



See Page 2 for more on the B881 demolition.

**Make it safe. Clean it up. Close it down.**

July 26, 2004

Volume 10, Number 11

## Workers praised as B771 demolition begins

A ceremony to recognize Rocky Flats workers kicked off the start of B771 demolition last week. As news reporters gathered to watch the first crunch, Rocky Flats Project Office Manager Frazer Lockhart and Kaiser-Hill President and CEO Nancy Tuor presented commemorative plaques to representatives of the site's three major unions – “the true heroes of this effort,” according to Tuor.

Lockhart said the building's demolition “may be a more fitting event to mark the completion of the Cold War” than the fall of the Berlin Wall or the breakup of the Soviet Union and added that Colorado will not forget the Rocky Flats work force that made this event possible.

Tuor called the start of B771 demolition the most significant project milestone to date and “a tribute to the outstanding technical ability, hard work and dedication of the Rocky Flats work force.”

In a press release issued from Washington, Energy Secretary Spencer Abraham said, “This represents a historic milestone in closing Rocky Flats and the most significant accomplishment to date in the DOE complex. The demolition of one of the most contaminated buildings in the country, once thought impossible, demonstrates the nation's commitment to accelerated cleanup and closure of Rocky Flats.”

Plaques were presented to Ramon Rodriguez and Al Solano representing the United Steelworkers of America (USWA) Local 8031, Eric Vasquez and John Duffy representing the Colorado Building and Construction Trades, and Phil Meaney and Adam Zielbaur representing the Rocky Flats Guards Union.



In commemoration of the start of the B771 demolition, Rocky Flats Project Office Manager Frazer Lockhart and Kaiser-Hill President and CEO Nancy Tuor present plaques to representatives from the site's three unions including Ramon Rodriguez and Al Solano with the USWA, Eric Vasquez and John Duffy from the Colorado Building and Construction Trades and Phil Meaney and Adam Zielbaur representing the Rocky Flats Guards Union.

The event received extensive coverage by metro Denver newspapers and television stations. National media such as the Associated Press and “ABC's Good Morning America” also provided coverage. Project Manager Chris Gilbreath toured a throng of reporters through the empty building in the morning. Photographs were displayed showing rooms packed with gloveboxes, tanks and process piping to indicate the extensive work required to decommission the facility.

Demolition is planned to be complete in September.

Building 771 was one of the four original processing facilities at Rocky Flats. It began operations in May 1953 to produce plutonium weapons components and recover plutonium from recycled materials. After the construction of B776/777 in 1957, B771 operations

focused solely on plutonium recovery. Recovery work involved the use of chemical solvents that often resulted in leaks and spills and contributed to significant contamination in the facility.

On Sept. 11, 1957, a fire started in a can of plutonium residue and spread to the glovebox exhaust filters and main plenum on the second floor of the building. Flammable vapors collecting in the main exhaust duct exploded, spreading plutonium contamination throughout much of the building. No major injuries were reported.

During routine operations in December 1988, an aircraft equipped with an infrared camera recorded a heat plume from the B771 incinerator. Officials with the EPA believed that illegal incinerator operations were being

– Please see B771 on Page 7

# 15 months of D&D work ends in flash

Fifteen months of D&D work came to an end at 11 a.m. on Saturday, July 17, when RISS and representatives from CDI safely brought B881 down using explosive charges to fracture the cement walls and floors of the 245,160 square foot basement structure. The countdown lasted almost as long the actual demolition. Once the go ahead was given, a mere 16 seconds later, it was gone.

Access to the site and the area surrounding the building was tightly controlled during demolition for obvious safety reasons. The few who were there to witness B881 coming down heard several pops in a row, a short pause and then one large boom as it began cascading in on itself.

Rocky Flats Project Office Manager Frazer Lockhart watched the demolition from the Buffer Zone. After the building was down, Lockhart talked to a 9 News reporter about the building and the significance of its demolition.

