



THE ADVISOR

A Publication of the Rocky Flats Citizens Advisory Board

Site Closure: The Year 2002 In Review

The last day of September brought fiscal year 2002 to a close, thus ending a 12-month period that site managers had called, "The Pivotal Year." It seems an opportune moment to take stock of Rocky Flats closure progress.

One of the reasons why the year was so crucial had to do with shipping plutonium off-site. Under the original schedule, the Department of Energy (DOE) was to have sent all of the Rocky Flats plutonium to Savannah River by early next year. However, a lengthy dispute with the Governor of South Carolina delayed the start of those shipments. The silver lining is that the shipments have now begun, and although behind schedule on that facet of the project, DOE still has a good chance to close the site by 2006.

There are other indicators that Rocky Flats is on track for timely closure. Overall, the project is more than 40 percent complete, or \$100 million ahead of schedule. A quarter of the structures at Rocky Flats have been demolished. Nearly half of the gloveboxes, containment chambers used during site operations to process plutonium, have now been disposed of offsite. This year, Rocky Flats averaged eight shipments per week of transuranic (TRU) waste to the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico, a rate that leads the entire DOE weapons complex. In 2002, Rocky Flats also set records for low-level waste shipments.

In terms of gauging project success, a couple of highlights are particularly noteworthy.

First, the site finished all draining of plutonium-bearing liquids from nine miles of piping and 230 tanks in Building 771. A 1994 DOE report had characterized this building as the nation's highest plutonium vulnerability.



One of the structures demolished in fiscal year 2002 is Building 125 (above). This building formerly was a laboratory used for calibrating equipment, among other things.

Second is the completion of plutonium residue packaging in May 2002. This represents the culmination of a six-year effort to prepare more than 100 metric tons of the material for waste disposal at WIPP.

Eugene Schmitt, manager of the Rocky Flats Field Office (RFFO), praised these recent accomplishments. "I have been truly impressed with the tremendous progress that has been made at Rocky Flats during the past year, and with the dedication of the site's workforce to get the job done safely." But he cautioned against reading too much into the current trend. "We must remain vigilant to ensure a successful cleanup and closure."

Counterbalancing all of the positive indicators are some key challenges that lie ahead; chief among them, the plutonium packaging system. Just last year, the site got its automated packaging system

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News Briefs and Updates

Board Approves 2003 Work Plan

The Rocky Flats Citizens Advisory Board (RFCAB) began providing advice and recommendations to the Department of Energy and the regulatory agencies in the fall of 1993. Thus, 2003 begins our tenth year of operation. Each year during that time, the Board has developed an annual work plan to help guide its work.

In approaching its work for 2003, the Board will focus on two major areas. The first is the set of activities by which the site will achieve closure in 2006. Among these are numerous building decontamination and demolition projects and environmental restoration activities. How well these projects are planned, implemented, and monitored after completion will be an important consideration for the Board. To address these issues, the Board has formed a new committee called the Closure Projects Committee.

As a second focus area, the Board will examine the future of Rocky Flats beyond 2006. The Board is aware that the final end-state for Rocky Flats will not be a pristine site. There will be contamination left behind after closure that will require vigilance to monitor and maintain well into the future. How that future is addressed through an effective long-term stewardship program is a key concern. The Board is also interested in planning for the Rocky Flats National Wildlife Refuge, particularly how that planning will address the issue of residual contamination and how the unique ecological assets at the

site can be preserved. To address this focus area, the Board will continue operation of its Wildlife Refuge Technical Review Group. In addition, the Board will schedule special topic discussions related to long-term stewardship, surface water management, and future land configuration.

A complete copy of the Board's 2003 Work Plan can be found on our web site at www.rfcab.org.

Advisory Board Chairs Hold Meeting

The chairs of the nine local advisory boards at DOE sites across the country get together on a semiannual basis to discuss issues of common concern. The most recent meeting was held in Knoxville, Tennessee, in mid-October. Attending the meeting from Rocky Flats were Board officers Jeff Eggleston and Shirley Garcia, staff member Ken Korkia, and DOE Coordinator Anna Martinez.

