THE ADVISOR

A Publication of the Rocky Flats Citizens Advisory Board

Spring 2000

1999 Was Good, But Not Good Enough

Rocky Flats Reports on Safety and Cleanup, and Shares Plans for 2000

At the end of each calendar year, Rocky Flats performs an assessment of how much it accomplished toward cleanup in the preceding fiscal year. Through the measures that are developed, members of the community can track the site's cleanup progress and assess where any problems may be occurring. On January 27, 2000, Rocky Flats held its third annual State of the Flats meeting. This meeting is an opportunity for Rocky Flats stakeholders to learn about the preceding year's cleanup successes and failures, and also what plans are in store for the current year. DOE and Kaiser-Hill management each spent time reflecting on the status of Rocky Flats cleanup efforts. Overall, the speakers at State of the Flats addressed two primary issues - safety and cleanup.

Safety

The primary message given to stakeholders was that safety measures did improve during 1999, but the rate of improvement was not what managers had hoped for. Many small safety violations occurred during 1999, which was unacceptable to site management because of the potential to lead to more serious violations. DOE's Acting Manager at Rocky Flats, Paul Golan, stated the site can never be satisfied with safety performance without risking a dangerously complacent attitude.

The most serious injury reported at Rocky Flats last year was a head concussion, resulting from a slip on ice in a parking lot. However, the site did record its first radiological exposure above existing standards during 1999. This contamination resulted from a puncture wound sustained while the worker was cutting apart a glovebox. Kaiser-Hill does not expect any health risk to this individual. Most of the safety indicators tracked by Kaiser-Hill are improving, but none have reached Kaiser-Hill's goals. Top officials for both DOE and Kaiser-Hill report that safety performance must get better, or cleanup work will have to be slowed down in order to address these issues.

Cleanup

During 1999, Kaiser-Hill submitted a plan to DOE that mapped out a strategy for completing the cleanup of Rocky Flats by the end of 2006. According to Rocky Flats officials, the site is not yet on a pace to finish cleanup by the end of 2006. While Kaiser-Hill believes it has a strategy for reaching this goal, the company does not anticipate hitting the necessary pace until sometime in 2001. Both DOE and Kaiser-Hill were pleased, however, with the overall progress made during 1999.

The Department of Energy's Hank Dalton addresses questions at the State of the Flats meeting.

(continued on page 5)

Highlights Inside:

Rocky Flats Updates

DOE and Kaiser-Hill Sign New Closure Contract

In late January, DOE and Kaiser-Hill announced they had agreed to a new contract for the closure of Rocky Flats. Effective February 1, the new contract extends until December 15, 2006, when the work to close Rocky Flats is expected to be complete. The amount of the contract is just over $4 billion. For that work, Kaiser-Hill can earn a maximum fee of $340 million.

This contract contains several new provisions, including a modified incentive fee system in which half of Kaiser-Hill's profits will be held until the end of the project. Also, Kaiser-Hill will be responsible for absorbing any additional costs which are necessary to address unanticipated contamination.

The contract contains a three-tiered penalty provision for violation of health and safety standards. For the most serious violations, such as a criticality or loss of life, Kaiser-Hill could be fined upwards of $20 million. Lesser violations could earn fines in the tens to hundreds of thousands of dollars.

Golan to Serve as Acting Manager

In late November, Paul Golan was appointed to serve as Acting Manager for DOE-Rocky Flats. His appointment to this position followed the announcement that Jessie Roberson - Rocky Flats manager since 1996 - had been appointed by the President to serve on the Defense Nuclear Facilities Safety Board. Jessie's permanent replacement will be named in the near future. Until that time, Paul Golan will serve as Acting Manager.

Paul has been at Rocky Flats since 1990, serving in various management roles. Most recently, he was DOE's assistant manager for closure projects. He was formerly an officer in the U.S. Navy, and earned his physics degree at Loyola University. Paul and his family live in Lakewood, Colorado.

Flats to Recycle Building Rubble

With the demolition of Building 779, the site has begun to stockpile concrete building rubble. The regulators have approved the Standard Operating Protocol for Recycling Concrete. This document describes how the site will stockpile "uncontaminated" concrete from the demolition of concrete buildings, and later use it to fill holes left by the demolition of buildings. A Standard Operating Protocol is a document under the Rocky Flats Cleanup Agreement that allows the site contractor to prepare one document to outline the procedures for repetitive tasks.

