Fall 2014

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Boots on the Ground Pilot Program: What $400,000 can do for leaking underground storage tanks

The Montana Legislature appropriated $400,000 to the DEQ Remediation Division's Petroleum Tank Cleanup Section to help address petroleum tank sites during Fiscal Year 2014. Find out how many tanks were closed, sites addressed and releases resolved.

TREADing Forward

DEQ has successfully kicked off the next phase of the RIMS project, which will ultimately result in an extensive database adn e-Service upgrade for several DEQ associated programs, including the tanks programs. The new system, referred to as TREADS, will help DEQ manage its data more efficiently. Read on to learn how you can be part of the "User Experience" portion of the design phase.

Meet the New Petroleum Brownfields Coordinator!

DEQ welcomes Hayden Janssen to the Brownfields program.

The Significantly Effective Shear Valve

Shear valves are one of the most important pieces of Underground Storage Tank equipment, but they often get overlooked by owners/operators and sometimes inspectors. Learn more about the most common issues associated with shear valves and what DEQ is doing to address them.

Montana Economic Development Authorities

Montana Economic Development Authorities (EDAs) are charged with working to rehabilitate and redevelop sites throughout the state. Through collaborative efforts with DEQ's Montana Brownfields program, the focus of redevelopment is often directed toward the assessment and potential cleanup of contaminated properties across Montana. These properties can then be redeveloped with special attention paid to meeting the needs of a community, while improving the overall aesthetic of the site.

Wanderlust...A Walkabout with Jeff Kuhn

DEQ's own Jeff Kuhn is now writing a column in the New England Interstate Water Pollution Control Commission's, *L.U.S.T. Line* newsletter. A veteran of petroleum remediation at the state and national levels, Jeff's column, "Wander LUST," will take readers on "walkabouts" across the world of underground storage tanks. The column

was written for many years by the late Pat Ellis of the Delaware DNREC. Click the link to view the current edition of *L.U.S.T. Line*. Jeff's current article, titled "Reopening Pandora's Box, What's Up with the Lead Scavengers EDB and 1, 2-DCA?", begins on page 4.

Ask the Expert

How does the underground storage tank program establish violation significance?

DEQ 3rd Quarter Enforcement Cases Closed

Penalties, permits and resolutions. Find out what DEQ Enforcement cases were resolved during the 3rd quarter of 2014.

Petroleum Storage Tanks: Planning for the Future

DEQ and the Petroleum Tank Release Compensation Board are currently working on a unified strategic plan to improve the programs that work with petroleum tanks, including both the management of active tanks to prevent releases, and the cleanup of tank releases. A collaborative strategic planning meeting between DEQ's underground storage tank section, petroleum tank cleanup section, brownfields section and Petro Board staff was conducted to identify and prioritieze unified goals and objectives.

Fund and Release Status Report
Petro Board Meeting Schedule and Minutes

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DEQ
Montana Department of Environmental Quality

