from afar.

These theories also explain why international firms would build and expand large food processing facilities in remote Franklin (WA), Bingham(ID) and Jefferson(ID) counties. These counties are major centers for large western farming regions, and thus provide ready and low cost availability of primary sources of agricultural output for processing. They also have excellent access to well developed water and highway transportation systems, permitting industry to ship its final product to domestic and

international markets in a cost-effective manner.

In addition, these theories explain why few durable goods manufacturing companies would be attracted to locate facilities in the remote areas of Washington and Idaho, that for similar reasons are considered ideal for the location of large government-owned nuclear weapons and research facilities. Even with the construction of major highways and local airfields, these regions generally lack the raw materials, local market size, available workforce, infrastructure and other attributes required to create a competitive advantage for these manufacturing firms, vis-a-vis other available locations.

***2. The changes to the geography and attributes of the local area caused by the location and expansion of different industries and businesses.***

Under-appreciation of the job-creating potential of the service sector has a long history, supported by theories of growth that drew distinctions between basic (goods or production) and non-basic (service) sectors of the local and regional economy (Power 1996; Daniels 1985). These opinions are not always justified, and research has identified a number of service sectors which are actual or potential exporters, and contribute to the economy by bringing money into the community from the external sources. The most obvious and most relevant examples to our research are the large DOE funded research and development facilities in Benton (WA) and Bonneville (ID), and the large University based hospital and health care complex in Richmond (GA). The Pacific Northwest Labs, operated by Battelle in Kennewick (WA), and the INEEL research facilities in Idaho Falls, operated by Lockheed Martin, are funded by both federal government and private sector funds from

outside the region. Including the large number of smaller engineering and consulting firms that have been attracted to the Hanford area as a result of agglomeration factors, the region's service sector employed in excess of 16,000 people in 1994.

Christaller's theory of central places, as expanded and refined by others, provides a sound basis for understanding how and why the cities of Augusta (GA), Kennewick (WA) and Idaho Falls (ID) have become major retail and service centers in their respective regions. Each serves a much larger geographic region than the communities and counties surrounding the DOE site, and in most cases its market ranges outward in a radius of from 50 miles to 100 miles.

***3. The degree of involvement and leadership displayed by individuals and groups within the community in formulating and carrying out programs of economic growth.***

The location of a manufacturing facility, especially a large one, has numerous economic impacts on the local and regional economy. Its purchasing pattern for goods and services, labor requirements, demand for infrastructure, and the direct and indirect effect on local wealth set in motion a series of circular and cumulative processes that have clear implications for spatial distribution of economic development (Chapman and Walker 1987). When such a facility downsizes or closes down the result is generally mass layoffs within a limited geographic area, and secondary impacts on property values, retail and service jobs, and business growth (Groves and Valente 1994).

The ability of both urban and rural communities to mitigate some of this impact through special federal and/or state grant-in-aid programs has declined markedly since the

early 1980s. Throughout much of the 1960s and 1970s the federal government played an active role in funding job training, education, and job creation programs that were intended to reduce poverty and aid economically distressed communities. However, during President Reagan's term in office the concept of a New Federalism, combined with a conservative emphasis on expenditure reduction, evolved and has since become the norm (Heilbrun 1987; Mikesell 1993). The resulting paradigm shift of funding people versus places reduced federal aid to states and cities from a level of nearly \$50 billion a year in 1978 to \$22 billion in 1990 (both in 1982 dollars) (Mikesell 1993), and placed a greater burden on local communities to resolve their own individual economic problems. Dramatic changes, such as the loss of a major employer, are highly disruptive and may or may not contribute to local economic development, depending on how local residents react. If they adopt a passive attitude toward their own well-being, waiting for the white knight to appear and instantly transform their local economy, little development is likely to take place (Power 1966). Passive attitudes toward community well-being exhibit themselves in many instances as a internal denial that the event has occurred, or that it is only a short-term aberration. These feelings, attitudes or behaviors are not unlike those experienced by a person faced with the sudden death of a close family member or friend, being told that they have a life threatening illness or disease, or fighting a strong addiction to drugs or alcohol. They call into question a person's basic assumption about personal invulnerability and/or force the individual to adapt to new and unfamiliar circumstances (Brehm and Kassin 1993).



Some community leaders will find it easier to cope with the loss of thousands of jobs, and its related effect on the larger community, by denying that the event has occurred - blocking it from their minds or believing that everything will be better tomorrow. Research has shown that the more chaotic and out of control people's lives become through a continuation of this denial, the more they struggle to maintain whatever vestige of command over the situation they can muster (Appelbaum 1997). To move ahead the community and its leaders need to acknowledge and take ownership of the problem, and need to increase their awareness of the problem's negative aspects (Prochaska and DiClemente 1992).

In earlier research conducted on 34 cities that had experienced boom and bust cycles caused by the loss of major employers (Mayer 1999), we identified several areas of possible concern regarding the economic future of the regions surrounding the more rural DOE facilities at Savannah River, Hanford and INEEL. Collectively, the findings suggested that these communities may fall prey to delays in developing a consensus about if, and how, they should replace the loss of thousands of DOE related jobs. The history of the communities interviewed, social psychology theory, and evidence of a paradigm shift in the federal government's involvement in local economic issues indicate that some of the DOE dependent communities will probably be slow to react, and that they could lose some share of their current population base and skilled workforce before they complete the rebuilding process.

These findings are similar to those expressed in a 1996 report on global disarmament and the successful conversion of U.S. military bases (BICC, p. 211),

A premium, perfectly maintained facility may ultimately face conversion failure without the implementation of a publicly supported, local redevelopment plan for the future ... By avoiding local paralysis and in-fighting through consensus, community leaders may then develop achievable goals for redevelopment that respond to the needs of affected citizens.

### **Methodology**

The regions surrounding these three huge DOE sites are comprised of several cities and counties, each with different socio-economic characteristics. Because our research was focused on the economic and other impacts of recent workforce downsizing, we narrowed the geographic area of our study to encompass only those counties most adjacent to the sites and/or having the greatest dependency in terms of employment. In the case of INEEL, we chose to include Bonneville, Jefferson and Bingham counties (where workers and their families accounted for from 9 percent to 18 percent of total population). Butte County (18 percent) was not included because it had a population of only 2,918 people, was on the opposite side of the 890 square mile facility, and located about 73 highway miles from the nearest city, Idaho Falls.

Although four counties surround the Hanford nuclear weapons complex, two counties - Benton and Franklin - and the Tri-Cities area of Richland, Pasco and Kennewick are home for the vast majority of its workforce. In 1994 the site accounted for 23 percent of all jobs in the two county area and 38 percent of total payroll.

A total of 19 counties are located within 20 miles of the Savannah River weapons site, but 88 percent of the workforce lived in four counties - Aiken and Barnwell in South

Carolina, and Richmond and Columbia in Georgia. Workers and their families accounted for about 13 percent of the total population of these four counties. We chose to eliminate Columbia County from our study area because it was very different than the other three in terms of socio-economic characteristics, relative impact of SRS downsizings, and recent growth patterns. Columbia had a median household income of \$41,122 in 1989 versus an average of \$26,253 for the other three. It also had the lowest African-American population, lowest poverty rate and highest percentage of residents with college degrees. During the period of sharp workforce reductions at the site, less than 15 percent of the positions held by Columbia residents were eliminated, versus from 36 percent to as high as 55 percent of those held by residents in the other three counties.

