Newsletter

Decontamination, Decommisssioning, and Reutilization Divisio
May 2002

NEWSLETTER CONTENTS

CHAIRMAN'S MESSAGE

My year as chair of the DD&R Division is coming to an end and, like all of my predecessors, I am amazed at how fast time has flown and how much of my plans for the year remain undone. We actually did achieve quite a bit, but our goals for the year were so ambitious that it was not reasonable for a volunteer group to expect to achieve all that we had planned to do. In any case, we do need to leave challenges for Lynne Goodman and her group of Officers and Executive Committee to tackle during 2002-03.

First, I want to congratulate the winners of the 2002 elections: Jim Byrne, VP/President elect; Gerry Motl, Treasurer, and Paul Ziemer, Secretary. Congratulations also to the four winners of the Executive Committee race; Larry Boing (ANL), Steve Bossart (DOE), Tracy Goble (Consumers Energy), and Kelly Trice (Kaiser-Hill). On behalf of the Division, I would like to thank the outgoing members of the Executive Committee for their service to the Division and hope they will stay involved. I am also pleased to note that the changes in the DD&R Divisions Bylaws, proposed by the Officers and Executive Committee, were accepted by the members.

Chairman's Message (Continued)

Let me recount the successes we have had this past year:

- One of our most important goals is to stimulate student interest in the Division. We have devoted a significant amount of our resources to student matters. Thanks to the income generated from the 2001 Foxwoods Executive Conference, we were able to fully fund the student support endowment fund for the Division. We will now be able to support a student every year in perpetuity. We have been fortunate to have a large number of very qualified student applicants for the DD&R scholarship and have had to make difficult choices to select the scholarship recipients. We have also had a policy of supporting student participation at the ANS meetings and student conferences. Our contributions to the students and conferences have been gratefully acknowledged by the students and conference organizers.

- We have had a goal of sponsoring joint conferences with other Divisions in order to improve attendance and create better economics. We have had a number of discussions with the Fuel Cycle and Waste Management Division and have worked closely with them on the organization of the SPECTRUM 02 Conference, scheduled for August 4-8, 2002. The technical program for the conference looks really good. We expect to run joint Topical and possibly Executive Conferences with them in the future. Incidentally, our Program Committee has assembled excellent sessions for the 2002 ANS Conferences (June and October) as well as for the Embedded Topical at the June 2003 ANS Conference.

- We have made some progress on another major goal that I had outlined earlier, that of integrating closer with the development of the next generation reactors. We had a very interesting technical session at the Reno ANS Conference (November 2001) in which several key people from ongoing and recently completed D&D projects presented their lessons learned. It is my aim to compile their experiences and others into a paper for use by designers of future nuclear power plants.

- We have made procedural changes to improve the operations of the Division. In the past, the practice was to hold Executive Committee meetings during the ANS meetings (i.e. twice a year). It became clear that the two meetings were insufficient to cover all the business of the Division adequately. We initiated a set of teleconferences for the Executive Committee on roughly a bimonthly schedule. This helped make conducting our business more efficient; however, getting a majority of the Executive Committee members to participate regularly proved to be a problem because of busy schedules. I expect this practice of periodic teleconferences to be continued in the future and Executive Committee member participation to increase.

In a number of significant areas, we have made limited, if any progress this year. These areas include the completion of the long pending D&D standards, completion of a strategic plan, which includes identification of major focus areas for our concentration in the near future. Finally, strategies for our declining financial position (caused by the cancellation of one Topical Meeting and generally unfavorable prospects for future such meetings) need to be evaluated.

Overall, we have come a long way as a Division from its relatively recent start in 1995. As one example, our newsletter published in brief in print and in full on our website, has expanded from the small first issue to include many topics of member interest. I have had requests for copies from the IAEA, Japan and Russia. My message in the October 2001 newsletter was published in ANS News to reach the entire ANS Community. Our website has received many compliments and appears to have been receiving numerous hits. Our membership stood at 1304 in the fall of 2001, having increased steadily from the ~700 number in 1995. The membership has started to decline for the reasons I discuss in my October Newsletter, and we need to find ways to reverse this trend. I will be presenting a report on the Status of the Division to the ANS Board of Directors at the June ANS meeting. I will post the viewgraphs used for the presentation on the DD&R website (http://ddrd.ans.org) when they are ready.

In closing, I want to express my personal appreciation for having been awarded the opportunity to serve as your Division Chair. We have done well, but much more needs to be done. We need everyone's help – with ideas, energy and action. Please help us by first helping expand the Division by encouraging colleagues to join; next by participating in the technical sessions at ANS Conferences and finally by volunteering to serve on the Division's Committees. Together we can continue to be a vital part of the American Nuclear Society and of the renaissance of Nuclear Energy in the United States.

Sam Bhattacharyya

DD&R Officers and Committee Members Present at theReno Meeting, November, 2001

Lynne Goodman, Sam Bhattacharyya, Russ Mellor (Seated)

Don Eggett, Joe Carignan, Patty Augustyn, Gerry Motl, Vince Likar, Carl Mazzola, Jim Fiore, Jim Rang, Paul Ziemer (Standing)

NOTE: Contact information for all of the Officers and Committee Chairs are available elsewhere on this web site

UPCOMING CONFERENCES

2002 Annual Meeting in Hollywood, Florida - June 9-13 at the Diplomat Hotel.

Your Program Committee has planned five panel sessions in **Track 5: Life Extension and Decommissioning** at this years Annual Meeting. The sessions include:

Monday, June 10, 1:00 - 4:00 PM **"Issues in Site Clean-up and Release of Solid Materials",** Chair **Dr Jas Devgun**

Tuesday, June 11, 10:00 – 11:30 AM **"Decommissioning Successes",** Chair **Jim Byrne**, Co-Chairs **Tim Polich** and **Will Phythian**

Tuesday, June 11, 1:00 – 4:00 PM **"Dry Cask Storage Update",** Chair **Mike Floyd**

Wednesday, June 12, 8:30 – 11:30 AM **"Hot Topics and Emerging Issues",** Chair **Tom LaGuardia,** Co-Chair **Patty Augustyn** (See "Hot Topics" item below for more detailed information)

Thursday, June 13, 8:30 – 11:30 AM **"Comparison of Decommissioning Expenditures Vs. Cost Estimates",** Chair **Lynne Goodman**

For specifics and additional information on the meeting, check out the Preliminary Program and registration materials on the ANS web site at www.ans.org.

Program Committee Report (Continued)

Spectrum 2002 9th Biennial Meeting in Reno Nevada, - August 4-8, 2002 at the Reno Hilton.

Spectrum 2002 is an international conference with a primary focus on resolving technical issues, deploying improved technologies and strengthening the science-based decisions for nuclear and hazardous waste management applications. DD&R is Co-Sponsoring this Meeting and assisted FCWM in attracting over 300 papers for the conference. DD&R is also sponsoring an Executive Session that is embedded into the conference. Please see a more detailed write-up included below in the Program Committee Report.

2002 Winter Meeting in Washington DC, - November 17-21, 2002 at the Omni Shoreham Hotel.

DD&R supports the Winter Meeting theme of "**Building the World Nuclear Community – Strategies for the Deployment of New Nuclear Technologies"** with 5 panel sessions and 4 paper Sessions in **Track 5: Life Extension and Decommissioning.**

2003 Annual Meeting in San Diego California, - June 1-5, 2003 at the Town and Country Resort and Convention Center.

DD&R has received ANS approval to sponsor an embedded topical at the 2003 Annual meeting. Five one half-day sessions are planned over 2 _ days (Monday afternoon through Wednesday afternoon) with 60 papers being solicited. **Rich St Onge is the TPC** with **Steve Bossart** and a **representative from FCWM** assisting. Organizational meetings are being held on a monthly basis.