“Having worked at the site for a long time, it means a lot to see one more step in the process of cleaning up and closing down Rocky Flats. Moving this back to rangeland, like it was when we got a hold of it back in the 1950s, is probably the best thing for the entire community,” he said.

In June B881 met unrestricted release criteria. Unrestricted release means that the building has been decontaminated and surveyed to demonstrate that the residual radioactive material levels are below the standards established by the DOE. In meeting these criteria, the building was released for demolition without restrictions or controls and the rubble approved for disposal as sanitary waste.

Early Saturday morning, water cannons were strategically placed around the building to aid in dust suppression. Three mobile air samplers and 13 stationary air samplers were also placed throughout the area to monitor dust particulates.

During demolition, small areas of smoke were visible. The biggest cloud, however, was created when the upper floors and roof crashed into the annex. The cloud, comprised of concrete and soil particulates took less than 15 min-



*B881, one of the four original manufacturing facilities, came down in a matter of seconds on July 17.*

utes to fully dissipate into the atmosphere.

Weeks before demolition the building was prefilled with more than 35,000 cubic yards of soil and rubble to minimize voids. Since demolition, large earth movers have pushed in the south wall, left there by design to stabilize the structure. An additional 60,000 cubic yards of soil will be hauled in to return the area to its natural grade. Once grading is complete, the area will be reseeded.

Deactivation and decontamination work began in January 2003, but was suspended in May so that funding could be reallocated to other high priority projects. The building remained locked until October 2004. Demolition Project Manager J. Mike Swartz and the rest of

the RISS crew resumed work without missing a beat, exhibiting the same momentum and commitment to safety as they had that spring.

Building 881 was one of the four original manufacturing facilities at Rocky Flats. Completed in 1953, the facility was used to process and machine enriched uranium into finished weapons components. Chemical recovery and foundry operations were also completed in the building as part of the enriched uranium process. Enriched uranium work was phased out between 1964 and 1966. At that time, much of the decontamination work was completed and the building was converted to handle stainless steel fabrication. *by Jackie Powers*

# What does site closure really look like? It depends on who you ask

Rocky Flats closure – what does it really mean? It's tearing down the bomb plant. But it's more than that. Closure also has contractual, regulatory and future-use meanings.

For some, closure means completing the contract with DOE. To others, it's completing the Superfund environmental cleanup and terminating the RCRA permit and other regulatory requirements. To still others, Rocky Flats will never be closed because the DOE Office of Legacy Management will continue to conduct environmental monitoring well into the future. And to some, closure means the time when the site becomes a national wildlife refuge managed by the United States Fish and Wildlife Service.

This article discusses the contract meaning of the word. A second installment will describe closure from an environmental and regulatory perspective, and the last installment will describe closure in terms of the site's future with the Fish and Wildlife Service and DOE's Office of Legacy Management.

From a contract perspective, closure means achieving physical completion, namely, meeting the seven requirements spelled out in the contract. Under the contract between Kaiser-Hill Company and DOE, Kaiser-Hill earns its cost and schedule incentive fees upon physical completion. The seven physical completion criteria are:

1. All buildings are demolished, except continuing water treatment facilities or other structures with a DOE declared continuing mission. (Other than some structures that support long-term environmental monitoring or groundwater cleanup, nearly all other man made structures will be removed or covered with 3 feet of fill. There are approximately 800 buildings and structures that will need to be demolished.)
2. All Individual Hazardous Substance Sites (IHSSs) are remediated or dispositioned per the Rocky Flats Cleanup Agreement. (IHSS generally refers to areas of soil, groundwater or surface water where past activities



*Aerial of Rocky Flats taken on June 14, 2004, shows the significant closure progress.*