We chose to conduct in-person interviews with a cross-section of local leaders in each of these regions in order to gain more in-depth opinions about the relative importance of the DOE facility and its impact on their community. This approach also permitted us to visualize first-hand the geographical relationships of the individual communities to one another and to the site, in order to better understand related issues and concerns that might be raised during the interviews. The objective of our research was to look for both similarities and significant differences in the responses provided by a number of influential citizens and leaders within the same regional community. We also wished to compare the general pattern of responses from each region with the others, in order to gain a greater insight into similarities and differences between regions.

The interviewee selection process for each region began by contacting the

Chairperson of the respective County Commissions, the Mayors in each of the largest cities, and the head of the DOE's designated Community Reuse Organization (CRO). After making an appointment to interview each of them, or their designee, we asked for suggestions as to who else should be contacted. Upon completion of each of the in-person interviews, we asked the interviewee who else within the community we should attempt to reach. Having completed the interview, they had a better understanding of the questions and issues being raised and were sometimes able to suggest individuals that were not already on our list.

Our objective was to complete in-person and telephone interviews with a cross-section of individuals representing public bodies, economic development agencies, chambers of commerce, and other community organizations from each region. The latter group would include academic leaders, editorial writers, representatives of the DOE contractors and other private citizens. An effort was made to include anyone thought to have an interest in the issues at hand and who was in a position to make or influence local policy.

### ***Interview Protocol***

Our in-person and telephone interviews followed a standard protocol and were intended to elicit open-ended responses to the questions. All interviews were tape recorded with the interviewee's permission. The subjects included:

1. How would they describe the DOE weapons or research complex in terms of its economic importance to the community? Could the area be characterized as being

economically dependent on federal government support of the site?

2. What was the impact on their community and the larger region of the recent downsizing and/or changing mission at the site? Did it affect real estate values, retail sales, or the local tax base?
3. Did they believe that their community and the region has experienced the worst of the impact, or is there more to come?
4. Did they believe that other community leaders agreed with their assessment of the current and future impact of these events?
5. How did community leaders react to the first announcement of the cutbacks, budget reductions and large layoffs? What actions were taken?
6. Did a consensus develop within the community and region on what actions were needed? How long did it take for this to happen?
- 1.
7. What role has the Community Reuse Organization (CRO) played since these events? Are they satisfied with this role, or how would they change it?
8. Does the area have any barriers or impediments to attracting jobs or industry?
9. Do they believe that their region's population and employment base will grow, remain the same or decline over the next 5-10 years, and what might cause it to do the opposite; i.e. decline instead of grow?

The questions were intended to raise a common set of issues that were relevant to the DOE sites and surrounding communities, and in the process provide an opportunity for

each individual to agree or differ with the opinion expressed by someone else within that community. These questions also provided a standard basis of comparing the general opinions of each community with another in the same region, and to also draw comparisons between communities in different regions.

### **Results**

In total, 42 interviews were conducted and tape recorded. Of these, 32 were conducted in person and 10 were via telephone. Interviews with seven other individuals that had been recommended to us could not be arranged because of scheduling difficulties or non-responsiveness to our calls. The average length of the interviews completed was approximately 40 minutes.

The interviews provided a very rich discussion of the pertinent issues that each region faces as a result of being so closely tied to the economic fortunes of the DOE site, but most were given to us with the assurance that they would not be personally identified with their comments. We will therefore provide no attribution to the findings and quotes used over the following pages because it would be impossible to hide the actual identity of a Mayor, Commissioner or economic development official if we made any reference to his or her general position or location.

#### ***INEEL Region***

The INEEL region is the smallest, in terms of population, and most remotely located of the three DOE regions. Much of the region is dependent on a diverse agricultural economy and the downsizing that began at the site in 1994 did not have as severe an impact

on the area as had been feared by community leaders (Mayer 1999).

The first reductions occurred in 1993 with the Navy's closure of its nuclear submarine training facilities and caused employment at the site to dropped from 11,950 in 1992 to a level of 10,710 at the end of 1994. DOE downsizing through consolidation of its activities under a single contract with Lockheed-Martin, some reductions at the Argonne Laboratories and continuation of the Navy's restructuring, caused site employment to contract to 8,376 by the end of 1995. In total, these cutbacks reduced staffing at the site by 3,574 people or about 30 percent over two years. Although the job losses were large vis-a-vis the site, they represented only 5.2 percent of the region's total employment base in 1993, and caused barely a ripple in terms of increased unemployment.

A number of reasons were cited by local officials as to why the loss of nearly 3,600 INEEL jobs during the first two years caused such a small impact. The first is that the DOE related work force reductions were in the form of voluntary buyouts and early retirements, each with attractive financial incentives. This permitted many of the workers to retire and stay in the area, or to take the early buyout in order to accept a position elsewhere in the community.

In addition, a large portion of the job losses that began in 1994 were associated with the Navy's transfer of permanent and temporary staff to its nuclear submarine facilities in Groton (CT) and other naval bases. As military, they were not considered part of the civilian workforce and included in calculations of unemployment. Their sole impact on unemployment statistics would have been related to the loss of retail or other service related

jobs that their earnings had supported. This impact was also less, because a large portion of the Naval personnel were trainees and therefore compensated at levels well below the average paid by the DOE contractors.

One of the things that people don't realize is that the INEEL is really not a part of the weapons production complex. We never had any large manufacturing here ... This is the national reactor test facility ... Our issue was driven less by the end of the cold war and more by changing missions that required a change in skills mix. So when you had dislocation, you did it to achieve balance in other areas. Nobody's going to give up their best and their brightest ... If there was someone with critical engineering skills they are still there ... The majority of the positions lost through the downsizing were not scientific and technical. They were support, they were administrative, they were transient, or they were voluntaries.

Two other reasons offered were Lockheed-Martin's openness in working with the community and the site's existing workforce to minimize economic dislocations, and the vision of Idaho Falls' private business leaders in forming the Eastern Idaho Economic Development Council (EIEDC or Council) nearly two years before the downsizings began. The latter enabled the Idaho Falls and Bonneville County areas to get a head start on diversification efforts, and to create new jobs for some of the workers that were displaced at the site. The early formation of the DOE's Citizens Reuse Organization (CRO) under EIEDC also enable the region to put federal money into several strategic planning projects that were already in the design stage at the Council.

Lockheed made a concerted effort not to lay anybody off, and they didn't. People took voluntary retirement or a voluntary out ... It had more to do with perception than substance ... Lockheed was very up-front ... but there was an uncertainty there for a year ... Am I going to be approached with this? Is this going to happen? ... What we saw was a downside in the real estate, which was very obvious to a lot of people. People were not buying homes, within a price range ... You could buy or sell any house you wanted if it was under \$70-80,000. That house you could sell, and then later it got up to



about \$90,000. But homes from \$90,000 to \$150,000 you couldn't sell them, it was tough ... Then things leveled off ... We kind of maintained our status quo, there wasn't a lot of economic growth, but we didn't lose a lot either.

The reaction of community leaders and public officials was essentially one of surprise that there was so little impact, and relief that it wasn't worse.

It was a whole lot less than I had dared hope. They [Lockheed] put into place a fairly liberal early retirement and voluntary separation program. There were no involuntary separations, which means psychologically for the community it was a whole lot better than if there had been layoffs. In addition to that, about a year and a half or two years earlier the community had put in place a publicly and privately funded economic development organization. And so some diversification work had already been underway ... I think the community sort of thought we're going to be OK. In large part we are.

