

Post-Closure Land Jurisdiction Transfer to the US Fish and Wildlife Service at Rocky Flats: Surviving the Safari Through Old Records and Other Lessons Learned

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ABSTRACT

The U.S. Department of Energy's (DOE's) Rocky Flats Site (Rocky Flats), located near Denver, Colorado, was listed on the Comprehensive Environmental Response, Compensation, and Liability Act National Priorities List (NPL) in 1989. Subsequent cleanup and closure activities were completed in October 2005 and the final remedy was selected in September 2006. The remedy is "no further action" for the generally unimpacted Peripheral Operable Unit (OU), formerly known as the Buffer Zone, and institutional and physical controls with continued monitoring for the Central OU, formerly the industrialized area.

The Peripheral OU has been deleted from the NPL and jurisdiction over the majority of land in that OU (3,953 acres) was transferred to the U.S. Fish and Wildlife Service (USFWS) on July 12, 2007, to establish the Rocky Flats National Wildlife Refuge. The remaining approximately 929 acres in the Peripheral OU were retained by DOE's Office of Legacy Management where outstanding mineral leases and mining operations exist. As mineral rights are purchased or mining operations and mineral leases are completed and fully reclaimed, jurisdiction of portions of the 929 acres will also be transferred to USFWS for inclusion into the refuge.

During the almost 2 years since cleanup and closure work was completed at Rocky Flats, DOE and USFWS have worked the specific legal parameters, timing, and constraints of the 3,953-acre transfer. Many lessons have been learned, based on these early experiences.

INTRODUCTION

Following World War II, the United States determined it needed to develop a sustainable nuclear weapons program. Operational and functional aspects of the program were identified and sites were evaluated throughout the country to provide various contributions to the program. The basic criteria were that the sites be located near an urban setting with a scientific community, have access to railroad transportation and high-voltage electrical transmission, and yet be somewhat isolated to enhance the security requirements. One site was eventually selected along the Front Range of eastern Colorado. Since that time in 1950 when the original land acquisition occurred, many program changes and functional requirements have resulted in additional land acquisitions and transfers of the land base at the Rocky Flats Site.

Land Acquisition at Rocky Flats

The original Rocky Flats land acquisition, authorized by Congress, occurred from 1950 to 1951 and consisted of 2,911 acres south of Boulder, Colorado, and northwest of Denver. The actual location and boundaries of the site were repositioned several times and were finally positioned to accommodate the site requirements, avoid interference with a high-voltage electrical transmission line and condemnation of a state-owned parcel, and provide access to the railroad transportation spur used at the time by a nearby gravel mine-cement plant. The US Army Corps of Engineers (USACE) surveyed and monumented the final site boundary; however, they did not record their survey. The 1950 survey and a later survey based on the additional Buffer Zone land acquisition (added from 1974 to 1976) contributed to the survey questions and deliberations on the scope of work in 2007.

Other decisions were made over the period from 1951 to 2005 that changed the real estate interests and clouded the real estate records. These decisions and actions, and sometimes lack of action, resulted in a treasure hunt to determine what title actually existed and what records could support the real estate title needed to complete the 2007 transfer of land jurisdiction to the U.S. Fish and Wildlife Service (USFWS) for the Rocky Flats National Wildlife Refuge following closure of the site. Note that DOE's 2007 transfer of the Peripheral OU to USFWS involved transfer of only the jurisdiction and management of the land, not an actual land transfer.

The correspondence in the 1950 files provides some interesting reading. Certain premises and changing demographics existing in 1950 are not valid today, and in fact several policies and land use values have changed significantly since that time and have resulted in costs to the government in the 2005 closure period that were considered negligible in the 1950s. One such example involves sand, gravel, and clay mineral interests. The USACE was the acquisition agent for the Atomic Energy Commission (AEC) in the 1950s. Correspondence from the USACE to the AEC in 1951 states that the sand, gravel, and clay mineral interests at Rocky Flats have no significant value, and the USACE recommended not purchasing any additional mineral rights other than those mineral rights that were acquired as part of the surface right acquisition. The National Defense Authorization Act of 2006 appropriated \$10 million to acquire outstanding mineral rights needed to retire Natural Resource Damage Assessment Liabilities and support the transfer of the Rocky Flats Site as required by the Ronald Reagan National Defense Authorization Act of 2001, specifically the section referred to as the Rocky Flats Wildlife Refuge Act of 2001. The taxpayers would have been well served had the government purchased the insignificant mineral rights back in the 1950s.

