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Environmental Education Work Force Pipeline Strategic Plan

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Environmental Education Work Force Pipeline Strategic Plan

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ENVIRONMENTAL WORK FORCE PIPELINE STRATEGIC PLAN

EXECUTIVE SUMMARY

Recent studies reveal a decline in both the quality and number of students in U.S. schools who are pursuing scientific and technical careers. This decline threatens the nation's future in the global economy. Minorities, immigrants, and women will represent 85 percent of the new entrants to the work force by the year 2000 (FCCSET 1991 p.7). Plans to improve our educational system must address this culturally diverse population, not just perpetuate the programs of the past.

The changes in demographics and the depletion of traditional work force pools challenge human resource departments to support a culturally diverse work force educated in science and math, and in many cases, specially educated for environmental work. To achieve this culturally diverse work force, the Hanford Site, the Richland Field Office (RL), and the RL contractors will implement the Hanford Environmental Management (EM) Education Work Force Pipeline.

The purpose of the Pipeline is to provide a pool of highly qualified administrative, technical, and managerial graduates that are familiar with the Hanford Site and the way we do business. Hiring officials can select qualified and experienced candidates from this pool for employment at the Hanford Site. The Pipeline will provide work experience and mentoring to a culturally diverse student base which enhances affirmative employment goals.

The Pipeline is the many education programs that are developed and implemented by the Hanford Site in conjunction with academia. Teachers, community organizations, and human resource departments encourage students from kindergarten through graduate school to flow through these programs to gain the necessary knowledge, skills, and abilities for future employment in the EM workforce. The Pipeline will call upon Hanford Site scientists, engineers, and technical professionals to carry the U.S. Department of Energy's (DOE) educational message to classrooms at all levels.

The Hanford EM Education Work Force Pipeline will help direct qualified participants from the education system to the Hanford Site and other DOE locations with similar needs. The Pipeline will bring together DOE, Hanford Site contractors, other national laboratories, all levels of government, Native American tribes, and organizations representing minority groups.

Goals to be completed by the year 2003 are aimed at defining the criteria necessary to establish Pipeline partnerships. The cleanup mission is scheduled to conclude by 2019. Long-term goals of the pipeline, which extend beyond 2019, will ensure a constant supply of qualified, trained workers to support the missions of the remaining industries. Initially, the Pipeline will provide instructors, establish strong collaboration with all internal and external human resources organizations, provide equipment to local schools, and enhance the science and math skills of local teachers. The Pipeline will encourage opportunities in science and math for students. At the college level, the Pipeline will support programs that address Hanford Site needs, provide internships, and develop research partnerships. Societies and

community agencies will be full partners in identifying and encouraging student participation, particularly among under-represented groups.

Hanford Site operations will continue to commercialize and create spin-off environmental companies. As opportunities grow and move to the private sector, the Environmental Work Force Pipeline will become critical to the economic well-being of the Tri-Cities and surrounding area. The RL is actively working to ensure full stakeholder and public participation in developing the vision and strategy for the Environmental Work Force Pipeline. This participation will create an atmosphere of ownership, leading to successful completion of the EM mission.

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ENVIRONMENTAL WORK FORCE PIPELINE STRATEGIC PLAN

1.0 INTRODUCTION

The primary mission of the U.S. Department of Energy (DOE), Richland Field Office (RL) is to clean up the Hanford Site, eliminate potential risks to the public, and serve as the model for environmental restoration. While performing this mission, our vision is to become recognized internationally for science; environmental research, development, and demonstration; and operational excellence in all that we do.

The DOE's Environmental Restoration and Waste Management mission requires a well-educated work force. Without assistance from programs such as the Environmental Work Force Pipeline, and unless we help them understand our needs, schools cannot produce the number of students or the range of skills we require. In fact, schools generally continue to teach as they have for generations and have not adopted the innovative teaching materials and methods necessary to regain our country's edge in the global economy (DOE 1990; AAAS 1989).

