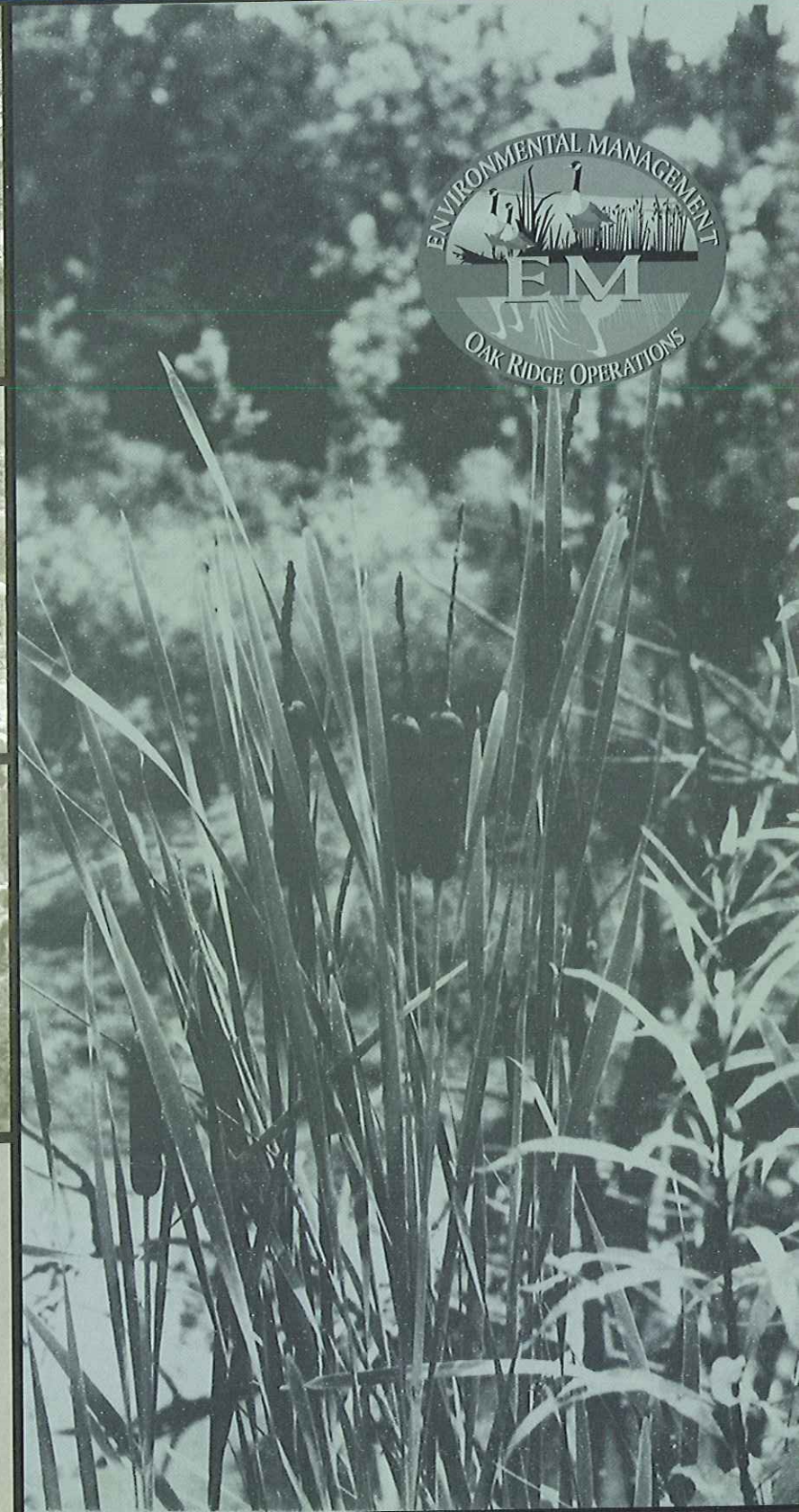


CLEANUP PROGRESS

Annual Report to the Oak Ridge Community for the Year 2000



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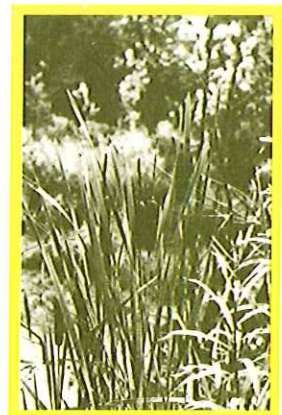
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This document has been approved for release to the public by the Classification and Information Control Office at East Tennessee Technology Park.

Cover photo by Dan Lipe (Design integration Group, Inc.) at the intersection of Highway 58 and Highway 95, just east of ETTP.



FROM THE ASSISTANT MANAGER FOR ENVIRONMENTAL MANAGEMENT

Welcome to the inaugural edition of Cleanup Progress, an Environmental Management (EM) status report to the community. Cleanup Progress is designed to give you an overview of the past year's challenges and accomplishments, as well as preview the coming years.

Your first impression will probably be how the pace of transition from paperwork to cleanup is accelerating. After many years of time-consuming, yet necessary, research, documentation, and decision-making, we are now seeing dividends in the form of extensive cleanup activity across the Reservation. Major milestones reached over the past year include:

- demolition of Group I Buildings at East Tennessee Technology Park (ETTP) and sign-off on the Action Memorandum for Group II,
- completion of the gunite tanks project,
- first shipments of Oak Ridge low-level wastes to the Nevada Test Site,
- sign-off on the Record of Decision (ROD) for the EM Waste Management Facility (EMWMF),
- sign-off on the ROD for transuranic (TRU) waste treatment and disposal,
- sign-off on the watershed RODs for Bear Creek Valley and Melton Valley, and
- issuance of a Proposed Plan for Bethel Valley.

Last year also saw refinements to the EM watershed approach initiated in 1997. We consolidated Upper and Lower East Fork Poplar Creek, Bear Creek, and off-site programs under the administration of a Y-12 Watersheds group. An Oak Ridge National Laboratory watersheds team now manages the area, which includes Bethel Valley and Melton Valley.

We worked diligently with regulators to address concerns over the site-wide ROD approach to cleanup at ETTP. As a result, rather than

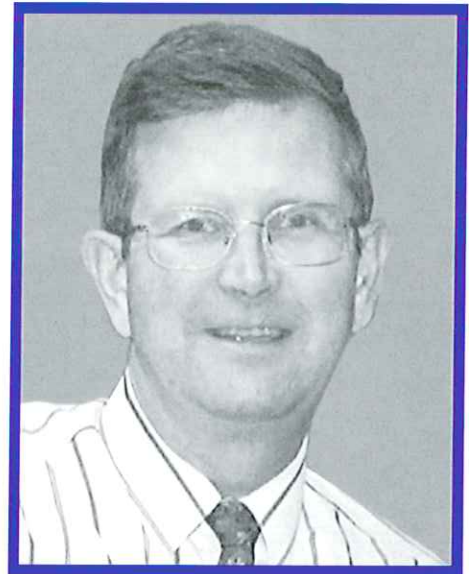
pursue a single ROD for the entire watershed, we have divided the site into zones, based on distinct environmental characteristics and impacts. The decontamination and demolition of site structures, meanwhile, continues apace on a separate regulatory track.

Approval to proceed with the EMWMF, along with the opening of the Nevada Test Site, was critical in our efforts to avoid the so-called "train wreck" scenario in which cleanup schedules run into a lack of disposal options for the wastes being generated.

The much anticipated Life Cycle Baseline came on-line in 2000. This baseline, which will be updated annually, is a comprehensive management tool that documents management's vision for the cleanup program. It details the major program assumptions and the scope, schedule, and budget needed to achieve the vision.

Finally, public involvement continues to be a vital component of EM decision-making. Waste management, environmental restoration, and long-term stewardship are all areas that have benefited from stakeholder input, and we will continue to seek opportunities for meaningful dialogue with the public.

A great deal of hard work remains to be done, but the future indeed looks bright for EM on the Oak Ridge Reservation.



If you have comments or suggestions about this report, please contact the DOE Public Affairs office at (865) 576-0885.

You can find out more about DOE Oak Ridge Operations at <http://www.oakridge.doe.gov>.