As Rocky Flats was closed, remediation was accomplished, and future site land use plans were completed, the specific boundaries for the land to be transferred and the land to be retained by the U.S. Department of Energy (DOE) for long-term surveillance and maintenance and future management became the focus. The Rocky Flats Wildlife Refuge Act, as amended, provided that certain lands would be retained by DOE and managed using defined institutional controls, and management and jurisdiction of other lands would be transferred to USFWS for inclusion into the Rocky Flats National Wildlife Refuge. The differing missions and land management goals between the two agencies provided for a significant effort.

As part of the closure process for the site and subsequent transfer of thousands of acres, many discrepancies were uncovered in the detailed evaluations required to validate the government's ownership interests prior to transferring the land to USFWS for the Rocky Flats National Wildlife Refuge. This document describes the process and lessons learned from that transfer.

Historical Site Records

Original land acquisitions and associated records are 50 to 60 years old and many aspects have not been reviewed for years given that the land was occupied by an agency where national security interests were protected by armed guards, and trespass was not an issue. Rarely did a real estate question arise, and most of the time the improvements and infrastructure information were not open to public scrutiny. New buildings and improvements were needed for mission requirements and, following Congressional appropriations, were constructed as expeditiously as possible. The infrastructure was put in place in the 1950s with quiet negotiations between the AEC, local utilities, and security-cleared contractors. Detailed land ownership records were never reviewed. The real estate files were kept in Omaha, Nebraska, with the USACE, or in Albuquerque, New Mexico, with the Operations office.

The additional acquisition of the 4,000-acre Buffer Zone in 1974 to 1976 was accomplished without condemnation, and the mineral rights that were not part of the surface ownership rights were not acquired. At that time, the Rocky Flats Site was still far removed from the growing Denver suburbs and gravel mining and mineral rights were not considered significant. In addition, the Buffer Zone did not have any nuclear facilities on it. Therefore, not acquiring the mineral rights was in keeping with federal land acquisition policy. That is, an agency was only authorized to acquire those immediate and specific real property interests that were needed to support the mission requirements. That is how the land was acquired and it marks the end of the active real property activities for 20 years.

When the Rocky Flats Area Office received Field Office status and a Real Estate delegation was needed, the site's first Realty Officer was hired to manage the real property interests. Real estate records were sent from the Omaha USACE office and the Albuquerque Operations office to provide technical support to the DOE office for the real property program. After a cursory review of the real estate records, other duties such as facility and space management, including establishing a new acquisition program of thousands of square feet of leased space for offices, warehouses, training, and a visitors center for the site, soon precluded any in-depth review of the 50-year-old real estate records.

Some detailed work was necessary on some of the western parcels that had existing mining operations and it was determined that the subsurface ownership on the 6,500-acre site ranged from absolute fee title (all of the bundle of rights) to surface ownership only with varying degrees of subsurface ownership. It was discovered that one parcel had all mineral rights severed, with the government owning 25% and the other 75% owned by private parties.

Transition From Closure to Post-Closure

At Rocky Flats, the transition from closure to post-closure presented its own set of challenges with regard to maintaining accurate real estate records. Since the late 1970s, real estate actions centered around the capital improvements in the site's Industrial Area and the expansion of the production facilities. In the late 1980s, suspicion of hazardous waste violations resulted in a staged U.S. Environmental Protection Agency/Federal Bureau of Investigations raid that eventually led to the cessation of all operations following the end of the Cold War in the early 1990s. Closure activities were conducted under the Rocky Flats Cleanup Agreement of 1996. These activities placed tremendous pressure on the limited space as new studies and staff came to Rocky Flats to plan for its cleanup and closure. The site population grew from approximately 3,500 during full production to almost 9,000 in the 1992-1994 time frame with over 1,200 people housed in off-site leased space.