Spectrum 2002 (with embedded Executive Session)

The 9th Biennial Conference will be held in Reno Nevada August 4-8, 2002 at the Reno Hilton. The technical program will focus on opportunities for deployment and evaluation of new technologies; science and technology application to environmental decisions; and accelerating the deployment of advanced technology to emerging environmental problems. The objective is to provide new opportunities for commercialization of products and services for nuclear waste management including decommissioning and decontamination, and environmental restoration.

The meeting will include an embedded Executive Session sponsored by DD&R with Executive Sessions on **Waste Management** on Monday Afternoon August 5th, and on **Decommissioning** on Tuesday Morning, August 6th. Each two and one half-hour panel session will address emerging technical and financial issues as they affect both commercial and government decommissioning projects.

To promote discussion among attendees, panel participants and senior industry and government representatives, DD&R is planning a sponsored **"Champagne and Dessert Reception"** activity for the **Executive Session Attendees** on Monday evening following the Exhibitor's Reception. The embedded Executive Session seeks to build on the successful conferences held at Trojan, Big Rock Point and Connecticut Yankee over the past several years. We expect to have an excellent turnout of senior commercial and government leaders.

GENERAL DD&R INFORMATION

Hot Topics

The HOT TOPICS AND EMERGING ISSUES panel session has been scheduled at this year's ANS Annual Meeting in Hollywood FL for Wednesday, 6/12/02 @ 8:30 am. We've lined up a strong program of speakers on issues that affect many of us in DD&R. They include:

1. The Status of Yucca Mountain and its Impact on Decommissioning,
   Speaker - Ron Milner, USDOE

2. Financial Accounting Standards Board (FASB) 143 – "Accounting for Asset Retirement Obligations"
   Speaker, Ray Faloona of Deloitte & Touche

Hot Topics (Continued)

3. NRC's Recent Draft NUREG on Cost Estimating Guidelines, and Corresponding Standard Review Plan, Speaker, Mike Ripley, Project Manager, Division of Regulatory Improvement Programs, Office of Nuclear Reactor Regulation,

4. GAO Report to the Honorable Edward J. Markey, House of Representatives, "NRC's Assurances of Decommissioning Funding During Utility Restructuring Could be Improved," GAO-02-48, December 2001, Invited Speaker, Ms. Gary L Jones Director of Natural Resource and Environment, General Accounting Office

5. "Use of Explosives in Turbine Building Demolition at Maine Yankee," Speaker, Terry Peacock, Manager of Projects for Site Restoration, Maine Yankee Atomic Power Station

6. "Disposal of Clean Material at a Controlled Burial Site (Non-radioactive)," Speaker, Terry Peacock, Manager of Projects for Site Restoration, Maine Yankee Atomic Power Station

MEETING CONSOLIDATION

The committee responsible for attempts to consolidate DD&R related meetings have taken its first stab at actualizing the concept. We decided that a successful consolidation within ANS was a necessary step prior to reaching out to other organizations. Over the past several months we have worked closely with the Technical Planning Committee of Spectrum '02 to incorporate a special DD&R Executive Session into the body of Spectrum. This DD&R Executive Session is earmarked to replace an annual stand alone meeting organized by the DD&R Division and most recently sponsored by Connecticut Yankee ('01) and Big Rock Point ('00).

Two half-day sessions will be held on Monday afternoon and Tuesday morning during the Spectrum Conference held in Reno, NV August 4-8, 2002. The session tracks have been organized as follows:
TRACK 1 - Decommissioning Progress, Lessons Learned, and Industry Initiatives.
Speakers – Jim Fiore, Kurt Haas, Ken Pallaghi, Wayne Norton, Paul Genoa, John Greives and Dennis Carr.
TRACK 2 - Spent Fuel and Waste Disposal Forum
Speakers – Russ Mellor, Art Derosiers, Tom LaGuardia, Mike Lackey, Jon Stouky, Rich St. Onge, and Lynne Goodman.

Strong attendance by DD&R members who would normally participate in the stand-alone conference is essential! In order to take our idea of consolidation to other organizations, we need to be able to show its' benefits with real numbers. Plan on attending to support our endeavors.

DD&R DIVISION SCHOLARSHIP

The Scholarship Committee has Selected Erica Marie Ludlum, a University of Illinois Student, for the DD & R Scholarship Award

The DD & R Scholarship Committee, consisting of Paul Ziemer (Chair), Jim Fiore, and Gerry Motl, received 13 applications for this year's DD &R Scholarship. The applicants represented eight different universities including U. of Illinois, U of Maryland, U. of Missouri, Oregon State U., Pennsylvania State U., Purdue U., Wentworth Tech, and the U. of Wisconsin. Nine of the applicants were women, and four were men. The grade mix (for Fall, 2002) included 6 seniors, 4 juniors, 2 sophomores, and 1 freshman.

The judging was based on educational performance (grade averages and academic preparation), academic honors and awards, outside references, and career goals and objectives. All of the applicants had outstanding credentials, and the selection process was not an easy one. After individually rating each candidate and then discussing the merits of the most highly rated individuals, the Committee was unanimous in its selection of Erica Marie Ludlum of the University of Illinois.

In addition to an outstanding academic record in the Nuclear Engineering program at the U of Illinois, Ms. Ludlum has served as Secretary and as Vice President of the ANS Student Branch. She is also a member of Tau Beta Pi Engineering Honor Society and the National Society of Collegiate Scholars. She has received the Undergraduate Service Award and has been on the College of Engineering Dean's List. In addition, she serves as an undergraduate Research Assistant and as an Engineering Learning Assistant (ELA). In the latter position she was responsible for teaching a class of engineering freshmen in the Fall of 2001 and for working with other ELA's this Spring on developing teaching techniques. Erica hopes to go on to graduate school after she completes her Nuclear Engineering degree in May 2003. Congratulations to Erica Ludlum for her many achievements and for being our next DD & R Scholarship winner!

GOALS AND PLANNING

The long range Operations Plan for the DD&R Division is being updated. A draft will be available for Executive Committee members to review at the June ANS meeting. If anyone has specific input, as to an activity they would like to see the division pursue, please provide input to Lynne Goodman at goodmanl@dteenergy.com.

MEMBERSHIP

The DD&R Division is in about the same shape as we were last year. Since the fall of 1997, we have increased our membership by 29% from 1009 in 1997 to 1304 in the fall of 2001. We are down around 10% at this point this year but it is still early and many of the ANS members have not yet renewed.

DECOMMISSIONING STANDARDS COMMITTEE

The American Nuclear Society Nuclear Facilities Standards Committee (NFSC) and ANS-23 Decommissioning and Site Remediation Subcommittee are presently working on three active DD&R standards. They are:

1. Decommissioning of Nuclear Production and Utilization Facilities: Defueled Safety Analysis and Emergency Plan
2. Decommissioning of Nuclear Production and Utilization Facilities: Operator Training
3. Validation of Data from Radiological Analyses for Use in Environmental Remediation

One DD& R Standard entitled, "Criteria for Remote Sensing Techniques for Site Characterization in Environmental Remediation" remains in an inactive status. We are presently making efforts to re-activate this standard.

Completion and approval of active standards 1) and 2) above is projected for the end of 2002. A first draft of the third listed standard above is anticipated by mid-summer 2002. In addition, the ANS NFSC is taking the initiative to expand the development of ANS standards that could be converted or developed as joint US/International standards in the form of ANS/ISO standards. Your involvement is extremely important to develop such joint standards. You are asked to consider participation is such endeavors.

Finally, a meeting is scheduled on Tuesday, June 11, 2002 at the ANS Annual Meeting in Hollywood, FL from 7-8:30 am to discuss new D&D Standards. Please give attending this meeting some strong consideration. Your input is most valuable in generation new quality standards!