3. may have left radiological and chemical contamination behind that may require some type of remedial action. There are 360 potential areas of concern at Rocky Flats that will be investigated and a number of these will require some type of physical remediation. An example is the 903 Pad.)
4. All wastes are removed except for some materials that can be left in place, recycled or used as fill materials in accordance with regulatory requirements. (Unlike many other Superfund sites, Rocky Flats will not construct and operate an on site landfill for the wastes that are created as a result of the cleanup. Thus, a truck carrying waste from the cleanup leaves the site every five minutes or so.)
5. Closure caps are used for the remediation of two old landfills, the 700-area and the solar ponds, or these areas are otherwise remediated in accordance with RFCA. (Currently, closure caps are planned for only the two old landfills, one located north of B371 and an older landfill located south of buildings 440/460. DOE and the regulators have agreed that the 700-area and the solar ponds don't need capping and will be cleaned up to established action levels.)
6. Building foundations, utilities or other remaining structures, paved roads and/or parking lots are covered by a minimum of 3 feet of fill after final grade. (Thus, these structures can be covered with 3 feet of fill or removed.)
7. Surface water on site will meet health-based standards based on open space use calculated using methodology and toxicity assumptions utilized for the July 19, 1996, surface water action level. (Essentially, this means that surface water on site will be safe for open space visitors and wildlife refuge workers, the intended future users of the site.)
8. Water leaving the site in Woman and Walnut Creeks meets the water quality standards established by the Water Quality Control Commission. (This means that water leaving the site must be clean enough for any future use and meet the very stringent standards established by the Commission – for example, the standard for plutonium 239 is .15 pCi/liter.)

The next installment will discuss closure in terms of environmental and regulatory requirements under the Rocky Flats Cleanup Agreement, as well as state and federal environmental laws and regulations. *by "Endvision" cub reporter Allen Schubert; Jackie Berardini, contributor*

# Safety Awards

The Safety, Engineering & Quality Programs (SE&QP) organization recognizes individuals or groups that consistently practice safe work habits and are committed to a safe workplace.

Awards are categorized in three levels based on level of support to safe operations at Rocky Flats. Level III is the highest. Awards range from baseball caps, flashlights and travel mugs to hockey jerseys and leather jackets.

Any employee may nominate a person or group that has taken the extra step to work safely, has safely completed a complex job or worked for a long time without injury or safety violations. Contact your project safety organization to nominate a co-worker or team.

## Fewer pallet moves improves safety



Back row, from left: Jeff Reil and Rick Hansen. Front row, from left: Don Hoffman, Gina Sands, Nancy Quintana, Betty Will and Rochelle Darnell. Not pictured Gloria Griffin and Dung Tran.

Until recently, Waste Operations and Material Handling hazard reduction technicians (HRTs) in B460 moved an average of 550 drum pallets every day to access the specific pallets needed to fill waste shipments. Moving that many drums is inherently hazardous and increases the chance of a mishap. In addition, the tight, deep pallet stacks increased the chances that pallets could catch on each other or fall when moved.

HRT Jeff Reil and Supervisor Gina Sands came up with a plan to reconfigure the stacked drums so that every pallet was easily accessible from at least one side. They proposed stacking the drum pallets in long rows two pallets wide, with enough separation between the rows to access each side with a forklift.

Together with crew members Gloria Griffin, Nancy Quintana, Rochelle Darnell, Dung Tran, Rick Hansen, Don Hoffman and Betty Will, they spent three weeks moving an average of 600 drums per day, without incident, to reconfigure the drum storage area. Today the crew averages 175 moves per day to fill their waste shipments, saving nearly 375 moves daily.