Leaking Underground Storage Tank

Boots on the Ground
2014 Pilot Program

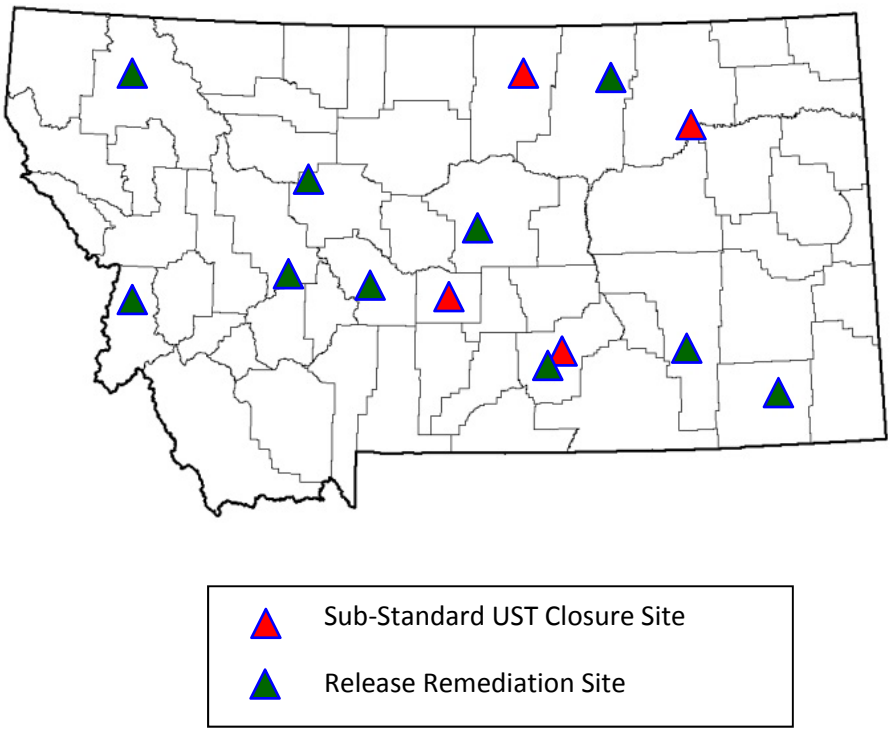
Background

The Montana Legislature appropriated $400,000 to the DEQ Remediation Division's Petroleum Tank Cleanup Section to help address petroleum tank sites during Fiscal Year 2014 (July 1, 2013 through June 30, 2014). In response, DEQ created a pilot program to address two areas where short-term funding could realize the best environmental outcomes: 1) assist owners who were challenged by the financial requirements to address petroleum releases at former petroleum storage facilities; and 2) assist owners to properly close abandoned or substandard underground storage tanks (USTs). Participation was limited to sites that no longer commercially stored or sold petroleum.

DEQ created a charter to transparently and fairly allocate the funds to a limited number of on-the-ground projects. The process required voluntary participation with the owners requesting assistance through an application process. In order to leverage additional funding for release sites with ongoing cleanup work, DEQ partnered with the Petroleum Tank Release Compensation Board (PTRCB) to ensure the funds expended could be credited toward the co-pay requirements of eligible release sites.

How the Funding Was Spent

The $400,000 was used to close abandoned USTs at four facilities and to conduct remediation work at 11 petroleum release sites. Releases were confirmed at all four UST closures and funding was available to assist with cleanup work at three of the sites. Costs averaged $33,900 per site and ranged from $11,400 to $71,000 for UST closure and from $8,600 to $69,100 for remediation at release sites.



Streamlined Ability-to-Pay Procedures

Because an owner's ability to pay for the required work was used in the site selection process, DEQ streamlined its existing analysis procedures and contracted with an expert to evaluate the financial viability of individuals and organizations to conduct environmental cleanup/remediation. Participating site owners voluntarily provided their financial information for this analysis. This contractor is currently assisting DEQ to update its procedures so staff can conduct future ability-to-pay evaluations without contractor support.

Financial details are not included in the project descriptions herein to protect individuals' privacy. However, some patterns that lend to financial difficulties became apparent from many of these former fueling facilities.

- Retired and fixed income: Several owners of these closed facilities have retired and are living on fixed incomes; in at least one situation Social Security was the only income.
- Widows of the former businessman: Some property owners are widows of the former tank owners or operators, also living on fixed incomes, who are not familiar with the facility operations.
- Difficult life situations: One widow cared for her debilitated husband for several years prior to his passing and is now currently undergoing chemotherapy and radiation treatments for her own ailments. One individual lives on the contaminated property, while another individual lives in the lot immediately next to her husband's former service station.

Several former petroleum operations are now owned or leased by small local businesses that cannot afford cleanup costs. These businesses include a coffee kiosk, a laundry, a clothing store and boutique, a cabinet maker, a second hand store, and an auto detailing business. One owner of a small business could not get a loan to complete needed building repairs necessary to obtain insurance because the property was contaminated. He could not afford both the building repairs to keep his business open and the required environmental work. Through this pilot project, the release is resolved and the business is viable. Other releases are owned by non-profit organizations with limited abilities to raise the funds necessary for the environmental work.

Six releases were denied reimbursement from the Petroleum Tank Release Compensation Board (PTRCB). The other five releases had been found eligible, but the owners demonstrated they were not capable of paying the co-payment requirements of the PTRCB.

Four releases addressed by this pilot project that are ineligible for PTRCB funding, will require additional cleanup work. DEQ is working with the owners, local governments, and other agencies to help identify additional sources of funding to clean up these sites, but sources are limited and are not readily available.

Renewed momentum at release sites

Three of the individuals who claimed that they could not afford to do the work were found to have sufficient resources as a result of our ability-to-pay analysis. DEQ is working with these individuals to address their sites appropriately. Two of these sites are in Broadus and another is in Billings.