ETTP WATERSHED



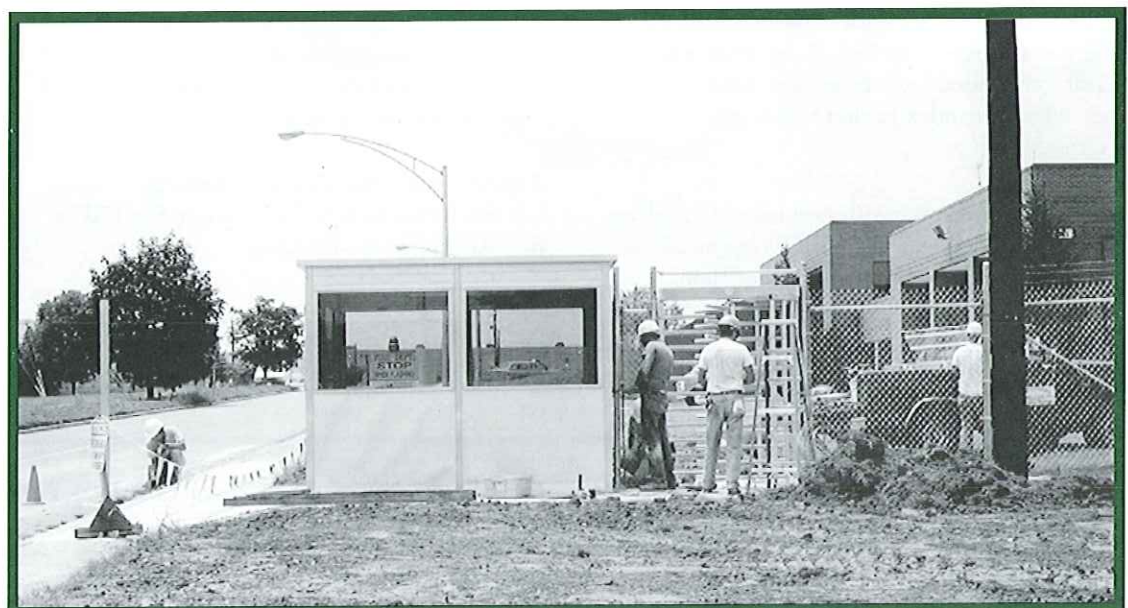
The East Tennessee Technology Park (ETTP) Watershed encompasses all of the former Oak Ridge Gaseous Diffusion Plant (later called the K-25 Site and then ETTP) and the surrounding areas. ETTP, which sits on a 1,500-acre tract of land, began operations in World War II as part of the Manhattan Project. Its original mission was to produce uranium enriched for use in atomic weapons. The plant produced enriched uranium for the commercial nuclear power industry from 1945 to 1985 and was permanently shut down in 1987. Restoration of the environment, decontamination and decommissioning of the facilities, and management of the legacy wastes have since been major activities. Reindustrialization, which involves bringing in private companies to use the facilities, began in 1996, and the site was renamed ETTP in 1997.

ETTP Fences are Moving

Visitors to East Tennessee Technology Park (ETTP) are noticing changes to the site's appearance. Fences in certain areas are coming down, and new fencing is being erected to limit access to the few remaining secure areas. This is part of a continuing effort for ETTP's eventual transition to a more traditional industrial park. These areas within the fence are called Property Protection Areas and will provide security protection control for five major areas once the site is opened to public

access. Those areas where protection must be maintained are the K-25 Building Vault area, Bldgs. K-1423 and K-1004L, K-1066B Burial Ground, and K-1070-C/D Burial Ground. Access to these areas must be controlled based on security and/or environmental concerns. This work is expected to continue through FY 2001, with work planned next year for Bldgs. K-1420 and K-1423 and the K-1200 complex.

Fence lines are changing throughout ETTP, including those at Portal 11



ETTP Zone 1 Proposed Plan Being Developed

The U.S. Department of Energy (DOE), Environmental Protection Agency (EPA), and Tennessee Department of Environment and Conservation (TDEC) agreed in September 2000 to a path forward for the cleanup of the East Tennessee Technology Park (ETTP). This path forward includes an interim decision on soil remediation in the areas outside the main fence. This area has been designated as Zone 1. DOE issued the draft Proposed Plan to regulators for review in December 2000. This Proposed Plan will be issued for public comment once finalized and approved by EPA and TDEC. Ultimately, a Record of Decision will be signed by the three agencies allowing cleanup to begin in Zone 1.

Once the soil has been remediated, additional data will be collected to support a final decision on soil, groundwater, surface water, and sediment remediation in Zone 1. Decision making on the cleanup approach for the main plant portion of ETTP will occur after more of the buildings are demolished so that soils requiring remediation can be more easily sampled and remediated.

The public will be kept informed throughout this process, including briefings to the Oak Ridge Site Specific Advisory Board subcommittees.

Demolition Projects at ETTP Under Way

As part of cleanup efforts at East Tennessee Technology Park (ETTP), the U.S. Department of Energy (DOE) is demolishing several buildings there. Five buildings, known collectively as Group 1, have already been demolished. The Group 1 Buildings include the K-725 Beryllium Building and the nearby K-724 Storage Building, the K-1131 Feed and Tails Building, the K-1410 Plating Facility, and the adjacent K-1031 Warehouse. These auxiliary facilities were selected for dismantlement because of their poor physical condition, proximity to surface water or other structures, expense of surveillance and maintenance activities, or a combination of these. Demolition was completed in April 1999.

Group 2 decontamination and decommissioning activities include 89 contaminated above-ground facilities that will be demolished by groupings. These facilities include buildings as well as tanks, sheds, and other above-grade structures. Facilities with actual or potential elevated concentrations of radiological and/or other hazardous substances were included in this evaluation. Demolition will include decontamination and disposal of materials at approved off-site disposal facilities and Oak Ridge Reservation storage or disposal facilities.

Buildings that are not contaminated are also being demolished when it has been determined that they are of no future use or are structurally unsound.

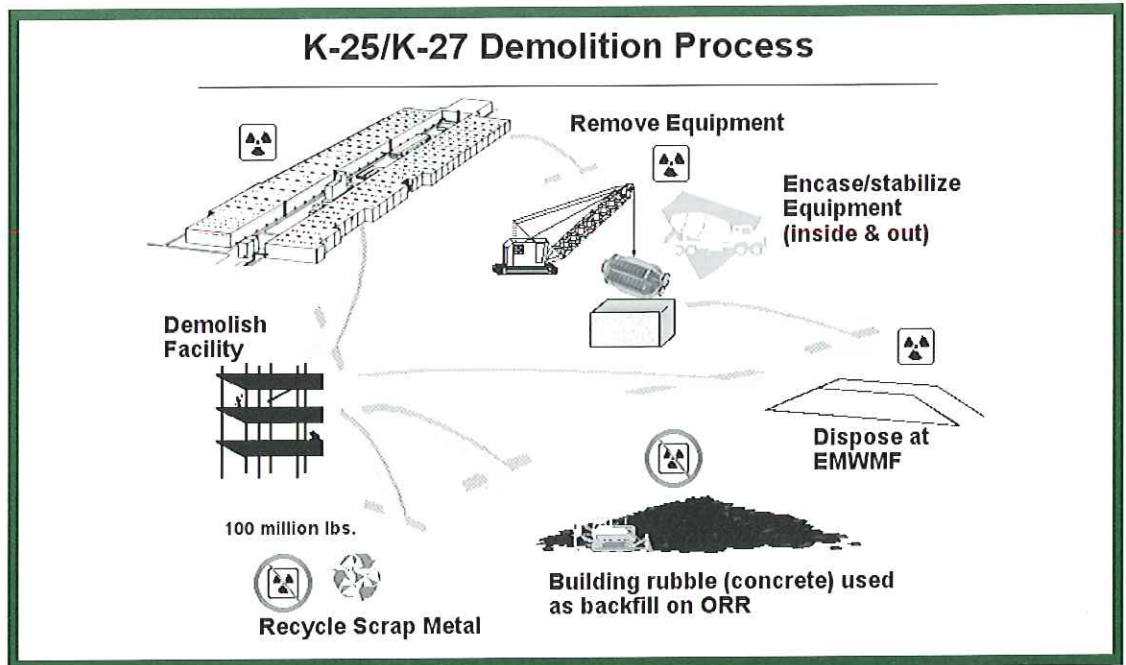
Building groupings are:

- main plant area,
- K-25/27 area,
- Poplar Creek area,
- Powerhouse area,
- K-31/33 rabbit ears area,
- centrifuge area, and
- balance of the site.

Demolition of ETTP contaminated facilities is being performed under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.



K-1410 during demolition



K-1070-A Burial Ground Subcontract Awarded

The IT Corporation has been awarded an \$11.1 million subcontract by Bechtel Jacobs Company LLC to clean up a major waste burial ground at East Tennessee Technology Park.

The 1070-A Burial Ground covers one acre and contains 62 pits and 26 trenches that were used to dispose of a variety of waste containing low levels of radioactivity (mostly uranium) and toxic chemicals from the 1950s until 1976. Most of the waste came from the uranium

enrichment process that was then in operation, as well as contaminated construction debris, laboratory waste, and other miscellaneous waste.

The IT Corporation will be responsible for planning and engineering design, followed by the excavation, characterization of the waste, disposal and finally re-vegetation of the burial ground site. The schedule calls for work to be completed by the summer of 2002.

Three-Building D&D Project Progressing

BNFL Inc., under contract to the Department of Energy, is decontaminating and decommissioning the materials and equipment within the K-33, K-31, and K-29 gaseous diffusion buildings at East Tennessee Technology Park. The three buildings contain more than 4.89 million square feet and house more than 136,000 tons of contaminated or potentially contaminated material.

The purpose of the project is to clean out the three buildings to make them available for reuse without radiological and other safety concerns.

In 2000, BNFL dispositioned 17,881 tons of metal from Building K-33. An additional

16,350 tons of metal within K-33 was dismantled to await disposition. The K-31 and K-33 Switchyard equipment demolition removal was completed, with a total of 4,615 tons of metal removed and dispositioned. BNFL also designed and constructed a supercompactor on-site to reduce the disposal volume of low-level waste. The supercompactor became operational in January 2001.

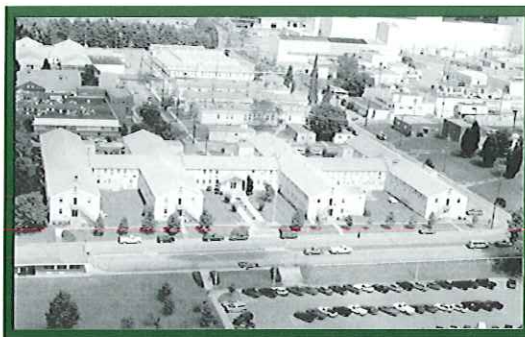
Complete dismantlement and disposal of five of the eight cascade units in Building K-33 and two of the six units in the Building K-31 are expected to be completed in 2001.

