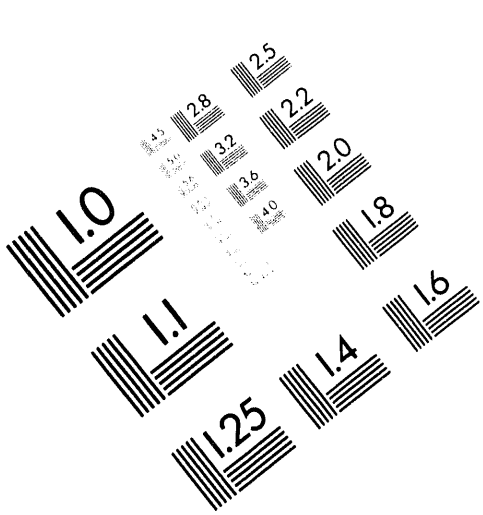
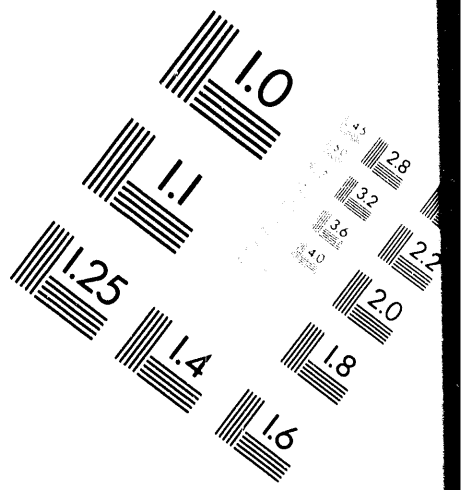

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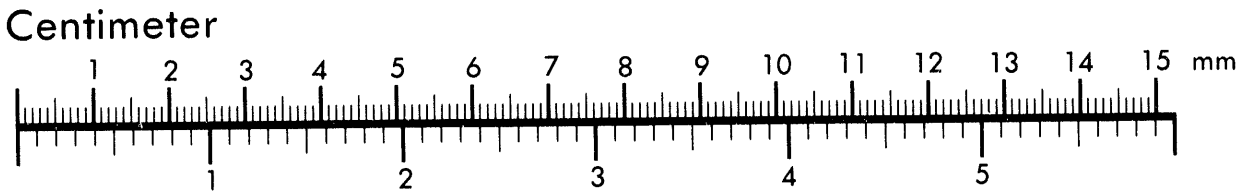


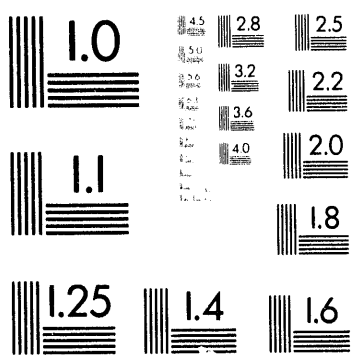

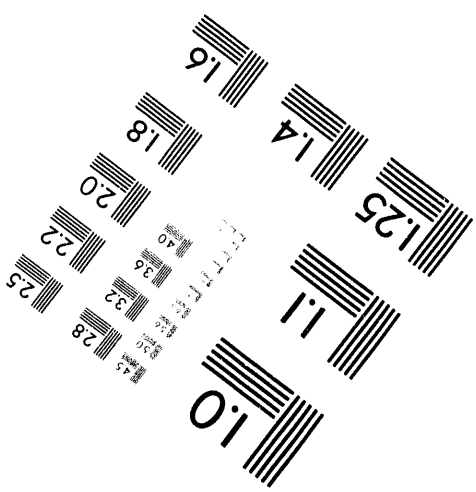
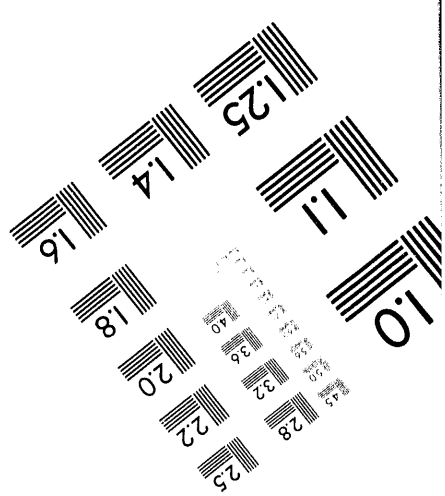