The meeting included a tour of the Oak Ridge facility, located northwest of Knoxville. Water contamination, both in surface and ground units, is a major environmental concern at the site. There are also numerous



Pictured at the advisory board chairs meeting (left to right): Jeff Eggleston, Anna Martinez, Jessie Roberson, Ken Korkia, and Shirley Garcia.



current or former waste burial facilities. Major contaminants of concern are a variety of radionuclides, volatile organic compounds and metals. With many facilities no longer needed, there is a very active decontamination and demolition program at the site.

The business portion of the meeting began with presentations by each of the local boards on their top three issues of concern. Overall, the most common issues included accelerated cleanup proposals for each of the DOE sites, long-term stewardship, and waste disposition. The accelerated closure issues are not unfamiliar to Rocky Flats, since the site is being used as a model for how DOE would like to restructure agreements it has for cleanup at the other DOE sites.

The meeting also featured a luncheon address by Jessie Roberson, DOE Assistant Secretary for Environmental Management. The main theme of her talk was DOE's emphasis on accelerating cleanup and closure of its facilities.

There was a presentation by a DOE Headquarters representative regarding DOE's response

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Natural Resource Management Issues

Mineral Rights on the Rocky Flats National Wildlife Refuge

Not long after the Fish and Wildlife Service (FWS) held its scoping meetings on the future Rocky Flats National Wildlife Refuge, a "Ziggy" comic strip came out showing the little cartoon character sitting on the deck of his house, dangling his feet. The house sits atop stilts over a gigantic abyss plunging deep into the ground. The caption reads, "That's what you get for not keeping the mineral rights."

The finger-wagging strip might have been aimed at the Department of Energy (DOE) for not purchasing the mineral rights when it bought much of the land for Rocky Flats — 2,500 acres in 1951 and the remaining acreage in 1975. But at the time there was no reason to think mineral rights would be a problem at the turn of the century.

Steve Schiesswohl, realty manager at the DOE Rocky Flats Field Office, said at a recent meeting of the Wildlife Refuge Technical Review Group that federal policy is to purchase only sufficient interests to protect the government mission.

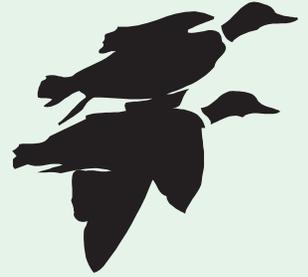
Now, as DOE prepares to turn over a large chunk of the property to the Service for a wildlife sanctuary, the FWS is refusing to take land that might be mined for sand and gravel and the Department of Energy department will not purchase the rights. The mineral rights may be the biggest barrier to the two agencies agreeing on a memorandum of understanding that must, by congressional mandate, be published in the Federal Register by December 28.

Of the 6,200 acres at Rocky Flats, 2,500 acres of mineral rights were subordinated in agreements in the 1950s and cannot be mined. At issue are "permitted or permissible" sand and gravel rights to the west and south of the industrial area.

Already, nearly 800 acres have been permitted to be mined for sand and gravel in that area. FWS Refuge Manager Dean Rundle said there are several hundred more acres the FWS is concerned about that are likely to be surfaced mined to extract sand and gravel. He believes there is a clear and imminent threat to habitat resources.

These sand and gravel rights underlay some of the last remaining stands of xeric tallgrass prairie in Colorado. Where once the prairie grew in a river of grass winding its way along the Front Range, it has evaporated to small but prized patches. According to one prairie restoration expert at focus group meetings held by the Service in late October, some of this prairie at Rocky Flats has evolved since the pre-Pleistocene era and has remained relatively undisturbed for millions of years, making it of extreme scientific interest.