The decline in the quality of American schools is well documented (FCCSET 1991). *A Nation at Risk* (NCEE 1983) called attention to this alarming trend, particularly the deficiencies in math and science--the skills most needed by the EM work force. Our country's changing demographics are also well documented. Researchers estimate that by the year 2000, 85 percent of the new entrants to the work force will be minorities, immigrants, and women (DOE 1990).

The Hanford Site's transformation to a key national asset for environmental restoration and cleanup work requires vision and commitment. Support organizations and education and human resources departments need to stimulate change and operate at the leading edge of human resources programs and practices. These organizations must integrate education programs, employment, training, and technical organizations into the education system to identify, successfully introduce, and retain students to the Environmental Work Force Pipeline, which leads to employment.

The Environmental Work Force Pipeline is a multifaceted program that will address these needs by developing strategies to encourage demographically and culturally diverse students to prepare for promising technical careers within the EM work force, particularly at the Hanford Site.

The Federal Government's current policies and programs encourage business and communities to take action in conjunction with education to improve our education system for all citizens. However, these programs and policies

traditionally perpetuate the under-representation of women and minorities, and fail to foster the synergism and attitude among all of the stakeholders needed to cultivate a diverse EM workforce.

The Environmental Work Force Pipeline will form a partnership between K-12 public and private schools, postsecondary institutions, community agencies, and employers' education, human resources, and other departments. This partnership will better serve all students; however, the program will include elements that emphasize under-represented groups, attracting more of those individuals into the science and engineering curricula, and then into the EM Pipeline; identifying and overcoming barriers; and improving their educational opportunities. This partnership will improve educational opportunities by providing meaningful work experience, relevant job training, mentoring partnerships, and role models. These elements, in turn, will better prepare students for employment locally (at the Hanford Site), regionally, and nationally in science, math, engineering, and related technical fields.

2.0 A CRISIS IN EDUCATION IS A CRISIS IN INDUSTRY

The landmark report, *A Nation at Risk*, documented the serious decline in the quality of American education (NCEE 1983). Many other studies confirmed this decline, particularly in science and mathematics. Also, the number of students who will enter the technical work force is declining. This decline is caused by low interest in science and math and changes in demographics, particularly under-represented minority and female students (AAAS 1989).

Researchers estimate that by the year 2000, 85 percent of the new entrants to the U.S. work force will be minorities, immigrants, and women (DOE 1990). Unless educational communities and employers are able to make full use of these people, our nation will be unable to meet the demands of the new, more technical jobs.

To address these trends, President Bush has implemented *America 2000, The National Education Strategy*, to reform our current education system (Education 1991). He charges Congress, business, labor, the education community, and the public to support these reforms to help America regain its competitive edge in world markets.

We must remember that our current education programs tend to perpetuate the under-representation of women and minorities. "Business as usual" is not expected to solve the problem.

Schools, in conjunction with Human Resources departments, would have a more positive effect on the Pipeline by instilling and transferring work ethics and values such as loyalty, trust, and teamwork, which are critical to the success of the diverse, highly skilled EM workforce.

3.0 DOE SUPPORTS EDUCATIONAL REFORM

The DOE's transition from a nuclear production mission to an environmental mission requires different skills, knowledge, abilities, and attitudes. The DOE must change the way it uses its human resources because the new workers being hired do not have the knowledge or skills to do the job. The *Manpower Assessment Evaluation* (RL 1992) identifies the skills and knowledge that new workers will need.