The Chairman of the DD&R Standards Committee is Don Eggett and he can be reached at dreggett@aesengineering.com

DOE DECOMMISSIONING HANDBOOK

The DOE Decommissioning Handbook to be published by ASME is in draft editing. All chapters have been submitted, and Alan Moghissi of the Institute for Regulatory Research is providing the first comprehensive review/edit.

CLEARANCE OF MATERIALS

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Life After the NAS Report- Will Anything Change?

By Dr. Jas Devgun, Chair, ANS Special Committee on Site Cleanup and Restoration Standards

Nothing much will change in the short-term as a result of the recently issued report (March 21, 2002) from the National Academy of Sciences. As you may recall, NRC initiated a rulemaking effort on this subject with the publication of an Issues Paper in 1999 (Federal Register 64:35090-35100, June 30, 1999). In stakeholder meetings conducted as a part of the enhanced rulemaking process, NRC experienced strong opposition to this rulemaking from several environmental groups, some of whom labeled it as a " son of BRC", as well as the metal and concrete industries, who are adamantly opposed to recycling. On the other hand, nuclear industry and the professional societies see a need for rulemaking because the regulatory void (no clear mechanism for releasing solid materials, which may have slight residual radioactivity) creates economic burdens on the nuclear sites, especially the decommissioning projects, where large quantities of such materials are generated. The cost of treating them as LLW is prohibitive. The regulatory framework of using 20.2002 submissions or Technical Specification changes have limitations. So does the application of RG 1.86, a 1974 document, which has limitations because it provides only surficial criteria, (no volumetric criteria), and because the criteria are measurement based rather than risk or dose based.

Clearance of Materials (Continued)

With the issue unresolved, NRC turned to NAS/National Research Council for advice in August 2000, which formed the Committee on the Alternatives for Controlling the Release of Solid Materials from Nuclear Regulatory Commission-Licensed Facilities. The Committee studied this issue for the past year and a half, solicited input from nearly forty groups and individuals. I presented the ANS viewpoint before the committee.

The bottom line from the Committee is summarized in their words "since the current case-by-case approach seems to be working, there is not a strong, unified impetus for change" (the Committee also lists seven recommendations in the report). This is a disappointing outcome because it does not move the process in either direction. There is no specific recommendation to terminate the rulemaking or proceed with it. Basically the status quo will continue, probably for several years. This presents a disconnect with the international developments in this area at the IAEA and EC, as well as with the professional society developed standards such as the ANSI/HPS N13.12.

Decommissioning is the main driver for such a rulemaking and with most of the reactor owners opting for license extensions, the impetus has certainly diminished. However, the cost of inaction to projects (and society) is unjustified. To dispose of metal and concrete from all reactors in the U.S. as LLW will cost between approximately $5 billion and $12 billion. If regulatory mechanisms for local disposal were available, the cost is estimated between $300 million to $1 billion. The economics are quite clear as to what needs to be done. It is also necessary to de-link recycling from disposal because they are inherently different in terms of public risk and public acceptance.

It must be remembered that most clearance standards at the national (such as ANSI) and international level are based on the individual risk (dose) level of 1 mrem/y, which is approximately 0.3% of the average background exposure to an individual in the U.S. This is considered to be a "trivial dose" by the IAEA and EC. The NRC is currently studying the recommendations of the NAS Committee and it is anybody's guess what actions may come out of it in the short-term and the long-term. One thing is certain, this is not the last word on it.

DECOMMISSIONING PROJECTS

RANCHO SECO DECOMMISSIONING

Fuel Transfer - The 13th dry-fuel storage canister came out of the Spent Fuel Pool in the transfer cask and was placed in the ISFSI on April 3. Eight more canisters remain to be loaded to finish emptying the Spent Fuel Pool. When this process is complete it will allow the Sacramento Municipal Utility District (SMUD) to cut annual decommissioning costs significantly. The fuel should be transferred to the ISFSI by the end August. Once the transfer is complete the water will be drained and released and the pool removal will begin.

System Dismantlement - System dismantlement continues in the Auxiliary and Reactor Buildings, with greater than 60% completed in the Auxiliary Building. The major remaining Auxiliary Building systems include underground liquid waste tanks and the ventilation system, which are currently working. Ventilation and small piping systems are being removed in the Reactor Building. Removal of the four reactor coolant pump motors was completed in November of 2001 with the motors being dismantled to achieve a significant waste disposal cost savings. The two large concrete missile shields were removed from the Reactor Building in February. The first of four Reactor Coolant Pumps was removed in March as the main reactor coolant piping is being removed using machine cuts.

Large Components - An insufficient decommissioning fund requires that high dollar activities, such as large component removal, wait for later in the schedule, once funds accumulate from ongoing additions. However, serious planning has begun. A transportation study evaluated rail and water routes for the vessel and the steam generators. The study showed that the vessel might go to Barnwell by water if work began soon on making this happen. The steam generators could go to Envirocare by rail but might require cutting in half. Other options being considered include vessel cutup and possibly Entombment (or long term Safstor). Further characterization and planning is beginning.

Planning Items – Future items include Control Room closure, re-powering of the site to remove the Main and Start-up Transformers, embedded pipe cleaning, and removal of remaining outside tanks and underground piping.

Rancho Seco Decommissioning (Continued)

Site Re-Powering – Planning is underway for a 500 MW natural gas fired plant on utility property south of the current security fence. The plant will make use of the switchyard, water supply and discharge structures. An additional 500 MW plant may be added later.

The current schedule calls for site Part 50 license release by the end of 2008.

Cutting Up a Reactor Coolant Pump Motor

[Rancho Seco Decommissioning (Continued)]

Removing the First Section of Reactor Coolant Piping

Removing the First Reactor Coolant Pump

CONNECTICUT YANKEE DECOMMISSIONING

Decommissioning Progress:

The decommissioning of Connecticut Yankee is approximately 60% complete. The major work activity in Containment is the continued clean up of the reactor cavity following the segmentation of the reactor internals. Planning for reactor cavity and transfer canal decontamination and draining of the cavity, canal, and reactor vessel is underway. The design of a cavity filtration system, to be used during this next stage of cavity decontamination, is being finalized. Removal of the Reactor Pressure Vessel is scheduled to occur next year. The internal demolition (removal of major components, heat exchangers, piping and cables) of the Turbine Building is complete. Various storage tanks are currently being prepared for demolition.

Dry Fuel Storage

Connecticut Yankee and the Town of Haddam, where the plant is located, signed a settlement agreement in January 2002 allowing the construction of a dry fuel cask storage facility in the location chosen by CY with negotiated conditions regarding safety and environmental monitoring. The settlement also includes deed restrictions that protect the town from any nuclear waste, other than that generated at CY, from being stored at the dry fuel storage facility. On March 15, 2002, a Federal District Court judge issued a permanent injunction preventing any further challenge to the Court's Consent Order resolving the fuel storage litigation between the Town of Haddam and CY, except by appeal of the Federal Court's decisions. The injunction was granted after a small number of local residents challenged the Court's January 2002 Order. A group of local residents are continuing efforts to invalidate the settlement agreement and block construction.

CY has initiated dry fuel storage construction activities. Tree removal and site preparations commenced on March 21, 2002. The fuel storage pad site has been cleared and work continues along the haul road access. The CY parking lot has been reconfigured to accommodate the construction of the pad where the Vertical Concrete Containers will be fabricated. Final Status Survey work is being conducted in that area and the pad construction is expected to commence soon. The transportable storage canisters and associated hardware have started to arrive onsite. The yard crane has been modified and upgraded to accommodate fuel transfer operations.

Connecticut Yankee Decommissioning (Continued)

Large Component Removal

On November 1, 2001, the Reactor Pressure Vessel Head left the plant via a 19-axle tractor/trailer rig for the Envirocare Disposal Facility in Clive, Utah.