Efficiency of DEQ Contractors

The cost of work completed by DEQ contractors and directed by DEQ staff were all within PTRCB unit cost reimbursement guidelines. This confirms that DEQ can conduct work as cost effectively, or more, than the current PTRCB reimbursement process where the owner hires the contractor and DEQ only oversees the results. The process also validates the efficiency of DEQ's contract management procedures.

PTRCB Co-Pay Process

Five of the sites selected for this pilot project were eligible for reimbursement from the Petroleum Tank Release Compensation Board (PTRCB); however, the co-payment requirements had not yet been met. The copayment for most releases is half of the first $35,000, or $17,500. For small non-commercial and heating oil tanks, it is half of the first $10,000, or $5,000. DEQ partnered with the PTRCB and developed a process so funds expended during this pilot program would apply toward the co-pay requirements. By leveraging multiple funds, DEQ was able to accomplish more 'boots-on-the-ground' work than it could have completed with only the $400,000.

An unanticipated benefit from developing this process between DEQ and the PTRCB has resulted in an example of this process to apply other funding sources (both State and Federal funds) toward co-pay requirements. Funds that are being used for this purpose include Federal Brownfields funds managed by the EPA, DEQ, local governments, tribes, or economic development authorities, and Resource Development Grants (managed by the Department of Natural Resources), as well as other potential funding sources.

PTRCB and Enforcement 'Catch-22'

Prior to streamlining DEQ's ability-to-pay process, DEQ relied on compliance assistance and formal enforcement to compel owners, regardless of their financial status, to complete the work. This proved counterproductive for releases that were eligible for PTRCB reimbursement. The Montana Petroleum Storage Tank Cleanup Act requires owners to stay in compliance with DEQ's cleanup laws in order to receive reimbursement. When DEQ enforced against an owner for not cleaning up a release, the PTRCB reduced the owner's reimbursement, in many instances by the full amount. This permanent reduction in reimbursement stays with the release, even if the property is purchased by another party who had nothing to do with the release or the failure to clean it up. This is also the case if the land is taken by the local government in a tax foreclosure.

With the streamlined ability-to-pay process, DEQ can more easily defer enforcement for owners who do not have an ability to fund the cleanup. This also facilitates DEQ's ability to find alternate funding sources such as the Montana Department of Natural Resources Reclamation and Develop Grants (RDG) or Brownfields funding to assist with achieving PTRCB co-payment requirements. Alternate funding cannot be identified for all sites at all locations because releases or sites do not meet specific grant requirements. Alternative funding is particularly challenging for sites already deemed ineligible for any PTRCB funding, where expensive cleanups are required.

Additional Resolved Releases

While DEQ staff worked to identify release sites that could benefit from this pilot program, nine sites were found that could be closed with minimal work and did not need contracted services funding to reach completion. In many cases, the work needed was minor and could be accomplished by DEQ staff themselves. These sites include the following:

Bartsch Farms	**(Brady)**
Blue Sky-Jannusch	**(Valier)**
BPOE Lodge	**(Deer Lodge)**
Cravens Garage	**(Butte)**
Douma Bus Barn	**(Manhattan)**
Knox Residence	**(Lewistown)**
Morhardt Residence	**(Cascade)**
Old Brady Store	**(Brady)**
Taylor's Honey	**(Stanford)**
Transmountian Livestock	**(Dillon)**

Summary of Sites Addressed

Substandard UST Closures:	Release Confirmed	Current Status	Page
Former Treasure State Formal Ware (Billings)	✓	Resolved	8
Former Browns Valley Grocery (Harlem)	✓	Investigation	9
Fort Peck Station (Fort Peck)	✓	Investigation	10
Tom's Body Shop (Harlowton)	✓	Investigation	11

Petroleum Release Sites:	PTRCB copay met [1]	Release Resolved [2]	Page
Auto Service Center (Lewistown)	✓	✓	13
Caldwells Service (Fort Shaw)	✓		14
Former Berre Holthues (White Sulfur Springs)	NA		15
Former Coal Corral (Colstrip)	✓		16
Former Chiropractor Office (Corvallis)	NA	✓	17
Helena Valley Irrigation District (Helena)	NA	✓	18
Sportsman's Conservation Club (Huntley)	✓	✓	19
Powder River Manor (Broadus)	✓	✓	20
P&R Distributing (Whitefish)	NA		21
Sleeping Buffalo (Saco)	NA		22
Bairs Self Serve (Billings)	NA		23

Notes:

1. "NA" is used for releases that are not eligible for PTRCB funding
2. Resolved Release include releases that are currently resolved and those projected to be resolved within a single round of confirmation sampling in the spring of 2015.