Although some owners of the mineral rights are known, a title report is underway by the DOE for the transfer of the land to Fish and Wildlife Service to determine who owns the rights.



News Briefs and Updates (continued from page 2)

to recommendations on groundwater that were developed jointly by the boards earlier this year at a workshop held in Augusta, Georgia. The speaker discussed DOE's overall groundwater remediation strategy. He also spoke about public involvement issues and announced that groundwater information from each of DOE's sites would be added to a national

database accessible to stakeholders.

The meeting concluded with an update about the next advisory board workshop on transuranic waste issues to be held January 30 to February 1, 2003 in Carlsbad, New Mexico, home of the WIPP facility. The chairs also discussed agenda topics for other future workshops. Most of their interest

was on long-term stewardship issues, perhaps focusing on information management, site transition from cleanup to stewardship, and continued public involvement post-closure.

The next chairs meeting will be held March 27 to 29, 2003 in the Denver area and hosted by the Rocky Flats Citizens Advisory Board.

Site Closure: The Year 2002 In Review (continued from page 1)



Construction of the protective tent over the 903 Pad is shown above. Work on removal of the asphalt pad began in mid-November.

up and running in order to begin packaging plutonium into 50-year storage containers known as 3013s. It is in these containers that the plutonium will make the trip to South Carolina. To date, 1,062 such containers have been packaged, as compared to an estimated 1,700 that will be needed to get all of the plutonium ready to ship out of Colorado.

But the automated packaging system has been plagued by numerous mechanical failures, resulting in significant downtime. DOE now projects completion of plutonium packaging by next summer, an estimate that assumes the system will remain temperamental, performing well on some days and poorly on others. If the rest of the packaging goes no slower than did the first third of it, site managers believe plutonium shipments to South Carolina will not be interrupted, at least not due to lack of ready cargo.

Another challenge is “orphan” waste, for which the site has yet to identify a disposal option. More than 10,000 drums of orphan waste currently sit in

limbo at Rocky Flats. The Rocky Flats Field Office is in the process of exploring other possible receiver sites for the different waste types that make up the orphan category.

On the environmental restoration side, workers removed the first chunk of asphalt from the 903 Pad in mid-November. This is where, in the early days of plant operations, leaky drums of plutonium-laden cutting oil were stored outdoors. The drums have long since been removed. Now DOE is cleaning the radioactive soil beneath the pad to a level of 50 picocuries per gram, consistent with the site’s integrated end-state approach.

That approach is currently out for public comment as a series of proposed revisions to the Rocky Flats Cleanup Agreement. The revisions propose more surface soil remediation than DOE originally agreed to in 1996, lowering the maximum allowable level of plutonium in surface soil by a factor of thirteen. In exchange for this more stringent cleanup level on the surface, plutonium below three feet of depth would only be

removed under certain conditions. Conceivably, plutonium-laden soil found deeper than six feet below ground might not be subject to removal, regardless of the volume of material or its radioactivity level. Site managers will examine plutonium at depth on a case-by-case basis using risk analysis, but they expect in most cases removal will not be warranted unless such plutonium stands a chance of migrating into groundwater or surface water.

According to Patrick Etchart of DOE-RFFO, “The proposal accomplishes substantial risk reduction, to the point that future users of the site will be protected well beyond the minimum standards required by law.” He added that the changes reflect the public’s desire for greater soil cleanup, balanced by his agency’s need to keep the project within budget and conserve resources for other sites in the DOE complex, many of which face larger environmental problems than those found at Rocky Flats.

Although stakeholders only saw the language of the proposal on November 12, the concepts that form the basis of it have been under discussion for most of this year. Citizens have raised a number of concerns about the proposal, particularly in regard to the long-term stewardship implications of possibly leaving behind a great deal of subsurface contamination. As of press time, the Rocky Flats Citizens Advisory Board’s deliberations on the proposal were still pending. The Board expects to issue a recommendation before the end of the public comment period in January 2003.