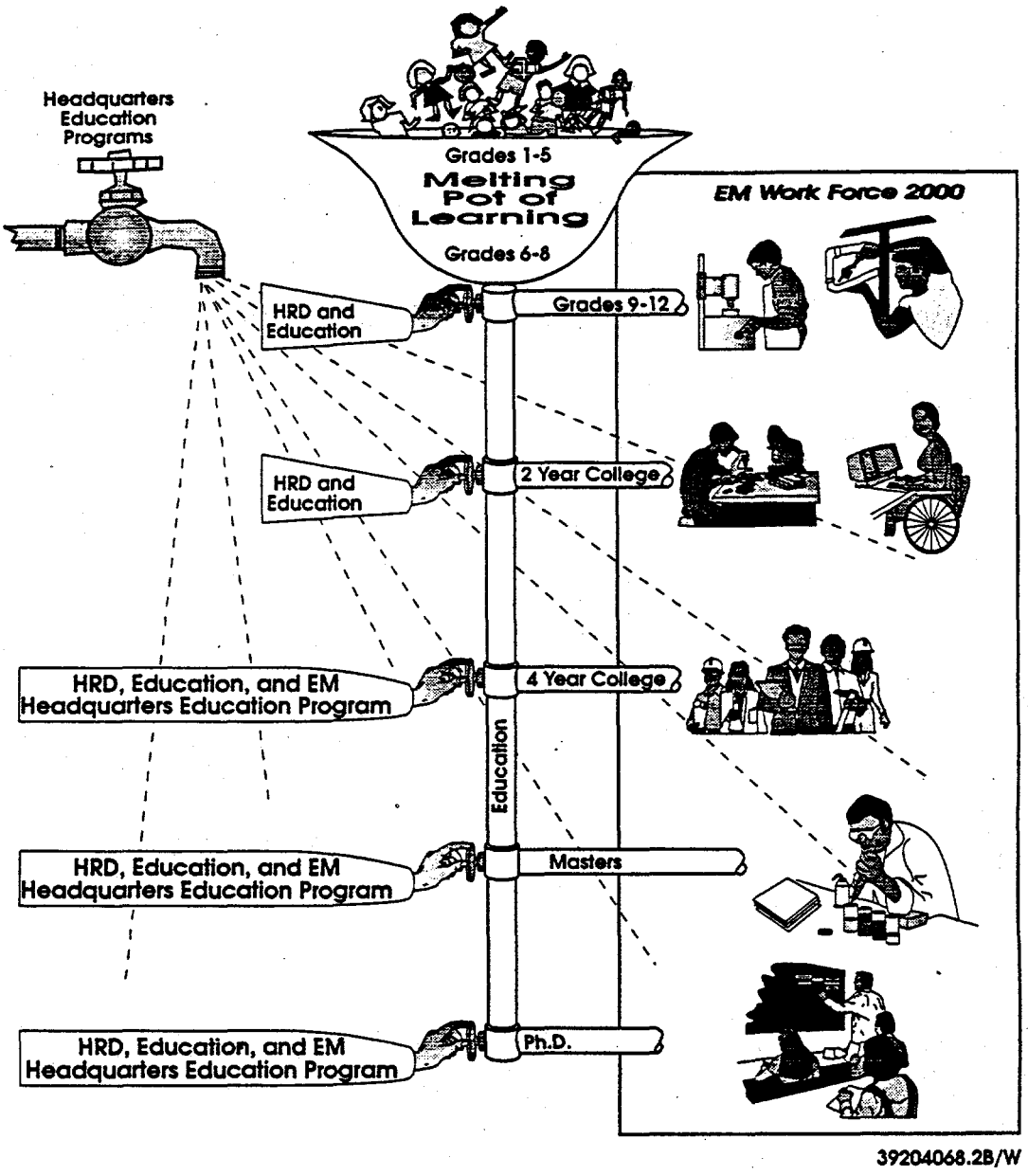
Public support will be a critical factor in the success of our mission. As Hanford Site operations grow and move to the private sector, the Environmental Work Force Pipeline will become critical to the economic well-being of the Tri-Cities and surrounding area. The DOE can build public support by promoting math and science education. The public must understand what technical talents are needed. Parents must be willing to learn those skills and to encourage their children to learn and understand math and science.