I think most people have no concept of how it could have been. I'm very familiar with the Tri-Cities area at Hanford, which over the years, in particularly in the 80s and early 90s, did some real roller-coasters with their community economic fortunes kind of following their budget levels at the site. And we didn't do that, and I don't think for most people they knew we could have done that.

Opinions on the impact were not all the same, however:

There was a general panic. We all lived very comfortable middle class lifestyles because of this facility, and the thought of this going away had people in a panic ... Its not a very diverse economy ... if it had gone away we would have fallen on our face.

There is also a strong base of opinion that the region fared as well as it did, because of its large agricultural and retail sectors, and their growing interdependency. More recently, however, these same apparent strengths have begun to place an economic shroud over the area, as most agricultural commodities have traded at prices lower than the cost of production.

The community ... has become a major retail trading center for a three state area. We're the biggest thing for hundreds of miles, in a fairly remote part of the world... I

compare us a little to Spokane 10 or 15 years ago, which was the only thing east of the Cascades ... We really are the center of commercial activity for an area that goes into southwestern Montana, to western Wyoming, to the eastern third of the state.

My feeling is that agriculture has a bigger impact on us, even with the 3-4,000 jobs that are out there. I think when the agriculture is in a depressed state, like it is now in this area, that really affects the retail business. If they lay off a few workers at INEEL we don't notice so much, but when the agriculture goes down the tubes we notice it very strongly in our retail dollar.

Agriculture provides the other 50% of our economy, and agriculture is taking it in the teeth, badly ... Farmers have gone through a supply and demand crisis that is going to come to a head ... If we have a problem here in Idaho, especially in Eastern Idaho, its not going to be what happens out at that site. That site is going to maintain a certain level of employment that's going to be beneficial to our community. But our Ag community could take huge giant hits, that's when our economy will suffer the most.

The INEEL layoff doesn't affect as many people as the farm depression. The farm depression goes down into children and children's children ... Any INEEL layoff or depression we can recover from, but agriculture is far reaching, its scope is a lot larger, it affects a lot more people ... The ripple affect is much greater from the agriculture guy.

On the surface then, the INEEL Region appears to have easily absorbed the recent downsizing. Bonneville County has benefitted from the growth of a substantial retail and service complex that serves a huge three state market, and from the foresight to form an economic development organization early-on and to aggressively seek to attract complementary industries paying family type wages. Bingham and Jefferson Counties have benefitted from a large and diverse agricultural sector, which made them far less dependent on changes at the INEEL site but replaced it with an export industry subject to the much greater vagaries of international trade and related commodities markets.

The combined result of these internal developments is also a creation of a greater economic inter-dependency between the cities and counties within the Region. They have

begun to offset the lack of a large available workforce in any one of their communities, by packaging themselves as a region to new industry partners. Bonneville might be where the physical facilities are located, but the employees may choose to live in any of the three counties, thereby spreading the wealth and benefits. Bonneville County and Idaho Falls have developed further as the retail and service center for the larger region, and in turn have become more dependent on the viability of the agricultural communities of Bingham and Jefferson Counties.

The formation of the CRO under EIEDC and the later formation of the Regional Development Alliance (RDA), have provided a strong framework for bringing the different community leaders together to discuss long-term strategic initiatives for the region. The process was not easy, and there are still some differences between organizations, but progress is being made.

The Idaho Governor negotiated a \$30 million environmental cleanup settlement with DOE about the same time as the CRO was being established ... There were conflicts between the private local development organization, with its missions and objectives, and the regional organization with DOE monies having different sets of objectives.

I think the RDA is more [of] a regional organization because of the makeup of the Board and the Bylaws ... The makeup of the Board is a Commissioner from each of the affected counties and the Mayors of the major cities ... The CRO had representation from some of those areas, but it was basically part of the EIEDC structure the way it was put together ... As far as a region, the RDA is much more effective ... The weakness of the CRO the other way is that it was perceived, and probably justifiably so, by the outlying counties as being totally dominated by and tightly controlled by [city] and EIEDC.

In the past [early 1990s] things were pretty segregated. Pocatello was Pocatello and Idaho Falls was Idaho Falls, and we were nobody ... What it has done ... it has brought the community, the region together. And we are finding ... that it is necessary, if we are

going to draw these companies in here ...Because one place alone does not have a workforce that can handle this, and so these companies want to look at an overall regional area. And that's what's made it so good for us ... We have been able to come together and agree on things, and work together that way ... We're looking out for one another ... Its been good for us.

The region faces many challenges as it attempts to further diversify its economy. Foremost among these is the region's remoteness and lack of readily available and modern industrial and office space. Although the commercial occupancy rate in Bonneville County is about 96 percent, the region appears to lack real estate developers or entrepreneurs willing to invest capital in spec buildings that might attract new industry. Available labor force, as measured by numbers of the right type of workers, is another problem, especially with low unemployment rates throughout the area. The region appears to have been successful in deflecting any concerns about the contamination at INEEL by pointing out that no nuclear weapons have been manufactured at the site, that it is the cleanest DOE facility, and that its primary mission is systems design and integration. On the other side of the coin, the region boasts some strong positive qualities such as low water and electric costs, and it is benefitting from a gradual rehiring of higher paid scientists and engineers at the lab.

The critical unanswered question, however, is what is the future use of the INEEL facilities and site? Although it is not a part of the DOE's nuclear weapons complex, it does rely to a large extent on an allocation of DOE budget dollars. Does the DOE need an R&D complex such as INEEL, and can their work be absorbed in Sandia, Los Alamos or even Hanford? The Region has made a great deal of progress in diversification, but areas such as Idaho Falls and Bonneville County will need more time to wean themselves sufficiently

away as to absorb a further reduction at the site. Much of their economic strategy relies on a continued funding of the already reduced facility workforce.

### ***Hanford Region***

The Hanford region is made up of Benton County, which is home to the largest contingent of DOE related employees, and Franklin County which has a higher dependency on the area's large and diverse agricultural sector. The region's total population of about 172,000 people is approximately equal to that of Richmond County in Georgia, and is about 24 percent larger than the INEEL region.

At its peak in 1994, the Hanford site employed about 19,200 workers (DOE-RO 1998), but by the end of 1995 DOE budget reductions had cut the workforce down to 14,045. In 1996 the DOE negotiated a new management contract that integrated a number of specialty firms under the general management of an integrating company. This change resulted in a further reduction of site employees to 12,350 by the end of 1997. In total, about 6,850 jobs were eliminated over the three year period, or about 36 percent of the Hanford workforce.

The impact was much harder on this region than at INEEL. After posting several years of unemployment rates that were below State averages, Benton's unemployment shot up in 1995 to 7.5 percent and in 1996 to 8.5 percent. Franklin, which had dipped below double digit unemployment rates in 1994 for the first time in four years, experienced an increase to 9.8 percent and then to 12.0 percent (WSESD 1998). Franklin County has consistently reported higher unemployment rates than Benton County or the state because of

the seasonality of its agricultural industries (LMEA 1991).

Housing prices in the region dropped about 10 percent during the first two years of the downsizing; housing starts dropped by half and stayed there through 1997; and, local apartment vacancies increased from 5 percent in 1994 to 18 percent at the end of 1996 (DOE-RO 1998).

The reaction of public officials to these sudden changes ranged from astonishment that it wasn't much worse, to anger over the effects it had had on the surrounding communities.

What happens at Hanford has a phenomenal impact throughout this community, and were all just astonished that we are as in good shape as we are after the last cuts that took place here. For most of the time of the Hanford existence that didn't matter much, because there were always going to be plenty of Hanford jobs. When the Hanford jobs went away there was at the same time ... the local retail economy began to spin up. It so cushioned the impact that a lot of folks ... don't realize how tough it has been on the community to lose Hanford.