K-1001 Demolished

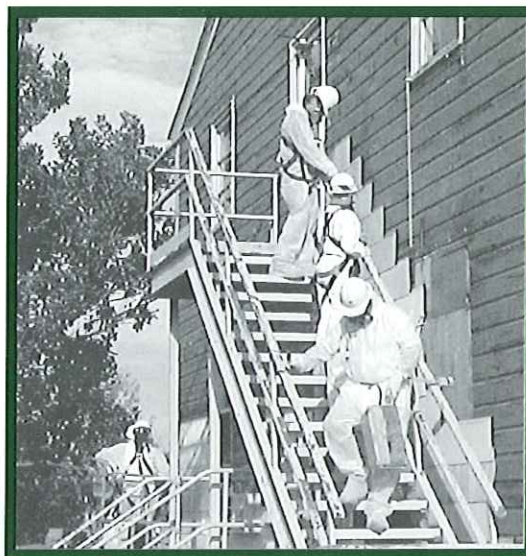
As part of the East Tennessee Technology Park (ETTP) Auxiliary Facilities Demolition Project: Group 2 Buildings, Bechtel Jacobs Company LLC has demolished the original administration building (K-1001). The building was demolished because a structural engineering analysis determined it was no longer structurally sound to use as an office facility.

Bechtel Jacobs Company awarded a subcontract to Safety and Ecology Corporation (SEC) of Knoxville, Tennessee, to perform the work. SEC removed all the asbestos-containing material and other contaminants, verified that they had all been removed, and proceeded with demolition. SEC conducted air monitoring to ensure the health and safety of its workers and ETTP employees. SEC also demolished seven trailers located east of Building K-1001. These trailers were not needed and would require significant work for continued use.

Building K-1001 was a two-story, wood frame structure with an underlying crawl space and attic. The building was constructed in 1944 to be used mainly as offices for administrative personnel. K-1001 was deactivated in 1999. It was certified radiologically clean based on past radiological surveys. Contaminants present in the building included asbestos-containing materials, small amounts of polychlorinated biphenyls, and lead. These contaminants are

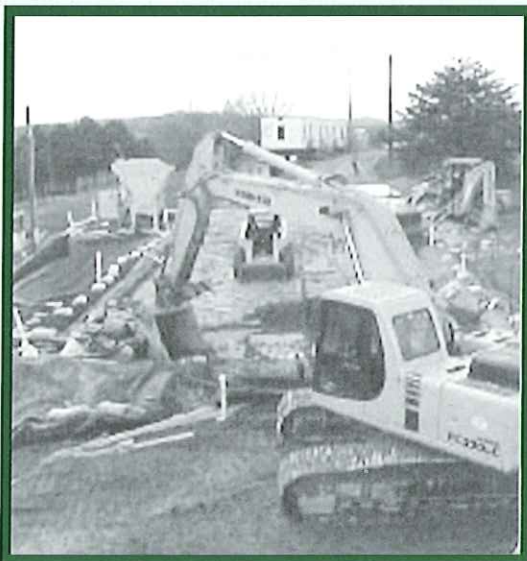


The K-1001 building prior to demolition



Workers are shown removing siding from the K-1001 building

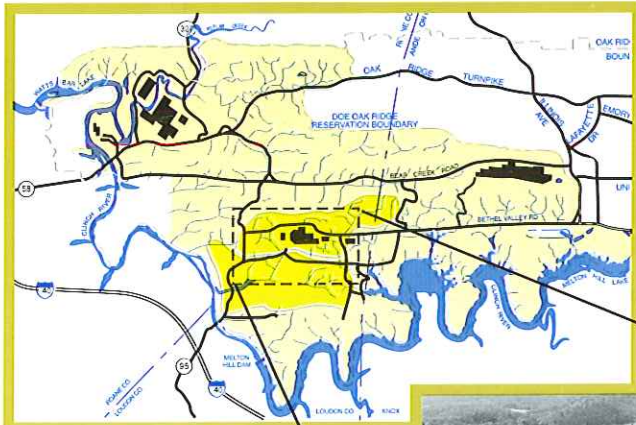
being shipped to a permitted disposal facility. The majority of the demolition debris has been shipped to the DOE Y-12 Construction Debris Landfill.



Treatment Method for CERCLA Waste Identified for G Pit

The treatment method to remediate the K-1070-C/D G Pit generated waste will be a portable low-temperature thermal desorption unit that will remove volatile organic compounds and capture any polychlorinated biphenyls (PCBs) in the soils. The filter units will be disposed of at the TSCA Incinerator at ETTP with the options for disposal of the soil dependent upon the final sampling data of the containers. The concrete pad was covered with a soil cap in April 1999, and the G Pit removal was completed in January 2000.

ORNL WATERSHED



The Oak Ridge National Laboratory (ORNL) watershed encompasses two distinct geographic regions: Melton Valley and Bethel Valley. Past ORNL operations have resulted in contamination at these sites. Melton Valley occupies about 1,000 acres in the southern portion of ORNL. Bethel Valley occupies about 1,700 acres, including the main area of ORNL. Contaminants of concern include low-level radioactive wastes, transuranics, metals, and polychlorinated biphenyls.

Bethel Valley Remediation Plans Unveiled

The first Department of Energy (DOE) Proposed Plan for cleaning up environmental contamination throughout Bethel Valley, which includes the grounds of Oak Ridge National Laboratory (ORNL), was unveiled this summer.

The purposes of the Proposed Plan for Interim Actions in Bethel Valley are to identify the preferred alternatives for remediation of the watershed, explain why these alternatives are preferred, and describe other options that were considered. DOE solicited public review and comment on all the alternatives, via a 90-day comment period and a public meeting held in late July. At that meeting, DOE officials, along with representatives of the Environmental Protection Agency Region 4 and the Tennessee Department of Environment and Conservation were on hand to discuss the plan and answer questions. Following the informal "poster session" was a brief presentation by project leaders and additional questions and comments from the public.

The term "interim actions" in the document's title refers to the fact that there will be a final Record of Decision (ROD) to address issues not included in this ROD. Those issues include active facilities, a final groundwater decision, and long-term stewardship.

The Proposed Plan was based on the preceding Remedial Investigation/Feasibility Study (RI/FS). For the purposes of the RI/FS, the Valley was divided into four areas: East Bethel Valley, Central Bethel Valley, West Bethel Valley and Raccoon Creek. The area includes the ORNL main plant area, which consists of inactive buildings, former burial grounds, underground liquid low-level (radioactive) waste tanks, underground pipelines, and associated underground and above-ground utilities. The documents evaluate separate sets of remediation alternatives for Central/East Bethel Valley and West Bethel Valley/Raccoon Creek.

The preferred alternatives include:

- removal of contaminated soils and sediments,
- shallow groundwater collection,
- extraction and treatment of groundwater in central Bethel Valley,
- decontamination and decommissioning of some facilities,
- capping or covering of buried waste, and
- stabilization of tanks and pipelines.

A ROD based on the Proposed Plan and the comments received from the public is now being developed.

Work on Core Hole 8 Plume Under Way

DOE is implementing three coordinated actions to stop the release of contaminants from Core Hole 8 to First Creek and to prevent the spread of additional contamination. The Core Hole 8 contaminant plume and its source are located at Oak Ridge National Laboratory (ORNL).

The actions to control the plume and its source during 2000 and 2001 include:

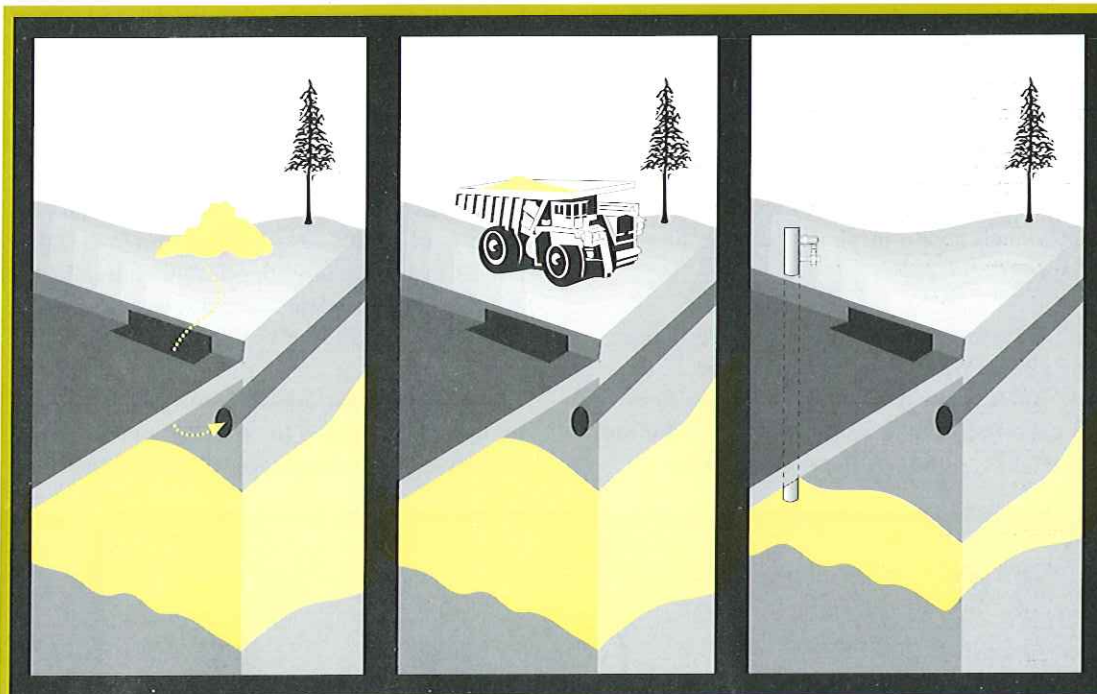
- seepage intercept action,
- contaminant source control action, and
- pumping from wells within the plume to control flow and remove contaminant mass.

