The Role of Appreciative Intelligence in Creating High Performing Organizations: A Case Study of Rocky Flats Nuclear Waste Cleanup

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Executive Summary

There have been many attempts to identify individual and organizational level factors affecting the creation of high performing organizations. The following case study shows that Appreciative Intelligence, a newly identified individual ability, has a critical role in creating and sustaining a high performing organization.

Appreciative Intelligence is the ability to perceive the positive inherent generative potential in a given situation and to act purposefully to transform potential into outcomes. Appreciative Intelligence has three components, reframing, appreciating the positive, and seeing how the future unfolds from the present, which were demonstrated by leaders and participants in this case study.

The case goes back to 2005, when the United States Department of Energy completed the cleanup of Rocky Flats, a former nuclear weapons production facility, $30 billion under budget and 60 years ahead of schedule. In 1980, the U.S. government created a Program to clean up dangerous toxic waste sites, and Rocky Flats was at the top of the list. With the end of the Cold War, Rocky Flats’ production mission was terminated. Experts considered cleaning up such a dangerous facility technically impossible, risky, and impractical. They estimated completion at $37 billion in 70 years.

However, working in collaboration with contractors, local officials, and community leaders, the Rocky Flats Team achieved extraordinary results and completed the cleanup in just 10 years and at a cost of $7 billions. Rocky Flats’ transformation is an example of the power of high performing organizational design enriched by high Appreciative Intelligence of leadership and participants.

Introduction

Creating a high performing organization is understandably the goal of most leaders. Organizational theorists have attempted to differentiate high performing organizations from the rest by isolating individual and organizational level factors. In this case study, we demonstrate that the individual ability Appreciative Intelligence plays an important role in creating and sustaining high performing organizations.

In 2005, the United States Department of Energy (DOE) with contractor Kaiser-Hill (K-H) completed the cleanup of Rocky Flats (RF), a former nuclear weapons production facility, $30 billion under budget and 60 years ahead of schedule. Project Manager Frazer R. Lockhart was recognized for contributing to the fields of science and environment and was awarded the 2007 Service to America Science and Environment Medal.

In 1980, the United States government created the Superfund Program to clean up dangerous toxic waste sites. At the top of the list was the RF facility that manufactured plutonium triggers for nuclear warheads for four decades. In 1992, with the end of the Cold War RF’s production mission was terminated. Experts considered cleaning up such a dangerous facility as technically impossible, risky, and impractical. In 1995, an estimate placed the cleanup bill at $37 billion and projected 70 years for completion.
However, working in collaboration with contractors, local officials, and community leaders, the RF Team successfully remediated the facility in just 10 years at a cost of $7 billion (Cameron, 2008).

Extraordinary results were accomplished at RF. The workforce removed 21 tons of weapons-usable nuclear materials; decontaminated and demolished 800 structures comprising 3 million square feet; drained 30,000 liters of plutonium solution; stabilized and packaged 100 tons of high-content plutonium residue; performed environmental cleanup actions at 130 sites; dispositioned millions of classified items and excess property; and safely shipped more than 600,000 cubic meters of radioactive waste to a safe disposal site enough to fill a string of railcars 90 miles long (http://servicetoamericamedals.org/SAM/recipient/profiles/sem07_lockhart.shtml, accessed February 27, 2008). In July 2007, after the unparalleled cleanup, 4,000 acres of the site were transferred to the U.S. Fish and Wildlife Service and became a national wildlife refuge in which the rare and unique tall grass prairie found along Colorado's Front Range was conserved and where deer outnumber humans (http://www.ens-newswire.com/ens/jul2007/2007-07-16-03.asp).

RF’s transformation is an example of high performing organizational design enriched by high Appreciative Intelligence of leadership and participants. This case study is based on an interview with Frazer R. Lockhart, RF’s manager at project completion time, and on several published materials.

This paper has three sections. The first section defines Appreciative Intelligence. The second section explains the impact of Appreciative Intelligence in creating a high performing organization and how RF’s leaders and participants demonstrated the components of Appreciative Intelligence. In the third section, we show how the qualities of people with Appreciative Intelligence were seen at RF.

What is Appreciative Intelligence?

Appreciative Intelligence is the ability to perceive the positive, inherent, generative potential in a given situation and to act purposefully to transform potential into outcomes. It is the ability to reframe a situation to recognize the positive possibilities embedded in it that are not evident to the untrained eye, and to engage in creating the necessary actions so that the desired outcomes may unfold from the generative aspects of the current situation (Thatchenkery & Metzker, 2006).