DOE Considers Broadening Worker Compensation Programs

The Department of Energy's Assistant Secretary for Environment, Safety and Health, Dr. David Michaels, has been touring the nuclear weapons complex. He has been meeting with current and former site workers and community members to help determine if workers with diseases other than those caused by beryllium should be included in government compensation programs. Beryllium exposures were included in an earlier proposal. In December 1999, Dr. Michaels visited Denver to listen to the stories of Rocky Flats workers. Approximately 250 people attended this meeting. Of the 44 speakers, most were workers from Rocky Flats who shared emotional stories of their exposures, illnesses and the immense difficulties they have had getting help from DOE. A common theme was that DOE simply needed to guarantee full, lifetime medical coverage to all workers. Dr. Michaels did commit to do what he could to work on the issue of guaranteeing lifetime medical benefits for Rocky Flats workers. A draft report released by DOE in February 2000 acknowledged for the first time that weapons complex jobs may have caused radiation-induced diseases. Decisions about compensation will come later this year.

New Member Selected for Advisory Board

During its January meeting, the Board recommended and approved the membership of Bruce Dahm. A resident of Thornton, Bruce works for the City of Broomfield as an Environmental Technician. In this position, he is responsible for researching and reporting on Rocky Flats issues, presenting his findings, and making recommendations to city representatives. He is actively involved with several Rocky Flats groups including the Actinide Migration Evaluation Technical Review Group and the ComRad Oversight Panel. Bruce represents the City of Broomfield on the Board. He was appointed to fill the unexpired term of a previous member representing local government, who is no longer with the Board.

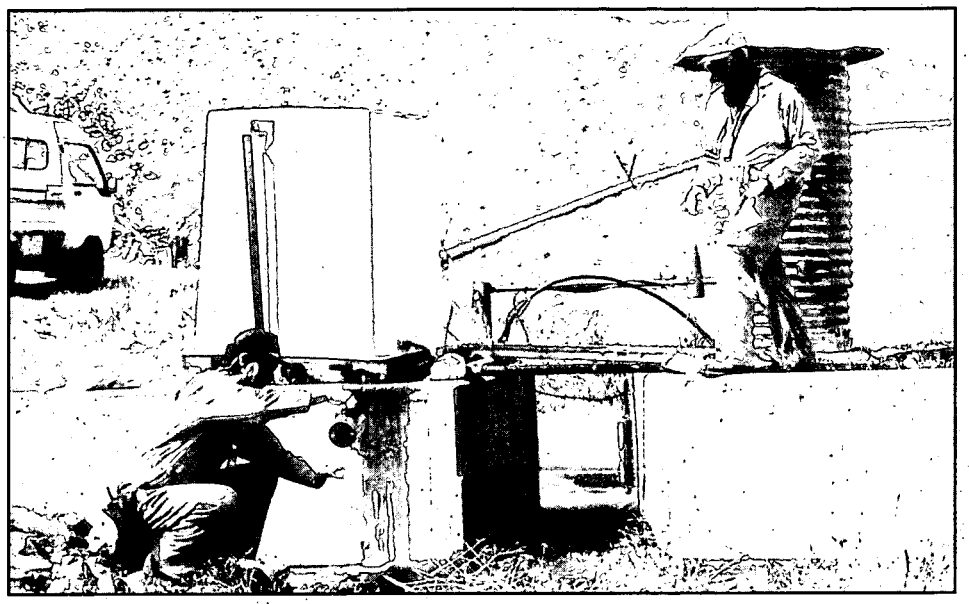
Rocky Flats Newspaper Available

Several organizations and agencies who deal with Rocky Flats issues recently prepared an informational newspaper on Rocky Flats cleanup issues. This paper is intended to provide the community with a thorough overview of what Rocky Flats is and how they can get involved or learn more. Please contact the RFCAB office at (303) 420-7855 if you would like copies sent to you.

Actinide Migration Evaluation Moves Into Year 2000

In 1995, Dr. Iggy Litaor discovered that plutonium deposited in the soils at Rocky Flats moved at speeds and amounts greater than originally believed possible. Following that discovery, Rocky Flats established the Actinide Migration Evaluation Group, comprised of scientific experts from throughout the United States.

