

2003 INNOVATIONS AWARDS PROGRAM
Application Form

1. Program Name: The South Dakota Abandoned Tank Removal "Tank Yank" Program
2. Administering Agency: The South Dakota Petroleum Release Compensation Fund and the South Dakota Department of Environment and Natural Resources
3. Contact Persons (Name & Title) Dennis D. Rounds, Executive Director, South Dakota Petroleum Release Compensation Fund and Kristi Honeywell, Natural Resources Engineering Specialist, South Dakota Department of Environment and Natural Resources.
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8. Please provide a two-sentence description of the program. The South Dakota Abandoned Tank Removal Program is the nation's largest and most comprehensive abandoned tank removal program. Its purpose is to aggressively remove thousands of inactive or abandoned underground petroleum and waste-oil storage tanks at no cost to the owner.
9. How long has this program been operational (month and year)? The South Dakota Abandoned Tank Removal Program was enacted in the 2000 State Legislature through Senate Bill 197 (SB 197) and commenced on July 1, 2000.
10. Why was the program created? (What problem[s] or issue[s] was it designed to address?) The program was created to remove inactive or abandoned underground petroleum storage tanks thereby reducing the environmental risks associated with petroleum releases, especially risks to ground water. By using state funds to remove the underground tanks, this program provides a strong incentive for property owners to revitalize their properties and to stimulate property transfers that would not otherwise occur when underground petroleum tanks exist on site.

11. Describe the specific activities and operations of the program in chronological order.

- In 1999 at the request of Governor Bill Janklow, the South Dakota Petroleum Release Compensation Fund (PRCF) and the Department of Environment and Natural Resources (DENR) conducted a pilot study to determine the approximate cost for removing abandoned tanks and the speed at which it could be done. Ten known abandoned tank sites located in diverse regions of the state were selected for the study. Information from the pilot study demonstrated that a statewide comprehensive program could be implemented. It also assisted the PRCF and DENR in determining the scope and cost of a proposed statewide program. Results of the pilot study provided valuable information on ways to lower program costs, accelerate tank removal activity and identify potential problems and ways to resolve them.
- February 2000, SB 197 was passed by the 2000 South Dakota Legislature creating the voluntary South Dakota Abandoned Tank Removal Program. The program is established as a joint program between the Department of Commerce, which administers the PRCF program, and the DENR. The PRCF program reviews, verifies and approves applications and pays for the work. The DENR hires contractors, arranges for and oversees the work. SB 197 authorizes the use of tank inspection fee revenue collected by the PRCF to pay for the tank removals.
- February 2000 - July 2000, Staff from the DENR and the PRCF worked jointly to develop the application, bidding and contracting and payment processes.
- February 2000 - July 2000, the DENR requests proposals from environmental consultants to coordinate the tank excavations, remove tank fluids, sample the sites, observe site conditions and submit reports detailing the tank removals. Four consultants are chosen and hired to perform the environmental work.
- February 2000 - August 2000, Staff from both DENR and PRCF cooperatively conduct an intensive statewide search for abandoned tank sites seeking voluntary applications for tank removals. This phase of the program included on-site, community-by-community investigations. Volunteer coordinators in many counties also assisted in identifying potential sites.
- July 2000, the PRCF and DENR develop a payment protocol that assures quick and accurate review of contractor and consultant billing. Once reviewed and approved by the DENR, contractor invoices are submitted to the PRCF for final approval. Payments are made on a weekly basis. Costs are tracked on both a per-site and per-bid basis. SB 197 requires that the PRCF make contractor payments within 30 days once the invoice has been approved by DENR. The PRCF is able to successfully carry out this provision to the

delight of the contractors.