Appreciative intelligence has three components: reframing, appreciating the positive, and seeing how the future unfolds from the present. Individuals who demonstrate Appreciative Intelligence demonstrate four qualities, persistence, conviction that one’s action matter, tolerance for uncertainty, and irrepressible resilience.

Appreciative Intelligence should be a dimension of the model of multiple intelligences developed by Harvard Professor Howard Gardner. According to Gardner (1983), intelligence is not just one ability, but several. He proposed seven intelligences: linguistic, bodily-kinesthetic, spatial, musical, logical-mathematical, intrapersonal, and interpersonal. What most of us consider as intelligence is the logical-mathematical component identified by Gardner - the capacity to understand and use logical structures, patterns, and relationships through experimentation and conceptualization. The intrapersonal and interpersonal intelligences identified by Gardner were later popularized as emotional intelligence. We believe that Appreciative intelligence should be another dimension of this model of multiple intelligences.
The Importance of Appreciative Intelligence in Creating High Performing Organizations: The Components of Appreciative Intelligence Demonstrated at Rocky Flats.

In this section, we explore how the components of Appreciative Intelligence: reframing, appreciating the positive, and seeing how the future unfolds from the present were demonstrated by the RF Team in achieving extraordinary results. Let us explore each of them.

Reframing

Framing is the basic psychological process in perception where a person constructs or interprets a context, issue, or scenario in a certain way. Reframing is framing reality in a “new and positive way,” which opens our minds to seeing new connections between ideas, people or situations” (Thatchenkery and Metzker, 2006).

From the outset, the RF Team recognized the need to reframe. They focused on a positive outcome even though they were well aware of the initially unmotivated workforce, the mistrust of the government, as well as the controversies and the intense negative perception toward the facility among the local population and media.

First, the RF Team helped the workforce reframe their motivation. Lockhart (2007) indicated that the initial challenge the team encountered was not knowing what motivated the workforce. They first identified that most workers had been working at RF all their lives. They had an incredible amount of pride and patriotism for their work during the Cold War. They were highly skilled at building radioactive hearts for most nuclear weapons in the U.S, something that only a few people in the world could do. Their mission was to keep their country safe, but when the Cold War ended and no more weapons were manufactured, they were no longer perceived as heroes. RF leaders engaged the workforce in accepting their situation, reframing their motivation, and enabling them “to have a patriotic sense” into the new national mission of cleaning and closure. They reframed the situation by selecting motivation as highly valuable to the workers, and allowing them to focus on being “part of something that they could have an equal sense of pride” (Lockhart, 2007).

RF leaders also reframed their own mental models to see workers as co-creators of solutions. They enabled workers to align with the new vision. They focused on showing workers that the work they were going to do would be something truly huge that would be a very important part of their lives (Cameron & Lavine, 2006). RF workers took the challenge and demonstrated a high level of commitment to clean up and closure, embracing it “as patriotically and earnestly as they performed weapons production work.” RF leaders allowed workers to become the best they could be by treating them as being capable and valuable, which resulted in a highly-engaged workforce. In fact, they “never missed a production deadline and gained a reputation as world-class decommissioning workers” (K-H/DOE Brochure). Indeed, their engagement in the process of closing and transitioning RF derived from their dedication to the vision and mission (RF Report, 2006).

Besides helping workers reframe their purpose around the current national mission of environmental cleanup, RF leaders demonstrated their Appreciative Intelligence by bringing to surface what was best in the workforce, maintaining it, and retraining it. RF leaders knew about the workers talents and willingness to overcome challenges. Lockhart (2007) indicated that workers believed they had won the Cold War and made a difference, but did not receive recognition for it. Then, they no longer knew what their work was. However, workers found new meaning in their work, and although they knew their new tasks were not going to last forever,
they excelled at them. Furthermore, another astonishing result was the exceptionally high retention of about eighty percent of the workers along with a large number of innovations by them (Lockhart, 2007). When the site was finally closed, K-H’s president Nancy Tuor acknowledged that the remarkable success of the project was due to the dedication of the workforce (Hansen, 2005).