During January 2002, the Main Station Transformer was dismantled and on February 2, 2002, it was transported off site via barge to Texas.

All components have been removed from the Primary Auxiliary and Waste Disposal Buildings. Decontamination/cleanup of these building is in progress.

License Termination Plan

Responses to the first and second Requests for Additional Information have been discussed with the NRC review team. Over 98% of the issues have been resolved. Revised LTP pages are being submitted to the NRC and revised RESRAD dose calculations are scheduled for submittal by May 10, 2002. An updated LTP is scheduled for submittal by May 17, 2002. The draft SER is expected to be issued in July of 2002.

The ASLB has accepted various contentions for a hearing. The ASLB assigned a mediator to the case to facilitate settlement of the remaining CAN contentions. Mediation meetings with CAN were held on January 29 and 30, 2002. Additional conference calls have been held and progress has been made towards resolving several of their contentions. The hearing will start after the NRC SER is published in 2002.

Land Donation

CY has enlisted the services of the Conservation Law Foundation (CLF) to develop a process for potentially donating a major portion of the CY site for open space conservation. The steps towards selecting potential donation parties/organizations include an interactive process for public input and the creation of an advisory committee. Through a collaborative process, the multi-stakeholder membership of the advisory committee will review the data gathered and assess the list of potential land donation parties/organizations and land use options. The advisory committee will issue proposal requests and review the proposals, making its recommendation to CY. CLF will complete the outreach phase of the process in April.

Reactor Head Transporter Departing

Transformer Barge Shipment

Connecticut Yankee Decommissioning (Continued)

Waste Evaporator Removal

MAINE YANKEE DECOMMISSIONING

General - Decommissioning began in August 1997 and is scheduled to be finished in 2005. The project is about 60 percent complete. Decommissioning involves the removal of buildings and other structures and the restoration of the site to meet state and federal requirements for the cleanup of radiological and non-radiological materials. With the possible exception of some buildings or structures that could remain for reuse, the one facility left at the site in 2005 will be the Independent Spent Fuel Storage Installation (ISFSI) where Maine Yankee's spent nuclear fuel will be stored until the U.S. Department of Energy removes it from the site or another responsible, viable removal option presents itself.

Safety - With a workforce of about 420 and more than 3.2 million hours worked on the project there have been just 6 lost time injuries. Also, workers' radiological dose exposure has consistently under run projections.

Site Restoration - Most of the 800 acre site is free of contamination. The focus of cleanup for radiological and non-radiological contaminants is the foot print of the power plant and adjacent areas. We are cleaning the site to rigorous state and federal standards and there is general agreement among our stakeholders about the process and end state.

Building and Other Infrastructure Demolition - All buildings and other structures are slated for demolition unless a reuse is identified and agreed upon. Buildings demolished in 2001 included the turbine building and bay pump house. Among structures slated for demolition this year: the former information center, fire pond, service and spray buildings.

Reactor Pressure Vessel - The RPV is the remaining large component. It is being prepared for removal from the containment building this summer. It will be shipped by barge to the low level radioactive waste disposal facility in Barnwell, South Carolina. In preparation for RPV removal we are currently draining the 375,000 gallon reactor cavity and discharging the filtered water to the river under the plant's NRC discharge license. The cavity drain down plan has been reviewed by state and federal regulators.

Maine Yankee Decommissioning (Continued)

Greater than Class C Waste

GTCC waste is irradiated stainless steel that was removed from the reactor vessel. For disposal purposes, GTCC waste is treated like spent nuclear fuel and will be stored at the Independent Spent Fuel Storage Installation in four casks. The last of the GTCC casks was recently transferred to the ISFSI.

Waste Disposal

About 75 million pounds of waste has been shipped from the site by road, rail, and barge. This is about 30 percent of the waste we expect to ship. The majority of the waste is concrete which is being shipped by rail.

Site Reuse

As part of the 1999 Federal Energy Regulatory Commission settlement agreement, Maine Yankee will donate the 200-acre Eaton Farm to a non-profit entity for conservation and environmental education purposes. Maine Yankee has three proposals for Eaton Farm and expects to select the successful donee by early summer. The State of Maine recently completed a radiological survey of Eaton Farm that found the property to be radiologically clean. The state's survey confirms the results of previous survey work done by Maine Yankee and the NRC. Maine Yankee continues to work with Pierce Atwood Consulting on reuse opportunities for the balance of the site, including the evaluation of proposals that have been submitted.

Spent Fuel Storage

The spent nuclear fuel is the one remaining area of sensitivity at Maine Yankee. It must be safely stored and protected until the DOE removes it. All of Maine Yankee's spent fuel is currently stored in the spent fuel pool where it has been since the plant began operating in 1972. This summer the transfer of the first of 60 casks from the pool to dry cask storage at the ISFSI will begin. All of the fuel is scheduled to be in the ISFSI by mid-2003.

Independent Spent Fuel Storage Installation

Moving spent nuclear fuel from wet to dry storage makes sense for several reasons: Placing the fuel in casks readies it for transport when the time comes; without dry cask storage, decommissioning of the plant could not be completed; dry cask storage is a passive, air cooled system that is simpler and more economic to operate than wet storage; and while both wet and dry storage are robust, secure methods for storing spent nuclear fuel, dry fuel storage has a number of advantages over wet storage that are recognized by most engineers as well as groups like the Union of Concerned Scientists.

Security

Since the terrorist attacks of September 11, Maine Yankee, along with every nuclear power plant in the country, has been at a heightened level of security. Maine Yankee is in regular communication with the NRC, the State of Maine, the U.S. Coast Guard, and local law enforcement authorities in implementing and coordinating security measures. Federal and state experts have performed independent security assessments at the site and have found security to be sound. The NRC is performing a top to bottom assessment of security in light of September 11 and is expected to issue additional orders regarding security requirements.

Emergency Planning

As a decommissioning nuclear power plant Maine Yankee was exempted by the NRC in September 1998 from the requirement for off-site emergency planning because the consequences resulting from the release of radiological material would be limited to the site. Under NRC regulations, Maine Yankee continues to maintain an emergency plan and response organization for on-site emergencies. Maine Yankee exercises this plan regularly in coordination with the State of Maine.

Community Involvement in Decommissioning

Maine Yankee's Community Advisory Panel has met 38 times since September 1997. The CAP advises the company on decommissioning issues and serves as a liaison to the community on decommissioning issues. The next CAP meeting is May 23. The CAP provides a regular forum for issues to be aired and questions asked.

For more information contact Eric Howes, director of public and government affairs at (207) 882-5875, or visit the Maine Yankee web site at www.MaineYankee.com.

Maine Yankee Decommissioning (Continued)

Turbine Building With Siding Removed (August 2001)

Turbine Building Implosion (November 2001)

Maine Yankee Decommissioning (Continued)

View of Containment and Remaining Turbine Building Structure (April 2002)

Transfer of 4th and Final Vertical Concrete Canister of GTCC Waste to the ISFSI

YANKEE ROWE DECOMMISSIONING

Decommissioning Status - Yankee Rowe plant activities continue to focus primarily on planning and preparing for the transfer of used fuel from wet to dry storage. Yankee has enlisted the services of CLF Ventures (CLFV), a subsidiary of the Conservation Law Foundation, to assist with the development of a Site Closure Plan for the Yankee Nuclear Power Station. Yankee and CLFV will work to reach a consensus with key stakeholders on a site closure plan that addresses non-radiological closure issues resulting from decommissioning. The closure plan will be integrated with the License Termination Plan. Yankee and CLFV have met and briefed several regulatory stakeholders, as well as the Yankee Rowe Community Advisory Board, on the proposed site closure plan.