Site Considers Options for Original Landfill

One area of the site where the path forward on cleanup remains unclear is the Original Landfill. The name is something of a euphemism, for this area was never engineered to receive waste. Rather, during the early years of the plant's existence, an estimated 70,000 cubic yards of waste were simply dumped over a steep hillside leading down to Woman Creek. It is thought to be mostly construction debris and office waste, although depleted uranium and other contaminants have been found.

The resulting land mass is somewhat unstable. In fact, studies have shown numerous small landslides have occurred in the vicinity.

According to Dave Shelton, a vice president at Kaiser-Hill, stability is the single biggest issue associated with the Original Landfill. "Nowhere do we see significant environmental impacts as a result of the Original Landfill. Water quality in Woman Creek is not impacted. The groundwater in the area is not significantly impacted. Clearly, we anticipate the focus of any remedial action we may take there to be enhancing long-term slope stability."

State and federal regulators have asked the Department of Energy (DOE) and its contractor to study the range of alternatives in greater detail, including complete excavation of the landfill waste. Steve Gunderson, Rocky Flats Coordinator for the Colorado Department of Public Health and Environment, says the important thing is to keep the analysis free of bias: "We have to make certain the full range of alternatives is looked at thoroughly and objectively. Cost estimates of moving the waste initially reflected a worst-case scenario, 100 percent disposal at a hazardous waste landfill, which is quite expensive. We've asked them to consider the fact that other disposal scenarios might prove less costly."



Distant view of the Original Landfill from near Antelope Springs.

There is still a lot of work to be done before DOE issues a specific cleanup proposal on the Original Landfill, tentatively scheduled to come out next spring. Dean Rundle, who leads the Fish and Wildlife Service team preparing to take over Rocky Flats once it becomes a national wildlife refuge, is withholding judgment until that time. However, he did say he is concerned about the extent to which the waste has been characterized, and whether it can be prevented from sliding.

Victor Holm, newly elected chair of the Rocky Flats Citizens Advisory Board, has the same reservations. "My concern is that the dump will move downhill at some point and begin exposing waste." There is also the chance that hydrologic conditions in the area could change and cause leaching of contaminants, he said.

The Board will closely follow the cleanup alternatives for the Original Landfill as they are being developed over the coming months.

Board Issues Recommendation on Solar Ponds

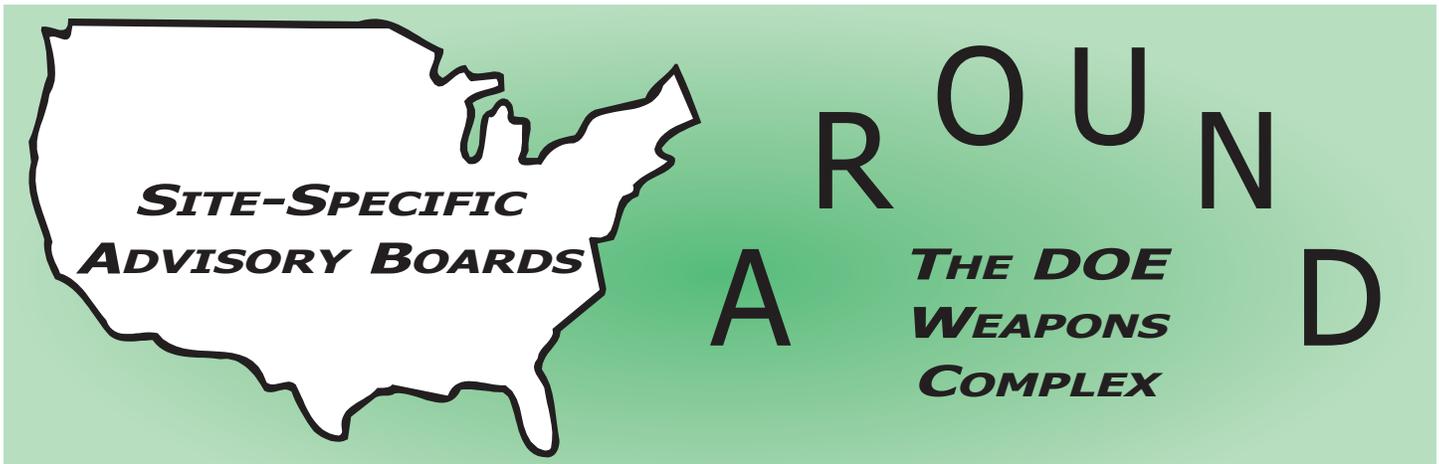
At its November meeting, the Board issued a recommendation on the Solar Evaporation Ponds. From 1953 to 1986, the ponds were used to reduce the volume of liquid process wastes. Though lined, they leached high levels of uranium and nitrate into the underlying groundwater, which impacted the quality of water in a stream nearby. In 1999, the site installed a treatment system designed to intercept and treat contaminated