Additional sampling and analysis was performed to identify contaminants and concentrations. Because this project is being

performed as a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Removal Action, an Engineering Evaluation/Cost Analysis (EE/CA) was developed. The EE/CA evaluated the technical feasibility, implementability, and effectiveness of three alternatives that include:

- excavating Tank W-1A and surrounding contaminated backfill soil,
- grouting the tank and surrounding soil to create a solidified, impermeable block that would prevent groundwater seepage through the contaminated soil, and
- grouting the tank and in situ chemical treatment of the contaminated soil to combine contaminants in a chemical form that greatly reduces their solubility.

[continued on page 10]



1 The first action is the construction of an additional groundwater seepage interceptor. This is being performed as a maintenance action to immediately stop contaminant discharge to the creek via storm drains. The project consists of adding a groundwater seepage collector near a storm drain manhole and connecting it to the existing Core Hole 8 plume interceptor system.

2 The second action being implemented will remove the contaminant source that has created the Core Hole 8 plume. The plume source, located in the North Tank Farm, consists of contaminated backfilled soil and bedrock at the site of a historic liquid low-level waste leak from a broken pipe at the inlet valve of Tank W-1A.

3 The third action is implementation of hydraulic controls on the plume. A pump test demonstrated that groundwater pumping could effectively control groundwater flow in the plume. The pumping also gradually removes contaminant mass from the bedrock affected by the plume.

[continued from page 9]

Based on the EE/CA, an Action Memorandum was prepared stating that excavation was the selected alternative. A Request for Proposals was issued, and a removal action subcontractor was selected. The removal action activities are under way with completion expected in 2001.

The tanks are located in Bethel Valley. The Proposed Plan for Interim Actions in Bethel Valley, which was issued for public comment in

June, recommends groundwater pumping for control of the plume.

Already operating is Well 4411, located in the southwest corner of the North Tank Farm in the ORNL main plant area. The well is downgradient of the Core Hole 8 plume source and intersects the contaminated plume. In conjunction with other plume collection actions being taken, the well is expected to enhance the containment of the plume.

Radioactive Sludge Removed from Storage Tanks

The Gunite Tanks Remediation Project removed radioactive sludge and liquid from eight underground storage tanks at Oak Ridge National Laboratory (ORNL), following 8 years of planning, preparation, and waste retrieval operations. The project was completed in September 2000, eliminating a potential risk to laboratory employees, the public, and the environment. The Gunite Tanks were built during the World War II Manhattan Project. The name for the tanks was derived from the process used for their construction. Gunite, a mixture of cement, sand, and water, was sprayed over a wire mesh and steel-reinforcing rod frame.

The tanks were removed from service in the early 1970s. Waste removal operations in the early 1980s removed most of the transuranic and mixed waste that had settled at the bottom of the tanks. Although those efforts were

successful, some 87,000 gallons of sludge and 250,000 gallons of liquid containing 78,000 curies of radioactivity remained in six 170,000-gallon and two 42,500-gallon tanks.

The Gunite Tanks Remediation Project was the first of its kind completed in the United States, and project officials say the technologies used for this successful tank remediation project can serve as a model for other DOE sites. According to DOE project manager, Stephanie Short, "This achievement represents a significant milestone in the environmental cleanup of ORNL. The project eliminated the largest inventory of underground contaminants at ORNL's main plant area, and was accomplished without accidents or injuries."

Integrated robotic and remotely operated equipment was used to clean the tanks. Twenty-eight technologies were combined into

Former DOE Secretary Bill Richardson and other dignitaries were in Oak Ridge to recognize the successful completion of the gunite tanks project. Pictured (up front) are State Rep. Gene Caldwell, Gov. Don Sundquist, U.S. Rep. Bob Clement, U.S. Rep. Zach Wamp, Richardson, and ORNL Tanks Project Manager Dirk Van Hoosen.



integrated systems to effectively perform tank and waste characterization, waste removal, waste mixing, and waste transfer activities.

Teamwork, said Short, was one of the big keys to the project's success. "Without the dedicated cooperation between DOE, the state of Tennessee, EPA, stakeholders, and contractors, we would not have been successful."

The DOE Tanks Focus Area and the Robotics Crosscutting Program allocated resources and contributed to the research and development for the technology development and integration. Overall, the teamwork, planning, preparation, and tank remediation process resulted in a cost avoidance of \$120 million and accelerated the cleanup of these tanks by more than 10 years.

Short said the tank project was one of the top priorities for the Oak Ridge Reservation Environmental Management Program because, in the event of a tank leak or collapse, the radioactive wastes posed a significant risk to workers and the environment.

The just-completed project safely removed 99 percent of the waste and 95 percent of the contamination remaining in the tanks. The waste was transferred to the Melton Valley Storage Tanks and will be treated as part of the ORNL TRU Waste Treatment Project, then shipped to the Waste Isolation Pilot Plant in New Mexico for disposal. The empty tanks will be filled with grout in 2001-2002.

Technologies Key to Landmark Cleanup

A total of 28 technologies were integrated into effective systems for the Gunitite Tank Remediation Project, making it possible to complete this project at a fraction of the cost and a decade ahead of original projections. Technologies that were key to the success of the project are briefly described below.

- The Waste Dislodging and Conveyance System consists of a confined sluicing end-effector (CSEE) with rotating water cutting jets to break up the sludge. A jet pump removes the waste from the tank via the transfer hose, which is supported and moved in the tank by the hose management arm (HMA).
- The Modified Light Duty Utility Arm (MLDUA) is a skid-mounted robotic arm capable of positioning tools and end effectors in the tank. It has a 16.6-ft reach and 200-lb payload capacity.
- The Houdini, a remotely operated vehicle, folds up to allow deployment through a 24-inch tank riser. The tracked vehicle is equipped with a manipulator arm, two onboard cameras and a plow blade, which aid on tool deployment, retrieving debris, and plowing sludge.



FFA Tank Remediation Continuing

The Federal Facility Agreement (FFA) Tanks Project currently consists of the sludge removal and stabilization of 26 inactive Low Level Liquid Waste tanks located in Bethel Valley and Melton Valley as a CERCLA Removal Action.

Seven of the tanks were remediated (i.e., waste removed and grouted) during the past year, while an eighth had the sludge removed, and others were sampled in preparation for waste removal. Four additional tanks were remediated in early 2001.

Tank remediation generally includes the following activities:

- Inspecting the tanks internally using video,
- High pressure washing for sludge removal,
- Transferring waste to a high integrity container and transporting it to a preconditioning tank and transferring it into the tank,
- Transferring the waste from the preconditioning tank to the Melton Valley Storage Tanks for final disposition,
- Internal tank inspections to confirm final tank conditions, and
- Grouting tanks in place, following regulatory approval.

ORNL Surface Impoundments Being Remediated

The third of four Main Plant Surface Impoundments at ORNL was remediated during the past year. Sediment from Impoundment A was transferred to Impoundment B. Impoundment A was then backfilled.

The Main Plant Surface Impoundments originally consisted of four surface impoundments located in the south-central portion of the ORNL main plant area. Impoundments C & D were remediated in 1998.

Impoundment A was built in 1943 to serve as an intermediate storage, collection and mixing basin for the process waste treatment system located in Building 3544. Impoundment B was built in 1944 to serve as a settling basin for untreated waste water before discharge into White Oak Creek.

The next steps include removing the combined sediments from Impoundment B, treating and packaging them on site and transporting them to the Nevada Test Site for disposal. Treatment facility equipment installation was also completed in 2000.

Demolition of Metal Recovery Facility at ORNL Begins

DOE has begun demolition of the Metal Recovery Facility (MRF) at ORNL. MRF is a former small-scale nuclear fuel reprocessing plant that operated from 1952 to 1960. The reprocessing that occurred in the building's seven hot cells recovered isotopes of uranium, plutonium, neptunium, and americium and separated out fission product isotopes of strontium, cesium, and technetium.

To date, the project has completed characterization, asbestos abatement,

equipment removal, and partial dismantling. Currently, decontamination using strippable coatings is under way. In 2001 the structure will be demolished, including the highly contaminated hot cells. The remaining foundation will be stabilized, and the demolition waste will be disposed of. Field work on the project is scheduled to be completed by the end of September 2001. With the demolition of this structure, annual surveillance and maintenance costs will be reduced significantly.

Cleanup Plan for Melton Valley Signed

State and federal regulators approved in September a \$165 million DOE plan for cleanup of contaminated sites in the Melton Valley area of the Oak Ridge Reservation.

The Record of Decision (ROD) is a 14-year plan to isolate and prevent future leaching of contaminants into groundwater in Melton Valley. The 1,000-acre area is located between Haw Ridge and Copper Ridge south of the main Oak Ridge National Laboratory (ORNL) complex. Melton Valley is contaminated with radioactive and chemical wastes resulting from more than 50 years of production and research activities at ORNL.