The Environmental Work Force Pipeline addresses these issues using Hanford Site resources. In partnership with other, external organizations, the Environmental Work Force Pipeline will enhance K-12 science and mathematics education; create a Pipeline that will help and encourage students from all backgrounds to prepare themselves to meet the needs of the EM work force; and provide educational opportunities, including meaningful work experience for students, teachers, and faculty. The Pipeline is shown in Figure 1.

Since the publication of *America 2000*, business, labor, and the education community have implemented many independent education programs. Many of these programs have resulted in duplication of effort with no assessment criteria and no unified strategy. The Environmental Work Force Pipeline must encourage internal and external organizations to agree on common goals and how to achieve them. By doing this, the goals of the Environmental Work Force Pipeline will be achieved quickly and economically, and the public and all the stakeholders will be fully involved in the process.

The partnership will include K-12 public and private schools, postsecondary institutions, community agencies, and employers' education, human resources, and other departments. This partnership will serve students in under-represented groups by attracting more of those individuals into the science, engineering, and technical Pipeline, by identifying and overcoming barriers, and by improving the quality of their educational opportunities. This partnership will improve educational opportunities by providing meaningful work experience, relevant job training, mentoring partnerships, and role models. Students in under-represented groups will have the opportunity to prepare themselves for employment locally (at the Hanford Site), regionally, and nationally in science, math, engineering, and related technical fields.

Figure 1. Hanford Environmental Management Education Work Force Pipeline.



Students enter the Pipeline through the "Melting Pot of Learning," via public and private schools from elementary through junior high. Human resources departments (HRD) collaborate with education to prepare the future Environmental Management work force based on the skill mix identified in the Manpower Assessment Evaluation. Students may enter the Pipeline at more advanced levels via Environmental Management Headquarters Education Programs such as work-study and internships. At the undergraduate and graduate levels, the Headquarters Education Programs also work with higher education institutions to identify future work force needs.

3.1 MANAGEMENT AND RESOURCES

The mission of the Environmental Work Force Pipeline is consistent with the vision expressed by the Federal Government in *America 2000* (Education 1991) and with the goals of DOE identified in *Support for Science, Mathematics, and Engineering Education* (DOE 1990). However, as with any new program, difficulties are encountered when bringing together existing staff with new, culturally diverse staff. To be effective, the Environmental Work Force Pipeline must be integrated into each of the current organizational structures and gain credibility to successfully complete its mission.

The RL's current budget for education programs is adequate to continue existing programs. As these programs grow and new programs are developed, they will need more money. In addition, RL will need to simplify the paperwork involved with disseminating the funds, so the money can be spent when and where it is needed.

3.2 USE OF EXISTING STAFF

The Hanford Site's large technical staff is an asset that can be tapped to support the Environmental Work Force Pipeline both onsite and in the community. Onsite, scientists, engineers, technicians, and environmental professionals can educate the legal, administrative, clerical, and management work force to help them develop the skills and attitudes necessary to meet the Hanford Site's short- and long-term EM mission. In the community, Hanford Site technical staff can be used in classrooms and various education programs to provide positive role models and to demonstrate the practical side of math and science education. In addition, innovative environmental solutions developed at the Hanford Site can be used in strong science and technology education programs. These solutions will support environmental excellence for the Hanford Site, as well as locally, regionally, nationally, and internationally.

3.3 BENEFITS

Maximum use of management resources and existing staff will enable the Pipeline to tap the pool of local youth who are likely to stay in the region, substantially reducing relocation and recruitment costs.

4.0 PROGRAM

4.1 VISION

In the next several decades, the challenge for the Environmental Work Force Pipeline is to guide students from academia to employment, to meet the future needs for a demographically and culturally diverse EM work force on a local, regional, and national basis. This Strategic Plan depicts two views of the future: a short-term vision, from 1993 to 2003, and the long-term vision, which extends until 2019.