Substandard UST Removals

Former Treasure State Formal Wear

Billings

Facility ID# 60-15238
Release ID# 5001

The Treasure State Formal Wear property was an automobile fueling station from 1920 to 1950. It was later the location of a formal wear business, and is currently a vacant office/retail outlet building and parking area. The site is located in a commercial/residential area of Billings. The owner is the responsible party.

The former station contained two 1000-gallon underground storage tanks (USTs). These USTs did not meet state and federal tank standards due to age and lack of upkeep and needed to be removed. DEQ used this pilot program to remove the USTs in June 2014. Contamination discovered during tank removal confirmed that the tank had leaked petroleum into the ground around the tank and former pump island as well as the former UST basin.

This former facility was selected for this pilot program so that the two out-of-compliance UST systems could be removed and disposed of. Although a release was confirmed during UST removal, further site analysis and the sample results provided adequate information to resolve the release.

Fast Facts

UST System Removed: 2-1,000 gallon gasoline tanks

Release Confirmed

Remediation Status: Release Resolved

Petroleum Tank Release Compensation Funds Spent: None

Removal of the first 1000-gallon underground storage tank. Billings Rim Rocks in the background.

Former Brown's Valley Grocery

Harlem

Facility ID# 03-07988
Release ID# 4802

Brown's Valley Grocery operated on the property until 1987. The property was then leased to a plastics manufacturing business until 1991. The building has since been vacant, windows are broken out, and there are reports of transients occupying it.

The payment of property taxes ceased in 1999 when the owner suffered health issues. He died in 2007, and Blaine County is currently owed $38,000 in back taxes.

In 2010, Bear Paw Development Corporation completed an environmental assessment (EA) at the property with funding from an EPA community-wide hazardous substance assessment grant (Brownfields). Test pits were dug as part of the EA and three abandoned underground storage tanks (USTs) and piping were found. The EA also identified three 55-gallon drums and seven smaller buckets that contained petroleum products at the facility. Samples confirmed petroleum and lead impacts to both soil and groundwater.

DEQ used this pilot program to permanently close and remove the UST systems, investigate the extent of soil and groundwater contamination, survey surrounding properties for potential receptors of the contamination, remove the drums and spilled petroleum stored in the building, and plan an excavation for early 2015. The investigation discovered that contamination has migrated off the site and is impacting city and private properties. Because of an identified risk to a neighboring residence, DEQ is conducting a vapor intrusion study using alternative funding. A large excavation has been selected as the cleanup mechanism for this release.

Fast Facts

UST System Removed:
3 tanks, gasoline & diesel

Release Confirmed: 2010

Remediation Status:
Cleanup

Petroleum Tank Release Compensation Funds Spent: Not Eligible

The Petroleum Tank Release Compensation Board (PTRCB) determined the release ineligible for cleanup reimbursement on June 27, 2011 because the facility was not in compliance with the eligibility statute. DEQ is currently working with the City of Harlem and Blaine County to discuss redevelopment options for the property and to identify future funding sources that may be available. No funding sources have yet been identified for the necessary cleanup.

Left: *Broken glass in windows and door at Former Brown's Valley Grocery.*

Right: *Containers of petroleum and spills within the store prior to cleanup.*

Fork Peck Station

Fort Peck

Facility ID# 53-04496
Release ID# 4974

The Fort Peck Station is a former retail gas station and automotive repair shop that had three 3,000-gallon and one 6,000-gallon underground storage tanks (USTs). These USTs were reportedly last used in 1986 and contained gasoline and used motor oil. These abandoned USTs did not meet state and federal tank standards due to age and lack of upkeep and needed to be removed.

This pilot program removed these USTs in early 2014. A petroleum release was confirmed when contaminated soil was discovered beneath the tanks.

DEQ removed approximately 460 cubic yards of contaminated soils and disposed of it at the Valley County landfill in June 2014. Physical site constraints limited the amount of soil excavation activities, both by how deep excavation could occur and by how far out laterally. DEQ installed soil borings and five monitoring wells by late July 2014. Soil removal activities have taken care of the worst of the contamination at this site. Groundwater impacts are at levels that indicate further active cleanup is needed. Remaining contamination run beneath the street and the facility building, and will be difficult to treat or remove. DEQ is evaluating cleanup alternatives.