“This decision represents a major step forward in cleanup of the Oak Ridge Reservation,” said Rod Nelson, DOE Assistant Manager for Environmental Management. “This achievement would not have been possible without years of hard work on the part of many individuals and organizations. DOE, the EPA, the Tennessee Department of Environment and Conservation, the Oak Ridge Site Specific Advisory Board, the Local Oversight Committee, and stakeholders have actively

participated in this process to choose the best remediation alternative.”

Melton Valley is the second of two major cleanup RODs completed this year. The Bear Creek Valley ROD was signed earlier. Specific remediation measures in the Melton Valley ROD are based mainly on isolating wastes, with some waste removal. These measures include:

- plugging and capping all wells that have no future use,
- hydraulic isolation for major contaminant source areas,
- in situ vitrification (the melting of contaminated soils into a more stable, glass-like form) of two liquid disposal trenches,
- removal and backfilling of impoundments,
- grouting of the Homogenous Reactor Experiment facility fuel wells,
- excavation of various contaminated soil areas and pipeline leak sites,
- removal of contaminated floodplain sediments, and
- establishment of institutional controls (signs, fences, or other appropriate barriers).

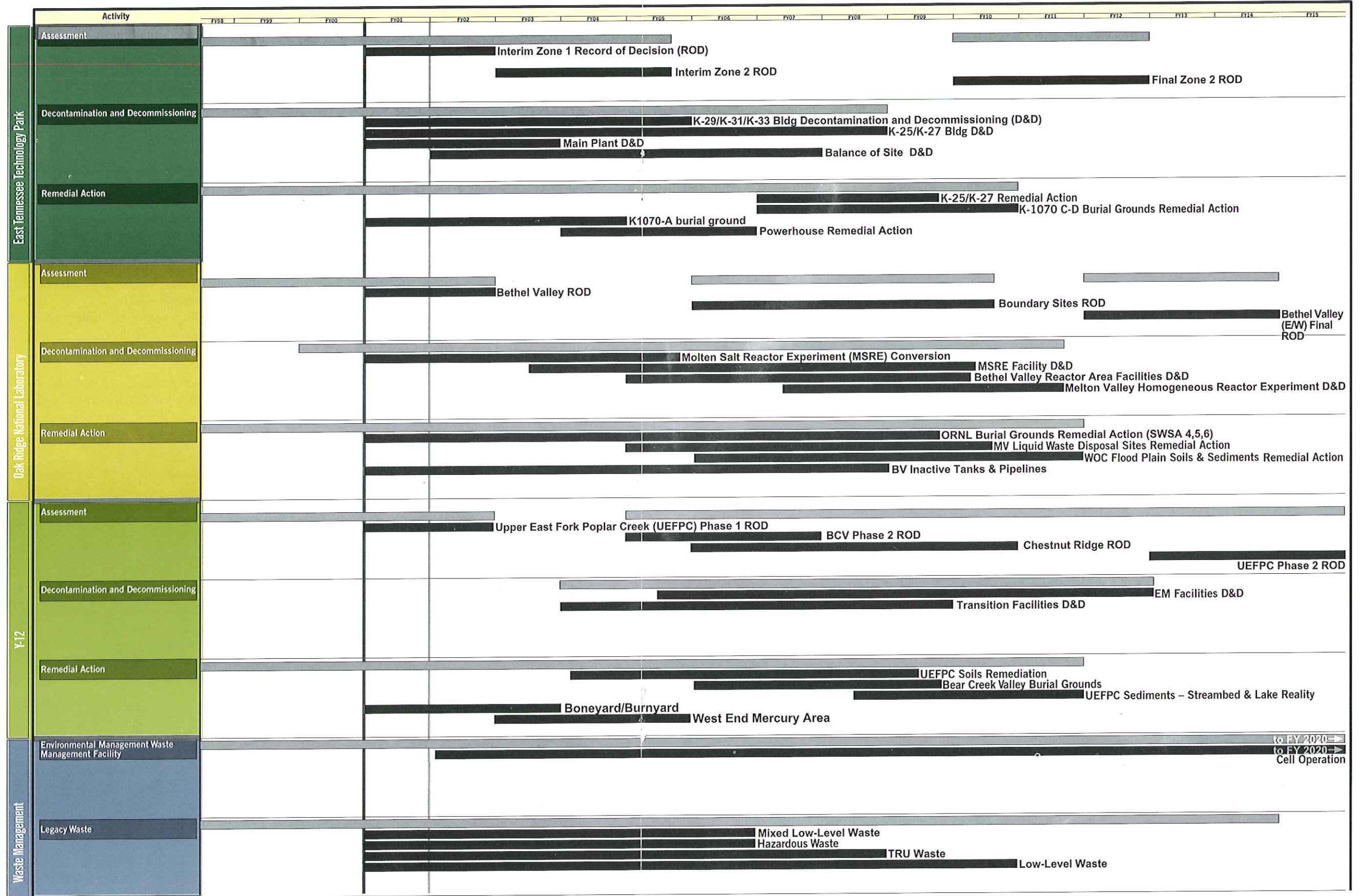
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Signing the Melton Valley ROD were Rod Nelson, DOE Assistant Manager for Environmental Management; Dick Green, Director of the Waste Management Division, EPA, Region 4; and Earl Leming, former director of the DOE Oversight Office, Tennessee Department of Environment and Conservation. Joining the signing ceremony were representatives of area stakeholder groups and DOE and contractor staff.

Critical Projects to Completion

Summary Bar
 Significant Subprojects



[continued from page 13]

“The selected alternative leaves most contaminants in place, but isolates these materials to prevent any additional leaching into groundwater,” said David Adler, DOE Oak Ridge Operations team leader for remediation of ORNL watersheds. “Once completed, the environmental cleanup actions will be evaluated to determine if additional actions are needed.”

Melton Valley is the location of Solid Waste Storage Areas (SWSAs) 4 and 5, which, during the 1950s and 1960s, were used as a regional burial ground for radioactive wastes from more than 50 other facilities, including other national laboratories operated by the Atomic Energy Commission—a DOE predecessor agency. In addition to burial trenches located in SWSAs 4

and 5, the area contains landfills, underground tanks, impoundments, liquid waste seepage pits and trenches, wells, pipelines, and surface structures.

The primary radioactive contaminants in Melton Valley are strontium-90, cesium-137, tritium, and transuranics, which are elements with a higher atomic weight than uranium. Wastes at some locations in this area are leaching into groundwater, which flows toward White Oak Creek, which in turn flows into the Clinch River. Soils and sediments are also contaminated from past leaks and spills.

The next step in the process will be a remedial design work plan, which will describe in detail how the ROD is to be carried out.

Efforts Continue in Remediating MSRE Tanks

Three drain tanks beneath the Molten Salt Reactor Experiment (MSRE) contain solidified salts that in turn contain various radioactive fluorides, including uranium and plutonium. The material in the tanks was drained from the Molten Salt Reactor when it was shut down in 1969. In 1987, elevated radiation levels were detected in off-gas lines connected to the three drain tanks. Then in 1994, samples revealed the presence of fluorine and uranium hexafluoride gases.

The selected remedy for cleaning the tanks includes melting and chemically treating the salt in the drain tank cell, separating the uranium and converting it to a stable oxide, and storing it at ORNL. The selected remedy also calls for packaging the residual salt and storing it at ORNL until arrangements are made for final disposition.

During the past year, over 250 grams of uranium were extracted from one of the drain tanks. Also, contracts were awarded for fabrication of various equipment to be used in the remediation process.

Another activity involving the MSRE is the recovery of uranium 233 from the Auxiliary Charcoal Bed. When it was discovered that the charcoal was not granular and could not be removed by vacuuming, a new removal method was required.

Deposit removal equipment was fabricated, installed, and tested in 2000, with the plan to complete the removal of the uranium deposits during 2001.

*MSRE
remediation*



Work Continues on Remediating OHF Pond and Tanks

The Old Hydrofracture Facility (OHF) is located in the Melton Valley area of Oak Ridge National Laboratory (ORNL) and consists of a pond, five underground steel tanks, and support structures used during injection of liquid low-level radioactive waste (LLW) grout mixture at depths of up to 1,000 feet. The OHF Pond and T-Y Waste Pit were used for emergency storage of LLW for operational failures that occurred during the injection process. The five OHF Tanks were used to store the LLW prior to mixing it with grout for injection.

The Process Waste Sludge Basin (PWSB) is located to the north of Solid Waste Storage Area (SWSA) 5, just one-half mile north of the OHF Pond. The PWSB, which was used as a settling basin, received liquid waste from the ORNL Process Waste Treatment Plant. This lined basin contained radioactively contaminated sludge.

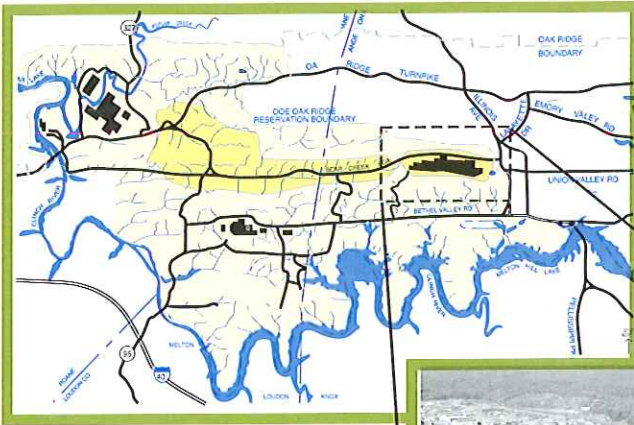
The OHF Tanks were 98 percent emptied in a successful remediation action in the summer of 1999. During the summer of 2000, remediation activities involved stabilization, removal, transport and consolidation of the PWSB sediments into the OHF Pond and homogenizing the OHF Pond sediments with the stabilized PWSB sediments to form a monolith. The OHF Pond monolith was covered with clean soil, and the PWSB was backfilled with clean soil. The OHF Tanks and the T-Y Waste Pit were filled with concrete to stabilize them.