It was a frightening time because it was so fast, because we had been in the midst of a boom and you can't turn it off very fast. You had people building retail office space and big homes on the hills ... We never had these big homes sitting on the tops of these hills before the waste cleanup ... they were under construction and people had these construction loans out ... it was unfortunate that it happened so fast ... a community can adjust, but not that fast ... when you have a [site] budget underway, which was close to \$1.4 billion, and all of a sudden its cut within a matter of six weeks ... you just had a lot of people caught, and that was hard ... people resented that ... they felt like no matter what we have to do, we ought to get away from the federal dole, because it does this to us ..it whiplashes us.

About the time the production mission ended the [city] school district was at a point to where they needed to add a third high school. The Department, as they were transitioning to the cleanup mission, added 5,000 new workers. That really really put a hurt on the school district ... They went out and did a \$32 million bond issue on a new high school. Before the plans for the high school were completed - the bonds had already been sold - they laid off 7,000 workers at the site. So everyone is scratching

their head ... saying do we really need this \$32 million third high school now ... It is exactly the decisions they make that drive the need to add that kind of infrastructure in the community ... Another was the \$24-25 million spent for a new wastewater plant ... [DOE and site] are expecting the community, i.e. the taxpayer to be the support for [its] mission in Hanford ... when you lay those people off and take those wages away, the people left here, like myself, we end up picking up the burden of those infrastructure improvements in the community.

It is obvious that the area was hurt by the large and abrupt DOE budget reductions, but what is difficult to discern with any accuracy is a complete understanding of why the employment and unemployment numbers do not reflect the loss of the 6,850 positions eliminated at the site and the ripple effect that those losses should have had on retail and service sector jobs over this same period. Average annual non-agriculture unemployment in the two county region increased by only 3,100 from 1994 to 1996 (WSESD 1998), or about one-half to one-third of what might have been expected.

The two primary reasons given by community officials, and which are somewhat supported by available data, are that many of the displaced workers accepted attractive offers of early retirement and stayed in the area, while others accepted attractive voluntary buyouts and either left the area, started-up new businesses or took lower paying jobs in the area.

Population here is self-selecting. Its composed of people who chose to stay ... People who come here and try this place either decide that they love it or they hate it. And if they hate it they leave, and if they love it they will stay through anything. They will stay even if they have to take a job that pays a third in many cases ... There's a survivor mentality, you'll do anything, you'll take a lower paying job because it means your kids don't have to change schools.

The average annual civilian labor force in Benton County declined by only 200, or

about three-tenths of one percent, over this two year period, which would support a thesis that other increases in the workforce most likely offset retirements or people leaving the area. The unemployment results for 1997 and 1998 are much improved, with non-agriculture employment in 1997 averaging only about 1,200 jobs less than in 1994. Although both counties continue to report unemployment rates that are above state and national averages, they appear to have returned to more historical levels for the region which include a large seasonal workforce in agriculture (WSESD 1998).

One of the primary areas of employment growth appears to have been in the retail and service sectors. As explained by an economist employed at Pacific Northwest Labs.

{Has been a] great deal more service and retail activity in the area ... Started about 1989 ... Decisions in the retail sector ... major chains ... to locate a regional shopping area here. Kind of a hole in retail landscape about 50 miles in radius ... Area described by one of the economists for a regional chain as under-stored ... wasn't sufficient retail and service shelf space to serve what was a fairly large regional area ... Expansion of that [existing retail core] began in 1989 at the Columbia Center, and a series of retail chains moved in around it ... Whatever happens in that entire region now affects Tri-Cities ... [this] larger region is seeing a good amount of ... general population growth.

The downside to this change in employment patterns is the lower pay scale and earnings potential offered by these types of jobs

This is a one mall town ... but it has expanded considerably. There are about a comparable number of jobs here now as when Hanford was at its peak, but they are paying a lot less and the benefits are a lot less ... There are two economies here. Two different sets of books that are kept. There are Hanford salaries and the non-Hanford salaries. The benefits and the pay are considerably different.

But there are larger and longer term problems facing the region as it attempts to transition to an economy less dependent on continued DOE funding of the site. Community



leaders are unanimous in their general desire to develop greater diversity in the region's economy. However, there are pockets of deep-seated differences with, and/or resentments against, the DOE and its contractors, that may prevent the formation of the strong partnerships that are necessary to achieve these diversification goals.

Until just the last couple of years they [the site] literally would not recognize the existence of separate communities and did not want to deal with individual communities on any kind of an issue impact related ... There has not been a single dollar of economic investment in [city] that is directly attributable to the Hanford site in the 50 some years that it has been in existence ... There has been a lot of impact on the community as a result of the people who live here ... Been no investment, so our tax base did not grow as a direct result of Hanford related activities ... Contractors who came to town did not put up office buildings in [city] and didn't do spin off businesses in [city].

By and large I think our communities can be characterized as colonies to be used by the Department of Energy and its predecessors as they attempted to meet their mission at the Hanford site.

We know that we have to diversify this region and we know we have to do it quickly ... so none of us have gone into denial, we know that we are basically going to get screwed in the ground by the DOE eventually and Congress. The only way we can really avoid getting killed, we know we are going to get hurt, but the only way we avoid being killed as a community, as a region, is by the doing the diversification now and building for the future. Working together, because we are all in this together.

There also appear to have been conflicts or disagreements with the Tri-Cities Industrial Development Council (TRIDEC), which has attempted to fill three different roles in the community as, the primary economic development organization for the region, voice of the community with regard to future Hanford funding, and the DOE's CRO arm. Some of the problems appear to have been related to TRIDEC's structure, which has a Board of Directors that is elected only by dues-paying members, and the perception that up until very

recently TRIDEC was run by only a handful of people.

You have to financially support TRIDEC to have a real voice in their decisions...involved in economic development ... Also.. they were lobbying and speaking for the communities in supporting the Hanford project, but ... there were some people that weren't real happy with some of the decisions they were making. ... We [the county] haven't seen any benefits from TRIDEC.

TRIDEC initially formed a CRO Committee, consistent with the DOE headquarters guidelines, with tribal interests and community interests and all the different organizations ... We had very poor staffing, which made the effort difficult at best ... We put forth a series of recommendations, and the TRIDEC Board didn't like them. So they abandoned our Committee, and said thank you we'll take care of this ourselves. And basically a very small group of people evaluated their proposals and made the decisions, and it was blessed by the TRIDEC Board of Directors. So you don't have that same broad participation, overview of projects, determination of priorities that you do with almost all CROs. This is behind closed doors and it probably comes down to two or three people.

This mistrust of the DOE, its contractors and TRIDEC caused the region to be less effective and focused in its economic development efforts in the first few years after the major downsizings at Hanford. A study conducted by DRI/McGraw Hill (1996), on behalf of then recently formed Hanford Communities organization, criticized the Tri-Cities region's economic development organizations for not being market-driven, being weak in developing innovative programs, lacking a shared vision and not collaborating to maximize their available resources.

Another major, if not greater, impediment to the region being able to build a more diversified and sustainable economy, is the adverse stigma of radioactive and hazardous waste contamination at the Hanford site. Most local leaders believe that the stigma is the product of western media (newspapers in Seattle and Portland), and that it has no basis in

fact. But in a different breath, many of these same leaders expound on the real environmental problems their communities face as a result of the considerable contamination at the site and their underlying fear that Congress and the DOE will not sufficiently fund Hanford's continued cleanup into the future.