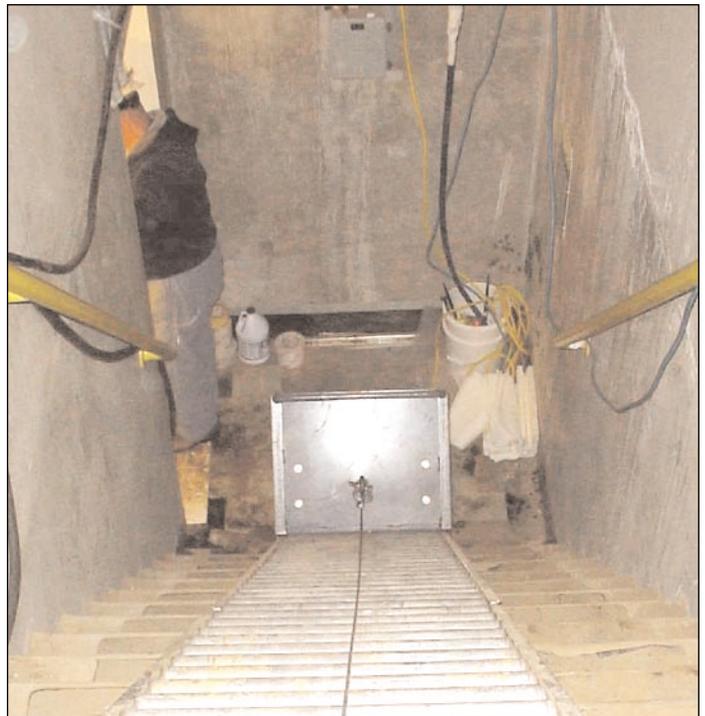
The crew received Level II safety awards for their efforts to improve safety and increase productivity.

## 707 Project finds a new, safer way

Three B707 Project D&D workers found a better way to remove heavy waste items from the bottom of Pit 732 that avoids the hazards of carrying material up a steep flight of stairs.

Jim Dockter, James Gutierrez and Doug Hanson put their heads together and came up with a system using a metal box, metal track and a winch. They load the heavy items into the box in the bottom of the pit, then winch it up the track to the surface, where they can load them into waste containers. Safe egress from the pit is maintained by using lightweight components that are easily pushed to the side of the stairway, leaving plenty of room to climb the stairs.

The trio followed the ISM process by identifying the problem, developing a solution and taking their idea to project engineers for approval. They not only found a better and easier way to safely do their jobs, they also earned Level II safety awards for their effort.



Heavy items are loaded into the box in the bottom of Pit 732.

## Safety Awards



### Williams Power team recognized for long-standing safety record

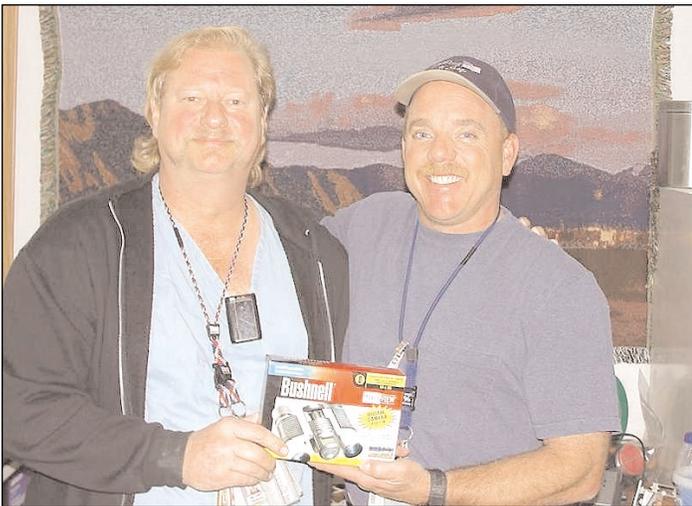
*Williams Power Specialty Services has achieved an outstanding safety record during asbestos abatement activities. Williams Power has worked 19 months without a recordable injury and has met or exceeded project expectations in safety. In recognition of their safety achievement, the 707/776/777 Project presented soft-sided coolers with built-in radios to team members.*

### Hook design increases production and safety

Bill Thorsen, Bartlett Services RCT, was assigned to provide support for the Waste Operations Group in B371. Thorsen noticed that the waste technicians were always reaching into low-level waste crates and re-arranging heavy sections of pipe and other material. This put the technicians at risk for back injuries and hand injuries due to pinching and crushing, as well

as potential intakes from puncture wounds and inhalations.

Thorsen designed a metal hook device with a handle to use instead of reaching into the crates. He had this device manufactured in three different lengths in order to accommodate various size pipes and reaching distances. The crew immediately put these hooks into use, increasing both safety and production.