Another example of reframing was designing a wildlife refuge. The RF Team went beyond conventional judgment that called for merely clearing up the facility and securing it with fences to keep citizens from danger of contamination. They visualized a positive outcome that would symbolize the best of nature and wildlife. Ultimately, after the unparalleled cleanup, 4,000 acres of the site were transferred to the U.S. Fish and Wildlife Service and became a national wildlife refuge in which the rare and unique tall grass prairie found along Colorado's Front Range was conserved and where deer outnumber humans (http://www.ens-newswire.com/ens/jul2007/2007-07-16-03.asp).

Appreciating the Positive

The second component of Appreciative Intelligence is appreciating the positive, or the ability “to see talents or potential that others might miss” (Thatchenkery & Metzker (2006).

At the beginning of the project, RF leaders encountered a hostile environment with the surrounding communities. As Lockhart (2007) indicated, such hostile climate was due to the secrecy around the plant’s classified mission. Workers could not talk about their work, not even to their families. Also, many people opposed manufacturing of nuclear weapons. Thus, the RF team had to overcome “two or three decade’s worth of pent-up hostility and mistrust.” With the purpose of overcoming hostility and mistrust and to earn credibility, RF leaders needed to understand the communities so they began having meetings with them and intentionally listened to them. Such intentional engagement allowed the RF team to recognize the real power of the communities, something they had not seen before, and they subsequently started seeing them as co-creators of solutions (Lockhart, 2007).

The RF team focused on the positive side of what they already had. They started to see the communities as potential allies, something that came true later. Reframing from antagonism to appreciation certainly resulted in partnership. Thatchenkery & Metzker (2006) write that psychologists Mitchel Adler and Nancy Fagley identified a type of appreciation that is related to Appreciative Intelligence, a “have” focus, in which people rather than paying attention to what they don’t have in their lives, they notice what they have and acknowledge and feel good about it.

DOE leaders also started to see the value of other stakeholders for project success. Thereafter, the RF team purposely built trust with stakeholders and started having frequent informal meetings to give updates on the project progress. The newly created climate led to open dialogue and communication (RF Report, 2006), which opened the doors to discussions of important issues such as the project’s conceptual plans (Lockhart, 2007). Dialogue is a basic component of effective communication, and “communication is the basis for all human interaction and for all group functioning” (Johnson & Johnson, 2003). The roots of the word dialogue are Greek: *dia* and *logos* which mean “meaning flowing through” (Jaworski (1996). At RF, the psychology of the communities changed, and dialogue was an invitation to bring multiple viewpoints and to honestly and candidly construct new viewpoints. The dialogue brought “the diversity of voices that people bring to the table – and move to a new level of collective insight” (Isaacs, 1999). Dialogue changes the psychology of a group and can expand
its capacity or deflate it (Bossidy & Charan, 2002). At RF, appreciative behaviors led to the much needed dialogue which increased the capacity of the organization.

**Seeing How the Positive Future Unfolds from the Present**

The third component of Appreciative Intelligence is seeing how the future unfolds from the present. Highly appreciative intelligent people connect potential in the present with desired outcomes (Thatchenkery & Metzker, 2006). They can generate more possibilities for the future so they can reach the end goals.

Even though RF was in a very unfavorable and regulatory environment with a workforce that initially lacked motivation (Lockhart, 2007), RF leaders were able to see a positive future unfolding from the present. They could transform the present situation in order to accomplish their goals, and they took action. For instance, many RF key leaders contributed greatly towards creating the accelerated closure schedule (RF Report, 2006) of a facility structurally built as if it was never going to close. Indeed, a major breakthrough occurred when they realized they had a closure deadline in ten years and a budget of ten billion dollars, which realization made them focus and identify priorities (Cameron & Lavine, 2006).

A significant action impacting the performance of the accelerated closure was the “projectizing” of the clean up and closure. Implementing a project meant to have deadlines, a beginning and an end, a budget, as well as criteria for performance. DOE was used to work in programs, but not in projects. However, when DOE and K-H leaders realized that a project format was necessary to accomplish clean up and closure, they agreed in “projectizing” the site (RF Report, 2006). Leaders applied “project planning tools” in a disciplined manner (RF Report, 2006). Using a project format required strong leadership, and DOE and K-H surely had it. Further, they were united and consistent in the messages sent to others, such as the “unified closure project message: ‘Get it done!’” (RF Report, 2006). DOE and K-H partnership in the project paved the way for success and earned them several awards, such as the Project of the Year, a prestigious award that recognizes and honors the winning project team for “superior and exemplary project management” (FDCH Regulatory Intelligence Database, 2006).