4.1.1 Short-Term Vision (1993 to 2003)

By 2003, the Environmental Work Force Pipeline will be well established; it will have a reputation for collaborative, well-defined, and well-planned education programs for developing a demographically and culturally diverse EM work force. The RL will be recognized by the education communities, the general public, and other Federal agencies as a pioneer in fostering programs and ideas that help achieve EM's mission and the educational goals of *America 2000*. The RL will have established significant public and private sector cooperation resulting in greater efficiency and higher quality education programs.

Evaluation and maintenance of these high standards will be based on assessment criteria that will be established and evaluated on a quarterly basis, thus ensuring the Environmental Work Force Pipeline a legitimate reputation for quality service to its customers.

The Environmental Work Force Pipeline and all stakeholders will agree on a strategy for each program, partnership, and education activity. Strategies will include detailed plans and time tables. Organizations internal and external to RL will willingly work together to achieve program goals and objectives. Communication and sharing of information will be effective and productive at all levels. Personnel will possess the passion to achieve these goals and will be well respected in their fields. Training will be comprehensive and shared among internal and external organizations.

State-of-the art technology and information will be used in the Environmental Work Force Pipeline and activities. All Hanford Site organizations will use the Environmental Work Force Pipeline philosophy to help write their goals and objectives. The Environmental Work Force Pipeline will maintain its cost effectiveness and efficiency, and continue to incorporate people's passions, thoughts, and ideas into the education renaissance ensuring a demographically and culturally diverse Environmental Work Force Pipeline, which leads to employment.

The Environmental Work Force Pipeline will maintain the proper rapport with other Federal agencies and within DOE. The Environmental Work Force Pipeline will receive strong support from the Hanford Site principals, Congress, the states, local governments, tribal governments, and under-represented groups.

Specifically, by 2003, the following elements of the Environmental Work Force Pipeline will be in place.

- The demographics and cultural diversity of technical organizations will reflect that of society as a whole.
- Evaluation measurement criteria will be approved by DOE-Headquarters for the Environmental Work Force Pipeline.
- The Environmental Work Force Pipeline will have developed partnerships with local and regional two- and four-year colleges for recruiting and retaining students in support of DOE's EM programs.
- The Environmental Work Force Pipeline will be the flagship for all other Education Work Force Pipelines.

4.1.2 Long-Term Vision (2019)

It will take beyond the year 2019 for EM to accomplish its environmental restoration mission at the Hanford Site. This is an important benchmark for the Environmental Work Force Pipeline. From 2003 to 2019 and beyond, the Environmental Work Force Pipeline will have supplied the skills needed for accomplishing the EM mission. The Environmental Work Force Pipeline will be an integral part of the infrastructure that supports this Pipeline. The Hanford Site work force will reflect the demographics and cultural diversity of the current and future population. The Pipeline will be the model that national and international communities will emulate.

4.2 STAKEHOLDERS

While defining the vision and establishing program objectives, RL will coordinate constant communication with stakeholders and other interested parties. These stakeholders and their present concerns include the following.

Public. The general public is a vital stakeholder. Presently, the public is seeking answers to America's decline in student achievement. The Environmental Work Force Pipeline will continue to work with the public to develop partnerships that enhance education, enhance the Pipeline, and increase the flow of information. The Pipeline must reach all cultures and all people, regardless of social or economic status.

Congress. Currently, Congress supports DOE efforts; however, as the education budget tightens, Congress will depend on established evaluation criteria to determine which programs receive funding. Long-term support for education programs depends in part on three issues: RL's ability to maintain open, timely communication; a well-defined and coordinated mission that provides qualitative and quantitative results; and statewide legislative support.

States and Tribal Governments. The Pacific Northwest states and tribal governments are concerned about their lack of senior legislative representatives in Washington, D.C. Tribal governments continue to stress their desire to be more involved in the decisions affecting the environment; in particular, Indian nations with historical ties to the Hanford Site wish to ensure that their concerns are addressed.

Private Sector. The private sector has the same concern as DOE in ensuring the availability of trained technical personnel. In an increasingly competitive high-tech world, availability of trained staff is essential for economic security.