ISFSI Status - Yankee's Fuel Transfer Operations Contractor (FTOC), NAC International, is scheduled to begin transferring Yankee's 533 spent fuel assemblies and segmented reactor internals from the pool to dry storage in late May of this year. The transfer, which was scheduled to begin in late 2001, was postponed due to a delay in ancillary equipment procurement and testing and procedure finalization. The FTOC will perform three transfer dry runs prior to the actual start of fuel transfers in May – the first for internal observation, the second for the Yankee Oversight Team and the third for the NRC. The second and third dry runs are referred to as "wet" dry runs because they involve lowering the fuel canister and transfer cask into the spent fuel pool.

All fuel transfer equipment has been installed and craft and engineering staff have been increased to support the upcoming fuel transfer.

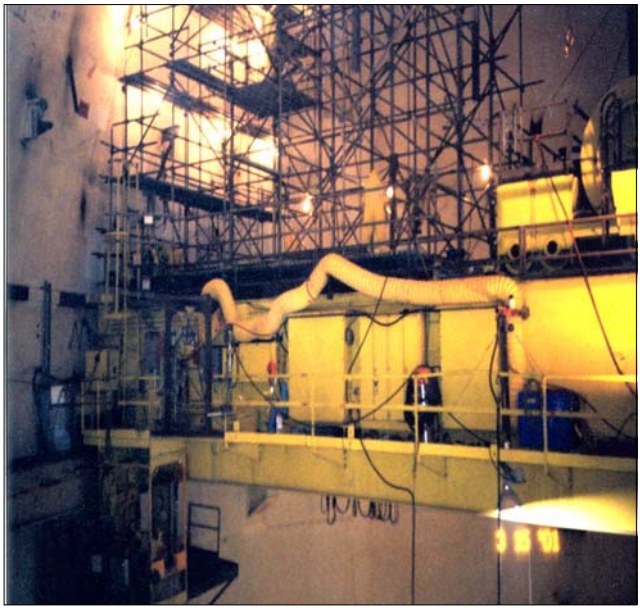
The fuel transfer is expected to take approximately 6 months. Yankee will complete the remainder of decommissioning, including license termination plan activities, building dismantlement and site restoration, after the fuel has been transferred to dry storage.

"Dry" Cask Transfer

TROJAN DECOMMISSIONING

Trojan Final Survey Activities and ISFSI Project

As previously reported in the fall 2001 newsletter, the Trojan Nuclear Plant started final survey activities on April 26, 2001, with the Containment dome. The NRC then independently checked this portion of the final survey while access to the dome was still available. Much of the final survey of the remainder of the Containment Building has since been completed. The remaining portions requiring survey are the floor liner plate and the reactor cavity, which are expected to be completed in May 2002. Final surveys of other Plant areas will begin upon completion of the Containment Building. Surveys of building exteriors will be performed as time and weather permit. Progress of surveys inside and outside of buildings is expected to be impacted by spent fuel loading activities later this year.



Final survey of the Containment dome was safely performed using scaffolding built on top of the polar crane 150 feet in the air.

Surveying Containment walls.

Trojan Decommissioning (Continued)

The 10 CFR 72 license amendment request for the Trojan Independent Spent Fuel Storage Installation (ISFSI) was submitted to the NRC on October 29, 2001. This document reflects the Holtec International current design and the components from the Trojan ISFSI (such as the existing ISFSI pad, concrete casks, and transfer station). The NRC technical review of the Trojan Part 72 license amendment started in late January 2002 with approval expected in late October 2002. The NRC's request for additional information is expected in late April 2002. Fuel loading is scheduled to begin in the December 2002. The vendor must submit a Part 71 license amendment to the NRC to reflect the eventual transportation of the Trojan spent fuel components. Procedures have been developed for the fuel transfer operations from the spent fuel pool to the ISFSI.

Fabrication activities for the Trojan ISFSI components are in full swing. Three of the 34 multi-purpose canisters have been delivered to Trojan. Other components, including the transfer cask and yoke and various pieces of ancillary equipment have also been delivered to the Trojan site.

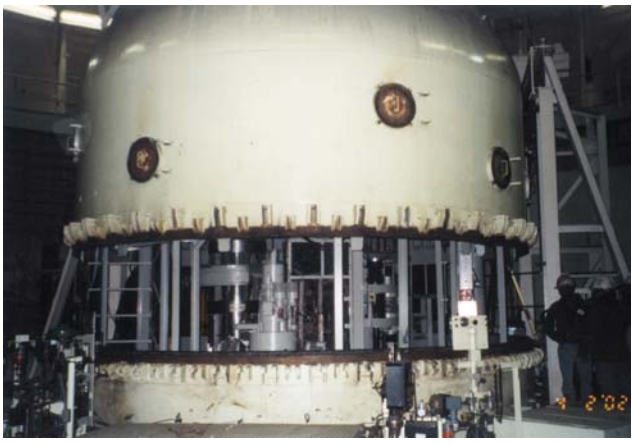
The remaining major tasks associated with the ISFSI Project include licensing, fabrication of the remaining spent fuel canisters, and loading of the canisters. Engineering support for field changes and enhancements from lessons learned are being provided as required. The ISFSI Pad, Transfer Station, Storage Casks, and related security components are in place and are being appropriately maintained.

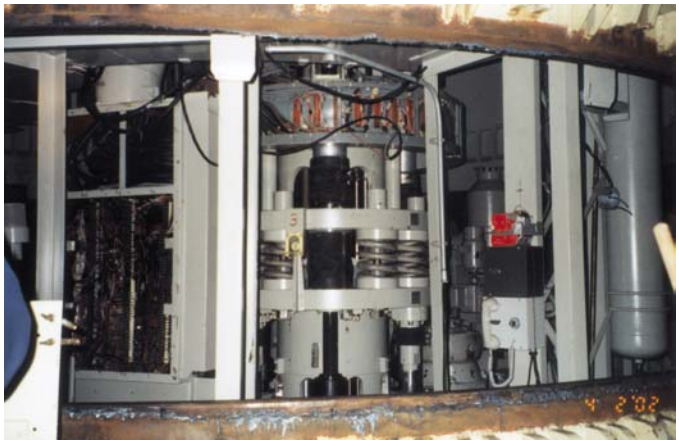
The Trojan ISFSI area.