Future work in the OHF area will include the demolition of all the OHF structures to grade level and the plugging and abandonment of 111 OHF associated injection and monitoring wells. The OHF area is scheduled to be covered with a cap extending down from SWSA 5.



*OHF Ponds
and Tanks*

Y-12 WATERSHED



Two main geographic areas comprise the Y-12 Watershed: Bear Creek Valley and Upper East Fork Poplar Creek (UEFPC). The 4,500-acre Bear Creek Valley contains burial grounds, oil landfarms and settling ponds, where waste from the plant was disposed of. UEFPC includes the main Y-12 complex, which is located south of Oak Ridge and covers approximately 800 acres. The complex has played a pivotal role in the enrichment of uranium for nuclear weapons. Its current mission involves the dismantling of nuclear weapons components, providing support for ORNL research programs and serving as a manufacturing technology and demonstration center. Contaminants of concern include mercury, radionuclides and volatile organics in ground water, surface water and sediments.

East End VOC Plume Treatment System Begins

The East End Volatile Organic Compound (VOC) Plume (EEVP) Treatment System began operation on October 1, 2000. The EEVP is a deep plume of contaminated groundwater traveling through fractured and locally karstified (eroded limestone) rock. This plume is currently migrating across the eastern portion of the Y-12 complex as well as off-site into areas to the east of the Y-12 complex and Scarboro Road.

The EEVP Treatment System was installed as a CERCLA non-time-critical removal action with the goal of mitigating additional off-site migration of the plume. Installation of the system was completed in July 2000. System testing was performed during August and September, and the system was transitioned to Y-12 Waste Operations on October 1. The system consists of a duplex air stripping system capable of extracting groundwater at flow rates ranging from 25 to 75 gallons per minute. After

five years of operation, an evaluation will be conducted to determine the effectiveness of the system in containing the plume.

Additionally, bioremediation has been identified as a technologically plausible enhancement to and/or replacement for the current EEVP groundwater pump and treat system. Implementation of bioremediation throughout the source area and contamination plume represents a more proactive shift to remediation and source removal. Oak Ridge has teamed with other company bioremediation programs to pursue deployment of bioremediation at Y-12. Bench-scale tests were successfully performed in 2000, and characterization, modeling, and bioremediation conceptual design activities are currently ongoing to support the next proposed phase, a pilot-scale deployment of bioremediation.

Phase I of Bear Creek Valley Remediation Progressing

Work has progressed steadily on portions of the Bear Creek Valley (BCV) Watershed since the signing of the first of two Records of Decision (ROD) in June 2000. The BCV encompasses an area from the western end of the Oak Ridge Y-12 National Security Complex (S-3 Ponds area) to the point where Bear Creek exits the valley near State Highway 95.

The sites discussed here are part of the BCV Phase I ROD and include waste areas that are the greatest contributors to human-health and ecological risks within the BCV Watershed. These sites include the S-3 Ponds, Boneyard/Burnyard (BY/BY), Oil Land Farm, and other miscellaneous sites.

The Phase II BCV ROD will address the Bear Creek Burial Grounds and finalize groundwater remediation goals.

S-3 Ponds

The S-3 functional area includes areas where contaminants are attributable to operations at the former S-3 Ponds. The S-3 Ponds were closed in 1988 under the Resource Conservation and Recovery Act (RCRA). Primary contaminants are nitrates and uranium with smaller concentrations of heavy metals and organic solvents.

The actions at the S-3 Ponds Site consist of an investigation into the applicability and effectiveness of passive treatment of shallow groundwater plumes. The groundwater in this area is contaminated with cadmium, uranium, and nitrate. Contaminants discharge from the shallow groundwater to upper Bear Creek through three pathways. Pathway 1 flows directly south of the S-3 Ponds Site, Pathway 2 flows southwest of the S-3 Ponds Site, and Pathway 3 flows west of the S-3 Ponds Site.

Barrier systems were installed to intercept and treat contaminated water flowing through Pathways 1 and 2, but testing demonstrated that the operation of the two treatment systems has been inconsistent and less than satisfactory overall. Efforts to evaluate the Pathway 1 and 2 systems to determine the necessary

modifications to fix them are underway. A subcontract was awarded to evaluate, design, and construct these modifications. The systems modifications will be completed in 2001.

A pre-design study has been initiated to determine the most efficient and cost effective means for addressing the Pathway 3 Plume. The study includes the installation of two trench tanks with different treatment media. The installation of the pilot design system was completed in 2000. Collection of data from the system will continue throughout 2001 and will be used to support the design of the remedial action.

Boneyard/Burnyard

At BY/BY, uranium contained in soils and in waste materials leaches into groundwater, which subsequently discharges to surface water in a tributary of Bear Creek. Uranium in groundwater that has leached from buried waste and fill material in BY/BY likely migrates directly to the Maynardville Limestone and to Bear Creek via shallow groundwater flow.

The Remedial Investigation Report estimates that more than half of the human health risk and hazard index for the watershed is because of uranium derived from BY/BY waste. Excavation of contaminated soils and waste materials that are leaching uranium to groundwater and surface water will significantly reduce uranium flux and, therefore, reduce unacceptable health risk.

Results from sampling indicated that approximately 35,000 yd³ of buried waste contributed to off-site migration of uranium. This primary source area material was excavated, and hydraulic controls were constructed to mitigate movement of water into the remaining buried waste.

Oil Land Farm

The Oil Landfarm functional area covers land immediately downgradient of the Oil Landfarm, BY/BY, a sanitary landfill, and the Oil Landfarm itself. The Oil Landfarm was used from 1973 to 1982 for the disposal of

[continued on page 20]

Continued from page 18

waste oils and coolants that contained beryllium compounds, depleted uranium, polychlorinated biphenyls (PCBs), and chlorinated hydrocarbons. Final RCRA closure of the site was accepted by the Tennessee Department of Environment and Conservation (TDEC) in 1990.

The Oil Landfarm Soil Contamination Pad is located just north of the now closed Oil Landfarm. This facility consists of a concrete pad and dike within a fabric-covered, metal-frame building. It was constructed to store soils

excavated during closure of the Oil Landfarm. The pad lies within the footprint of the proposed Environmental Management Waste Management Facility (EMWMF), and efforts are under way to close it in order to accommodate construction of the EMWMF.

Current plans are to dispose of the soils as mixed waste and remove the remaining structures. The soils contain low-level radiological constituents and potentially contain RCRA-listed wastes, and arrangements are being made to dispose of the soils at an off-site disposal facility in 2001.

Proposed Plan for Poplar Creek Released

A Proposed Plan for remediation of areas contributing to contamination in and around Upper East Fork Poplar Creek (UEFPC) has been released.

UEFPC encompasses the developed Y-12 complex industrial area. It is bounded to the north by the base of Pine Ridge, to the south by the base of Chestnut Ridge, and to the west by the Bear Creek Valley Characterization Area. To the east, the UEFPC area extends to the Oak Ridge Reservation boundary along Scarborough Road.

Built in 1943 as part of the Manhattan Project, the Y-12 complex is a manufacturing and developmental engineering facility that produced components for various nuclear weapons systems. Activities at the plant have released contaminants to the environment resulting in contamination of soil, surface water, sediments, and groundwater. Contaminated areas within the UEFPC area pose potential risks to human health and the environment.

Mercury contamination is widespread at the Y-12 complex and has been found in soil, sediment, surface water, groundwater, buildings, drains, and sumps. Mercury continues to be released into UEFPC from several sources within the complex. Mercury enters UEFPC from direct erosion of contaminated soil, migration of dissolved mercury through storm drains and outfalls, and