National Laboratories and Sites. The EM has access to talented scientists and engineers at the national DOE laboratories and sites. With support from DOE Headquarters, the labs and sites could integrate their education programs to decrease duplication of effort, substantially improve efficiency, and develop a higher-quality, innovative, and cost-effective EM Education Work Force Pipeline. The RL will continue to seek effective communication and cooperation among the various organizations.

Other Agencies. The DOE is currently working with other government agencies (e.g., National Science Foundation, Nuclear Regulatory Commission) to form coalitions to combine our resources to aid in this educational renaissance.

Others. The Environmental Work Force Pipeline will continue to work with technical societies and all other interested parties and stakeholders to provide leverage for DOE programs.

4.3 PLANNING ASSUMPTIONS

Planning assumptions are an integral part of strategic planning. The assumptions define the opportunities, requirements, and constraints in meeting the program objectives. The following assumptions guided the development of this Strategic Plan.

- The DOE will retain an interest in influencing education policy and responsibility for providing funding and resources.
- The DOE, DOE contractors, and the Environmental Restoration Management Contractor (ERMC) will retain an active interest in education programs.
- Overall budgets for DOE activities will remain stable until 2019.
- The number of employees needed at the Hanford Site will remain stable, but the skills they need will change as remediation work increases.
- Management will take advantage of the benefits of a culturally diverse work force in their program activities.

- The current education system and human resources organizations will not provide the demographically and culturally diverse qualified workers to meet the future needs of the Hanford Site.

- Students who are exposed to the Pipeline, but who choose not to pursue technical careers, will be encouraged to acquire the science and math skills literacy required for administrative and support roles within the EM work force.

4.4 CURRENT OBJECTIVES AND FIRST STEPS

To fulfill its mission, the Environmental Work Force Pipeline will focus on the following four target categories: K-12, college, community agencies, and employment. Performance objectives in each of these categories can be measured. The measurements will be part of the overall evaluation of the program. The objectives for each category are described below. Specific programs and actions that support these objectives are identified in Appendix A.

4.4.1 K-12

Interact with K-12 schools to assist in the fulfillment of the Environmental Work Force Pipeline, recognizing the need for emphasis on under-represented groups. Hanford Site technical employees will act as role models and mentors and provide technical classroom presentations showing students the practical and fun sides of math and science. These presentations and other interactions such as teacher enhancement, site project tours, and high school senior work-study programs should encourage students to pursue and visualize themselves in technical careers. Provide employment opportunities to minority, female, and low-income students in the eleventh and twelfth grades.

4.4.2 College

Establish active partnerships with postsecondary institutions that will assist in our mission. These partnerships will serve all students with emphasis on under-represented groups by attracting more of those individuals into the science, engineering, and math fields; identifying and overcoming barriers; and providing hands-on relevant job training, work experience, mentoring partnerships, role models, internships, co-ops, laboratory graduate research appointments, faculty research visits, postdoctoral appointments, faculty research appointments, institutes, and conferences. These partnerships will also develop needed classes associated with the new EM mission.

4.4.3 Community Agencies and Societies

Establish partnerships (develop programs) with business, professional, and community organizations that will assist DOE in its mission. These partnerships will be part of the networking system that identifies potential resources and candidates and informs the public on how to support the Environmental Work Force Pipeline.

4.4.4 Employment

All of the outreach program elements will ultimately provide conduits for employers to hire a demographically and culturally diverse EM work force. Human resources will need to continually review its policies and practices to maintain an effective flow of qualified candidates through the Pipeline and to offer jobs to successful candidates.

5.0 CONCLUSIONS

The Environmental Work Force Pipeline faces two immediate challenges. First, a clear, concise vision statement must be communicated to the stakeholders and the public. Second, realistic strategies to achieve the vision must be developed.

The stakeholders must accept ownership of the vision and the strategies. This can be fostered by the participation of the stakeholders in all steps of developing, planning, and implementing the vision and strategies. Responsibility for direction, guidance, and oversight of the Environmental Work Force Pipeline will remain with RL.