groundwater before it enters the stream.

As part of an accelerated remedial action conducted recently, DOE removed six hotspots of surface soil contamination. Also removed were most of the man-made structures associated with the ponds. The exceptions are process waste lines buried deeper than three feet, plus the pond liners that will be left in place and covered with clean fill. Based on a human health risk assessment

specific to the Solar Ponds area, the Department of Energy has proposed to close the area with no further action.

The Board had a number of concerns about the proposal, primarily having to do with the adequacy of characterization that was done to support it, as well as the extent to which the long-term stewardship considerations were factored in. The full text of the recommendation can be viewed on our website at www.rfcab.org.



This Issue: Sandia National Laboratories

The Rocky Flats Citizens Advisory Board is one of nine Site-Specific Advisory Boards (SSABs) that have been formed at former nuclear weapons production sites. In each issue of The Advisor, we spotlight the activities of one of these boards, their respective sites, or other interesting information about the Department of Energy.

As the Sandia National Laboratories Environmental Restoration Project matured, the opportunities for site-specific advisory board advice began to narrow. Since most of the cleanup decisions at the site had been made and much of the cleanup had been completed, the Sandia Citizens Advisory Board (CAB) members and DOE recognized it was time to come up with a new process for involving stakeholders, one that would last beyond the current cleanup activities and carry public participation into Long-Term Environmental Stewardship (LTES).

In September 2000, the Sandia CAB held its last meeting and officially began its transformation to a more informal public involvement process. The formal CAB meetings have been replaced with issue-oriented working groups and a Community Resources Information Office (CRIO), which provides a meeting place and information center for citizens interested in LTES issues at Sandia. Sandia is

among the first of DOE's facilities to make the transition from the use of a site-specific advisory board to a new phase of public participation.

The major goal of local stakeholders now is to work with DOE and Sandia on the development of an effective long-term environmental stewardship plan. The draft plan, presented to the task groups on August 2001, was actually guided by three documents generated by the task groups over 18 months of public meetings, workshops, and meetings.

The LTES task groups are continuing to work with DOE and Sandia on the plan to identify gaps, address issues that have not been resolved, and to identify opportunities for making positive changes. The long-term nature of stewardship makes the continued participation of stakeholders in this process imperative.

For more information about the Community Resources Information Office, please contact Karren Suesz at 505-293-5514, or at ksuesz@abqcab.com.



The Advisor asked some questions about Sandia CAB's transition. Following are replies provided by Karren Suesz.

How did your committee members react to their changing role in Sandia affairs?

Initially, the Department of Energy/Sandia National Laboratories/NM Citizens Advisory Board members were concerned historical memory would be jeopardized and public involvement diminished. They were concerned how the public would be kept informed, how working groups would be formed and what resources DOE would dedicate. The formation of the Community Resources Information Office, with a part-time staff, was one way to alleviate some of the concerns.

Did they feel it was a logical step to take?

