SUBCON SUBGROUP FY98 ANNUAL REPORT TO THE STCG MANAGEMENT COUNCIL

November 18, 1998

During FY98, the Subcon Subgroup had the following accomplishments, listed below the related STCG Mission Statement elements.

MISSION STATEMENT - Element 1

Function by involving user organizations (both DOE and the contractors), technology providers, regulators, American Indian Tribes, and stakeholders, and promoting broad information exchange among all interested parties. Maintain a helpful attitude and serve as a conscience for technology improvement at Hanford. Contribute to DOE-wide communications and lessons learned.

Subcon Subgroup Accomplishments

- Arlene Tortoso became the Subgroup Co-Lead, which increased ER project involvement in the STCG.
- Doug Huston replaced Dirk Dunning as the voting member from the Oregon Office of Energy.
- Wade Riggsbee was introduced as the designated alternate voting member for the Yakama Indian Nation (Barbara Harper's back-up).
- John Stanfill replaced Paul Danielson as the voting member from the Nez Perce Tribe.
- John April replaced Kim Koegler as the BHI representative.
- The Subgroup raised technology issues/concerns to the Management Council for debate and resolution (e.g., the Innovative Treatment Remediation Demonstration [ITRD] process and the letter from the Yakama Indian Nation to DOE-HQ).
- The Subgroup invited presentations by ER project staff on the cleanup strategies they are planning to pursue (e.g., Accelerated Site Technology Deployment [ASTD] proposals, ITRD proposals, vadose zone planning).

MISSION STATEMENT - Element 2

Identify, prioritize using systems analysis, and seek consensus on Hanford Site and program-specific problems, science and technology needs, and requirements. Recognize baseline schedule insertion points for technology. Focus on the baseline, but also identify technologies to support potential baseline alternatives if they offer risk reduction benefits or high financial return on investment by improvements in environmental, safety, or health protection. Devote 20% of the STCG effort to science needs and 80% to technology needs and deployment.

Subcon Subgroup Accomplishments

- Reviewed and endorsed the FY98 science needs that were submitted to the Environmental Management Science Program (EMSP).
- Reviewed and endorsed the FY99 technology needs that were submitted to the Subsurface Contaminants Focus Area (SCFA).
- Reviewed and endorsed the FY99 science needs that were submitted to EMSP.
- Addressed concerns of the Yakama Indian Nation regarding the Subcon science needs and the process used to develop them.
- Reviewed and provided input on Technology Insertion Points (TIPs); some members participated in the TIP workshop.

MISSION STATEMENT - Element 3

Be a forum for assessing and recommending potential technologies for application at Hanford. Look for technologies that provide improved endstates, effectiveness, improved schedules, or improved costs in accomplishing the required results. Also look for technologies to reduce surveillance and maintenance costs while maintaining safe operations. Focus on life-cycle costs and benefits; improvements in environmental, safety, or health protection; and improvements in performance, pollution prevention, and waste minimization relative to alternative remedies. Make appropriate referrals for vendors (e.g., to DOE or the contractors).

Subcon Subgroup Accomplishments

- Endorsed two technology proposals for submittal to the ASTD Program: In Situ Redox Manipulation for Groundwater Remediation in the 100-D Area and Enhanced Site Characterization System.
- Invited Mike Hightower, the ITRD Program Manager, to Hanford to kick off our ITRD project. Several Subgroup members participated in the ITRD workshops.

- Participated in meetings/workshops on subsurface contaminant characterization and remediation technologies (e.g., DNAPL characterization technologies).

- Invited presentations on innovative technologies for characterization and remediation of soil and groundwater problems at Hanford (e.g., Westbay multi-level groundwater monitoring wells, carbon tetrachloride bioremediation, three-dimensional ground-penetrating radar, laser-induced breakdown spectroscopy, electrically switched ion exchange).

- Interfaced with the Tank Subgroup on vadose zone technology issues (e.g., horizontal drilling, vadose zone science and technology roadmaps).

- Provided feedback to the Efficient Separations and Processing Crosscutting Program when they visited Hanford in January 1998.

MISSION STATEMENT - Element 4

Champion and facilitate demonstration and deployment of innovative, modified, or existing technologies that are new to Hanford and share information with other sites to best leverage all available resources.

Subcon Subgroup Accomplishments

- Continued to evaluate the performance of the In Situ Redox Manipulation (ISRM) technology demonstration.

- Continue to follow the ITRD project activities related to the strontium plume at N-Springs and the carbon tetrachloride plume in the 200 Area.

- Actively pursued potential improved technologies to address Hanford groundwater contamination problems. The big push this year was ITRD, but attention was also given to ASTD for in-line detection of strontium and chromium.

- Reviewed and provided feedback on the Hanford Technology Deployment Plan.

- The Ecology representative attended a field demonstration and evaluation of two sensor technologies deployed by a cone penetrometer for direct detection of DNAPLs at Savannah River. He provided a briefing for the Subgroup.

MISSION STATEMENT - Element 5

Foster market pull from the DOE-RL and contractor line project customers and eliminate barriers (e.g., "not invented here", resistance to change).

Subcon Subgroup Accomplishments

- Reviewed/endorsed Technology Insertion Points (TIPs) to be included in the Multi-Year Work Plans (MYWPs).

- BHI Technology Applications staff worked with the ER projects to determine what they should be working on and which problems to address. "Technology Agreements" were made with the projects on what the priorities are. BHI Technology Applications has had some success in getting the projects interested in using technology.

MISSION STATEMENT - Element 6

Promote competitive privatization and commercialization by communicating information on Hanford's science and technology needs and schedule insertion points, as well as demonstration and deployment opportunities, to commercial technology providers. Help break barriers to involvement by companies new to Hanford.

Subcon Subgroup Accomplishments

- The ER Project maintained the Technology Application homepage to broadly communicate the Subcon technology needs (www.bhi-erc.com/technology/tech.htm).

- The Pacific Rim Enterprise Center distributed Hanford technology needs through the World Wide Web, the Northwest Environmental Business Council, and Trade Shows.

- The Subgroup identified and tried to eliminate barriers to deploying technologies in the field (e.g., ITRD, ISRM).

MISSION STATEMENT - Element 7

Provide input to decision-makers (e.g., DOE-RL, DOE-HQ, Congress, regulatory agencies) on Hanford's highest-priority science and technology needs to ensure critical needs are funded. Also, provide feedback to them on the Site's accomplishments.

Subcon Subgroup Accomplishments

- Members participated in the SCFA Mid-Year Review in Augusta on April 28-30, 1998. Also, weekly conference calls were held with SCFA to maintain good communications.

- Maintained a dialogue with SCFA and the Characterization, Monitoring, and Sensor Technology (CMST) Program, private vendors, and other technology providers on how

our high-priority technology needs are being addresses and kept the Management Council informed.

- BHI Technology Applications responds to frequent vendor contacts regarding the Subcon technology needs. The monthly Deployment Center reports to the Management Council list the number of vendor contacts made.

- Prepared the Subcon Subgroup FY97 Annual Report to the STCG Management Council to highlight accomplishments for the fiscal year.

- Subgroup members hosted a NAS Committee on Technologies for Cleanup of Subsurface Contaminants in the DOE Weapons Complex who visited Hanford in May 1998.