FERMI DECOMMISSIONING

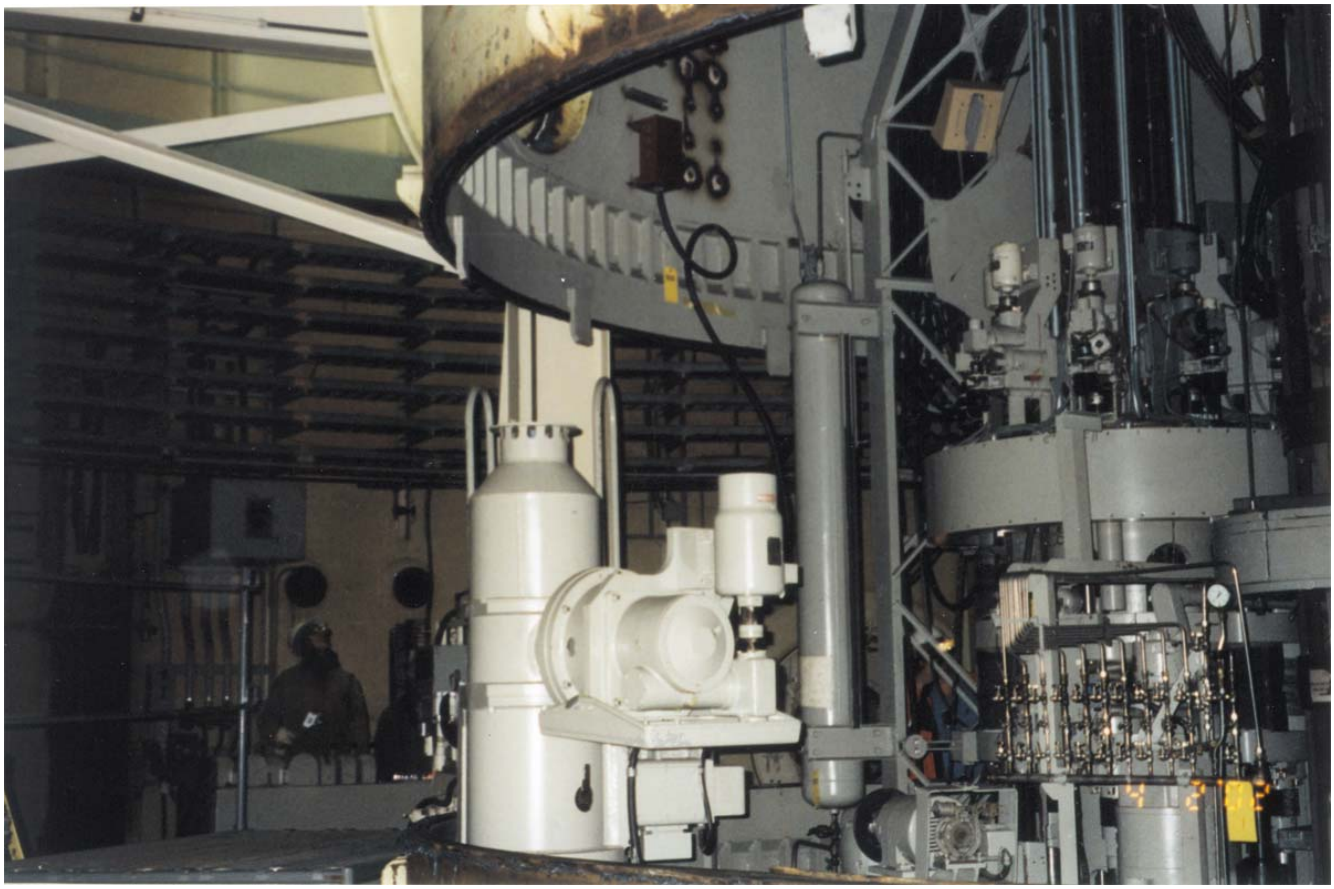
Progress continues slowly and deliberately at Fermi 1. Recent accomplishments include declaring the first steam generator tube bundle sodium free and contamination free and shipping it offsite for scrap metal recovery (See picture).

The machinery dome was removed from on top of the reactor vessel, exposing various operating mechanisms. The dome had been welded to the primary shield tank in the 1970's fully enclosing the reactor and preserving an inert atmosphere for the reactor and primary system. This will allow access to remove materials from inside the primary shield tank and to further plan reactor vessel disposal. Setup is currently underway for processing the first primary sodium containing system in situ. Processing involves converting the sodium into caustic and hydrogen gas, venting off the hydrogen gas after scrubbing, filtering and monitoring it, and then neutralizing the caustic.





[Fermi Decommissioning (Continued)]



BIG ROCK POINT RESTORATION PROJECT

Preparing for the dry fuel storage (DFS) loading campaign and NRC approval of a plant debris disposal plan highlighted efforts over the past quarter at Big Rock Point.

Eight casks (seven with fuel, one with Greater Than Class C radioactive waste) are scheduled to be loaded this summer at Big Rock Point. Employees have been working over the past several months with vendors to ensure the DFS equipment is ready and delivered in time to begin the campaign.

Milestones in support of the project include:

- A single-failure proof crane - necessary to load fuel and move associated components - was installed, tested and approved for use in late 2001.
- A stainless steel prototype fuel canister was delivered in November and followed by three production canisters.
- Providing a glimpse of the future, a DFS concrete overpack was transported approximately one-half mile from the containment sphere to the DFS pad in November. Working inside a temporary building on the pad, employees qualified the grouting process necessary to seal the three concrete sections together. A total of four production overpacks are on site.
- The fuel canister transfer cask, used to move the canisters loaded with fuel from the spent fuel pool to a storage overpack, arrived in April.
- Equipment fit-up and testing, procedure development and oversight preparations have been ongoing in anticipation of three fuel load dry runs scheduled to begin in May.

In February, the NRC approved the plant's request to dispose of clean building material in a Michigan landfill. The request detailed Big Rock Point's testing methods and quality control program that will be used to ensure the public and environment will be protected. The program will save millions of dollars when compared to disposing of all debris as low-level radioactive waste.

Big Rock Point Restoration (Continued)

Other significant achievements and events include:

About 50 members of EPRI attended a two-day license termination and final site release conference hosted by Big Rock Point in October.

Citizen Advisory Board chairman Don Smith helped lead an on-going statewide effort to secure resolutions and letters of support to open Yucca Mountain. The resolutions and letters are being sent to Michigan's federally elected officials.

A Big Rock Point postcard, dated 1965, sold on E-Bay for $31.

Big Rock Point employees are shown installing tubing around the middle and top section of a dry fuel storage overpack. The tubing allows grout to be applied, which bonds the concrete rings together.

Big Rock Point Restoration (Continued)

A heavy hauler is used to move a concrete overpack from the containment sphere to the dry fuel storage pad

SAN ONOFRE DECOMMISSIONING

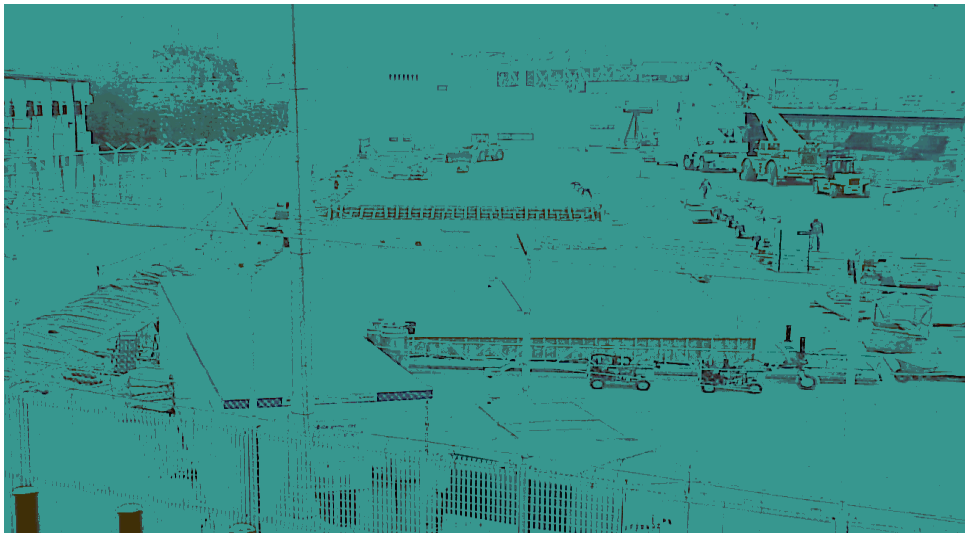
San Onofre Unit 1 (SONGS 1) began active decommissioning in 1998. SONGS 1 was first physically separated from the adjacent operating Units 2 and 3, followed by system and building removal to provide space for dry cask storage of spent Unit 1 fuel. Dry cask storage is needed to decommission the SONGS 1 spent fuel pool, radwaste, and cooling systems. A reactor vessel internal (RVI) segmentation project to remove high dose components from the RPV was undertaken and successfully completed. This activity was conducted to create a Reactor Vessel LLRW package that would be acceptable to the Barnwell, SC LLRW disposal facility. The top of a large concrete structure built to encase the SONGS 1 containment sphere, the Sphere Enclosure Building, is being removed prior to lifting the SONGS 1 large components from the containment. Additional SONGS 1 decommissioning activities are scheduled to continue into 2008.