During closure, the focus at Rocky Flats was on demolition and remediation of all functional areas. With regard to real estate transactions, one major action was the transfer of 280 acres associated with the National Wind Energy Test site in the northwest Buffer Zone to the Chicago Operations office for the study of renewable energy and testing of wind energy products and techniques. This land transfer did not require any real estate reviews, and the land surveys, performed by the Chicago office contractor, only focused on the 280 acres being transferred, not the other 6,500 acres of the original acquisitions. Other major real estate actions involved facility and space management to manage the office, training, and warehouse space for 8,000 employees that included \$6 million in off-site leases; mineral rights and mining operations; and the closure and \$2,250,000 sale of the Oxnard, California, facility. Little time was available for research and review of real estate records.

When the 2000 closure contract was negotiated with Kaiser-Hill Company, focus shifted to the real estate interests needed to support long-term surveillance and maintenance. Disposal of any unneeded interests, such as the railroad spur and the raw water line easements, also became a priority as site closure became imminent. Specific projects were emphasized such as the identification, individual title research, and acquisition of mineral rights needed for the eventual transfer of the Peripheral OU (Buffer Zone) to USFWS as directed by the Rocky Flats Wildlife Refuge Act. The remedy requirements that determined the location, geography, and boundary of the DOE-retained lands (Central OU) were identified and implemented under the post-closure Rocky Flats Legacy Management Agreement.

Land Survey

One of the provisions of the Rocky Flats Wildlife Refuge Act was a land survey of the land to be retained by DOE separate from the land to be transferred from DOE to USFWS. The land survey was originally scheduled to require only 60 days. However, when the statement of work was negotiated with the survey contractor, the amount of time needed for review and validation of real estate records, survey inconsistencies with past surveys, and other issues resulted in many extensions and modifications to the contract. The surveying task basically encompassed three efforts. Original plans were to only survey the Central OU boundary and fence line, with final adjustments after completion of the fence. The mining parcels associated with the site were then

surveyed at the request of DOE. Problems discovered with the outer boundary survey required additional work.

A substantial amount of time and energy was devoted to real estate records research and review needed to substantiate outstanding interests such as utilities and other easements and answer follow-up questions that were raised as the survey progressed. Many real estate records were missing or had been archived and these needed to be located, reviewed, and compared to recorded county records for documentation purposes of the survey. Some records showed inconsistencies and survey descriptions that either did not close, contained errors, or indicated missing parcels in the acquisition plat. These issues required a great deal of discussion and negotiation between the agencies prior to the final transfer. Some records were barely readable or completely unreadable and many assumptions needed to be made during completion of the work. Figure 1 is an example of the historical documents reviewed.

In addition to the real estate records challenge, there were differing survey requirements and goals between USFWS and the instructions given to the private surveyor hired by DOE. The significant complexity regarding the methods of breaking down the sections, monumentation, and the interpretation of information that is a major part of any survey was very evident as the two agencies interacted. Applying the U.S. Department of Interior's (DOI's) federal guidelines to the state surveying law often required negotiations between the two surveyors. It took a substantial amount of time and effort to discuss these issues, meet with the surveyors, and come to agreement on how to handle the various conflicts and differences. All issues were eventually resolved, and the process became a lesson in questions and answers, a "give and take" within the constraints of the federal land laws, policy, and guidance; the process; and state law. All in all, the survey took 12 months to complete, including negotiation time between surveyors and the agencies.

The following items are examples of the challenges encountered in conducting the land survey required as part of the transfer to USFWS:

1. The surveyors first had to identify the many section corners, quarter corners, and centers of section; make determinations on how the sections would be "broken down"; and locate past survey monuments and markers.
2. Only one original survey monument from the 1874 surveys was located (Figure 2), along with a range of other monumentation from caps that simply said "Survey Marker" with no information, to clear and concise USACE government monuments that were found in the snow (Figure 3). Note that locating the original 1874 monument represents the surveying subcontractor's diligence given that it was found under several inches of snow. Other recovered monuments had a wide range of information and reliability. Winter and spring snows and muddy roads presented a significant challenge.
3. The survey identified an in-holding of 2 acres in the Rocky Flats Buffer Zone with documentation that showed a positive management decision to not purchase 2 acres with no other justification or reasoning.