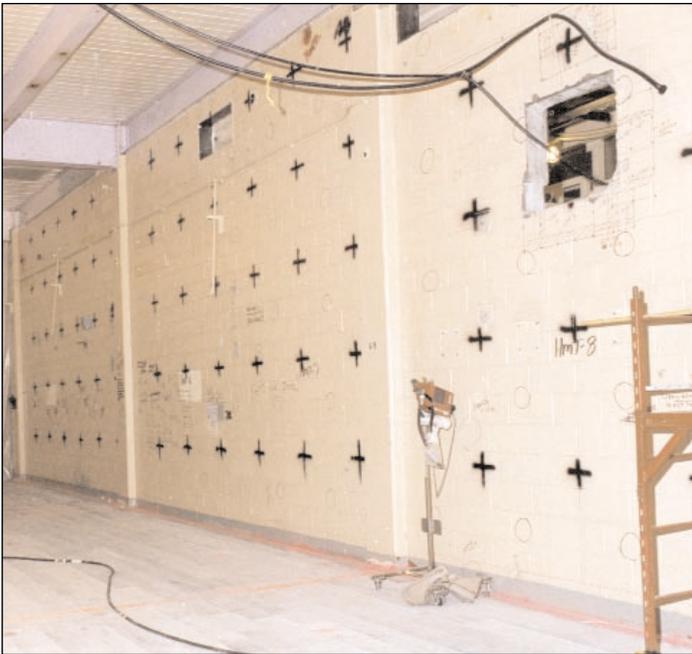
*Ken McFadden, B371 Safety Manager, presents a Level II safety award to Bill Thorsen at left.*

### K-H and the SBA hosting a small business outreach fair

Kaiser-Hill and the U.S. Small Business Administration have teamed to host the Rocky Flats Small Business Outreach Fair on Wednesday, August 4, 2004, from 9 a.m. to 3 p.m. at the Front Range Community College. The fair is being offered to assist small business subcontractors at Rocky Flats whose services will eventually be ending.

The fair will provide the opportunity to meet with companies and agencies such as Lockheed Martin, Ball Aerospace, Bechtel Pueblo, U.S. Dept. of Interior, CDOT and Raytheon Polar Services to explore potential subcontracting opportunities. Other exhibitors include local small business organizations, chambers of commerce and several local and federal agencies. Individuals planning on starting their own business are also invited.

# B776/777 rounds third base, heads for home



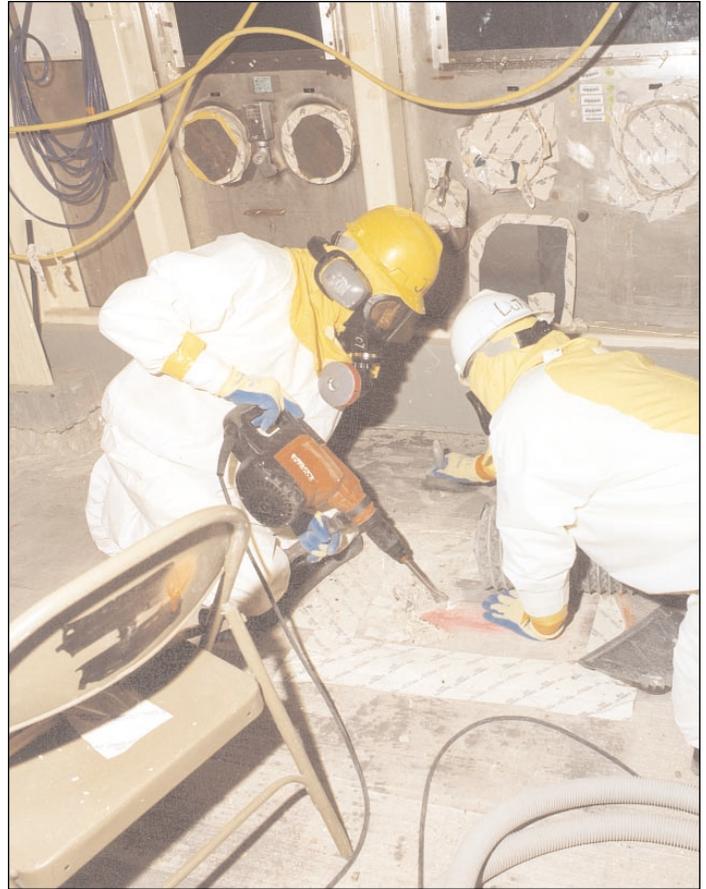
Plus-signs line the walls of B776/777 where the final radiological surveys have been completed.