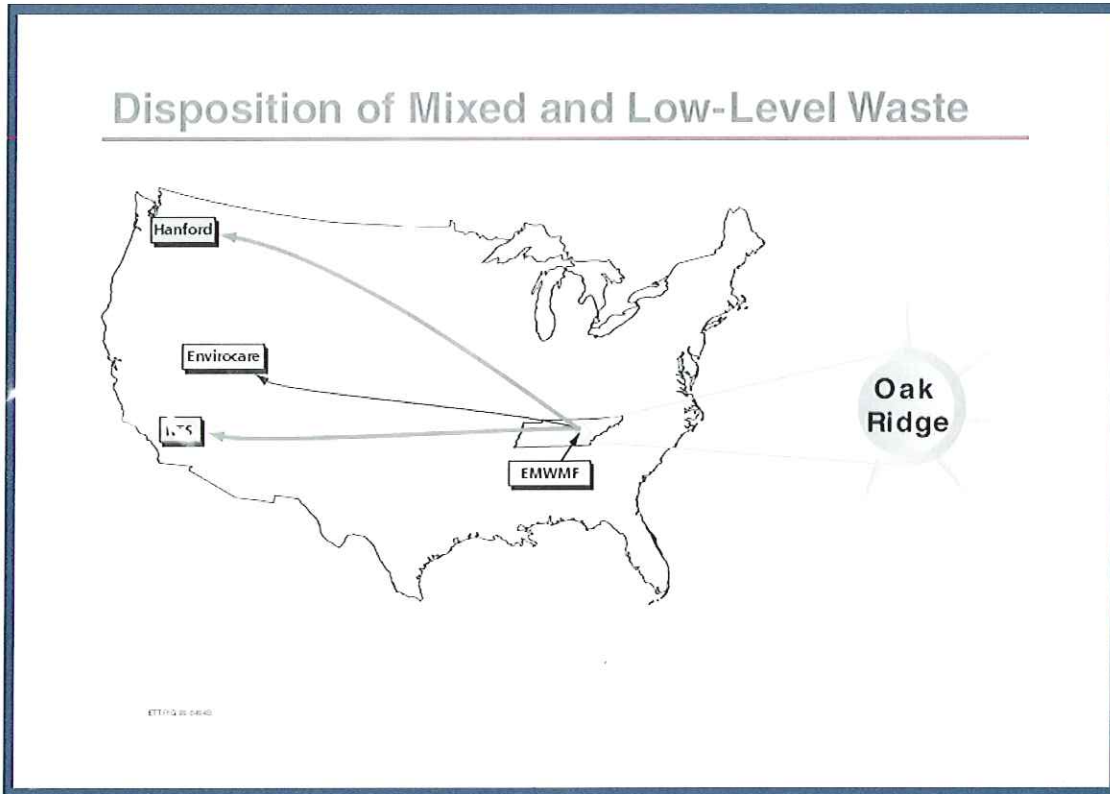
through shallow groundwater. UEFPC surface water exceeds mercury levels for Ambient Water Quality Criteria and acceptable levels for ingestion of fish by recreational users. Surface water is a conduit for off-site releases of mercury. Unacceptable risks to human health are also present in soil, sediment, and groundwater in the UEFPC area.

The remediation of UEFPC will involve actions to limit mercury releases via surface water. A number of alternatives, including source removal and water treatment, were presented in the UEFPC Feasibility Study (FS) and FS Addendum. The preferred alternative would limit releases of mercury to UEFPC at the sources. Principal actions include:

- isolating contaminated soil from groundwater within mercury-contaminated areas of the Y-12 Plant,
- excavating of contaminated sediments in UEFPC and Lake Reality, and
- treating of water discharged from Outfall 51 (a spring that is currently the largest discrete source of mercury to UEFPC).

A public meeting was conducted during the public comment period for the Proposed Plan in February 2001.

WASTE MANAGEMENT



Sites Identified for Mixed and Low-Level Waste Disposal

The Waste Management Programmatic Record of Decision, signed in February 2000, determined that there will be two primary sites [Nevada Test Site (NTS) and Hanford] used for waste disposal from the DOE complex. Most legacy and newly generated low-level waste from the Oak Ridge Reservation (ORR) will be sent to the NTS, Hanford or commercial disposal facilities. Mixed low-level waste is

currently being disposed of at a commercial disposal facility. DOE-ORO is currently working with the NTS to obtain final approvals to begin shipments of low-level waste for disposal. Radioactive waste generated by CERCLA projects are planned for disposal at the Environmental Management Waste Management Facility, currently under construction on the ORR.

TRU Waste Record of Decision Issued

DOE has completed a major step in preparation for the treatment of transuranic waste at Oak Ridge National Laboratory (ORNL) by issuing a Record of Decision (ROD) under the National Environmental Policy Act (NEPA). DOE has decided to proceed with the low-temperature drying technology for waste treatment, with final disposal at the Waste Isolation Pilot Plant in New Mexico.

In August 1998, DOE awarded a contract to Foster Wheeler Environmental Corporation to construct a transuranic waste treatment facility adjacent to the Melton Valley Storage Tanks at ORNL. The selection was contingent on completing the NEPA review and selecting Foster Wheeler's technology and the decisions incorporated in the ROD. Construction of the treatment facility is expected to begin in 2001, with waste processing to start in January 2003.

Changes Take Place at TSCA Incinerator

IT Corporation is Subcontractor

Bechtel Jacobs Company LLC (BJC) awarded a subcontract to Pennsylvania-based IT Corporation to operate the Toxic Substances Control Act (TSCA) Incinerator for three years, beginning in January 2000. An option in the contract allows for two 2-year extensions.

To streamline operations, IT Corporation made some changes to the incinerator's operating schedule. The company plans to burn waste for three months at a time, then minimize burning while workers package waste to prepare for the next burn. That will allow fewer workers to operate the incinerator. The incinerator is currently not in operation but will be restarted in July 2001. The incinerator previously was operated almost continuously for nine months of the year.

The incinerator is scheduled for closure in 2003 based on the assumption that private industry will have developed suitable disposal alternatives by then. If not, DOE officials may have to re-evaluate the incinerator's planned life.

TSCA Incinerator Pre-Trial Burn

A pre-trial burn for the TSCA Incinerator was held in November 2000. The TSCA Incinerator is required to periodically perform a rigorous test to make sure it is meeting its permit requirements, which is a standard part of reapplication. BJC awarded the subcontract to TRC Environmental Corporation, based in Lowell, Mass., to perform the pre-trial and trial burns and issue a final report. The RCRA/PCB Trial Burn is scheduled for April 2001.

TSCA Incinerator Burn Plan

The state has approved the DOE "burn plan" for the TSCA Incinerator, including limited authority to bring toxic wastes to Oak Ridge from DOE sites in Colorado and Idaho. Justin Wilson, the policy deputy to Tennessee Gov. Don Sundquist, informed DOE of the decision in a letter to Leah Dever, DOE Oak Ridge Operations manager.

In approving the burn plan, Wilson said the state will permit DOE to burn "limited amounts" of liquid nuclear waste from the Idaho National Engineering and Environmental Laboratory and the Rocky Flats Plant, a former warhead plant near Denver, Colo.

The plan also allows continuation of waste shipments from DOE sites in Ohio and Kentucky, which were included in the original incinerator agreement because those facilities are managed by DOE's Oak Ridge Operations office.

"This approval is another example of the cooperative working relationship that exists between (DOE's) Oak Ridge Operations and its state regulators," DOE spokesman David Page said. "This approval is not only important to DOE's Oak Ridge facilities but also to other DOE facilities across the complex that will have their wastes treated in a safe and environmentally protective manner."

*TSCA Incinerator
at ETPP*



Waste Management Facility Construction On Course

Following a series of public meetings in 1999, the signing of the Record of Decision, and completion of the planning and design phase, construction has begun on the Environmental Management Waste Management Facility (EMWMF), an above-grade waste disposal facility located in East Bear Creek Valley.

The facility will dispose of waste generated during cleanup of the Oak Ridge Reservation (ORR) and nearby sites in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Cell design includes:

- perimeter dike,
- 10-foot-thick geologic buffer,
- 5-foot multi-layer base liner system consisting of man-made and natural materials,
- double leachate collection and leak detection systems,
- protective soil layer, and
- 13-foot multi-layer cell cover.

In addition to the disposal facility, the EMWMF will contain a leachate collection and transfer facility, support facilities, access roads, storm-water detention basins, and monitoring systems. The facility will occupy 22 to 44 acres and will initially hold up to 400,000 cubic yards of waste. Future expansion and final size will be based on the quantity of waste generated during the cleanup of the ORR.

The EMWMF will be constructed with natural and man-made materials to isolate waste from the environment. Natural materials such as clay, sand, and rock are essential for long-term performance and to keep estimated future risk within acceptable ranges.

The facility will dispose of low-level radioactive waste, Resource Conservation and Recovery Act waste, Toxic Substances Control Act waste, and mixed waste from cleanup of the ORR and certain ORR-related off-site properties. Waste types include soil, sludge, sediments, solidified waste forms, stabilized waste, building debris, personal protection equipment, and scrap equipment.

Criteria are being established to ensure that only those wastes that could be safely managed in the

facility will be accepted for disposal. Wastes determined not to meet the waste acceptance criteria would either require off-site disposal or additional treatment.

“On-site disposal offered the best balance of CERCLA disposal criteria as developed by the U.S. Environmental Protection Agency,” said DOE project manager Bill Cahill. “It offers comparable protection to off-site disposal at a lower cost and with fewer transportation risks.”

On-site disposal was selected as the preferred alternative over two others: (1) no action, which would leave the ORR without a sitewide strategy for the disposal of waste from future CERCLA cleanup, and (2) off-site disposal of waste at commercial and/or DOE facilities in other states. Depending on the nature of the waste actually shipped, more than one off-site facility could be required. Most of the waste would be shipped by rail and some by truck.

A Record of Decision for the EMWMF was signed in November 1999. The subcontractor for the design, construction, operation, and closure of the first 400,000 cubic yards of capacity is Waste Management Federal Services, whose team includes CH2M Hill, Golder & Associates, and ATI.

After the facility is closed, regular inspections will be conducted to verify the condition and performance of the cell. Maintenance will include such activities as clearing plant growth from the cover and side slopes, repairing and clearing surface water drainages, and maintaining fences and signs. Groundwater, surface water, and air would be routinely monitored for the presence of contaminants.



Artist's rendering of Environmental Management Waste Management Facility in Bear Creek Valley

PUBLIC INVOLVEMENT

Stakeholder Voices Heard Throughout 2000

Year 2000 proved to be another busy year for Oak Ridge area stakeholders. Many of you took advantage of a myriad of opportunities to get involved in EM decision making. Those opportunities included seven public meetings, eight public comment periods, 98 Oak Ridge Site Specific Advisory Board (SSAB) meetings (full Board and committees), a dozen Local Oversight Committee (LOC) Citizen Advisory Panel meetings, and countless informal discussions with DOE and Bechtel Jacobs Company managers. (Totals are for Fiscal Year 2000 (Oct. 1999—Sept. 2000.)