- July 2000, PRCF investigators ("tank hunters") begin to visit application sites to confirm the presence of tanks, determine site accessibility and measure liquid levels in the tanks. This information is immediately provided to the DENR for use in the bidding documents.
- July 2000, the DENR begins to assemble bid packages as applications begin to come in. Bid packages are based on information from the applications and from the on-site investigation reports from the PRCF "tank hunters". To keep costs at a minimum, the DENR groups the tank sites into clusters ranging from 10-25 sites per bid. Bids are let on a weekly basis.
- July 2000 - present, the DENR contracts directly with the excavators and consultants to remove the tanks. As the general contractor, the DENR oversees the work.
- Contract change orders are allowed on a regular basis as new applications are frequently submitted once the contractor arrives on site and is in the community working. Since the sites are bid using per-unit costs, additional sites can be added to the work order without increasing the basic per-tank removal costs.
- Between July 2000 and December 2002, approximately 3,700 tanks are removed from over 2,600 sites in virtually every city, town and rural community in the state. Over 700,000 gallons of petroleum and contaminated water are removed from tanks.
- Additional risk assessments and cleanups are currently being conducted at about 100 sites.
- The program continues to this day, however the majority of the tanks have already been removed.

12. Why is the program a new and creative approach or method? The abandoned tank program is new because it is the first and only program of its kind in the nation. No other state or federal program incorporates such a wide-scale approach to removing abandoned underground petroleum storage tanks in a timely and cost-effective manner at no cost to the tank owner. The program is creative in that it is being carried out entirely with state resources and under state lead. Application requirements and bureaucratic red tape are kept to a minimum in order to gain public interest and trust. Once the tank is removed, the level of subsequent cleanup is determined using a risk-based corrective action approach.

13. What were the program's start-up costs? (Provide detail about specific purchases for this program, staffing needs and other financial expenditures, as well as existing

materials, technology and staff already in place.) While the total cost of the entire Abandoned Tank Removal Program will be approximately \$6.5 million, there were very little start-up costs. For the most part, existing staff and equipment were used to administer the program. However, some new equipment was purchased to assist staff in investigating sites and to verify the existence of tanks and determine their size and contents. This included the purchase of four metal detectors along with several steel probes, wrenches and other tools. Two file cabinets and one explosivity meter were also purchased. The additional start-up costs, excluding in-kind services, were less than \$3,500.00.

14. What are the program's annual operational costs? The annual administration cost including in-kind full-time employees (FTEs), travel and supplies is approximately \$330,000. Even though this is an on-going program, the peak of activity was from July 2000 through October 2002. Most tanks have now been removed. During this time, the DENR and PRCF each dedicated three FTEs from existing staffs to this program for a total of six FTEs. Other staff would assist at times, depending on the workload. The annual operating cost which includes consultant and contractor costs for removing and disposing of tanks and contaminated soil were approximately \$3 million. Total program expenses over the 27-months of peak activity were \$6.5 million.
15. How is the program funded? The Abandoned Tank Removal Program is funded with revenue from the PRCF. The PRCF is a state-operated insurance fund, which provides financial assurance for petroleum tank owners in South Dakota for corrective action and third party liability expenses if there is petroleum release to the environment. In its regular program, the PRCF is very similar to commercial pollution liability insurance. If a tank owner has a spill or release, the PRCF can reimburse necessary and reasonable cleanup expenses after a \$10,000 deductible has been met. SB 197 authorized the creation of the special Abandoned Tank Removal Program within the regular PRCF program. Under SB 197, the deductible requirement is eliminated for those sites that qualify for the new program. SB 197 also limited eligibility of the new program to unregulated tanks such as home fuel tanks, and commercial tanks that were taken out of service prior to April 1, 1988. Tanks that do not qualify for the new program, may still qualify for coverage under the PRCF's regular program, but there would be a \$10,000 deductible. Additionally, if these tank owners can show they cannot afford the tank removal, they may still qualify for Federal Leaking Underground Storage Tank Trust Fund monies.

The PRCF is funded with revenue from a \$20 per 1,000-gallon tank inspection fee, which is imposed on all motor fuels entering the state. Only a small percentage of the tank inspection fee, about 10%, is actually distributed to the PRCF (about \$1.6 million per year) with the remaining funds going to other un-related programs.

16. Did this program require the passage of legislation, executive order or regulations? If YES, please indicate the citation number. Yes, the 2000 Legislature passed SB 197

which authorized the South Dakota Abandoned Tank Removal Program. The 2001 Legislature revised the program by removing the lien requirements in HB 1277.

17. What equipment, technology and software are used to operate and administer this program? Microsoft Office Software programs including Access, are used to track sites and to review and process contractor payments. Magnetometers (metal detectors) are used to help identify the precise location and size of underground tanks. Special tapes are used to measure fluid levels in tanks and estimate quantities. Large wrenches are used to open tank fill spouts. Photoionization detectors are used to record petroleum vapors. Pressurized carbon dioxide used to inert tanks to avoid explosions or fire. Heavy construction equipment is used by contractors to physically excavate and remove the tanks.