DOE and K-H leaders were intentional about developing their partnership. At arrival at RF, K-H saw the need to change the culture and processes if they were to achieve high performance. K-H people asked DOE leaders a lot of questions. Subsequently, DOE leaders learned to appreciate K-H’s questioning and “thinking outside the box” attitude (Lockhart, 2007). In fact, they built a great relationship, reflecting together and finding new ways towards accomplishing their goals.

RF leaders moved from reframing and focusing in the positive to creating steps to complete the project by taking different approaches. For instance, Lockhart (2007) indicated that K-H was very innovative and had a different approach. K-H “became the dominant partner” and helped others reframe “because they came in RF having no investment in nuclear weapons at all.” They asked a lot of questions,” such as “Why do you have to do it that way?” K-H was interested in cleaning up the place and helped RF staff “blow up some paradigms” they had (Lockhart, 2007).

RF leaders saw how the future unfolded from the present. Beyond having ideas and creating possibilities, they took specific sequential actions to get to the desired future state. Their steps built on one another and created the energy to lead to positive outcomes and produce change in individuals and their environments (Thatchenkery & Metzker, 2006).
The Four Ensuing Qualities of Appreciative Intelligence and How they Were Demonstrated at Rocky Flats

This section examines the four qualities of Appreciative Intelligence, persistence, conviction that one’s action matter, tolerance for uncertainty, and irrepressible resilience (Thatchenkery & Metzker, 2006) and how they unfolded in this case.

**Persistence**

Persistence, or the ability to continue with a project, is a critical ability of individuals with high Appreciative Intelligence.

RF leaders demonstrated high levels of persistence. For example, when they first recognized the appropriateness of using a “project” format for successfully meeting deadlines and completing tasks, they persuaded DOE officials in Washington, D.C. to use such format.

RF leaders often had to “learn under fire” (Lockhart, 2007), but they didn’t stop. They “learned on the go, sometimes moving piece-meal through processes as many policies to facilitate accelerated closure were not yet developed and key decisions had not yet been made. Various strategies and activities were conducted without a complete game plan and without a coherent notion on how the pieces would fit together at the end” (RF Report, 2006). Nevertheless, the RF Team continued to be engaged in the project.

Persistence was also demonstrated when processes or initiatives were first implemented. “Because of the groundbreaking nature of attempting a first of-its-kind accelerated cleanup and closure project, RF had to pioneer processes” (RF Report, 2006). For instance, Barbara Mazurowski, site manager from 2000-2002, was very persistent in her safety goals. In fact, in 2001, she demanded K-H to develop a thorough action plan to correct safety issues (Cameron & Lavine, 2006). As a result, safety improved significantly. Workers also became involved in planning the work and identifying hazards. Persistence paid off as trust and engagement of the workers was built. Indeed, workers were quite innovative and found several safer and cost-effective solutions (K-H/DOE Brochure).

There are many stories of RF workers and leaders demonstrating persistence and showing that after a setback they continued finding solutions. Indeed, workers experimented and came up with numerous innovations. For instance, workers created a “low-cost, low-tech chemical decontamination solution that cleaned deeply contaminated surfaces to level not imaginable before” (K-H/DOE Brochure).

Further, the RF Team engaged in path creation. They went beyond the expectations of the familiar and logical way of proceeding, based on the self-reinforcing patterns of the past (Boland & Collopy, 2004). As a matter of fact, before the vision of accelerated closure was articulated, no expectation existed that the closure could be accomplished in the near future or as a defined project with specified schedules (RF Report, 2006). The goal of accelerated closure was added to the contract signed in 2000. Persistence guided the team to achieving greater goals not originally envisioned, and the end result was high performance and extraordinary success.

**Conviction that One’s Action Matter**

The second quality of Appreciative Intelligence, Conviction that One’s Action Matter, is related to self efficacy (Bandura, 2000). Bandura (1978) also introduced the concept of reciprocal determinism - that our thoughts, feelings, and environmental factors influence one another, creating an interdependent system. Both concepts are relevant for high performance and Appreciative Intelligence.
At RF, managers started to believe that they were effective in dealing with bureaucracies within federal agencies as when reaching out to the uneasy community. Their perceptions of their capability determined what they would do with them and how they would interpret the results of their actions. People with strong self-efficacy take on more challenging tasks, increase their efforts if they think they might fail, and recover quickly after unexpected failures (Thatchenkery & Metzker, 2006). In this case, as the project unfolded leaders took on more challenging assignments and recovered quickly when things didn’t work out.