If D&D was a ballgame, the B776/777 team would be in the World Series. Since removing all major equipment and gloveboxes in 2003, the team has dismantled overhead piping, conduit and ducting, completed asbestos abatement and made significant headway in building decontamination.

Structural decontamination and final survey work was broken into seven areas encompassing 37 subset areas referred to as “survey units.” Floors are being mechanically decontaminated using concrete shaving technology that removes approximately 1/8-in. with each pass. Two areas have been decontaminated, encapsulated and final surveys are completed. Close behind is a third area that is currently being encapsulated and a fourth that is mostly decontaminated.

Encapsulation includes spraying a fixative to shaved concrete.

Workers have completed all sets within B776/777 and approximately 46 percent of the 224,600 square foot building



Using a jackhammer, workers chip away contaminated concrete in B776/777. This activity is done throughout the entire building prior to concrete shaving and final building characterization.

have been mechanically decontaminated. They continue to remove highly contaminated interior block walls and false ceiling sections. Asbestos abatement is approximately 80 percent complete. To date, building D&D efforts have led to the shipment of 22,891 cubic meters of waste – an equivalent of approximately 12,050 Standard Waste Boxes.

For more than nine months the closure team has finished many challenging projects without a single recordable injury.  
*by Jeanna Blatt*



## CAST drivers mark 1 million safe miles

CAST drivers taking transuranic waste from Rocky Flats to the WIPP in Carlsbad, N.M., passed the 1 million safe miles mark recently. As of June 28, Rocky Flats has sent 1,527 shipments to WIPP. The site has shipped more transuranic waste to WIPP than the rest of the DOE weapons complex combined.

# B771 demolition

Continued from Page 1

conducted. The EPA convinced authorities to issue a warrant to enter the plant to investigate the allegation. The investigation could not confirm the allegation but raised several safety concerns that ultimately led to the curtailment of site operations in 1989.

## D&D Scope

A DOE report issued in 1994 ranked B771 as its most vulnerable plutonium facility. The most urgent risks at B771 resulted from large quantities of plutonium solutions stored in aging tanks, process piping and four-liter bottles inside gloveboxes. Numerous leaks in the building's tanks and piping systems were also identified in the DOE's findings.

Initial cleanup work at B771 focused on the highest risks. In 1993 workers began stabilizing plutonium solutions stored in bottles and began draining tanks in 1994. But tank draining was abruptly halted due to safety concerns.

The Kaiser-Hill team resumed tank draining in 1996 after completing an extensive operational readiness review. In 1997 workers completed draining all high-concentration plutonium solutions from tanks and removed all weapons-usable special nuclear materials from the building.

In 1998 the team started draining and removing process piping. To ensure that the piping system posed no further hazard, pipes were removed immediately after draining.

The work to drain tanks and piping systems was slow and carefully controlled because of the potential for worker contamination from plutonium solutions and nuclear criticality safety concerns. Solutions were drained using strict nuclear safety procedural controls.

Workers mitigated or eliminated other urgent risks that included accumulation of explosive hydrogen gas in tanks and process lines and plutonium metal and scraps stored in deteriorating containers. By 1999 workers completed removing all plutonium "holdup." The last radioactive liquids were drained from process piping in 2001. In 2003 the facility was declared criticality incredi-



*Demolition of B771 began on July 15 and, by July 20, a significant portion of the north side of the building was gone.*

ble, meaning that the chances of a nuclear criticality accident occurring were less than one in a million.