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# The Hanford Summit and Sustainable Development

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# THE HANFORD SUMMIT AND SUSTAINABLE DEVELOPMENT

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## ABSTRACT

Since the days of the Manhattan Project of World War II, the economic well being of the Tri-Cities (Pasco, Kennewick, and Richland) of Washington State has been tied to the U.S. Department of Energy missions at the nearby Hanford Site. As missions at the Site changed, so did the well being of the region. The Hanford Site is now poised to complete its final mission, that of environmental restoration. When restoration is completed, the Site may be closed and the effect on the local economy will be devastating if action is not taken now. To that end, economic diversification and transition are being planned. To facilitate the process, the Hanford Site will become a sustainable development demonstration project--a project with regional, national, and international application.

## I. BACKGROUND

The Hanford Site, in the southeastern corner of Washington State, boasts the largest and most complex waste management and remediation program ever undertaken in the United States. Two-thirds of the nation's radioactive defense wastes, more than 1,100 different soil and groundwater contaminated waste sites, and 78 *Resource Conservation and Recovery Act of 1976*[1] operational units are located at the Site. While it is important that everything possible is done to ensure cleanup of the Hanford Site is accomplished in an efficient and cost-effective manner, the future does not lie in just cleaning up and closing the Site forever. There is also an opportunity, and indeed a responsibility, to go beyond cleanup and convert the Site's enormous assets to other uses that will benefit the region and the nation. Today's challenge at the Hanford Site is to set a course that will help ensure a bright economic future for the Northwest after restoration is completed. This will be done through the active export of knowledge to others with similar problems, while encouraging the growth of more diverse environmental technology and services in the region; this will be achieved under the umbrella of a sustainable development model.

Diversifying the Tri-Cities economy for "life after cleanup" may prove as tough as the cleanup mission itself. Historically, the Tri-Cities has depended on a defense-driven job base. Defense materials production was the mission of the Hanford Site for 50 years. The Hanford-dependent job base has grown even more as defense production ended in the late 1980's and the focus was changed to environmental cleanup. However, when cleanup is completed, only a small caretaker-type work force will remain. The impact of such a downsizing at the Hanford Site could be catastrophic for the local communities and the Northwest if steps are not taken today to prepare for the future. The Hanford Site and surrounding region are fortunate that cleanup is projected to take several decades, but the reality of replacing more than $1 billion a year in the regional economy will require extensive and long-term planning. The consensus is clear: action must be taken before it is too late, before the Tri-Cities area is once again at the bottom of an economic roller coaster.

## II. THE HANFORD SUMMIT

A past executive vice president of Westinghouse Hanford Company had an idea to possibly negate this dire prediction: what if a summit meeting could be arranged between the two major players in the Hanford economic issue (a meeting between the Governor of Washington State and the Secretary of the U.S. Department of Energy (DOE), the two principal governmental representatives who could help shape the future of the Hanford Site and the

surrounding communities). In addition, a group of experts in the economic development arena would be invited to explore possible solutions and recommend an action plan for the continued economic vitality of the region.

Initially, there was little interest in the proposal outside the Tri-Cities area. But with a change of leadership at the federal and state levels, attention once again was focused on the idea and then embraced by all parties. With a newfound vigor a planning team began work on what would become the "Hanford Summit, a National Forum on Environment, Technology, and the Economy." The event proved to be just that, a national forum that brought together a diverse group of concerned citizens including bankers, educators, Native American tribes, government policymakers, media representatives, special interest group members, and many other stakeholders. The Hanford Summit was held in the Tri-Cities in September 1993.