Highly appreciatively intelligent people have the confidence that their actions matter and they are positive and proactive (Thatchenkery & Metzker, 2006). RF leaders and workers had a “Yes I can do” attitude and the conviction that they had the power to produce desired outcomes. Many people believed that site clean up was impossible and thought it was enough to build a fence. However, that “taped into their sense of personal challenge” and they said, “Yes, we can do it.” “When it came to cleaning up RF, the word “No” and “Can’t be done” were not in the workers’ vocabulary (Lockhart, 2007). They overcame potential roadblocks through determination and by attempting to approach problems with new perspectives” (K-H/DOE Brochure).

RF leaders also believed they could have the same workforce clean up the site. They were confident they could influence others and make things work, and they did. It has been documented that the same workforce that built weapons was retrained to do the clean up. We must note that even though some experts were hired, about eighty percent of the workers had been working at RF for many years. As Lockhart (2007) indicated, the workforce “turned 180 degrees…” Also, RF leaders highly appreciated the workers and focused on being financially generous and compassionate towards them to aid them with “soft-landing” or working out of their jobs.

At RF, self-fulfilling prophecies worked for positive expectations. The term Self-fulfilling prophecies is a construct associated to self-efficacy. Self-fulfilling prophecies are expectations that come true, irrespective of typical cause-effect relationship (Merton, 1948). K-H leaders started to believe that accelerated site closure was possible at a significantly reduced cost, and that belief changed things. First, they started questioning why cleaning and closing the site would take “more than a half of a century and tens of billions of dollars” (K-H/DOE Brochure). They acted with integrity and went beyond satisfying immediate corporate and individual interests. They “sensed what was possible and seized the opportunity to create the possibility of a landmark accelerated closure” (RF Report, 2006). The new vision and commitment to an accelerated closure “provided a new basis for dialogue that affected everything including budget decisions, project performance expectations, approaches to regulatory compliance and application of human resources” (RF Report, 2006).

RF leaders and workers had the conviction that their actions mattered and that they could achieve their goals, which they did.

**Tolerance for Uncertainty**

The third quality of Appreciative Intelligence, tolerance for ambiguity, is the ability to successfully reach toward the unknown, take risks and to grapple with the discomfort of uncertainty or ambiguity – even to feel comfortable with it (Thatchenkery & Metzker, 2006). Uncertainty or ambiguity is dealing with two seemingly contradictory ideas at one time, not knowing an answer, not knowing how to solve a problem, or not foreseeing the results of a given situation.
RF leaders recognized that they had to figure things out as work was being done. For example, K-H CEO Nancy Tuor who made safety and efficiency a priority at KF, acknowledged that challenges at RF were similar to those of “going to the moon” and that “no one knew how to do it when they started” (K-H/DOE Brochure).

Ambiguity and uncertainty can lead to conflict and discomfort, but benefits surface from the process of resolving or making sense of contradictory ideas. Ambiguity can spark new ideas or products and generate mental energy, excitement and creative tension (Thatchenkery & Metzker, 2006). At RF, innovation flourished as many workers found innovative ways to use off-the-shelf products. For instance, some innovations like the ones related to waste packaging, were crucial to the acceleration of closure and saved millions of dollars (RF Report, 2006). This model of technological innovation happened because of the openness to experimentation, willingness to take risks, and the engagement of the workforce (K-H/DOE Brochure). RF leaders suspended feelings of discomfort and could bear uncertainty for a long time. They learned on the go and not knowing how pieces would fit together (RF Report, 2006). Also, workers had the ability to manage the discomfort of not knowing how to fix problems and stayed enough time in situations to come up with numerous innovations.