The Group's mission is to analyze the movement of plutonium, americium and uranium (collectively given the name "actinides") from the soil where they are deposited into the air and water. These actinides were deposited on the soils due to past fires, poor waste management practices, and other mishaps that have occurred over the years at the site. The ability of these materials to leave the site and "migrate" into the surrounding community through the air and water is of great concern.



Rocky Flats workers take samples of water from one of the site holding ponds.

To better understand how actinides move from the soil into the air and water, the Actinide Migration Evaluation Group is turning to computers for assistance. Using sophisticated computer programs, the researchers are able to input data concerning the site-specific conditions, and the computer is able to work with the data to give predictions on what might happen under varying circumstances. For instance, what would happen if there were a major flood, a drought, a fire, or high winds? The results from these computer simulations will provide information to begin predicting how much plutonium might leave the site.

Much of the work that the Evaluation Group is doing is quite sophisticated. To the naked eye, a handful of soil might appear quite uniform. The study researchers know, however, that the soil is made up of many different types of particles that come in a variety of sizes. So far, the researchers have come to the conclusion that plutonium likes to associate with smaller particles in the soil, and it is these smaller particles that have the greatest ability to travel when picked up by the wind or be carried in the water. Sometimes, though, the smaller particles tend to clump together and form larger particles. These larger particles have a harder time being transported by the wind and water. There are natural conditions in the environment that assist smaller particles join together, while other conditions cause the larger, combined particles to break apart. After breaking apart, the smaller particles are once again able to move more readily. It is these natural mechanisms of the soil particles combining together and then breaking apart that the researchers are interested in better understanding. They will use the computer models to assist them in this understanding.

Actinide:
Radioactive chemical element such as plutonium or uranium

Another area of interest to the researchers is how the plutonium and other actinides are distributed across the site. Some areas are known to have high concentrations, while others have lower concentrations, or are not contaminated at all. Because it will be impossible to sample every square inch of the site, the researchers are using a statistically based method, called soil kriging, to help them better understand where the actinides can be found.

Once the researchers know more about the size of the soil particles in a particular area of the site, combined with knowledge about the concentrations of actinides that can be found there, they can better predict the amounts of actinides that might be carried into the air and water. Building on this knowledge, the site will be better able to assess what cleanup levels are necessary to ensure that offsite populations will not be exposed to actinides carried by the wind or surface water streams.

The Citizens Advisory Board has formed a Technical Review Group to examine the work being performed by the Actinide Migration Evaluation researchers. In order to better understand the complex work, the Board has contracted with two independent researchers to review documents, attend meetings, and translate the information into terms more easily understood by non-technical persons. If you would like more information on this effort, please contact the RFCAB office at (303) 420-7855. For more information about the Actinide Migration Evaluation studies, you may contact John Corsi with Rocky Flats at (303) 966-6526.

Fiscal Year 1999 Performance Measures Results

Performance measures are activities for which the site contractor is eligible to earn fee if they are accomplished safely and on time. Beginning in 2000, a new site contract will employ a different payment methodology.

Regular Performance Measures

Activity	Maximum Fee	Fee Earned*	Notes
Building 371 closure	$1,850,000	$1,850,000	N/A
Residue processing	$4,000,000	$2,432,000	Completion report pending
Plutonium packaging system	$500,000	$500,000	Expected to be paid
Building 771 remediation	$1,737,458	$1,737,458	Completion report being validated
Building 779 cluster closure	$1,750,000	$1,452,500	Cost variance penalty applied
NE quadrant D&D	$250,000	$250,000	Completion report being validated
Building 776/777 deactivation	$1,000,000	$0	Carried over to FY2000
Groundwater plume remediation	$700,000	$679,000	Cost variance penalty applied
Special Nuclear Material (SNM) shipments	$1,232,165	$1,232,165	Completion report being validated
Waste shipment	$1,430,000	$1,430,000	N/A
Comprehensive performance (cost reporting, safety, Y2K, etc)	$0	$0	No fee associated with this PM
TOTAL	**$14,449,623**	**$11,563,123**	

Super Stretch Performance Measures

Miscellaneous Activities	Maximum Fee	Fee Earned*	Notes
B771 deactivation, residue treatment SNM shipments, Y2K readiness, B371 closure, property disposal	$57,988,000	$3,750,428	Some completion reports still being validated
TOTAL	**$57,988,000**	**$3,750,428**	

***Some of Kaiser-Hill's accomplishments are still being validated by DOE, so the fee earned may increase or decrease. Also, some of the super stretch maximum fee was not available during FY99.**

Fiscal Year 2000 Cleanup Plans

The following activities are scheduled to occur during Fiscal Year 2000 under the Rocky Flats closure plan.