The Town of Fort Peck was instrumental in supporting this project with UST access, concrete disposal, supplying of backfill, and historical background of the site and area.

Fast Facts

UST System Removed: three 3,000 gallon and one 6000 gallon tanks used for gasoline and waste oil

Release Confirmed: 2014

Remediation Status: Cleanup Selection

Petroleum Tank Release Compensation Funds Spent: Not Eligible

The Petroleum Tank Release Compensation Board (PTRCB) determined the release ineligible for cleanup reimbursement because the facility was not in compliance with the eligibility statute.

Removal of former dispenser islands, January, 2014.

Removal of substandard tanks, January, 2014.

Tom's Body Shop

Harlowton

Facility ID# 60-15222
Release ID# 4990

The former Tom's Body Shop is currently an abandoned building located along Harlowton's main street. This very visible facility is surrounded by residential properties and businesses.

The current owner inherited the property in 2008 from his father, who used it as an auto body shop. His father did not sell fuel during his ownership, nor did he inform his son (the current owner) of the tanks. DEQ discovered fill ports and tank vents along the canopy while conducting an area-wide investigation to identify source(s) of a large pool of petroleum free product below Harlowton. DEQ worked with the current owner to apply for funding from this pilot program to close the substandard abandoned USTs.

Because these two USTs were located under a permanent structure, the tanks had to be closed-in-place. To close the tanks, contractors excavated the tops of the tanks, cut holes in them, filled them with a concrete slurry mix, and collected soil samples beneath the tanks. During the in-place closure of the two known USTs, three additional previously unknown USTs were discovered. Two were also closed in place and the third one was removed.

Results from the soil samples confirmed a release had occurred from the tanks and contamination is at levels that require an investigation and cleanup. DEQ assisted the owner to complete the 30-day Release Report and submit a PTRCB eligibility determination request. However, the owner does not have the financial ability to pay for cleanup, or even the PTRCB $17,500 copay if the release is found eligible. .

The property is for sale and there is a potential buyer who would like to use the facility as a car maintenance and repair shop. If the facility can be redeveloped, it will provide new business for the town and facilitate putting this very visible property back into a viable use. Work completed under this pilot program has helped the owner stay in compliance with Montana's UST laws.

Fast Facts

UST System Removed: 5 gasoline tanks closed in-place or removed.

Release Confirmed: June 10, 2014

Remediation Status: Investigation

Petroleum Tank Release Compensation Funds Spent: Not yet determined

Front view of the building during the tank closure.

Holes cut in the top of tanks in order to clean and fill with concrete slurry.

A third tank was discovered by following piping. Internal photograph shows condition of this tank.

Petroleum Release Sites

Auto Service Center

Lewistown[MJT1]

Facility ID# 14-04762
Release ID# 2713

The Facility operated as a retail gasoline and service station from the 1940s until the underground storage tanks (USTs) were removed in 1989 with no reported release. The property has been sold several times since, and was once the Fergus Electric storage facility and a car maintenance shop.

The current owner operates an auto detailing shop and is trying to expand and improve this young business. In 1995, a previous owner completed an environmental assessment (EA) and discovered the historical release near the former USTs and pump islands. The site is PTRCB eligible and the current owner has assumed fund eligibility and responsibility for the release, but prior to this pilot program, no money had been applied to the co-pay.

DEQ used this program to determine the extent of contamination in the soil and groundwater and surveyed surrounding properties potentially impacted by the release. Work completed under this pilot program achieved the PTRCB co-pay requirements.

The work also accurately documented the risks this release poses to human health and the environment and provided the necessary data to resolve it. These results will facilitate future business loans and development for a small local entrepreneur.

Fast Facts

Release Confirmed: 1995

Remediation Status:
Pending Closure

UST System:
4 gasoline tanks

Petroleum Tank Release Compensation Funds Spent: $19,750

Geoprobe advancing borehole.

Caldwell Service Station

Fort Shaw

Facility ID# 14-04762
Release ID# 1963

Caldwell's Service is a former service station on the main highway through Fort Shaw. The owner ceased retail fuel sales and removed three underground storage tank (USTs) in 1993. A petroleum release was discovered at the time and seven cubic yards of soil were removed from the diesel tank basin. Despite the excavation, petroleum contaminated soil and groundwater remained. The tank excavation was not backfilled and remained open for over 20 years. The owner dug 14 test pits to determine the area of soil contamination, but work ceased in 1997.