18. To the best of your knowledge, did this program originate in your state? If YES, please indicate the innovator's name, present address and telephone number. Yes, this program was initiated in South Dakota at the request of former Governor William J. Janklow. Governor Janklow was elected to US House of Representatives in 2002.
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19. Are you aware of similar programs in other states? If YES, which ones and how does this program differ? No. There are no other programs similar to or as comprehensive as the South Dakota Abandoned Tank Removal Program. Stephen McNeely, US EPA Office of Underground Storage Tanks, commented in the Bureau of National Affairs (BNA) newsletter "I know of no other program like it." (BNA, August 20, 2001).

20. Has the program been fully implemented? If NO, what actions remain to be taken? Yes. The program has been fully implemented. While it remains active, most inactive or abandoned underground petroleum tanks have now been removed in South Dakota.

21. Briefly evaluate (pro and con) the program's effectiveness in addressing the defined problem[s] or issue[s]. Provide tangible examples.

Pros: This program has nearly eliminated the environmental risk from a large number of inactive or abandoned underground petroleum storage tanks in South Dakota. With the tanks now gone, this potential liability has been removed forever. This program also encourages the revitalization of vacant or underdeveloped properties. The US Environmental Protection Agency refers to properties that are vacant or underdeveloped due to the presence of inactive or abandoned petroleum tanks as "USTfields". By removing most abandoned or inactive tanks, the SD Abandoned Tank Removal Program

has encouraged the sale and redevelopment of many USTfields. The South Dakota program was recently highlighted in a special report funded by the US EPA entitled "Recycling America's Gas Stations - The Value and Promise of Revitalization", (Northeast-Midwest Institute and National Association of Local Government Environmental Officials, 2002). The purpose of the report is to profile 10 US EPA pilot studies on USTfields reuse. Although not part of the US EPA-funded pilot study, the US EPA believed the innovation and success of the SD program warranted its inclusion in the report. South Dakota's program was the only one profiled that was not part of the study. The profile on South Dakota's program includes the quote, "By tapping state resources, going beyond the minimum requirements of federal UST regulations, and clearing sites for reuse, the South Dakota program should provide UST developers with a powerful incentive to revitalize these sites."

In just over two years the state has removed approximately 3,700 tanks at 2,600 sites, removed over 700,000 gallons of product and contaminated water from the tanks, and excavated and treated more than 20,000 cubic yards of contaminated soil. This is virtually our entire population of inactive or abandoned tank sites. While there are clearly some sites where tanks have yet to be removed, the number of those remaining present a very small percent of the original estimated abandoned tank population.

Cons: While tank owners have had their tanks removed at no cost, the state has retained the responsibility for future cleanups associated with the tanks. Of particular concern is soil and ground water contamination encountered during future construction activities near some of the more heavily contaminated tank sites.

22. How has the program grown and/or changed since its inception? The 2000 Legislature passed the original version SB 197 creating the Abandoned Tank Removal Program. This version required a five-year lien be placed on the property for the cost of tank removal or \$10,000, whichever was less. The 2001 legislature passed House Bill 1277 repealing the lien requirements. It was widely believed that the lien discouraged tank owners from voluntarily submitting applications. This proved to be true, as once the lien requirement was removed, the rate of application submittals was greatly accelerated. The number of applications was more than double the initial estimate.
23. What limitations or obstacles might other states expect to encounter if they attempt to adopt this program?
- **Funding:** One of the greatest obstacles may be finding the revenue to pay for a program such as this. There was tremendous bipartisan support in the 2000 South Dakota Legislature for using the revenue from the PRCF to pay for this program. Senate Bill 197 authorizing the program and funding from the PRCF passed the SD Senate 33-0. There was also similar support in the House, passing 60-4. Furthermore, there was no opposition from industry or special interest groups. One can speculate as to why there was so much support for the program, but clearly the administration made a very strong for this program and agency staff

provided solid information that such a program could be successfully carried out and at a low cost. This is partially based on the results of the abandoned tank pilot study, which was completed during the previous year. It is also worth noting that the unspent balance of the PRCF had grown in recent years to the level where expenditures of up to \$10 million could be spent on this program without impacting the solvency of the PRCF. The balance of the PRCF had increased in part because of joint efforts of the PRCF and DENR to implement a risk-based corrective action (RBCA) program in 1995. While it is difficult to document precisely, the RBCA program may have contributed to savings of \$6 million to \$20 million in cleanup costs thereby allowing the savings to be used for the Abandoned Tank Removal Program along with other programs as well.