While workers mitigated the risks posed by stored plutonium, others began removing highly-contaminated equipment from the facility. This work included the removal of 240 stainless steel gloveboxes, more than 250 tanks, more than 11 miles of process piping and all of the equipment used in plutonium recovery operations, much of it grossly contaminated.

Cutting the contaminated gloveboxes, tanks and other equipment into a size that would fit into waste containers was difficult and rife with hazards. Workers wearing cumbersome protective clothing cut up glovebox sections that contained up to three-quarter-inch-thick stainless steel.

Workers also faced hazards posed by some of the most contaminated areas at Rocky Flats. Room 141, the building's infamous "infinity room" – so named because 25 years ago radiation levels inside pegged radiation detection equipment and prompted operators to seal and abandon the room – posed significant challenges. Initial readings inside the room in 2002 revealed airborne plutonium contamination levels 2,000 times higher than the maximum limit for safe entry. The Fu2B filter plenum also posed highly radioactive hazards.

The 771/774 Project blazed the trail for D&D. With a "safety first" mentality, the project developed the "bird cage" inner tent chamber (ITC) that put a barrier between the worker and the glovebox during size-reduction. The ITC also pro-

vided increased airflow within containment tents where size-reduction is performed. (In ITC-1, workers in SBA suits reached into the chamber; ITC-2 had gloveports for further separation and workers wore PAPRs).

In 2001 the project initiated the use of plasma-arc torches to cut gloveboxes, an innovation that significantly improved safety. Its use allowed workers to cut stainless steel in a fraction of the time it took using mechanical cutting tools such as Sawzalls and nibblers. Plasma-arc cutting reduced radiation exposure and lessened the need to use injury-prone mechanical tools. Plasma-arc cutting also reduced worker exertion required to complete cuts.

The project was first to capitalize on packaging radioactive waste under a new DOT classification called SCO (surface contaminated object). SCO is non-radioactive material with only surface contamination. The use of SCO criteria reduced the need to size-reduce large pieces of waste, especially gloveboxes that were decontaminated using cerium nitrate.

The project also developed and received approval to implement a decommissioning nuclear license that improved the process for eliminating authorization basis requirements as systems in the building were removed. Other innovations included a glovebox glove removal tool developed by Gary Clark, using ultra-high pressure water jets to cut large, contaminated tanks, and diamond wire saws to allow workers to cut up and package the infinity room.  
*by Ed Bodey*

# declassifieds

## Animals

Boston terrier, white/brindle, female, 2 years old, spayed, \$400. Linda, 303-280-5135.

## Automobiles/Motorcycles

1978 Dodge half-ton pickup, very collectible, 151,500 miles (rebuilt engine), body in good condition, auto, P/S, P/B front disc brakes, fog lights, roll bar w/lights over cab, trailer hitch, electric brake, gun rack, over-size tire w/special rims, \$2,700. Hank, 303-422-3216.

1982 F150, 4.9L, 4-spd., short box, 4WD, great work truck, \$1,000 or best offer. Marlene, 303-902-0744.

1984 Volvo 240 DL station wagon, 110,000 miles, very good condition, \$2,000. Charles, 303-994-1782.

1993 Cadillac STS, 93,000 miles, good condition, immaculately cared for, \$5,000. Allen, 303-665-8160.

1995 Nissan Quest GXL mini van, auto, A/C, sun roof, C/D, 107,000 miles, \$5,000. Bob 303-258-7513.

1996 Oldsmobile Bravada, great condition, 4WD, auto, A/C, power windows/locks AM/FM CD, leather, 125,000 hwy. miles, book value - \$5,900, make offer. Mark, 720-934-4080.

1997 Nissan Pathfinder SE, 111,000 miles, C/D, ski rack, good condition, \$7,100. Lynne, 303-466-6167.

1998 Ford Explorer Eddie Bauer, loaded, white w/gold trim, new BF Goodrich tires, excellent condition, \$8,400 retail, \$6,400 or best offer. Frank, 303-980-5181.