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3. MECHANICS OR OTHER STATUTORY LIENS ACCRUED BUT NOT FILED.
4. RIGHTS OF WAY FOR ROADS, HIGHWAYS, DITCHES, DITCH AND RESERVOIR FILINGS, UTILITIES AND OTHER PURPOSES OVER, ACROSS OR UNDER THE WITHIN DESCRIBED PROPERTY, IF ANY.
5. THE LIABILITIES AND OBLIGATIONS IMPOSED UPON THE WITHIN DESCRIBED PROPERTY BY REASON OF THE INCLUSION THEREOF WITHIN THE JEFFERSON SOIL CONSERVATION DISTRICT.
6. RESTRICTIONS AND CONDITIONS IMPOSED UPON THE WITHIN DESCRIBED PROPERTY BY ADOPTION OF AREA BUILDING CODE, BUILDING CODE AMENDMENTS AND ZONING REGULATIONS OF RECORD.
7. MINERAL RESERVATIONS AS SHOWN ON DEED RECORDED IN BOOK 71 AT PAGE 45 OF THE JEFFERSON COUNTY RECORDS, GIVEN BY JAY GOULD AND RUSSELL SAGE TRUSTEES OF THE UNION PACIFIC RAILWAY COMPANY. (THE SUCCESSOR TO THE UNION PACIFIC RAILWAY COMPANY, IS THE UNION PACIFIC RAILROAD COMPANY)

Fig 1. Historical realty document for Rocky Flats.



Fig. 2. Original survey monument from 1874 surveys.

Rocky Flats

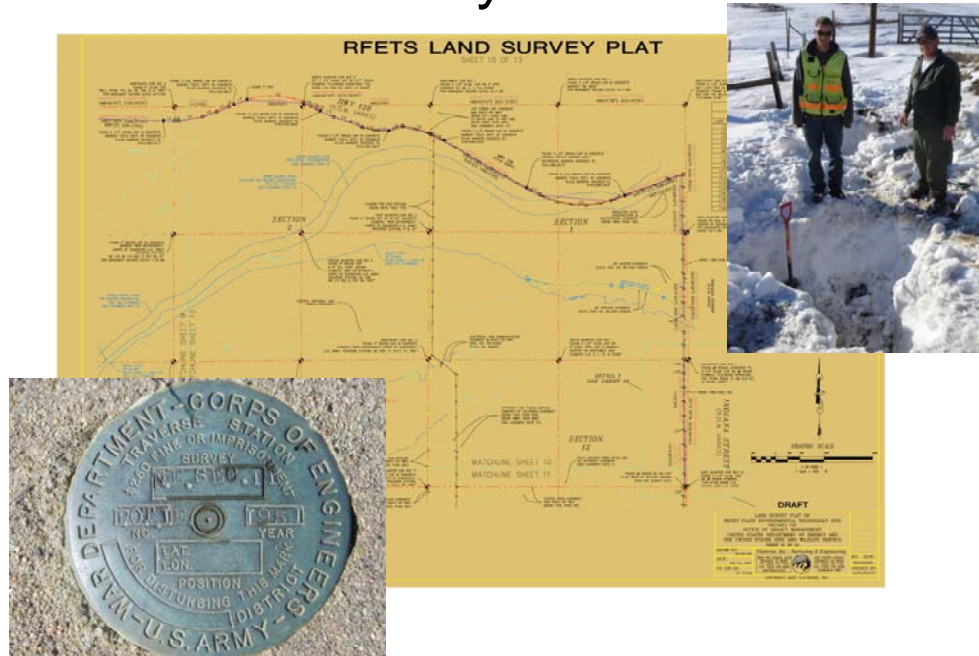


Fig. 3. USACE monument found in the snow.

4. A difference of 50 feet was identified for 2 miles of the south boundary, depending on which survey interpretation was used. Discussions were held regarding the actual locations of the section corners and whether the south boundary was located where the

fence was installed or 50 feet south of the fence. DOE agreed with its surveyor's recommendation and determined that the south boundary would be held to the traditionally recognized boundary at the fence line.

