



VESTED For Success Case Study

How the U.S. Department of Energy Transformed a
Weapons Wasteland into a Wildlife Site

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The U.S. Department of Energy knew there was a serious community relations problem when 17,000 people encircled the 17-mile buffer zone of the Rocky Flats Nuclear Production Site in protest to what citizens and environmentalist feared to be one of the worst environmentally hazardous sites in the world. The site had been the home of the nuclear production site since 1952 where workers proudly purified and machined the plutonium pits that served as the triggers for nuclear weapons. Fears become a hard reality when the FBI, Justice Department, and EPA conducted a surprise raid, Operation Desert Glow. Serious environmental issues were found and the site was shut down and President George H. W. Bush ordered full closure of Rocky Flats in 1992.

Total closure and cleanup of a nuclear production facility had never been accomplished anywhere in the world. By 1995, Congress and the DOE were frustrated. The original DOE 1995 Baseline Environmental Management Report estimated that the project could require up to 75 years and cost up to \$37 billion. Two different contractors had made little progress towards cleanup between the 1989 raid and 1995 and the cleanup and closure effort was costing taxpayers almost a billion dollars a year.

Laying the Foundation: Getting to We

Recognizing that bureaucracy's normal procedures would be an obstacle to the compressed time frame and vow to save billions of dollars, the DOE decided to on a new path. The DOE set out to establish a contract and governance structure that would enable them to reward the supplier when the vision was achieved. In short, they would create a commercial agreement where DOE and their potential contractor would have a vested interest in each other's success. Using a Vested approach – the DOE would become working partners with their supplier where the supplier would bear a shared risk –and shared reward – for achieving mutually defined goals.

On July 1, 1995, the United States Department of Energy (DOE) signed a five year contract with Kaiser-Hill Company LLC, a joint venture of CH2M Hill and Kaiser Engineers, to manage Rocky Flats cleanup and closure. In 2005, just 10 short years after Kaiser-Hill started, the improbable became a reality. Kaiser-Hill successfully removed transuranic and other hazardous waste the equivalent to a 65-story building the length and width of a football field. In the end, the Rocky Flats Nuclear Production site was transformed into a 6,550-acre wildlife environmental refuge. The site was not just clean, but clean enough for birds and bison. The project also came in a staggering \$27 billion under initial budget projections and 65 years ahead of initial projections.

It is important to understand that the DOE's and Kaiser-Hill's efforts were not easy. Radically beating cost, time, cleanliness and safety projections involved fearlessness, commitment, and leaps of faith. It took fresh thinking and a Vested mindset whereby the DOE and Kaiser-Hill's objectives became tightly aligned in each other's mutual success by following the Vested Five Rules.



Rule 1: Focus on Outcomes, Not Transactions

By 1995, the DOE had clearly seen that a conventional transaction based approach were not driving breakthrough innovations to radically beat the budget and timeframe. Traditional government contracts were “cost plus” which meant the DOE would pay for the costs and pay a pre-negotiated fee or margin to the service provider. The hazardous environment increased expense as contractors frequently cited “safety” as the reason for “slow”. The DOE knew this common approach did not align the interest of contractors with DOE’s interest to reduce costs. In fact, it created a perverse incentive because the higher the cost, the more money contractor stood to make.

The DOE decided it was time for fresh thinking, creating their first ever performance-based contract. The result was a 1995 contract with Kaiser-Hill designed to challenge the traditional mindset of paying for activities. Specific language was included in the agreement to break long-practiced paradigms, including such things as eliminating unnecessary tasks and reviews, providing flexibility, and accepting priorities would change with circumstance.

The parties ultimately worked to create a flexible commercial agreement that was intended to drive innovation and results, but would also stand up to rigorous federal contracting requirements. Under the agreement, Kaiser Hill was now tightly aligned to achieving results – not just showing up to perform activities or meet pre-established metrics. Innovation would be critical for them to achieve the vision and associated Desired Outcomes.

Rule 2: Focus on the What, Not the How

For the DOE and Kaiser-Hill to succeed, both parties would need to rely on innovation. Innovation required both parties to adopt a “learn-as-you-go” mindset if they were going to radically come in under 65 year/\$37 billion budget. Rather than create a rigid Statement of Work, the DOE challenged conventional approaches for SOWs. Instead, they established the contract that limited the primary objectives to nine categories – disposition of weapons useable fissile materials and transuranic wastes, in-site and off-site waste management, water quality, cleanup guidelines, land use, environmental monitoring, building disposition, mortgage reduction, and definition of terms. DOE set overall cost and time requirements as well as refined objectives into bite-sized goals which they rewarded Kaiser-Hill for completing.

Kaiser-Hill then published its own Project Control System that incorporated governmental requirements with Project Management Institute’s best practices. Kaiser-Hill also utilized Work Breakdown Structures to align schedule, cost estimate, and work scope. A separate Project Management Plan was developed for each of DOE’s nine objectives.

While the workscope was broad in nature, the focus was on “doing things right the first time,” not speed. This safety first mentality, coupled with a “learn as you go” mindset, enabled Kaiser Hill to challenge conventional approaches and foster innovative thinking. When something failed, workers learned from it, and tried something new. Being unafraid to fail and determined to win



paid off. In the end Kaiser Hill developed over 200 innovations that saved the DOE years of time and billions in cost savings.