Building Remediation and Demolition

- Demolish 73,000 square feet of buildings (B779, which has already been demolished, accounts for most of this square footage. The site also plans to demolish 21 uncontaminated buildings and one slightly contaminated facility during FY00.)
- Drain 14 of the remaining 19 plutonium liquid process systems in B771; start decommissioning Building 776/777

Removal of Plutonium

- Begin the transfer of plutonium metal and oxide materials to Savannah River, South Carolina (the FY00 goal is to ship 760 containers - this would leave about 1,500 containers to ship in FY01-02)
- Place plutonium metals and oxides in appropriate storage/shipping container (the goal is to package 720 containers; the remaining 1,180 containers are scheduled to be done in FY01-02)

Plutonium Residues

- Maintain and possibly accelerate residues production pace
- Ship all remaining sand, slag and crucible residues to Savannah River

Waste Shipments

- Resume WIPP shipments (goal for FY00 is 1,000 cubic meters)
- Continue to ship low level/low level mixed waste (the goal for FY00 is 6,588 cubic meters combined)

Environmental Remediation

- Remove French drain groundwater treatment system at Operable Unit 1 (881 Hillside)
- Continue work on plans to remediate the Industrial Area once the buildings have been removed (develop data quality objectives, risk assessment methodology and comprehensive sampling and analysis plan)

Plans for Closure

- Begin development of water balance study (will estimate fluctuation of water resources and associated contaminants after closure)
- Begin land configuration study (information to design the final land surface configuration for the site)

State of the Flats (continued from page 1)

One of last year's most significant accomplishments at Rocky Flats was the demolition of Building 779. This was the first plutonium-contaminated facility of its size (67,000 square feet) and complexity (containing 133 gloveboxes) in the country to be completely demolished. Other larger, more complex buildings will be demolished later in the cleanup project. Ongoing remediation activities occurred in other buildings during 1999 as well, including Buildings 771, 776/777 and 886.

Rocky Flats managers were also extremely pleased that the Waste Isolation Pilot Plant in New Mexico opened in 1999 after years of delay, and began accepting transuranic waste shipments for disposal. Rocky Flats made 23 shipments prior to halting in December. This stoppage was necessary so that Rocky Flats and other sites could come into compliance with a permit that allows them to ship "mixed" transuranic waste to WIPP. This is waste that is also contaminated with hazardous chemicals.

A key component of the cleanup program is the need to process and treat materials known as residues. Residues are waste materials containing plutonium in higher amounts than found in transuranic waste. Residues will also be shipped to WIPP. But to be accepted at this facility, these materials first need to be processed into a safer form. At the 1998 State of the Flats meeting, Kaiser-Hill noted this was an area where they faced the most difficult challenges. In 1999, the site tripled residue processing rates, resulting in the completion of 40% of the entire residue inventory.

Another significant achievement during 1999 was the removal of all remaining plutonium pits from Rocky Flats. Pits were the primary product of Rocky Flats during the Cold War. When surrounded by high explosives, they served as the detonating device for nearly all of the nuclear weapons ever produced by the United States. Most of the pits were shipped to a DOE facility near Amarillo, Texas, for storage until final decisions are made on their ultimate fate.

For a summary of cleanup activities planned for 2000, please see the opposite page.