- **Estimating Costs and Number of Potential Tank Sites:** It was a major challenge for DENR and PRCF staff to predict the number of abandoned tank sites in the state. Since the Abandoned Tank Removal Program is a voluntary program, it was even more difficult to predict how many tank owners would agree to participate. The DENR and PRCF used various methods to estimate the population of inactive or abandoned tanks in the state. One tool that proved quite useful was the results of a study commissioned by the DENR in 1992 to investigate the approximate number of abandoned tank sites in the eastern part of the state. The final estimate for the Abandoned Tank Removal Program was calculated using numbers that were extrapolated from the study. County size, number of roadway miles and population were also used in calculating the statewide estimate.
- **Identifying Possible Tank Sites:** The DENR and PRCF did not assume that property owners would always know whether or not there were buried underground petroleum tanks on site. Consequently, the state initiated a statewide coordinated effort to identify possible sites. DENR and PRCF staff and local volunteers were trained to identify likely sites such as properties at major intersections and older building that were vacant or used for storage. The statewide canvass included meetings with city and county officials, fire department representatives, business owners and "old timers" to get leads as to possible tank sites. Once identified, owners of the properties were personally contacted and informed of the program. As property owners began to learn about the program, word spread rapidly and numerous additional applications were submitted. The state also initiated an advertising effort in local and statewide news media. Even though the program was free and a tremendous benefit to tank owners, the DENR and PRCF recognized that persistent one-on-one contact along with media promotions were essential in order to make the program a success.
- **Gaining Tank Owners' Trust:** While it was not a major obstacle, it is worth mentioning that many tank owners did not accept the notion that the program was free with no strings attached and the state was actually here to "help" them. The problem took care of itself as the citizens began paying attention to the success of some of the earlier tank removals and the stories in the newspapers and television.

The Mitchell Daily Republic wrote an article in the August 3, 2000 newspaper focusing tank removals in the town of Mt. Vernon. The mayor of Mt. Vernon, Craig Runestad, was quoted, "I've never seen a state project go as smoothly as this."

- **Contractor Reliability:** In order to encourage small and local contractors to bid on the tank removal projects, the DENR limited the size of most bid projects to 10 to 25 sites. Keeping the estimate below \$50,000 allowed the DENR to minimize the bonding and insurance requirements for the contractors. While this had the benefit of increased competition and lower costs, it also created occasional problems with contractor reliability. The biggest problems arose when certain contractors did not pay their subcontractors and suppliers in a timely manner. The state dealt with this problem in a number of ways, but the primary one was excluding irresponsible contractors from bidding on future projects. As one might expect, overseeing multiple contractors working around the state at any one time can be more than a full time job as questions and special circumstances can arise many times every day. To handle this problem the DENR authorized specialized staff to bulldog the projects and make certain site-specific decisions without seeking additional management review. More complicated decisions were worked out with PRCF and upper management. But for most situations, the DENR project manager relied on the philosophy of "make a decision and live with it".
- **Future Cleanup:** When the state agrees to remove a tank through the Abandoned Tank Removal Program, it also agrees to conduct any further corrective action that may be necessary to comply with state environmental requirements. This had the potential to greatly increase costs, as the degree of pollution associated with these sites was not known until the tanks were removed. Fortunately, this turned out to be a minor obstacle in South Dakota for two main reasons: 1) Most of the abandoned tank sites are old and contamination that may have been present at one time has substantially attenuated and 2) the state of South Dakota relies on a risk-based approach for determining the petroleum cleanup requirements. States that do not have a risk-based approach to cleanup may find cleanup expensive and at times requiring substantial cost for no apparent reduction in risk. While the state agrees to conduct all required corrective action, it does not assume liability for the tanks or any associated contamination.

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