Rule 3: Agree on Clearly Defined and Measureable Outcomes

A Vested relationship always contains performance metrics that clearly define and measure success against Desired Outcomes. The Desired Outcomes are the result of collaboration to establish crystal clear understanding how to define success. The DOE and Kaiser-Hill careful construction Desired Outcomes and associated metrics that aligned to the vision, providing a roadmap for success. For Rocky Flats, success was defined as:

- Safety First – The duo agreed to use an approach known as the Organization Diagnosis Survey (ODS) to establish a performance baseline on four factors, with Kaiser-Hill being required to close the gap.
- Closed - While safety was paramount, getting Rocky Flats closed was job #1. Simply put, time was money.
- Cleaned Up - A 1996 Cleanup Agreement between the DOE, EPA and the Colorado Department of Public Health defined an initial “clean” target of 651pCi/gm (picocuries per gram of radiation) for soil samples outside the building area. Under the flexible Vested contractual structure, the parties later revised the target to 50pCi/gm.
- Cost - The cost estimates to complete the project were staggering – ranging from \$17 billion to \$100 billion.

While safety, cleanup, closure and cost were the primary Desired Outcomes, the DOE did have other objectives and metrics. The original contract included 60 metrics. However, by 1999, the number of metrics was reduced to 19 as the DOE learned focusing on the “critical few” generated better results.

Rule 4: Pricing Model with Incentives

Properly structured incentives drive the right behaviors. The basic Kaiser-Hill fee was structured as a Cost Plus Fee at Risk with Incentives. The fee-at-risk approach was critical because the true scope and costs of the work were truly unknown – they were, at best, guestimates. Creating an incentive fee tied to Kaiser Hill’s ability to contain (or even beat) the budget-aligned Kaiser-Hill’s interest with the DOE and taxpayer interest.

This meant that Kaiser-Hill’s profit would be connected to the final cost the DOE paid. For example, the original 1999 contract stated that, if total costs were between \$3,963 billion and \$4,163 billion, Kaiser-Hill would earn the target fee. If actual costs were lower than the target cost, Kaiser-Hill earned an additional 30 cents for every dollar <\$3,963. If costs exceeded the target cost, Kaiser-Hill’s fee was reduced by 30 cents.

Under the first DOE performance based, risk-sharing contract, Kaiser-Hill assumed programmatic and fiduciary responsibility for Project assumptions. They financed its own performance and submitted vouchers for payment. Not only did Kaiser-Hill have a portion of their fee at risk tied to



cost, they were putting up their own money to drive innovations with the hope of achieving incentive payments if they performed well.

When DOE invested in a contract that offered huge rewards for early completion and cost reduction, they believed reward needed to relate to people's daily lives – specifically their pocketbooks. And greater reward would yield greater results. Kaiser-Hill voluntarily continued the philosophy, offering performance incentive contracts for all sub-contracting work and pledging 20% of their profits to Rocky Flats workers at project end.

Rule 5: Insight versus Oversight Governance Structure

Working within jurisdiction of multiple governmental agencies and levels is always difficult. Working within multiple governmental units in a *nuclear facilities* project can be a real nightmare. Efforts by the multiple jurisdictions to avoid duplicate mandates and streamline reporting requirements made the process easier. Following sound Vested governance principles also paved the way to working together successfully. These include an aligned governance structure, encouraging communication at every level, an established flexible framework, balanced scorecard, and use of third party neutral reviews.

A commitment to engage the public was also an integral part of governance. Community boards and committees were organized with a dedication to public involvement, awareness, and education. Citizens regularly came on site, observing building demolition, checking safety records, and, all in all, staying totally informed. A system of project databases provided effective and consistent reporting. Data sharing information was integrated and shared through automated interfaces. Easily accessed, comprehensive information strengthened the bonds of trust essential to relationships.

Vested For Success - The Results

The DOE learned an important lesson many people might think of as common sense. You get what you pay for. Having clearly defined and measurable Desired Outcomes with significant incentives highly motivated Kaiser-Hill to not just show up – but to be wildly successful. The more Kaiser-Hill achieved the DOE's goals, the more Kaiser-Hill succeeded themselves. Across the board Kaiser-Hill achieved the DOE's Desired Outcomes for safety, closed, clean and costs.

Kaiser-Hill earned the maximum incentive – 11.6%. While many, including the Government Accountabilities Office, argued the fees were too high, Kaiser-Hill faced significant risk if they did not perform. The critical point is that when Kaiser-Hill “won” with more profit, the DOE “won” with lowered costs.

The DOE and taxpayers got the best part of the deal – successful cleanup and closure of one of the most dangerous nuclear sites in the world – at a staggering \$30 billion under budget and 65 years ahead of originally projected schedule. Rocky Flats is proof positive that Abundance Mentality works and works well.



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For More Information

Visit the University of Tennessee's website dedicated to Vested Outsourcing at www.vestedoutsourcing.com where you can download white papers, watch videos, read articles and subscribe to our Vested Outsourcing blog or register for one of Vested Outsourcing classes.

We encourage you to read our [other books](#):

The Vested Way: Why a What's in it for WE is THE Framework 21st Century Business Relationships are Build on (Palgrave Macmillan, 2012)

Vested Outsourcing: Five Rules That Will Transform Outsourcing (Palgrave Macmillan, 2010)

The Vested Outsourcing Manual: A Guide for Creating Successful Business and Outsourcing Agreements (Palgrave Macmillan, 2011)

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