As the summit progressed, the broad-based group of participants tackled the most important topics of concern: public involvement, regulatory issues, training and education, technology transfer, partnerships, and economic development. The findings and recommended actions for the future were reported to Governor Mike Lowry and Secretary of Energy Hazel O'Leary who, in turn, committed to several actions at their levels to facilitate future progress at the Hanford Site.

To assess the progress made at the first Hanford Summit, a second meeting was proposed, Hanford Summit II. Although similar in design to the first summit, the working groups have been condensed into three groups: compliance and regulatory issues, worker training/ retraining and the K-12 pipeline, and economic development and technology partnership. Many of the original participants joined the Summit II effort as did several "new faces," adding new dimension to the process. At the conclusion of Summit II, the Governor and Secretary of Energy will hear specific proposals as well as be appraised of a strategic plan leading to a more secure and stable economic future for the region.

## III. SUSTAINABLE DEVELOPMENT DEMONSTRATION PROJECT

One of the most innovative aspects of Summit II is the method being used to coalesce the findings of the working groups: Summit II will explore economic diversification and Hanford Site cleanup under the umbrella of sustainable development, and through partnerships with the private sector, federal and state governments, turn the Site into a sustainable development demonstration project.

However, to add perspective it is necessary to digress to the events of over a year ago. As is often the case, timing is everything. In March 1993, newly elected Washington State Governor Mike Lowry held a conference on "Economic Development and Environmental Enhancement." As a result of that conference, Governor Lowry established a leadership task force on sustainable development to explore avenues for future development that would place the environment, the economy, and social equity on a level field. As the task force organized and sharpened its focus, it began the search for sustainable development models that could be used to demonstrate the principles of such a concept and be used as a visible means to promote the idea throughout the state.

Almost in parallel, President Clinton established the President's Council on Sustainable Development. As that group became more organized, it too began exploring opportunities for demonstration projects. Within the framework of a demonstration project, the Hanford Site was viewed in a different light. Instead of being a mind-boggling consumer of taxpayers' dollars and the most contaminated site in the nation, it offers itself as a 1,450-km$^2$ (560-mi$^2$) sustainable development laboratory--a place to test, validate, and explore new ideas.

## IV. SUSTAINABLE DEVELOPMENT CONCEPT

What is this concept, this idea of sustainable development, and how does it relate to the cleanup of the Hanford Site? One of the most commonly accepted definitions of sustainable development is

> Economic development that does not impair the health and welfare of future generations
>
> or
>
> A process of economic development that recognizes the interdependence of people, the economy, and the environment and considers the needs of present generations without compromising the needs of future generations.

Sustainable development is therefore a principle in which the creation of wealth is achieved without compromising our natural resource base in a manner that is sensitive to human need. In short, the concept of sustainability is achieved when the economy, environment, and social equity occur harmoniously.

Traditionally, economic development has focused on only one leg of the sustainability "triad," that of wealth creation. Environmental and social equity concerns were left for others to resolve or ignore. However, as environmental degradation and social disparity have increased in recent years, it has become increasingly evident that economic growth will stall and eventually decline in areas where quality of life has been seriously impacted. At the other end of the spectrum it also has been shown that a severely restrictive business climate, such as an over-regulated and/or over-taxed economy, will likewise stall and ultimately decline thus killing the engine that provides well being and a decent standard of living.

The new model for economic development, then, adds to the wealth-creation model a support base that emphasizes a healthy business climate and a high quality of life. With both of these linked together, sustainability is possible. Without either of these, the economy sputters at best or at worst, dies.

Initially, the concept of sustainable development sounds like another attempt to mollify the environmentalists while economic development proceeds unhampered. If, however, sustainable development principles are adopted and not merely given lip service, then it can prove to be a win-win situation for the environment and the economy. In the purest sense, achieving the principle of sustainability is really not good enough because it implies that things be left the way they are. Although that may seem challenging enough, what is needed additionally is some reversal of the environmental impacts already imposed. And that is at the heart of the Hanford Site. First, and foremost, is the cleanup of the Site: the environmental restoration mission. Note the operable word "restoration"--an attempt to restore the Site to a previous state.