1993 Crown Victoria, body/interior good shape, needs transmission work, extra snow tires, 117,000 miles, \$900. Kevin, 303-403-1351.

2003 Dodge Neon, loaded, blue, 18,000 miles, excellent condition, \$12,800. Greg, 303-666-5062.

Five Bridgestone tires, 245/75/16 E-Load from a Chevy 2500-HD, less than 1,500 miles on tires, \$300 or best offer. Joey, 303-229-6885.

## Miscellaneous

Girl's mountain bicycle, pink frame, 20-in. tires, 6-speed Shimano shifter, \$25; lawn mower, 22-in. Hi-boy, 5 hp. B&S engine, very good condition, \$45. Lee, 303-403-1066.

Piano, Yamaha console, walnut cabinet, excellent condition, \$2,500 or best offer; SLR camera equipment, lenses, cameras, tripods, etc. Diane, 303-530-0861.

1999 black custom Gibson Les Paul electric guitar, Humbuckers ebony fretboard, pearl inlays, mahogany body, \$1,950 or best offer. Joe, 303-455-3878.

Sof swimming pool, 17-ft. round, new, still in box. Edwin, 303-288-0940.

Twin day-bed frame with mattress, good quality, white enamel, wrought iron with heart design, porcelain/brass finals, like new, never used, \$125. Barb, 303-927-7191.

Sears window air conditioner, used half a season, 17,000 Btu, \$200. Tom, 303-766-0480.

Lawn tractor, 42-in., 14 hp, 7 spd., trailer, \$300; two 5-ft. x 7-ft. heavy duty windows. Butch, 303-772-5970.

Free phone and accessories for LG 510 cell phone. Brett, 303-579-9355, ext. 2714.

GE Spectra gas range, biscuit/black, used 4 months, \$425; NuTone range hood, almond, in original carton, \$45; Craftsman 6 hp 22-in. recycling lawn mower with bag, used one season on small lawn, \$275. Julie, 303-438-7151.

## Trailers/Campers/Boats

1993 Lund Tyee Grand Sport, 18.5 ft., 180 hp IO, every available option. David, 303-651-1384.

## Wanted

Need carpool from Lafayette near Hwy. 287 and Baseline, Schedule F. Patrick, 303-665-8291.

## Declassifieds

- Only Rocky Flats site employees are eligible to place ads.
- Please use the form at right to submit your ad. Or send your ad via e-mail to Jackie Powers, or via the Intranet (Home Page/News & Info/Communication Division/Declassifieds).
- Ads should be no more than 20 words.
- Check category in which the ad is to be included.
- Home phone numbers must be used in the ads, except for items in the Lost/Found and Vanpools/Carpools categories.
- Site extension must be included (in case information needs to be verified).
- Only one ad per issue (ads will not be re-run unless they are resubmitted).
- Ads for garage sales or personal businesses will not be run.
- Ads for real estate can be placed only by owners and will include the phrase "for sale by owner."
- No ads for guns/other weapons will be accepted.
- Mail or bring ads to T130B, Cube 80.
- Declassifieds are accepted on a first-come basis.
- Deadline is six working days before the desired publication date.
- Employees who submit fictitious ads will be subject to disciplinary action based on company standards of conduct.

### Category (check one)

- **Animals**
- **Automobiles/Motorcycles**
- **Lost/Found**
- **Miscellaneous**
- **Trailers/Campers/Boats**
- **Vanpools/Carpools**
- **Wanted**

### Text:

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**Name (first and last):** \_\_\_\_\_

**Home phone:** \_\_\_\_\_

**Site extension:** \_\_\_\_\_

## en<sup>v</sup>ision

is published every other week for the benefit of all Rocky Flats employees. We invite your letters to the editor, story suggestions and comments. The deadline for approved stories is 10 a.m. on the Monday following AWS-Friday.

Vol. 10, No. 11,  
July 26, 2004

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