For innovation to happen, it is necessary to take risks and to have a capacity to tolerate failure. When we seek stability, we may be trying to avoid risk and failure. Legendary inventor and design leader Dean Kamen faced resistance to his innovative ideas and knew about the dynamic tension between stability and innovation (Thatchenkery & Metzker, 2006). In the RF case, there was willingness to take risks. For example, the new performance-based contract put a great deal of pressure on K-H to finish the job on time and on budget. The contract was “risky” for K-H, but the company was “willing to take risks.” K-H’s president Card confirmed that they didn’t know how the pieces would “fall into place by 2006” (Morson, 2000). The contract was contingent to completing the work, and K-H was willing to take risks and the responsibility to figure things out such as how to clean the contaminated buildings (Cameron & Lavine, 2006). Certainly, the contract had the potential of millions of dollars in earnings, but it was risky and uncertain. In the end, the contract turned out to be a key factor for the project’s success (Hartman, 2006).

RF workers also learned to work in new ways and shared the risks of success and failures. New performance goals were high and safety became a priority. RF’s working environment was uncertain and dangerous. However, workers maintained high performance. Indeed, even though they knew they were putting themselves out of their jobs, they continued to be engaged, maintained high performance, and safety improved considerably (Hansen, 2005).

RF leaders tolerated their own uncertainty and coped with the reactions to uncertainty in others. They brought new ideas into the open, causing discomfort in others by displacing old ideas and beliefs. The discomfort by others could take a toll on a leader’s or innovator’s acceptance, credibility or pocketbook. However, they helped others deal with uncertainty, helped them reframe situations and see what was positive. They could see how the future could unfold from the present and were persistence until what was unknown became known (Thatchenkery & Metzker, 2006).

**Irrepressible Resilience**

The fourth quality of Appreciative Intelligence, irrepressible resilience, is the ability to maintain strength against adversity and to bounce back. It is the quality of not buckling under stress and returning to a state of strength despite weakening forces around. It is the ability to
thrive in the face of adversity. When circumstances are challenging a resilient individual makes positive adjustments.

“Highly resilient individuals may have a greater capacity to learn from the lumps and bumps in the road and to use that knowledge to deal with future setbacks (Salovey, Bedell, Detweiler, & Mayer, 1999). According to Frederickson’s “broaden and build theory,” people’s positive emotions open the way for expanded cognition and behavior, which in turn build their “physical, intellectual, and social resources” (Fredrickson, 2001). This is one explanation of how appreciative-intelligent leaders are able to generate the future they see in the present (Thatchenkery & Metzker, 2006).

The RF team was able to reframe and reinterpret a given situation, enabling to perceive that a positive consequence could be built from even the most drastic or devastating circumstances. Instead of experiencing a position of impossibility and, therefore, a situation without hope or remedy, they showed the capacity to see what was possible and to set a plan of action with concrete steps. Over time they learned to turn almost any change into an advantage. Even though at times they felt overwhelmed, they became flexible and moved back into a positive emotional state that allowed them to handle challenging situations and succeeded. They reframed situations and addressed the present with the belief that they could accomplish their mission.

RF leaders empowered the workforce and gave them freedom to excel. “People with resilience are perceptive, insightful and open to new experiences, factors which may allow those with Appreciative Intelligence to come up with and act on solutions that haven’t been tried previously” (Klohnen, 1996). At RF, the vision of site accelerated closure was created by K-H leaders when they started questioning why site cleaning and closing would take such a long time at a very high price (K-H/DOE Brochure). They removed obstacles and made things happen.

Appreciative Intelligence is an individual ability that has an enormous impact on larger systems. Successful leaders and innovators extend their Appreciative Intelligence beyond their personal lives and into their organizations by creating an environment, infrastructure, corporate culture, or system that generates success and helps appreciation perpetuate (Thatchenkery & Metzker, 2006). RF leaders created an environment of partnership and engagement. They were models to the workforce and other stakeholders. RF’s culture became highly Appreciative Intelligent which led to high performance and extraordinary success of the project.

Conclusion

The RF cleanup and closure project demonstrated that a high level of Appreciative Intelligence and commitment of leaders and participants allows the creation of a high performing organization and extraordinary results.

Appreciative Intelligence is shown to be an individual ability that has great impact on larger systems. At RF, the vision of active collaboration and dialogue between leaders and workers, the public, private and nonprofit sectors helped create innovative reframing and new possibilities. The positive outcome was converting an environmental eyesore and security risk into a wildlife refuge, and the transformation of a public liability into a community asset. Skeptics who believed that cleanup was impossible were pleasantly surprised.

This project is a model that serves as a roadmap for similar reframing in a variety of environmental cleanup efforts for the U.S. Department of Energy and the Environmental Protection Agency.
References


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