## V. SUSTAINABLE DEVELOPMENT TEST BED

The Hanford Site should be seen as this nation's greatest environmental restoration test bed. Lessons will be learned regarding the cleanup of every kind of waste. New technologies will be developed to do the same. New techniques will be demonstrated. New regulations will be written; some may be discarded. Debate will be held regarding "how clean is clean." Public/private partnerships will be invented. Worker safety and training will be improved. Risk will be assessed. Cost versus benefit will be debated. Some of this already has begun. Much more will follow, and all the lessons learned must be shared.

As cleanup progresses, decisions regarding future use of the restored Site lands will be required. Who has the rights to those lands? How does one address the Columbia River ecosystem and the shrub-steppe ecologies? What is the definition of beneficial use and who makes that determination? What are the debate and decision-making methodologies for such issues? Who has final authority? These problems will be, and to some extent already have been, addressed at the Hanford Site. Such questions certainly are not unique to the Site. It is hopeful others facing similar challenges can benefit from experiences at the Hanford Site as well as share their lessons learned.

And what about the local economy? As cleanup is concluded, what economic legacy will remain? What is the socioeconomic impact of losing one quarter of the employment base? Is there compensation? Who is responsible? How will social equity or fairness be determined? Is this a local, regional, or national problem? How can a new economy derived from cleanup be created? Technology transfer, conversion, and a whole new array of programs will evolve. Significant focus already is being placed on these matters. But again, the Hanford Site and the Tri-Cities will not be alone regarding such issues.

It would seem that all the sustainability components (economy, environment, and equity) are at work at the Hanford Site. Why not take advantage of this ultimate test bed to help shape our sustainable future. Try new ideas, introduce models from others, take what has worked and what has not worked and share this information. Help steer the Hanford Site cleanup and leverage it to gain as much knowledge as possible about sustainable development. This would be the ultimate return on investment to the taxpayer for the cleanup of this Site.

It is understood that cleanup of the Hanford Site is huge, complex, expensive, and long-term. But that is why it has so much to offer. Rather than looking at it in the aggregate, using the Hanford Site as a pilot makes so much sense if one examines its many smaller parts; there is something for every interest. The following examples illustrate a few specific activities under way and how they relate to sustainable development.

- Scientists will soon be able to work in the new Environmental and Molecular Sciences Laboratory--a laboratory that will enable scientists to develop methods and technologies for environmental cleanup of the most difficult sites. Other spin-offs could result in E. coli eradication, improved groundwater treatment, cleanup of river and lake sediment, and neutralization of organics in the soil.

- As stated earlier, the northern border of the Site is the Columbia River, the last 51 miles of free-flowing river along its 2,500-km (1,500-mile) course. In 1996, the first of nine reactors will be moved to a location remote from the river, and the area will be restored. One day all the reactors will be removed and the land made available for possible alternative uses.

- One of the most visible and near-term successes is the use of pools in the 100 K Area of the Hanford Site that were constructed in the early 1950's to support nuclear materials production. These basins are serving the environment by assisting in the restoration of native fish to the Columbia River and other nearby wet lands. Salmon and sturgeon already have been successfully raised and similar proposals to rear chinook salmon and warm water game fish (bass, crappie, walleye, etc.) are being considered. More than 150,000 salmon and 500 sturgeon already have been reared in the K Pools and are approaching release size. In addition, the Yakama Indian Nation is interested in rearing another 500,000 salmon for release into the Columbia River.

- "Wasterock" is a process being developed at the Hanford Site to reduce the amount of "clean" backfill used to stabilize retrievable waste storage areas. Material obtained from disposal sites, dismantled buildings, or other waste management activities is ground and used in a grout-/concrete-type substance. This has the potential for a variety of applications at the Hanford Site, other DOE/ U.S. Department of Defense sites, and private industry. It can effect tremendous savings while reducing environmental impact by not using clean soils to backfill hazardous and mixed-waste sites.