Several citizen activist groups. They put out anti-Hanford stuff, they just like to smear us with a brush. All we want to do is pollute the Columbia River, pollute the environment, make bombs and kill people.

The six Enterprise Companies have hired professional recruiters to bring businesses into the area (per contract requirements) - they come back and tell us, after two years, that there is an apprehension to this area, in some sectors, because Hanford is here, because of the nuclear site, the fear of contamination, the fear of the tarnished regional image. They say quite openly that they run up against companies that say we don't even want to talk to you. We wouldn't go up there if the land were free.

If we have a tank explosion, if we have a tank lid collapse, and we have off-site exposure ... the contamination will be very dramatic and potentially not fixable ... Want to be sure that the federal government provides money for the adequate maintenance of those tanks, because they are aging and they are decaying in terms of the electrical systems, and they are corroding.

There are other impediments or barriers as well, to attracting jobs and industry into the Tri-Cities region. Foremost among them is its remote location and lack of a stronger transportation network. This is followed by a lack of the right type of workforce and higher wage scales than some industries would prefer.

Biggest impediment is transportation ... Another big impediment ... people look at government workers they think of them as being lazy and untrainable ... wages have been a hindrance ... biggest problem is that we don't have good transportation and aren't easily accessible ... They chose this area for its remoteness

Three deterrents that we hear about. The contamination fear, the wage scale...it has driven up the price of medical services and other services in the area in general ... For a small town we have a high cost of living ... Hanford site is heavily unionized and

unions are powerful in the region with building trades ... Feeling that you don't want to go into a union town ... have all the problems of a large organization, driving up wages.

On the positive side, the Tri-Cities have several locational strengths and a strong agricultural base on which to build. There is also strong evidence that the communities and TRIDEC are beginning to work together to build clusters of industries that best fit these strengths.

We have spent a lot of time and energy in the last five years trying to redefine this community and diversify the economic base. Value-added food processing has been very successful ... have 350,000 acres of irrigated farming around here that grows 108 different kinds of crop ... Cheaper to process it here and ship the finished product versus shipping the raw product ... Starting to attract some specialty metals firms that aren't tied to the site.

Very low power prices, if you're in an electricity intensive activity like titanium production or aluminum or something like that... Lot of agricultural activity that can be the basis for some clever value-added food processing ... If you talk to Pasco that's really where they're focused, and they have been pretty successful at it ... Kennewick has been fairly successful at providing some of the services that go with that, such as fertilizer production. Richland has taken a little different tact. They and the Port of Benton have kind of gone for the high-tech end. They're doing things like sensors for water and chemicals in agriculture. They all have this kind of we're going to help agriculture notion, but each of them has a little bit different view of what they do best.

When asked whether they felt that their communities had seen the worst of the impact or whether there was more to come, many leaders expressed the same reservations and mistrust of the DOE and Congress as shown in some of their earlier comments. Most don't believe that the worst is over and are fearful that further layoffs will occur over the next three to five years. Many are also concerned that they haven't accomplished enough in the way of diversification to effectively weather the job losses. And although the Tri-Cities area has developed into a large regional retail center, it has concurrently made the

local governments more dependent on retail sales taxes.

No it's not over ... DOE talking about taking \$139 million from 1999 budget to cover headquarters overheads and other kinds of things, when the budget that was approved was not adequate to meet the cleanup schedules and commitments that the department has made to the state of Washington through the tri-party agreement ... Got to layoff people... we know its not over.

We as a community have failed to diversify ourselves adequately enough in preparation for any downturns. So we have always been subject to vagaries of Congressional funding, and it has been a real roller-coaster. But we have been working the past four years ... have had some success at diversification, but not enough to offset any large scale downturn that may occur or could occur in the next 4-5 years. More layoffs are to come, which we may not be able to absorb as well.

Our City Council in some ways is losing its focus right now on economic development... It's a hard issue to keep people focused on ... nobody wants to pay for it, nobody wants to pony up the money in order to attract the businesses in here. With the government mentality that exists, they don't see why they have to. Somebody else should be doing it ... We could be hurting in another 2-3 years.

Having spent pages on pages describing how dependent the Tri-Cities area is on the DOE's continued funding of the Hanford site, and on the many impediments that the communities face in creating a more diverse economy, it may come as a surprise that most regional leaders are more concerned with the potentially devastating impact of an entirely different environmental situation. Although virtually all of the community leaders interviewed spoke of the positive impact of the DOE's spending at Hanford, the highly paid jobs it funds, their positive impact on the community as a whole, and the negative impact any loss of those jobs might cause, most consider agriculture to be the backbone of the region. The vast majority of the people living and working in the region are not scientists or engineers, and don't earn salaries of \$40,000 to \$60,000 a year. Most are

linked in one way or another to agriculture through farming, processing, storage, wholesaling, and shipping of food stuffs, through the supply of products or services to one or more of these agriculture components, or in selling retail and other consumer services to the thousands of people these related industries employ.

Above all else, these agricultural sectors are dependent on water for their survival. Water that is needed to irrigate hundreds of thousands of acres of farm land, to ship fuel to the Tri-Cities area and to ship finished food products to coastal ports for export. Just as the spotted-owl threatened the viability of the timber industry, now the classification of the salmon as an endangered species threatens the future viability of the agricultural industry in eastern Washington. Environmentalists have called for the elimination of many of the dams and locks on the Snake River which they believe are causing the population of salmon to decline.

The Snake River is a major tributary of the Columbia River, and in itself, is one of the largest rivers in the United States. Larger than the Colorado and Sacramento combined, it provides about one-fifth of the Columbia's total flow. From its origin at the Continental Divide in Yellowstone National Park, the Snake travels some 1,000 miles until it joins the Columbia at the Tri-Cities. In addition to providing year-round navigation from the Pacific Ocean to Lewiston, Idaho, the Lower Snake River provides 3.5 million kilowatts of electricity to thousands of industries and private residents in the two-state area (Army Corps 1991).

Water - huge movement to eliminating the dams on the Snake River and lowering of the

pool behind John Day, that would be huge, unimaginable impact on the community... our fuel comes up on barges, so much of our product goes down on barges, that by far is the most economical mode of transportation ... just the tip of an iceberg ... draw-down of water needed to support irrigated farms

Decision to breach lower Snake River dams ... that will absolutely devastate the agricultural industry in this area. That will be huge. That will rival any bad thing that you can do at the site ... If you wanted to wipe this place out take the dams out and cut back the budget at Hanford ... Literally tens of thousands of jobs that would disappear.

### ***Savannah River Region***

The Savannah River region is made up of the three county area of Richmond (GA), Aiken (SC) and Barnwell (SC). It is the largest of the three DOE regions, and nearly equal in total population to the other two regions combined. Although the Savannah River region has benefitted economically from the site's presence, its impact was not uniform across the area. The economic impact of the DOE's downsizing at SRS which began about 1992 has been similarly uneven, and the economies of the three counties do not reflect what many thought would be the repercussions of losing more than 10,000 positions since 1991's period of peak employment and more than 6,000 since the large DOE budget cuts of 1995 took effect.

Two reasons given by local officials for the relatively minor impact of DOE reductions on the surrounding communities were similar to those offered at INEEL and Hanford. The first round of SRS layoffs were in the form of voluntary early-retirement offers, and many of these individuals chose to take retirement and remain in the area. In subsequent reductions many of the workers used their severance to relocate, or to accept lower paying positions in the area to maintain their quality of life. There was some

noticeable slowdown in retail and real estate activity during the period of uncertainty, and the impact seems to have been uneven within the region. Barnwell experienced the least impact, because it has fewer residents employed at the site and a much smaller retail and services sector that might be dependent on SRS employee spending patterns.