Yes. After considering the remaining workload for the ER project at Sandia, the Board members agreed continuing to support public involvement and providing a facility with a part-time administrator would be appropriate.

Board Adds Four New Members and Elects Officers

This fall, the Board added four new volunteer members to its roster. Please meet our newest members:



Jim Fabian. Jim is retired and a former Rocky Flats worker, where he was involved in demolition and new construction at various areas of the site for 11 years. He also has experience at two other nuclear facilities:

Oak Ridge and Hanford. Jim has a BS in Environmental Engineering from Kennedy Western University in Boise, Idaho. He lives in Westminster.



Kip Harward. Kip is an environmental radiochemist working for a contractor at Rocky Flats. He has extensive experience in environmental radiochemistry, and has worked at the site for 13 years. At Rocky Flats,

he wrote the statement of work being used by offsite labs to analyze environmental samples. Kip also worked at Idaho National Laboratory for four years. He has a BS in Chemistry from the University of Northern Colorado, and a Masters degree in Nuclear Chemistry from the University of Idaho. Kip lives in Arvada.



Alliyah Mirza. Alliyah is currently a student at the University of Colorado-Boulder, studying in the Environmental, Population, and

Organismic Biology program. She is the coordinator of the energy program at CU's Environmental Center and president of the Mortar Board Honor Society. She earned an associate degree in Arts and Science at Illinois Central College. Alliyah has a future goal of becoming an environmental lawyer. She is a resident of Boulder.



Andrew Ross. An Arvada resident, Andrew is a water quality specialist with the Colorado Department of Public Health and Environment. He has expertise in Colorado water quality laws and regulations and a

working knowledge of other state and federal environmental programs and regulations. Andrew has a BS in Geological Engineering and an MS in Geology. He also serves on the Arvada Light Rail Committee and the First Judicial District Advisory Board.



New officers for the year 2003 from left to right: Joe Downey (Secretary), Shirley Garcia (Vice Chair), and Dave Davia (Treasurer). Inset: Victor Holm (Chair).

RFCAB MISSION STATEMENT

The Rocky Flats Citizens Advisory Board, a nonpartisan, broadly representative, independent advisory board with concerns related to Rocky Flats activities, is dedicated to providing informed recommendations and advice to the agencies (Department of Energy, Colorado Department of Public Health and Environment, and the Environmental Protection Agency), government entities, and other interested parties on policy and technical issues and decisions related to cleanup, waste management, and associated activities. The Board is dedicated to public involvement, awareness and education on Rocky Flats issues.



RFCAB Web site: www.rfcab.org

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Rocky Flats Public Meeting Calendar

January

6	Rocky Flats Coalition of Local Governments	8:30 to 11:30 a.m.	Jeffco Airport
9	Rocky Flats Citizens Advisory Board Meeting	6 to 9:30 p.m.	Jeffco Airport
14	RFCAB Closure Projects Committee	6 to 8 p.m.	RFCAB office
16	Wildlife Refuge Technical Review Group	6 to 8 p.m.	College Hill Library
23	Stewardship Working Group	3:30 to 5:30 p.m.	Arvada City Hall

February

3	Rocky Flats Coalition of Local Governments	8:30 to 11:30 a.m.	Jeffco Airport
6	Rocky Flats Citizens Advisory Board Meeting	6 to 9:30 p.m.	Jeffco Airport
11	RFCAB Closure Projects Committee	6 to 8 p.m.	RFCAB office
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ALL MEETINGS ARE SUBJECT TO CHANGE, PLEASE CALL BEFORE YOU GO: 303-420-7855

Arvada City Hall, 8101 Ralston Road, Arvada
College Hill Library, 3705 West 112th Avenue, Westminister
Jefferson County Airport Terminal Building (Mount Evans Room), 11755 Airport Way, Broomfield
RFCAB office, 9035 North Wadsworth Parkway, Suite 2250, Westminister

Rocky Flats Citizens Advisory Board
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Westminister, CO 80021

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