- A tree farm that grows cottonwoods for pulp products is yet another option. Such a farm would contribute to reduced pressure on the forests and could be a means of maintaining pulp and paper industry employment levels. While not unique to application at the Hanford Site, this activity would assist in diversification of the local economy. With the addition of public use green belts/parks in close proximity, a positive impact could be made on the quality of life.

- One segment of the Hanford Site has been designated as the Arid Lands Ecology Reserve. This 36,059-km$^2$ (140-mi$^2$) "laboratory" represents one of the last vestiges of the native grass steppe environment. It contains native flora and fauna including its own elk herd of approximately 60 animals. The Arid Lands Ecology Reserve will be transferred from DOE control to agencies involved in environmental protection, wildlife habitat preservation, and ecological studies.

These examples help demonstrate how the Hanford Site can be used to shape, define, and debate sustainability issues. Many more examples exist and others will be created.

However, missing from the argument regarding the cleanup of the Hanford Site and where it might lead is the forum needed to nurture the sustainability debate. It is suggested that two such forums are compatible and mutually supportive. These are the task forces that were mentioned earlier: the State of Washington's Leadership Task Force on Sustainable Development and the President's Council on Sustainable Development. It has been recommended that both adopt the Hanford Site as a pilot project.

## VI. CONCLUSION

If these groups agree to such an arrangement, the following benefits would be realized.

<u>For the State of Washington Task Force</u>:

- An opportunity to sit at the table of the largest funded project in the state (and one with national and international impact)

- A place to test new ideas with dedicated, multiple agency staff members in place (Washington State Department of Community, Trade, and Economic Development; Washington State Department of Ecology; and the U.S. Environmental Protection Agency [EPA] Region X)

- An opportunity to serve as the broker of successes/ failures among the Hanford Site and other state projects

- An opportunity to serve as the state's link to the President's Council

- A chance to access the Site's huge contractor human and technical resource
- Success will mean avoiding ultimate chaos caused by closure of the Site.

For the President's Council:

- An opportunity to focus on the nation's largest public works project
- A place to test new ideas drawing on the U.S. Department of Commerce, the U.S. Department of Agriculture, the U.S. Department of Interior, the DOE, the EPA, and other council member agencies
- An opportunity to serve as the broker of successes/ failures among the Hanford Site and other national projects
- An opportunity to serve as the nation's link to similar international cleanup projects from a sustainability point-of-view
- A chance to access the huge DOE pool of human and technical resources
- Success will mean cost avoidance of the socio-economic impact of closure of the Site.

For the Hanford Site:

- Access to local and national experts on sustainability
- Access to public policy shapers
- A forum to test ideas and learn about successes/ failures of others
- A forum to communicate the successes/failures of the Hanford Site with groups who will share them with others
- An opportunity to invent a new future for the Site and the Tri-Cities
- Success would mean a bright future, not economic devastation.

The DOE is committed to helping shape the future of the Hanford Site and the greater Tri-Cities region. The DOE created the Hanford Economic Transition Initiative to do just that as a partner with local, state, and regional interests. Additionally, the Hanford Summit was conceived as a mechanism to further these partnerships and their broader mission by serving as a national forum to define the interrelationship among environment, technology, and economy. In short, a means to get a return on investment from the cleanup activity that restores the environment serves as the basis for a new economy and provides benefits to all. By adopting the principles of sustainability in all that is done at the Hanford Site, and joining with state and national organizations similarly focused, that return can be achieved.

Together, the Hanford Site, the communities, and the region are building a clean, accessible, and healthy environment which is part of a prospering and diversified community. They are reaching beyond past achievements to continue a tradition of excellence in scientific and technological accomplishments, and expect to be a resource that nations turn to for solutions to environmental and economic challenges.

REFERENCES

1. *Resource Conservation and Recovery Act of 1976*, 42 USC 6901, et seq.

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