The RVI project was the most challenging decommissioning activity to date and is considered SONGS 1 decommissioning's highest risk evolution in terms of industrial safety, personal exposure, and the generation of secondary waste. Contaminated materials inside the reactor vessel, considered Greater-Than-Class C (GTCC) waste, were removed from the RPV and placed in the reactor cavity. The materials were then segmented under water using Abrasive Water Jet (AWJ) cutting and Metal Disintegrating Machining (MDM). Resultant pieces of GTCC waste were then packaged into modified fuel containers for long term storage at the ISFSI. An underwater filtration and secondary waste handling system was designed to capture activated cutting residues to maintain water clarity for cutting and to maintain dose levels to meet SONGS's ALARA (as low as reasonably achievable) standards. The SONGS 1 RVI project was completed with a total exposure of 22.5 person-rem, well under the industry standards for previously completed segmentation projects. No lost time or OSHA recordable accidents occurred during the project's 60,000 man-hours of work in the Radiological Control Area (RCA). The total curie content of the RPV was reduced from 282,000 to less than 50,000 (the maximum allowable for the reactor vessel to be shipped to Barnwell).

San Onofre Decommissioning (Continued)

Diver Underwater in the Reactor Cavity Disassembling the Water Filtration Skid

Design was completed and concrete poured for the Independent Spent Fuel Storage Installation (ISFSI) Pad for the dry storage of all SONGS 1 fuel stored in the SONGS 1, 2, and 3 spent fuel pools. The SONGS 1 GTCC waste is temporarily stored in the SONGS 1 spent fuel transfer pool and will be moved to the ISFSI at a later date. Transnuclear, Inc. designed the horizontal storage modules (HSM) and dry canister design for use in the SONGS high-seismic, coastal, and marine environment. Edison intends to fabricate their own canisters at a facility designed and built on site. SONGS received the American Society of Mechanical Engineering (ASME) "N" stamp accreditation for the construction of the SONGS canisters. The SONGS 1 phase will house 19 HSMs. 2 HSMs will store GTCC waste. 17 HSMs will each hold a canister filled with 24 fuel assemblies.



ISFSI Construction

San Onofre Decommissioning (Continued)

As mentioned above, the Sphere Enclosure Building (SEB) Roof removal to facilitate large component removal is in process. The large components to be removed include the reactor, steam generators and pressurizer. Prior to commencing work, a perimeter fence made of heavy wall steel piping was installed for protection of the spent fuel building and for personnel safety. Excavators and bob cats were placed on top of the roof to break apart the 18 inch concrete cover. The underlying tethered steel structure is being cut up and removed by crane. To date 1.96 million pounds of concrete have been safely removed from the SEB roof.

Sphere Enclosure Building Activity

DEPARTMENT OF ENERGY DECOMMISSIONING STATUS

Introduction: Last Fall this newsletter included an overview of the DOE Decommissioning Program as well as a status report on our cleanup at the Rocky Flats plant in Colorado. This Spring newsletter includes another update on DOE cleanup and closure at Rocky Flats and this article will profile our decommissioning activities in Oak Ridge, Tennessee.

DOE Decommissioning in Oak Ridge, Tennessee: The Oak Ridge Reservation is the site of the Department's largest decommissioning project to date. The Department awarded a $263.4 Million (escalated) fixed-price contract to BNFL, Inc. in 1997 to decommission three of the five immense gaseous diffusion buildings at the East Tennessee Technology Park (the former K-25 plant). The project scope includes removal and disposal of all process and process support equipment from buildings K-29, K-31, and K-33; and decontamination of the building interiors to a specified end-point criteria. The project also includes surveillance and maintenance of the buildings and options have been awarded to decommission a large electrical switchyard and to package and transport over 20,000 drums of stabilized sludge and soils for disposal at the Envirocare facility.

> **Status:** The Three Building Decommissioning project has encountered a number of challenges and set backs, but the work has continued and the job is being done. The project currently stands at 60 percent of completion. This April we completed equipment removal activities in the first and largest of the three buildings. This first building, K-33, included 64 acres of floor space on two levels. The decommissioning included removal and disposal of equipment from 640 enrichment stages. Each stage included a bus sized, nickel filled converter, a matched compressor, a 3,300 horsepower electrical motor, and associated piping. The project has dispositioned over 74,000 tons of metal.

Department of Energy Decommissioning Status (Continued)

Future: The project will continue to use a newly constructed supercompactor for compaction of wastes and a decommissioning workshop in the K-33 building for equipment disassembly and segmentation. The equipment removal activities are now underway in the second and third buildings and decontamination activities are now underway in K-33. The project has been shipping wastes to Envirocare and the Nevada Test Site; this Spring we plan to begin disposing a portion of the project waste at the Oak Ridge Environmental Management Waste Management Facility. The decommissioning project is currently about 10 months behind the original contact baseline, but the contractor plans to meet the original completion date of March 2004 by conducting remaining work in the K-31 and K-29 buildings in parallel. This project will be discussed in more detail in an upcoming issue of the Engineering News Record.

Additional Decommissioning and Future Plans: Over 80 additional facilities encompassing a footprint of approximately 500,000 square feet have been demolished at the East Tennessee Technology Park since the late 1980's. Additional facilities have been decommissioned at the Oak Ridge National Laboratory, and one large mercury-contaminated building at the Y-12 plant has been fully deactivated. The Bechtel Jacobs Company is subcontracting most of the current decommissioning work as the Management and Integration contractor for cleanup in Oak Ridge. Oak Ridge is also working with the Community Reuse Organization of East Tennessee to lease clean industrial facilities to the private sector under our reindustrialization initiative. Despite this progress, over 550 excess facilities including the original one-mile long K-25 enrichment building remain to be decommissioned at the East Tennessee Technology Park.

Earlier this year, at the direction of DOE Secretary Abraham, we completed a Top-to-Bottom Review of the DOE Environmental Management program. This comprehensive review concluded that the current approach to cleanup must be reformed to improve management practices, focus on risk reduction, and improve interactions and trust with our regulators. Our current 2003 Congressional Budget Request is based upon this reformed cleanup approach. We are currently developing a plan with the State of Tennessee and EPA regional regulators to improve the Oak Ridge cleanup program. If we are able to reach an agreement on these important reforms we expect to complete decommissioning at the East Tennessee Technology Park several years ahead of our current 2016 schedule. This acceleration translates into real risk reduction and saves hundreds of millions of dollars for US taxpayers.

BEFORE: The enrichment converters were enclosed in metal housings prior to decommissioning, four compressors are partially visible on the right hand side of the picture.

DURING: Bus-sized converters have been removed and await segmentation in the decommissioning workshop, other components are awaiting supercompaction prior to disposal.

AFTER: View of a typical K-33 cell following equipment removal. The floor penetrations and miscellaneous materials have been removed, the concrete pedestals were removed with diamond wire saws. K-33 is now being decontaminated and will be available for private sector industrial use following completion of the project in 2004.

ROCKY FLATS DECOMMISSIONING

With nearly one third of the Rocky Flats Closure Project complete, Kaiser-Hill Company is ahead of schedule and under cost on delivering a 2006 closure of the former nuclear weapons component production facility near Denver. As of March 31, 2002, the project showed a $33 million positive schedule variance and a $55 million positive cost variance against its 2006 baseline. The following are some of the highlights of the past year:

All special nuclear material on site was consolidated from numerous locations into a single building, the most robust on site. This move significantly enhanced protection of Rocky Flats' SNM inventory and enabled a dramatic reduction in the site's highly secured Protected Area from 180 to 30 acres in July 2001. In addition to significantly reduced security costs, access by personnel and equipment to the site's three 700-Area plutonium facilities, currently undergoing full-scale decontamination and decommissioning, no longer requires time-consuming security checks.

Operators began packaging Rocky Flats plutonium metals and oxides into compliant 50-year storage canisters (3013s) using the automated Plutonium Stabilization and Packaging System. Over 600 of the total 1,900 containers have been packaged to date. Packaging is a prerequisite to shipping the material off site.