Fiscal Year 2000 Regulatory Milestones

The following are milestones for 2000 under the Rocky Flats Cleanup Agreement. The State of Colorado and the Environmental Protection Agency may fine Rocky Flats if these milestones are not met.*

- Complete demolition of Building 779 to slab
- Ship 6,000 cubic meters of low level/low level mixed waste (already completed)
- Complete 86 shipments to the Waste Isolation Pilot Plant

  (This assumes: WIPP is open and remains open during the fiscal year; WIPP receives a RCRA disposal permit and can accept Rocky Flats TRU and TRM by February 2000; and that New Mexico certifies Rocky Flats waste for WIPP by February 2000.)
- Begin storing Transuranic waste in Building 906

  (If Building 906 is needed prior to 9/1/00 for TRU waste storage, then Building 906 must be ready in time to not impact residues processing or building cleanup schedules)
- Complete 18 D&D worksets (groupings of equipment in buildings)

*All activities must be completed by 9/30/00

RFCAB Milestone Input

In the fall of 1999, following status reports by the agencies during milestone negotiations, the Board's Executive Committee passed along some concerns for the parties to consider. The first concern was in regard to DOE's apparent reluctance to agree to milestones based on the 2006 closure baseline. The agencies did agree to use the 2006 schedule, with a 12-month cushion factored in for outyear milestones. The second concern was in response to DOE's suggestion that it be allowed to leave most of the environmental restoration work, specifically remediation of the 903 Pad, until the end of the project. The committee expressed its worry that this work may never got done if left until the end. Because EPA and the state shared this concern, the agencies agreed that work on the 903 Pad would begin in either 2002 or 2003, and that they would begin to explore the concept of EPA assuming responsibility for the cleanup of this area.

AROUND THE DOE WEAPONS COMPLEX

This Issue: Paducah Gaseous Diffusion Plant SSAB

The Rocky Flats Citizens Advisory Board is one of several 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.

In 1952, the Paducah site in Kentucky began producing low assay enriched uranium – for both defense uses as well as commercial nuclear reactor fuel – using a gaseous diffusion technology to enrich uranium. In 1993, as a result of the Energy Policy Act of 1992, uranium enrichment operations were turned over to the United States Enrichment Corporation (USEC). Now out of the enrichment business, DOE focuses its efforts on environmental restoration at Paducah, and managing waste generated from those activities as well as waste generated during the site's production years. Current activities include managing the site's infrastructure, decontamination and decommissioning of facilities no longer in use, waste management, managing about 30,000 cylinders of depleted uranium hexafluoride, and operating an environmental restoration program involving the cleanup of historic contamination.

The Paducah Site Specific Advisory Board (SSAB) was formed in 1996 and provides recommendations to DOE, the EPA, and the Commonwealth of Kentucky on environmental management and enrichment facilities programs at the site. The Board meets monthly, and currently consists of 13 members. Craig Rhodes is the Board's new chairman. He was elected at the Board's September 1999 meeting.

At that same time, Energy Secretary Bill Richardson attended a town meeting with the Board and other concerned citizens in the local communities near the Paducah site. Mr. Richardson announced proposed legislation to establish a pilot program for compensating current and former DOE contract workers at the plant for cancers caused by job exposure to radioactive contaminants. Under the proposed program, DOE contractor workers with cancer caused by the work-related exposure to plutonium contamination could receive lost wages and health benefits. Many contractor workers at Paducah were unknowingly exposed to plutonium and other highly radioactive materials as a result of the Atomic Energy Commission's policy of reusing uranium that previously had been used in the production of plutonium. Plant managers knew of the presence of these materials and their potential hazards as early as the 1950s. But until 1992, when protective programs were implemented, the exposures occurred without the knowledge of the workers.

DOE's Paducah Gaseous Diffusion Plant is located about 15 miles west of Paducah, Kentucky, near the Ohio River.

Details of the proposed compensation plan were released in November and introduced in Congress. An estimated 200 current and former workers will be immediately eligible for benefits; an undetermined number will be eligible over the next 20 years. However, anyone awarded benefits under the program would give up his or her right to sue DOE or any current or former contractor. Meanwhile, additional funding requested by DOE to cover the costs associated with expanding health screening for current and former workers was pulled from the budget by Congress. DOE was instructed to change its priorities and use other funds to pay for the health screening. Approximately $7 million in additional funding is needed to expand the program.

For more information about the Paducah Gaseous Diffusion Plant SSAB, visit http://www.oro.doe.gov/pgdpssab/

Wanted: Volunteers to Help Make Important Decisions about the Cleanup and Closure of Rocky Flats

Do you wonder about what is happening at the Rocky Flats site, and how it affects your future?