For Barnwell County it didn't have as much of an impact because the number of employees that held those higher income jobs are not as great here as they are in Aiken County ... The biggest thing was the fear of the unknown ... that such a large stable employer of the community was downsizing ... Had a very negative emotional effect ... People would lean forward in listening to the radio and read the papers when announcements would come out that there would be a layoff. Rumor control was just rampant and it had a very negative impact psychologically on the area.

Everybody sort of put things on hold. It's like let wait and see, maybe don't go buy that new car ... don't do a new house, let's just get into a holding pattern ... That lasted for awhile. I think retail could feel that ... don't buy things you don't have to have.

Saw it first in real estate, where there was a sharp curtailing during that time period of new housing starts ... It slowly crept back up to the normal range for the area, but the emotional and the perception of what was happening in our community started there. When the housing started to slow down, the ripple effect through the retail and commercial area followed right behind it.

These reactions were similar to those reported in a study of communities that had experienced the loss of a major military base over the past 10 years (GAO 1998, p69).

The rumors of a closure generated fear throughout the community, driving down consumer spending on major items and business expansion. This initial public reaction resulted in real economic impacts, such as a drop in real estate values and car sales.

There was a noticeable difference in the attitudes of local community leaders in the Savannah River region toward the DOE and the site's contractors when compared to the opinions and feelings expressed at Hanford. It was therefore not unusual to find that the general reaction to the cutbacks was one of great disappointment with the federal



government.

Gloom and doom. You've let us down. We've backed you all these years, now here is what you're doing to us.

Very vocal. Somewhat astounded. Reactionary. They immediately got on the phone to Congress ... Lot of press coverage, heightened the realization of what was going on ... Hopefully established some level of reality among the constituents ... so they knew 10,000 people would be exiting this market. Coordinated effort to make sure Congress understand what would happen to our communities collectively if this continued.

They went through the denial, and then they went through the helplessness, then they went through what can we do to turn it around ... When all this happened, these people were so close to the legislatures that they said by God we're not going to let it happen. We going to talk to our legislators and we're going to get something changed. And they went after it as a legislative issue.

The Savannah River Regional Development Initiative (SRRDI) was established as the region's CRO and it started with a \$6 million commitment from the DOE for projects intended to begin offsetting the large loss in local employment. The early stages of development were sometimes difficult, as it attempted to bring together leaders from five counties and some of the larger cities, most of whom had previously operated totally independently of one another.

There was extreme parochialism at the time. South Carolina felt that the site was located in South Carolina, they had the liability of the site, and they had the perception of others that the site was a nuclear facility that was possibly unsafe... They had 70 percent of the workforce... So there was a lot of parochialism, a lot of antagonistic behavior when it first started. This is mine, leave me alone. I deserve all of it. That was a permeating feeling when we started. There were a lot of cooler heads that were working towards a more regional approach ... It took awhile. I think everyone's on the same page now for the most part. There will always be a few people who go back to those initial territory defense mechanisms ... It's a lot better now ... When it first started it was a scary environment.

SRRDI has also received mixed reviews to date, with regard to its success in assisting the region in attracting new industry. Although some give it credit for helping to attract the Bridgestone/Firestone Company, which is in the process of building a \$400 million tire plant that will employ 300-400 people when it opens in 1999, and 800 people by 2000, others are of the opinion that it needs to do more.

SRRDI up to this point ... they spent a lot of money, did a lot of conversation, made a lot of people angry ... accomplished some minor things ... Essentially gave away a lot of money that didn't have much impact.

SRRDI is a clearinghouse for the DOE money. Focus is on technology ... Some of the perception is that maybe SRRDI hasn't done enough ... When you start thinking about job creation, have they really done what they it was set out to do ... Fact remains that the jobs are gone. The people may have remained, but the jobs are gone. And at some point that has got to have some impact.

Similar comments were noted in CRESR research (Lowrie and Greenberg 1997) that was conducted with fiscal officials of communities surrounding the site, "spokespersons for at least two of the counties said the group does not speak for them and has provided no benefit."

The SRS region faces some major impediments to creating a more diverse economy, one of which is the large number of high paying jobs that have to be replaced. The compensation and quality of many of the jobs that might be brought into the area are much less attractive. Industries offering better paying positions are concerned with potential competition from the site, or find it difficult to locate the proper facility. Education and training of the local workforce is also an issue.

Industries come in and look at the turnover ... When they [SRS] were in a hiring mode,

a lot of people liked the idea of benefits of being on the payroll at the Savannah River site ... So may have caused some loss from other industries from within the community by people applying there ... higher pay scale ... Benefits in some cases might be better than local industry ... You experienced some of that turnover with people who were already employed within the industry. I think it set up another standard with wage rates within the area that a lot of existing industries here looked at, or industries that were thinking of coming here.

The quality of the jobs is not as good. There is no way that the private sector can develop enough quality jobs ... commensurate with the salary levels those people have to offset that loss of 10,000 jobs. Absolutely impossible.

A lot of the industry that is attracted to the area is looking for a particular skill level. We have excellent technical institutions to provide people with those skill levels, but we don't have enough ... Sometimes we don't have the population actually to provide the people to go through the technical training to enter those skill levels. Having the manpower, even though we have a great workforce in the area. In some instances that workforce has not been sufficient ... Also we don't have adequate spec buildings and infrastructure to support various companies.

Barnwell County has chosen to meet many of these challenges by going in a somewhat different direction than Aiken and Richmond Counties. Working in combination with Bamberg and Allendale Counties, Barnwell has formed the Tri-County Alliance. Their decision was based on many perceived differences between its rural communities and the larger and more urban Aiken and Richmond Counties, as well as different needs and objectives in terms of economic development.

The three smaller counties are working together to join forces, and its probably more productive that way. We all share a very common goal. We are aligned with Bamberg and Allendale ... Pushing our three county region is more advantageous [to Barnwell] than pushing for Aiken. Because of our lack of development here we have to look at where these new industries locate ... Where are they going. We don't have the housing market for these people ... Educational needs depend on the industry we attract.

I do not believe that the small rural communities can survive on their own. Right now we have a big debate over the location of a new health care center ... 70 percent of our

citizens must leave Barnwell County for medical care because the services are not provided here ... Each of the three counties has its own small hospital which is subsidized through taxes. The new concept is to have one regional hospital to take care of everyone ... It will bring a better quality of life to our region.

Barnwell has already had one major success in attracting EFCO, a manufacturer of quality windows, store fronts, curtain walls and entrances. The company was enticed by the DOE's offer to provide a large amount of expensive extrusion and molding equipment, and it began building a \$17 million aluminum molding facility in Barnwell's Industrial Park at the end of 1996. It will employ 250 people at the start and has the potential to employ as many as 1,500.

The City of Augusta and Richmond County merged and formed a joint government in 1996. In the process, it became the second largest city in the State of Georgia and larger than either of the Hanford and INEEL regions in total. It has also become the regional retail and service center for more than 400,000 people in the Aiken-Augusta MSA. With about 10,000 people at Fort Gordon, a huge medical complex that employs about 20,000 people, and a diverse industrial base that places it right at the top of industrialized areas in the State of Georgia, as far as per capita industrial workers and per capita industrial wages, the Richmond area is continuing to make itself even less dependent on the Savannah River site.