Following is a snapshot of the year-that-was in public involvement.

In July, EM conducted a public meeting on the Proposed Plan for Bethel Valley. The meeting was planned with the assistance of stakeholders, whose input was solicited during a special open meeting of the Oak Ridge SSAB's Environmental Restoration Committee. The public meeting began with a one-hour poster session, followed by presentations from DOE's ORNL Watershed manager and Bethel Valley project manager and extensive public question and comment. A public comment period also accompanied the document.

Following a proposed plan public meeting in 1999, the Melton Valley Record of Decision (ROD) was signed by DOE and regulators. Members of the SSAB Stewardship Committee, which also includes representatives from the LOC, Friends of ORNL, and other stakeholder groups contributed significantly to stewardship language included in the ROD.

The Oak Ridge SSAB cosponsored and assisted DOE with the content of a public meeting on the EM budget. The meeting, which focused on the EM budgets for FYs 2000, 2001, and 2002, was held in February 2000 at the Jacobs Technical Center.

EM went the extra mile to involve the public in the recent Notification of Intent to Comply with new National Emissions Standards for Hazardous Air Pollutants standards for the ETPP Toxic Substances Control Act Incinerator. In addition to a public meeting, expanded outreach included a public comment period and extensive public notification,

including a sign posted near the Incinerator on Blair Road, daily announcements on local access cable, and notification via the monthly newsletter *Public Involvement News*.

DOE held a public comment period and public hearing in March on the Transuranic Waste Draft Environmental Impact Statement, which helped determine the most viable alternative for treating TRU waste at the Oak Ridge Reservation. These activities led to a ROD in August.

The DOE-ORO Technology Development organization sponsored a stakeholder Open House with the theme "Wastewater Triad: Deployment of Innovative Modular Waste Reduction Systems at the Oak Ridge National Laboratory." Three technologies recently deployed as part of the ORNL integrated tank waste management strategy were showcased,



followed by a public tour of the Melton Valley Storage Tank facility.

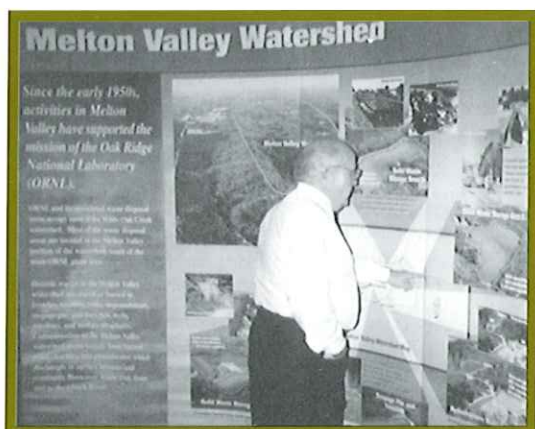
Further public comment opportunities were offered for:

- removal actions at ETPP, including the Group II D&D Engineering Evaluation and Cost Analysis;
- the first annual EM Remediation Effectiveness Report;
- an Environmental Assessment (EA) for Mixed Low-Level Waste transportation and disposal;
- an EA for Low-Level Waste transportation and disposal; and
- several RCRA permit modifications at ETPP.

In addition, DOE-EM public involvement played a supporting role in several additional

meetings, including a preliminary scoping meeting for parcel ED-3 sponsored by the DOE Office of Assets Reutilization, an Environment, Safety and Health (ES&H) meeting with DOE Assistant Secretary David Michaels attended by more than 400 people, and a public meeting to present results of the ETPP ES&H Investigation conducted last year.

In March 2000, EM sponsored the first-ever Environmental Symposium for area 8th graders. Close to 700 students from Morgan and Anderson counties participated in this hands-on learning event. A second Symposium was conducted in October for students from Loudon and Roane counties. The symposia curriculum was designed and implemented by Roane State Community College under subcontract to Bechtel Jacobs Company LLC.



DOE Oak Ridge Operations Policy Statement on Public Involvement

Public involvement in government affairs is one of this Nation's most treasured civic processes. Each Oak Ridge Operations (ORO) program and matrix organization will identify meaningful opportunities to involve the public in Departmental decisions that impact stakeholders and communities at all ORO sites. While many laws are in place that require government agencies to hold public meetings and comment periods, ORO will go beyond the minimum regulatory requirements. We will develop relationships and ongoing dialogue with stakeholders at each of our sites with the objective of enabling more effective public participation in our activities. Public involvement is an integral and effective part

of ORO's activities. Decisions are made with the benefit and consideration of the public, as appropriate. The Public Affairs Office has the lead responsibility for coordinating public involvement activities. Each program and support organization is expected to actively participate as opportunities are identified to present the Department's message and engage in meaningful dialogue. To ensure accountability to the public, activities that involve significant public interaction will be noted in weekly reports to the Manager. Commitment of staff and financial resources necessary to implement this policy is required by all ORO organizations.

DOE-wide Policy Reference: DOE P 1210.1

Oak Ridge SSAB Posts Numerous Accomplishments

The Oak Ridge Site Specific Advisory Board (ORSSAB) made significant progress in 2000 in its mission to provide advice and recommendations to DOE on its Oak Ridge EM Program.



The Board submitted a total of 15 comments and recommendations to DOE in FY 2000 on prominent topics like metals recycling, the TSCA Incinerator, long-term stewardship, transuranic waste treatment at Oak Ridge

National Laboratory, and environmental sampling. Presentations at Board meetings were geared to these topics, providing forums for interested stakeholders to learn more about top EM issues.

The Board expanded its outreach effort this year by holding meetings in new locations, such as Pellissippi State and Roane State community colleges (both Oak Ridge and Harriman campuses). Presentations at these meetings were targeted to local stakeholder interests and concerns, such as the Watts Bar fish consumption advisories.

Stewardship has been an ongoing topic of ORSSAB interest, and in FY 2000 the Board continued its efforts to include area stakeholders by sponsoring the Stewardship Working Group (SWG). This broad-based stakeholder group was set up by ORSSAB to follow up on long-term stewardship initiatives developed by the ORSSAB over the past 3 years.

ORSSAB and SWG achieved two important milestones this year. On October 25 to 27, 1999, the Board hosted the national SSAB

Workshop on Stewardship. More than 100 DOE stakeholders, including 50 members of SSABs from nine DOE sites, met in Oak Ridge to discuss the current state of stewardship and the related actions and activities that are most important for DOE to pursue. In December 1999, ORSSAB published the *Oak Ridge Reservation Stakeholder Report on Stewardship, Vol. 2*, which spells out the concerns, expectations, and recommendations of local stakeholders regarding long-term stewardship of the reservation.

In other major actions and accomplishments, the Board

- expanded its commitment to including the younger generation in its activities by seating two student representatives on the Board;
- cosponsored and assisted DOE with the content of a public meeting on the EM budget; and
- made numerous presentations to local civic, governmental, and educational organizations to inform the public about the EM Program and encourage involvement in ORSSAB activities.

ORSSAB is composed of 20 members, chosen to reflect the diversity of gender, race, occupation, views, and interests of persons living near the ORR. Members are appointed by DOE and serve on a voluntary basis, without compensation. The group was formed in 1995 and is chartered under the Federal Advisory Committee Act.

For More Information

All Board and committee meetings are open to the public and are announced in newspaper advertisements and in the *Federal Register*, at the Information Resource Center in Oak Ridge, and through the Board's 24-hour information line: (865) 576-4750. The Board maintains a Web site at <http://www.oakridge.doe.gov/em/ssab/>, where other information can be found. Information is also available by calling the ORSSAB support office at (865) 241-3665 or 1-800-382-6938.

INFORMATION RESOURCES

Locations

DOE Information Resource Center (IRC)
105 Broadway Avenue
Oak Ridge, Tennessee 37830
Phone: (865) 241-4582 Fax: (865) 574-1405
Open 8 a.m. to 5 p.m., Monday through Friday

DOE Public Reading Room
230 Warehouse Road
Building 1916-T-2, Suite 300
Oak Ridge, Tennessee 37830
Phone: (865) 241-4780 Fax: (865) 574-3521
Open 9 a.m. to noon, 1 to 4 p.m., Monday through Friday

Telephone Numbers

DOE Public Affairs Office	(865) 576-0885
DOE-ORO Public Info Line	1-800-382-6938
Oak Ridge Site Specific Advisory Board	(865) 241-3665
Local Oversight Committee	(865) 483-1333
Tennessee Department of Environment and Conservation	(865) 481-0995
Environmental Protection Agency, Region 4	1-800-241-1754
Agency for Toxic Substances & Disease Registry (Oak Ridge Office)	1-888-422-8737 (865) 220-0295

Internet Sites

DOE Main Web Site
www.energy.gov

DOE-ORO Home Page
www.oakridge.doe.gov

DOE-ORO Environmental Management Program
www.oakridge.doe.gov/em

Oak Ridge Site Specific Advisory Board
www.oakridge.doe.gov/em/ssab

Accelerating Cleanup: Paths to Closure
www.em.doe.gov/closure/

Agency for Toxic Substances and Disease Registry
www.atsdr.cdc.gov

Environmental Protection Agency
www.epa.gov/region4/

Tennessee Department of Environment and Conservation
www.state.tn.us/environment/doeo

DOE Public Reading Room
http://www.oakridge.doe.gov/foia/DOE_Public_Reading_Room.htm

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c/o Bechtel Jacobs Company, LLC
P.O. Box 4699, MS-7298
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