Would you be interested in learning about what the Department of Energy and its contractor have planned to finish cleaning up and closing down this former nuclear weapons production facility?

Are you dedicated to working toward common goals, and being involved in decisions that impact your community?

If so, the Rocky Flats Citizens Advisory Board needs you. The Board is soliciting applications from interested citizens in our communities to fill several vacancies. In order to best maintain our diversity, right now our strongest need is for representatives who are women, minorities, health care workers, or individuals who can represent either a business interest or their local community.

Primary membership criteria is a time commitment of about 10 or 15 hours per month, which includes:

1) Attending monthly Board meetings
2) Active participation on a committee or focus group
3) Preparing for meetings by reading written material and keeping up-to-date on current issues

Candidates must express a willingness, ability and desire to strive for consensus recommendations.

To obtain a membership application packet, or for more detailed information about the Rocky Flats Citizens Advisory Board, call us at 303-420-7855; send an e-mail to rfcab@indra.com; visit the Board's web site at www.rfcab.org; or write to: Membership Committee, Rocky Flats Citizens Advisory Board, 9035 North Wadsworth Parkway, Suite 2250, Westminster, CO 80021.

RFCAB Website: www.rfcab.org

The Advisor is published quarterly by the Rocky Flats Citizens Advisory Board (RFCAB). The Executive Editor is Jerry DePoorter. Please send your questions, suggestions and ideas to:

Erin Rogers, Managing Editor
Rocky Flats Citizens Advisory Board
9035 Wadsworth Parkway, Suite 2250
Westminster, CO 80021
Phone: (303) 420-7855 / Fax: (303) 420-7579
E-mail: rfcab@indra.com

Except as noted, all articles are written by RFCAB staff: Ken Korkia, Erin Rogers, Deb Thompson and Brady Wilson. To request a change of address or to add or remove your name from the mailing list, contact Deb Thompson at the above address and phone number. Material may be reprinted if credit is given. RFCAB is funded under a 2000 grant of approximately $300,000 sponsored by the U.S. Department of Energy.

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.

Rocky Flats Public Meeting Calendar

March			
2	***Rocky Flats Citizens Advisory Board Work Session***	6 - 9:30 p.m.	College Hill Library
2	*Rocky Flats Coalition of Local Governments*	8 - 11 a.m.	Superior Town Hall
16	*Actinide Migration Evaluation Technical Review Group*	5 - 7 p.m.	RFCAB office
22	*Rocky Flats Soil Action Levels Oversight Panel*	4 - 8 p.m.	Broomfield City Hall
23	*Public Meeting to Present Soil Action Level Review Findings*	7 - 9 p.m.	Broomfield City Hall
April			
6	***Rocky Flats Citizens Advisory Board Work Session***	6 - 9:30 p.m.	Westminster City Hall
6	*Rocky Flats Coalition of Local Governments*	8 - 11 a.m.	Location TBD
20	*Actinide Migration Evaluation Technical Review Group*	5 - 7 p.m.	RFCAB office
May			
4	***Rocky Flats Citizens Advisory Board Work Session***	6 - 9:30 p.m.	College Hill Library
3	*Rocky Flats Coalition of Local Governments*	8 - 11 a.m.	Location TBD
18	*Actinide Migration Evaluation Technical Review Group*	5 - 7 p.m.	RFCAB office

ALL MEETINGS ARE SUBJECT TO CHANGE, PLEASE CALL BEFORE YOU GO -- (303) 420-7855

Broomfield City Hall, One Descombes Drive
College Hill Library, Front Range Community College, 3705 West 112th Avenue, Westminster
RFCAB office, 9035 North Wadsworth Parkway, Suite 2250, Westminster
Superior Town Hall, 124 E. Coal Creek Drive, Superior
Westminster City Hall, 4800 W. 92nd Avenue, Westminster

Rocky Flats Citizens Advisory Board

9035 Wadsworth Parkway, Suite 2250
Westminster, CO 80021

Address Service Requested

NONPROFIT ORG.
U.S. POSTAGE
PAID
Broomfield, CO 80021
Permit No. 20

The Advisor is printed with
soy-based inks on 60% recycled paper
(30% post-consumer)