Aiken County, with the help of SRRDI and the State of South Carolina recently landed a new \$400 million tire plant for Bridgestone/Firestone. But as noted above, there is no way that the private sector can develop enough quality jobs ... commensurate with the salary levels those people have to offset that loss of 10,000 jobs. Absolutely

impossible.? In response, community leaders in Aiken County appear to have jointly endorsed a plan to lobby the DOE hard for holding to its current staffing levels at SRS, and to aggressively pursue new missions for the site to protect those employment and spending levels over the longer term. The decision is driven by the inherent risk to future missions of losing some of the site?s core group of engineers and other professionals, and the greater impact that the loss of these jobs would have on their communities.

Aiken, is thus choosing to remain more dependent on employment at the Savannah River site, at least for the near term, because of its inability to attract the thousands of higher paying private sector jobs that are needed.

You reach a point though when you start cutting a little too deep ... How far do you go before you start feeling it and how far do you get into the core competency of that group? ... The possibility of future missions [is threatened] because of what you?ve got there ... Everybody says it?s a lot harder to bring things back together than to keep what?s already there ... You reach a point when you say enough?s enough, let?s stop this now and look at new missions there, and utilize the group that?s already pulled together.

You don?t want to downsize and have that word out so far [into the community] that you have people who are voluntarily leaving because they don?t know what?s coming ... Keep going for those new missions.

We are at the point where reductions would impact the region unfavorably, almost uniformly. Nobody would be spared. But if they continue the downsizing you are going to see a real crippling affect because we are going to lose the purchasing power of the site ... When the purchasing power leaves, then the industries here, as well as the commercial entities, are going to feel it.

With SRS beginning to hire again in recent months, and the DOE?s decision to continue consideration of the site for the possible location of a tritium replenishment facility and pit disassembly and conversion facility, prospects look good for a relatively stable base

of employment at the site over the next several years. Unfortunately, the DOE has recently decided to locate the new tritium facilities in Tennessee or not building new facilities at all in the near future, and it is not clear that any pit disassembly will occur at SRS. In contrast, the county and region are attracting increasing numbers of retirees, which is helping to increase population numbers and provide stability to the local economy.

### **Discussion: DOE and Its Private Industry Counterparts**

Regions surrounding the DOE sites are not the only places that have suffered economically from the boom and bust cycles of a dominant employer. Many communities and regions in the U.S. experienced similar periods of rapid population, job and income growth resulting from the location and expansion of major manufacturing, extractive and shipping industries within a relatively small concentrated area. In many instances, these cities, counties and regions became highly dependent on a single employer, and later experienced economic adversities caused by major downsizing or the closing of these facilities. In earlier research we examined a geographically and economically diverse group of small and medium size communities that experienced long periods of economic prosperity built around a major industry or company, but which then suffered economic declines when those industries substantially reduced their staffing and in some instances closed (Mayer 1999; Mayer and Greenberg 1999). We hypothesized that these communities would provide a basis for understanding what could happen to the three DOE regions if they were to suffer a significant loss in employment as a result of site

downsizings, and longer term, if the sites are cleaned up and permanently closed.

The study identified several areas of possible concern regarding the economic future of the regions surrounding the more rural DOE facilities at Savannah River, Hanford and INEEL. Collectively the findings suggested that the DOE communities might fall prey to delays in developing a consensus for if, and how, they should replace the loss of thousands of DOE related jobs. One of the most disturbing findings of this study was the general lack of an early response by most cities to the loss of important industries and thousands of good paying jobs. In most instances, no local government or community leader stepped forward to form a coalition or to develop a viable economic redevelopment plan until the passage of from ten to as many as thirty years after the city had experienced its first significant loss of jobs and population.

The first round of large workforce reductions at the DOE sites in the early 1990s did not produce significant unemployment in any of the regions. Many employees accepted early retirement or a large voluntary buyout which, at least temporarily, removed them from unemployment statistics. Only in Bonneville County, however, is there evidence that such a painless transition was accomplished through the joint efforts of the DOE contractor and community leaders. Perhaps it was the benefit of being able to obtain such commitments as part of the INEEL contract bid process in 1994, but the result might not have been the same if community leaders had not raised the issue and later followed through to ensure that Lockheed-Martin honored its agreement.

The Savannah River and Hanford regions displayed some of the slowness in

reaction to the DOE cuts predicted by this earlier study, but fortunately there were no serious repercussions. The communities surrounding SRS were not accustomed to working closely together, and the river itself had been a major dividing line between the two states for many years. The formation of SRRDI drew local leaders from around the area together in a common forum, but by most accounts its early history was marred with parochialism and disagreement. Efforts to form a consensus on economic development for the region as a whole seems to have given way to an agreement to provide financial support to major projects submitted individually by each of the three counties.

Greater cooperation was achieved on the political front, as most community leaders joined Aiken officials in hiring a full-time lobbyist and taking annual train trips to Washington to lobby the DOE for new missions and larger budgets. But even this did not occur for several years until after the first SRS cuts were made.

Community leaders in the Hanford region were much more accustomed to working with each other, but they lacked a regional focus and economic development organization to carry out their plans. TRIDEC had been in existence for many years prior to the DOE cuts in the early 1990s, but its focus had largely been on promoting nuclear missions or related technology associated with the Hanford site. It was also organized as private non-profit corporation, with only dues-paying members eligible to elect the Board or vote on important decisions affecting the region. The formation of the CRO as a Committee under the TRIDEC umbrella denuded efforts to create a more regionally representative organization. Although TRIDEC has helped attract several new industries and invested DOE funds in



several economic development projects in the area, it lacks the community-wide consensus or agreement on its regional objectives and the broad inclusion of both the public and private sectors in executing the rebuilding process. Total employment in each of the regions has generally expanded over the past three or four years, although many of the jobs created were largely in the service sector and did not offer wages and benefits comparable to those lost at the DOE sites. It is unclear, however, whether this employment growth occurred as the result of local intervention and leadership in these communities, as an outgrowth of the U.S.'s expanding economy, as the natural result of shifts into the service sector occurring across the country, and/or a desire to live a less stressful life.

In a large percentage of the study cities, interviewed officials indicated that they have had to overcome environmental and/or labor barriers or impediments when seeking to attract new industry and jobs to their area. Many of the mining and heavy manufacturing companies that dominated the regions left behind lasting environmental problems. They include unattractive mountains of mining wastes, brownfield sites of abandoned buildings and contaminated land, and large quantities of toxic pollutants that threaten to destroy critical aquifers. By comparison the three DOE sites have higher levels of environmental degradation and problems that will take 50-100 years to correct, but they are located on huge sites far removed from the population of the surrounding cities.

Environmental stigmas, such as that attached to the Hanford site, are especially difficult to overcome because the region must deal more with perceptions and fear of the unknown, than with reality. Using the public media and threatening lawsuits in order to

force the DOE and Congress to meet their financial commitments to cleanup the site may be intended to remove the real contamination problem, but these actions only add to the perception that the region is a place that no one should want to visit. Likewise, such an environment provides little hope that a new conference or convention center promoted by some public officials in Richland or Kennewick will make the area attractive for tourism.

Many the study cities interviewed indicated that they have had to overcome labor barriers or impediments when seeking to attract new industry and jobs to their area. For some labor's mistrust and resentment toward industry created a barrier and impediment to attracting new businesses and jobs into many areas. The violent strikes of the past and continued demand for the high wages earned previously, caused many areas to be identified as anti-business.