All actinide solutions were drained from tanks and piping systems in Building 771 and the solutions stabilized. These solutions, contained in approximately nine miles of process piping and 230 tanks in the facility, earned Building 771 the number one rank in plutonium vulnerabilities according to a 1994 Department of Energy report.

Operators in early May 2002 completed the final processing and packaging of Rocky Flats plutonium residues. Residues are by-product materials from former weapons component operations that contain a high content of plutonium. The last residues processed represented the conclusion of a five-year effort to deal with 106 tons of material. This material will be shipped to the Waste Isolation Pilot Plant in New Mexico.

While most of the work in recent years has been performed inside buildings, building demolitions are dramatically changing the Rocky Flats skyline. Approximately 200 of the site's 800 structures have been demolished.

More than 400 of the of 1,000 highly-contaminated glove boxes have been removed from Rocky Flats plutonium facilities. In addition, 88 of 290 D&D work sets have been completed. Work sets are discrete units of work required to fully decommission a plutonium facility.

Record volumes of waste were removed during the past year, including 40,000 cubic meters of low-level radioactive waste and 18,000 cubic meters of low-level mixed. Rocky Flats is the leading shipper of transuranic waste to the Waste Isolation Pilot Plant in New Mexico with nearly 500 shipments. It is currently sending on average 12-15 shipments each week.

Kaiser-Hill and the DOE field office tested a "commercial" decommissioning approach that resulted in a savings of more than $1.5 million on demolition costs of a single non-nuclear building. By creating requirements equivalencies for DOE Orders and directives, requirements were streamlined and attracted wider competition from non-typical bidders due to easily understood and achievable Request For Proposal requirements. This approach will be used in the decommissioning of all non-nuclear facilities at Rocky Flats and is anticipated to save millions of dollars.

"Low-tech," high-leverage solutions to some of Rocky Flats' most difficult problems are being employed with outstanding results. A cerium nitrate rinse is effectively decontaminating glove boxes and tanks to meet Department of Transportation Surface Contamination Object low-level waste criteria, significantly reducing the volume of transuranic waste and risk to workers. Plasma arc cutting of large pieces of contaminated equipment is making a huge difference over using mechanical cutting devices, again reducing operator exposure to radiological and industrial hazards. Containment chambers for cutting large pieces of contaminated equipment are also improving, incorporating counterweight arms for easier equipment manipulation and mobility to allow tanks and glove boxes to be cut up and packaged in place.

In 2001 workers logged more than 9,900,000 hours and made approximately 333,000 entries into contaminated areas to perform high-hazard D&D work. The site collective dose was reduced by 36 percent; skin contaminations were held in check despite a large increase in entries (10 skin contaminations were recorded in 2001, compared to 13 in 2000). Nuclear criticality safety was the best in recent years – the site achieved more than 80 percent improvement since January 1997, and the Total Recordable Case Rate is down 60 percent from 1995.

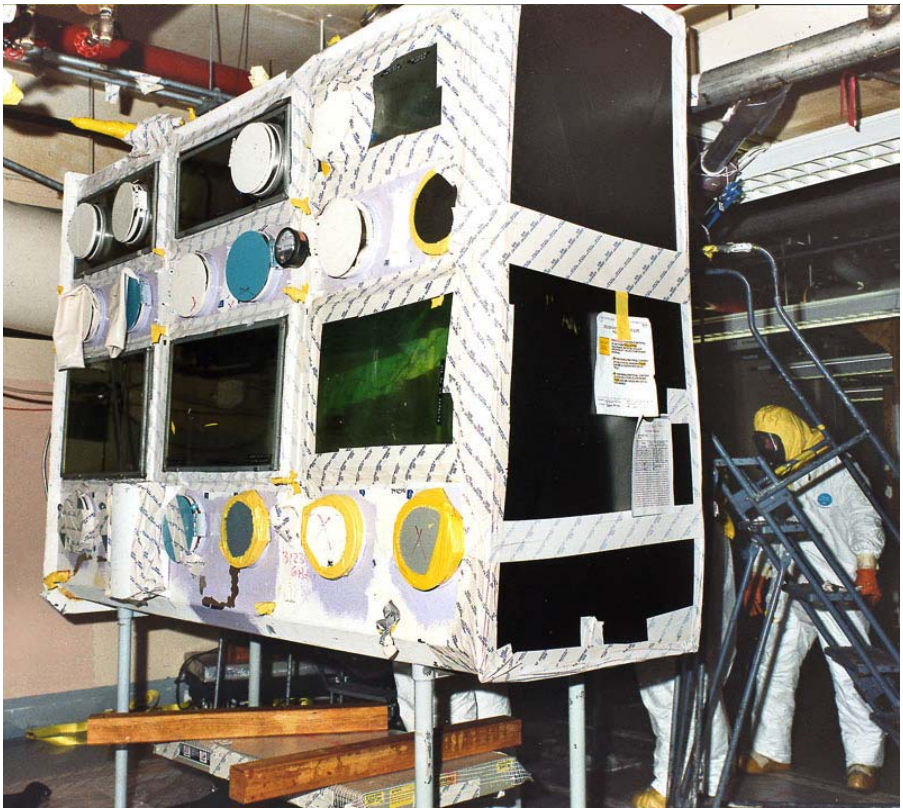
While Rocky Flats is on track for a 2006 closure, numerous challenges lie ahead. Plutonium facility D&D activities pose obstacles ranging from gross contamination as a result of fires in 1957 and 1969, uncharacterized buried equipment, and dismantling extremely large pieces of contaminated equipment. The site contains approximately 2,000 kilograms of "orphan" waste that currently has no treatment or disposal pathway. Waste and special nuclear material shipping containers and receiver sites must continue to be available. Finally, Rocky Flats has the challenge of maintaining safety, compliance and morale in a work force that is essentially working itself out of a job.

Rocky Flats Decommissioning (Continued)

Controlled explosives were used to separate concrete from rebar in the demolition of Rocky Flats Building 886. The process is called harmonic delamination. Building 886 was a laboratory used to conduct criticality experiments.

Using plasma arc torches to cut through thick, stainless steel glove boxes is much faster than using manual cutting devices, reducing operator exposure to radiological and industrial hazards. Glove boxes must be cut to fit in waste containers. Plasma arc cutting is performed in a specially-designed fireproof chamber.

Rocky Flats Decommissioning (Continued)



Contamination levels and the sheer size of some of the former weapons component production equipment will be challenges as the closure of Rocky Flats progresses.

A process called hydrolasing is used to remove contamination from concrete surfaces.

Rocky Flats Decommissioning (Continued)

Successfully cleaning up and closing Rocky Flats will return to Colorado one of its most beautiful parcels of land.

ARGONNE NATIONAL LAB EAST SITE DECOMMISSIONING

The ANL-East Site Decommissioning Program recently completed the decommissioning of the CP-5 Research Reactor facility. CP-5 had been used during the period of 1954-1979 as the primary reactor neutron source for the various research programs at the Laboratory. The facility was decommissioned and returned to the DOE site landlord as an "Industrial Use" facility. In accessible areas the radiation exposure levels are at background levels. The decommissioning work was performed by a combined team from within the Laboratory supplemented by Duke Engineering & Services and their subcontractor NSC Energy Services. A final independent verification survey was performed by ORISE for the DOE. Total project cost was $29.5 M USD and the field work occurred over an 8-year period. Total exposure to project personnel was approximately 11.5 person-rem.

This facility was the seventh significant research facility which has been decommissioned at the ANL-East site during the last 11 years.

Aerial photo of the CP-5 Facility at ANL-East

ANL East Site Decommissioning (Continued)

The BROKK excavator being used to break up the concrete base of the biological shield structure in containment at the CP-5 facility.