5. Another discrepancy involving the east boundary and overlap of Indiana Avenue further complicated the survey work. The older USACE survey of the east boundary used information from acquisition records and deeds that resulted in monuments that were 50 feet from the monuments identified by the DOE contracted surveyor. The difference was actually identified in the older USACE survey records, but the USACE decided to not move their monuments when the error was identified.
6. The surveyors encountered differing references for the datum points. Over the years, many surveys occurred at Rocky Flats. The reference and datum points used to anchor the surveys were different than those used today so calculations and equations were provided to cross-reference various datum points so all of the survey information could be correlated and tied together for future land management actions.
7. There were several missing easements or segments of easements involving portions of the natural gas line. A segment of the gas line easement servicing customers west of the site could not be found by either DOE or the utility company. The gas line exists and is in place, but no documentation or title exists for the segment.
8. Many of the mineral leases were proprietary and not recorded. Of these, several were identified by the surveyor. This new information was subsequently added to DOE's realty records. This is a good example of the many benefits of the survey.

Existing Mining Operations and Wildlife Refuge Criteria

DOE had purchased and used the more than 6,000 acres, with specific mission requirements. With specific subordination agreements in place, mineral activities were restricted to the western Buffer Zone and did not impact DOE activities. USFWS, operating under the regulatory guidance of the Wildlife Refuge Act, had very different guidance where land use compatibility does not allow mining which was determined to be detrimental to sensitive resources of the xeric tallgrass prairie. USFWS Refuge Act policy also resulted in constraints to granting easements and other encumbrances that could conflict with refuge management and other issues. As such, the existing mining operations and permitted mineral leases were determined to be incompatible with wildlife refuge criteria and certain parcels were identified for mineral right acquisition prior to the transfer. These parcels were subsequently identified for later transfer when acquisition of mineral interests is complete or when mining operations are over and mined land reclamation is complete.

The differing mandates between the two agencies resulted in a monumental effort to complete the work needed to transfer the lands outside the DOE retained lands to USFWS for the Rocky Flats Wildlife Refuge. Figure 4 presents the boundaries of the retained lands, transferred lands, and those parcels that either involve existing mining, mineral rights acquisitions, or other drivers that resulted in specific surveys and delineation for future transfers to USFWS.