Although the workers employed at only one of the DOE sites (Hanford) are unionized, none of the sites experienced any of the labor unrest undergone by many of the cities interviewed in this chapter. However, research carried out in Aiken and Barnwell counties in 1996 (Mayer and Greenberg 1996) found strong evidence of a labor stigma that might dissuade industry from hiring these displaced workers. Interviews with local business leaders found that most believed that the wage and benefits paid by the DOE contractors were well above market levels. And in fact, during periods of expansion and hiring at the site, they had lost some of their better workers to SRS.

Many of the managers believed that the SRS workers lacked the work ethic required of private sector employees. Several stated that they had refused to hire workers being

displaced by the DOE's downsizing. In addition, several potential new employers who had considered locating in one or both of the counties located elsewhere after evaluating the costs and capabilities of engineers and computer programmers that had been similarly displaced.

The three DOE regions have had varying degrees of success in breaking or reducing their dependency on continued DOE funding. Some of the differences relate to the actual or perceived physical impediments or barriers that must be overcome in each of the regions in order to attract new industries and jobs, but more of the differences are a function of the direct involvement and/or commitment of community leaders in focusing available resources on building a consensus and executing the resulting economic development plan. Some barriers, such as remoteness, are difficult to overcome if the region is hoping to attract a large manufacturing company needing ready and cost-effective access to national or international markets. But as Idaho Falls officials found, remoteness is not an impediment to telecommunications companies that have no need to purchase or ship product or services except through electronic means. The lack of a large workforce may be a barrier to a single community, but as the INEEL region has also found, the relative size of the available workforce can be greatly enlarged by measuring it in terms of all the worker who could reach the proposed site within a given driving time from his residence, versus those living in a specific city or county.

This is a critical departure from the usual pattern of each community or county fighting to have the prospective company locate within its borders and recognizes the

growing specialization of individual communities within a region and their resulting interdependency on one another for economic sustainability.

Barnwell County officials, in deciding to join forces with two other rural counties versus neighboring Aiken County, have identified the need for a regional approach to economic development that unites communities with common strengths, weaknesses and needs. Barnwell officials recognize that they have a workforce with less education and skills than that of Aiken, and thus Barnwell residents are less apt to find employment with companies attracted to Aiken. Likewise, they realize that the County lacks much of the infrastructure and housing that could support a company such as might be attracted to Aiken. But by working with Bamberg and Allendale counties through the Tri-County Alliance, Barnwell can focus regional resources on developing industrial sites that will employ residents from the three county region. It can also direct regional resources, and create economies of scale, that will provide cost-effective health services and other needs of the region.

The Tri-Cities area appears to have the financial and physical resources to attract and support a more diverse group of industries; it has at least one professionally prepared strategic development plan that could provide the foundation for a stronger diversification effort; and, it has already developed the base of what could be an even stronger regional retail and service center within that overall plan. What it seems to lack is a regional structure that permits the broad inclusion of both the public and private sectors in defining the objectives and in executing the rebuilding process. Our research identified several

communities and local leaders whose interests were not represented through the existing TRIDEC organization. This is a self-imposed limitation or impediment to success, and as such it can be resolved if community leaders are willing to rise to the occasion.

One possible alternative is for the DOE to designate the existing Hanford Communities organization as the CRO for the region. The latter is a low overhead organization that has been funded to date by local and county governments, and could easily evolve into the area's true regional organization and be funded by the DOE. The Hanford Communities organization financed the development of a strategic economic development plan in 1997, which could be used to provide a good foundation for developing a more diversified regional economy. Under this revised CRO arrangement TRIDEC would remain the primary economic development organization for the region, but the individual counties and communities will be able to tap DOE transition funds for local initiatives and projects that may not be on TRIDEC's horizon. This structure would create a stronger forum for regional planning and would better ensure that all interested parties have participated in the process and will cooperate in executing the agreed upon plan.

Aiken County faces one of the most difficult barriers to diversification, a high dependency on continued DOE funding of SRS. The building of such a large nuclear weapons facility in what had previously been a largely rural area was not one that local officials sought out, but in more recent years it is one that they fully embraced and promoted until the large cutbacks at the site in the mid 1990s. The need to protect 8,300 high paid jobs held by its residents and the thousands more that their incomes support, as discussed earlier,

can create a dilemma or internal conflict with the need to reduce this dependency through diversification. Local officials are cognizant of the problem, but that does not mean that they have found a solution.

Overall, compared to other rural regions across the U.S. that have suffered the loss of a steel, chemical, textile, mining or other major industry, these three relatively rural DOE-centered regions have major disadvantages. The DOE site carries a perception of stigma both in pollution and high worker wages and benefits. Second, the DOE land on these sites is not legally accessible to the surrounding region. They cannot place a tax on it, remediate it, or plan to redevelop it. Their lack of control is demonstrated by our surveys (Lowrie and Greenberg 1997) which showed that local land use and economic planners do not feel that the DOE keeps them abreast of future use plans.

The advantages for the regions surrounding these sites at this time, however, seem to more than balance these disadvantages. First, these three sites are much larger in terms of land mass than any private industry counterpart, and hence residential settlements are protected from the most blatant environmental impacts. The DOE is not a private organization responsible to stockholders who might demand faster results and at lower cost. The DOE has been, and probably will continue to be, more generous in providing retirement packages than U.S. steel and coal companies, and much more sensitive to political persuasion to provide continued economic support through allocations aimed at economic transition or development of new site missions. Lastly, the DOE has committed itself to remediate these sites, which means much more economic investment for a longer

period of time in those regions than their private company equivalents. In short, it seems to us that these three DOE regions have more time to think, plan, cajole, and work together to minimize any further impact, than communities affected by a similar loss of a large private sector firm.

## **Appendix A**

### **Socioeconomic Tables for DOE Regions**



**Table A-1      Socio-Economic Indicators: INEEL**

<b>Category</b>	<b>Bonneville</b>	<b>Bingham</b>	<b>Jefferson</b>	<b>Region</b>	<b>Idaho</b>
Population	72,207	37,583	16,543	126,333	1,006,749
College Degree - Percent	31.5%	21.2%	21.6%	27.1%	25.2%
Median Household Income	\$30,462	\$25,158	\$24,421	\$28,093	\$25,257
Poverty - Percent	9.8%	15.4%	14.2%	12.0%	13.0%



**Table A-2      Socio-Economic Indicators: Hanford**

<b>Category</b>	<b>Benton</b>	<b>Franklin</b>	<b>Region</b>	<b>Washington</b>
Population	112,560	37,473	150,033	4,866,692
Less Than High School (%)	16.1%	31.9%	19.8%	16.2%
College Degree - Percent	32.0%	21.2%	29.5%	30.9%
Median Household Income	\$32,593	\$24,604	\$28,599	\$31,183

**Table A-3      Socio-Economic Indicators: Savannah River**

<b>Category</b>	<b>Aiken</b>	<b>Barnwell</b>	<b>Richmond</b>	<b>Region</b>	<b>2 States</b>
Population	120,940	20,293	189,719	330,952	9,964,919

African-Americans (%)	24.1%	43.0%	42.0%	35.5%	28.0%
Less Than High School (%)	29.3%	40.1%	29.1%	29.8%	30.0%
College Degree (%)	23.1%	16.3%	22.9%	22.6%	23.8%
Median Household Income	\$29,994	\$23,501	\$25,265	\$26,253	\$27,639
Poverty - Percent	13.8%	21.5%	17.2%	16.2%	9.3%

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