Over the next several months, RL will be engaged in the fiscal year 1993 planning process. This strategic plan will be used as a means of guiding RL's planning activities. The RL also will be actively involved in integrating this plan with the other EM strategic plans. This integration will contribute to a more effective Environmental Work Force Pipeline.

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APPENDIX A

SPECIFIC PROGRAM OBJECTIVES

SPECIFIC PROGRAM OBJECTIVES

To fulfill its mission, the Environmental Work Force Pipeline will focus on the following four target categories: K-12, college, community agencies, and employment. Each of the steps in these categories have measurable performance indicators that will be built in to the overall evaluation criteria. The objectives and target dates listed for each category are based on current funding and organizational status. (Planning assumptions are described in Section 4.3.)

The specific programs and actions listed here are representative of the type of programs and actions that will be implemented to support the Pipeline. The list is not all-inclusive, and it does not represent firm commitment from all stakeholders but does provide guidance for the Environmental Work Force Pipeline.

A.1 K-12

Goals:

- Support teacher enhancement and preparation.
  - Hanford Site technical employees will enrich 1,000 hours of K-12 related subjects in Hanford Site area schools by May 1994 (e.g., OPTIONS).
  - Offer science and math enhancement opportunities to 100 additional elementary teachers by 1995, adding 20 per year until the year 2019 (e.g., Shadow Program).
  - Provide career awareness symposiums (e.g., *I Touch The Future*) that will keep teachers abreast of technological advancements.
- Provide technical assistance and support curriculum development, materials acquisition, and dissemination of information.
  - Hanford Site technical employees will enrich 1,000 hours to K-12 students in Hanford Site area schools by May 1994 (e.g., Community Ambassadors).
  - Loan equipment to schools for use in science- and math-based activities.
  - Provide assistance and technology to improve science and math classes.

- Provide student incentives and opportunities.
  - Increase by 10 percent the number of students majoring in math and sciences in Northwest colleges by the year 2000.
  - Develop and support three parent-student education programs for increasing awareness of science and technology by 1995.
  - Recruit, hire, and track graduates from DOE's Student Research Apprenticeship Program at Pacific Northwest Laboratory* (PNL).
  - Establish a world-class science magnet school in Pasco, Washington that prepares K-12 students for success in college by 1997.

A.2 COLLEGE

Goals:

- Provide the necessary funding for Columbia Basin Community College (CBC) to recruit and retain students in its Hazardous Materials Management Technology program in support of DOE's Environmental Restoration/Waste Management mission.
- Establish partnerships with colleges and universities that will assist in our mission.
- Provide internships for preresidence occupational medicine students.
  - Target medical schools substantially serving under-represented students.
  - Establish at least three eight-week internships at the Hanford Environmental Health Foundation (HEHF) each year by January 1, 1994.
  - Establish at least one eight-week internship at a Tri-Cities hospital each year by January 1, 1994.
- Develop faculty/student research partnerships at minority colleges and universities on projects related to DOE environmental problems.
  - Determine which minority colleges and universities have environmentally related programs by January 1, 1993.
  - Recruit at least five faculty/student research teams by January 1, 1995.
  - Maintain at least five faculty/student research teams annually through June 30, 2003.

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*Operated for DOE by Battelle Memorial Institute.