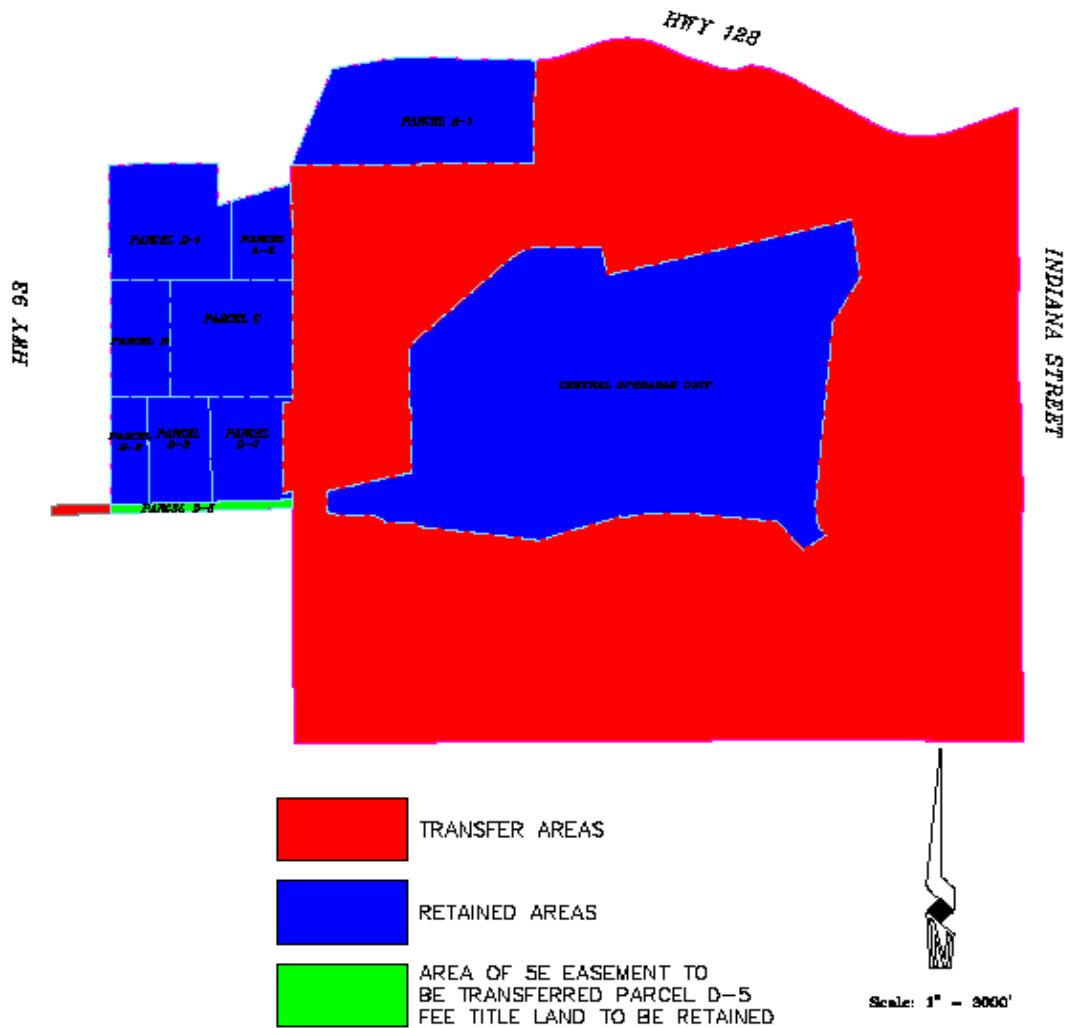


Fig. 4. Rocky Flats Site Corrected Transfer and Retained Areas Exhibit

The surveyor was tasked to complete a separate survey for each parcel using the legal description of the parcel from the mining operations plan associated with the zoning variance at Jefferson County. Unfortunately, these mining operation plans were not part of the federal real property records. DOE contracted with the surveyors to research the county records to obtain this information. Individual descriptions were then evaluated and monumented as part of the survey field work.

This provided DOE with two benefits. First, DOE now had specific field monuments that showed where the limits of the mining were and DOE, as the surface owner, could use them to oversee the mining and ensure that all mining operations remained inside the boundary of the mineral rights. Second, when mining operations and reclamation are complete, DOE will not need to commission a new survey with the added mobilization costs, but will already have a

survey that USFWS agrees is accurate and future transfers should occur with minimal work and negotiation between the agencies. This also overcame any risk associated with changing personnel or the discontinuity of negotiations.

U.S. Department of Interior vs. DOE Management Philosophies

Although all of the real estate interests are held in the name of the United States, DOI and DOE practices and management philosophies were in conflict on some issues such as which mineral rights were needed and whether parcels could be transferred until after all mining and reclamation were complete. USACE treated the transfer as a new acquisition to the U.S. government and required a great deal of documentation and research to answer questions on USACE work performed many years ago. DOE had sufficient realty interests to protect and allow its mission to occur, but USFWS policies required greater control of some interests such as the mineral rights.

Increase in Survey Funding and Scope

The funding and scope of work for the land survey was greatly increased when original surveys by the USACE were reviewed and it was determined that additional survey work was needed. This included field activities and research to break down sections and section corners, identify outstanding easements, decide how to resolve in-holdings and joint access to the site, and provide for future commitments such as legislated transportation corridors and utility easements that were required that USFWS may find incompatible with wildlife refuge regulations.

Additional Post-Transfer Requirements

DOE also needs to complete post-transfer actions on lands that were transferred to USFWS such as termination of realty instruments, permits, licenses, Memoranda of Agreement, easements, and other realty interests where improvements were removed and the easement or realty interest needs to be legally abandoned. Owners of outstanding interests such as utility easements and others also need to be notified by DOE of the land transfer to USFWS.

CONCLUSIONS

Other sites may be able to consider the Rocky Flats experience in managing their real estate records and detailed land ownership knowledge from transition of cleanup and closure work to post-closure long-term surveillance and maintenance. One of the most important lessons learned at Rocky Flats regarding real estate activities associated with site closure is that sufficient time and attention must be available to validate real estate records and title at DOE sites.