- Increase the talent pool of under-represented groups locally by 10 percent for potential employment at the Hanford Site in the science, engineering, and technology fields.
  - Identify the number of individuals who are majoring in science, engineering, and technology in local schools and colleges by November 30, 1993.
  - Provide support to increase participation in Math, Engineering, and Science Achievement (MESA) and Upward Bound by 25 percent by September 1, 1993.
  - Provide six tours, demonstrations, etc. by DOE and/or contractor personnel to MESA and Upward Bound students by September 1, 1993.
  - Provide financial assistance to CBC students enrolled in environmental disciplines by September 1, 1993.
  - Provide financial assistance to Washington State University (WSU) Tri-Cities students enrolled in environmentally related disciplines by August 1, 1994.
  - Provide 30 undergraduate environmentally related Cooperative Work Experiences site-wide each year by October 1, 1995.
- Increase the number of students from under-represented groups who participate in DOE's graduate-level internships and fellowship programs.
  - Identify the number of students from under-represented groups who participated in graduate-level internships and fellowship programs in fiscal year 1992 by September 30, 1993.
  - Double the numbers of students from under-represented groups who participate in graduate level internships and fellowship programs by September 30, 1997.
- Establish a Radiation Chemistry (Rad Chem) two-year program at CBC.
  - Develop a Rad Chem two-year curriculum by March 1, 1993.
  - Fund one 12-month Rad Chem instructor at CBC by September 1, 1993.
  - Begin offering Rad Chem classes at CBC in September 1993.
  - Support the acquisition of Rad Chem equipment at CBC by September 1, 1993.
  - Provide 10 internships for Rad Chem students with DOE contractors by September 30, 1994.

- Use the Pipeline to train candidates for hard-to-fill positions (such as fire protection engineers).

- Accelerate Environmental Engineering programs at WSU Tri-Cities.

- Establish cooperative work experiences for students from under-represented groups in Northwest colleges and universities and minority institutions nationwide in environmentally related disciplines.

  - Establish 50 cooperative work experiences site-wide for students from under-represented groups by January 1, 1997.

A.3 COMMUNITY AGENCIES AND SOCIETIES

Goals:

- **FIND.** Use societies and community organizations, including churches, to identify under-represented individuals.

  - By April 1993 identify agencies.

  - By May 1993 meet with agencies, discuss the EM mission, and request that they disseminate information about DOE programs.

  - By end of May 1993, ask for 20 referrals.

- **TURN ON.** Increase awareness of the need for education in science, engineering, and related technical fields.

  - Provide tutoring for 50 students in math and basic science.

  - Give a minimum of 25 presentations (by contractors and RL) in area K-12 schools.

  - Organize and conduct two career fairs for local schools.

  - Write one article per month for the local newspaper. Emphasize the importance of science and math education for candidates who wish to pursue careers with DOE and its contractors.

- **CAPTURE.** Develop mechanisms to use existing community resources for identification of career opportunities.

  - Place DOE information and 10 society journals and/or newsletters in local educational libraries.

  - Organize five site tours for local business and school employees, and encourage business people to tour local educational facilities.

- HIRE. Identify current job openings and projected business and industry personnel needs at the Hanford Site.
  - Send roll.
  - Publish quarterly progress reports.
  - Track number of positions filled by the Pipeline.
  - Enhance recruitment at local high schools to fill the Pipeline.

A.4 EMPLOYMENT

Goals:

- Increase cooperative education agreements to improve employment opportunities by making two new agreements each year through 1995 in each of the following categories:
  - Northwest colleges and universities
  - Regional community colleges
  - Area high schools.
- Develop and maintain 18 internship programs by 1995:
  - Five programs at Westinghouse Hanford Company (WHC)
  - Five programs at PNL
  - Three programs at Kaiser Engineers Hanford (KEH)
  - Three programs at HEHF
  - Two programs at RL.
- Develop and maintain one faculty and one graduate fellowship program per year at each Hanford Site contractor and RL until 1995.
- By 1995, increase full-time employment Hanford EM Education Work Force Pipeline participants by 50:
  - 20 participants at WHC
  - 10 participants at PNL
  - 10 participants at KEH
  - 5 participants at HEHF
  - 5 participants at RL.

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G. Cox	H3-24
J. O. Honeyman	B1-31
E. R. Jackson (11)	L6-29
D. B. Klos	G6-55
J. R. Lewis	A2-90
H. E. McGuire Jr.	B3-63
D. G. Panther	L0-18
H. H. Yoshikawa	B1-31