This highly visible site remains under-utilized and the owner lives on the property. The limited prior work achieved part of the PTRCB co-pay requirements (approximately $8,029 of the $17,500 co-pay).

DEQ used this pilot program to investigate the extent of groundwater contamination, identify properties and persons potentially impacted by this contamination, and to assess risks to nearby underground utilities. Contractors also filled in the open excavation for safety reasons. Funding from this pilot program has been used to meet the PTRCB co-pay requirements, and DEQ is now working with the owner to continue the work under that funding source to achieve cleanup.

Fast Facts

Release Confirmed: 1993

Remediation Status: Investigation

UST system: 3 diesel & gasoline tanks

Petroleum Tank Release Compensation Funds Spent: $10,555

Front of Caldwell Service Station. The former dispenser island was located in the grassy area.

Open excavation in the foreground with Highway 200 in the background.

Former Berre Holthues

White Sulphur Springs

Facility ID# 30-07174
Release ID# 2636

This facility was used as a gas station that stored fuel in two above ground storage tanks (ASTs). The ASTs were permanently removed from the Facility in 1987, but the underground piping remained. DEQ was notified in 1993 that the old gas station building had burned down which caused many drums of waste oil and possibly cleaning solvents to leak on the ground. The property owner conducted a soil excavation and removed some of the buried steel pipe.

Stained soil is visible across many parts of the site. DEQ assisted the former owner to dig eight test pits and collect soil samples in 1995. Based upon the results of that sampling, DEQ requested removal of the petroleum contaminated soils before the property owner could develop the property. The owner did not complete any of the requested work and later passed away.

The site is surrounded by residential properties, a hotel, and businesses. The site contains a large garage with two attached garages, and an open yard that used to contain the ASTs, and an adjacent residence. Some underground piping was still in place.

DEQ used this pilot program to determine the extent of soil and groundwater contamination at this site, and to survey the area for properties and persons potentially impacted by this release. The results of this investigation indicate that additional cleanup is necessary.

Fast Facts

Release Confirmed: July 13, 1995

Remediation Status: Investigation

Petroleum Storage tank system: 2 AST, Diesel, Gasoline, Waste Oil

Petroleum Tank Release Compensation Funds Spent: Not Eligible

This release is not eligible for PTRCB reimbursement because the former owner did not operate the tanks in compliance with applicable standards at the time the release was confirmed. The current owner, the former owner's widow, has no knowledge of the facility's operation. DEQ is working with the current owner to find funding to assist with the required work; however, a funding source has not been identified.

Front of facility. The left half of the building is new construction.

Geoprobe drilling next to waste oil AST in rear of facility.

Former Coal Corral

Colstrip[MJT2]

Facility ID# 44-05747

Release ID#3419

The former Coal Corral property was once a gas station and convenience store until the underground storage tanks (USTs) were removed and the release discovered in 1998. The property was foreclosed around 2000 and the business closed shortly thereafter. Approximately 80 cubic yards of contaminated soil was removed but groundwater contamination remained in the shallow aquifer. The persons who owned and operated the former USTs are unable to fund continued cleanup work. The tank owner maintained PTRCB eligibility but only $8,158 of the $17,500 co-pay was achieved.

The property has since been purchased, sub-divided, and is owned by two separate individuals who run small local businesses on the site. Both individuals state that they were not aware of the petroleum release at the time of purchase.

DEQ used this pilot program to determine the extent of soil and groundwater contamination at this site, and to survey the area for properties and persons potentially impacted by this release including a wetland across the road. Results of the work indicate that groundwater contamination remains at the site, but is not migrating to the wetland or other receptors.

Fast Facts

Release Confirmed: 1998

Remediation Status:
Ongoing Cleanup

UST System:
4 diesel & gasoline tanks

Petroleum Tank Release Compensation Funds Spent: $14,073

Work completed in 2014 has achieved the PTRCB co-payment requirements, and DEQ is working with the parties to continue work through PTRCB reimbursements. Active cleanup actions may not be necessary. The contaminants will be monitored as they naturally degraded over time to ensure they don't migrate or impact potential receptors.

Soil boring at former Coal Corral. where there are currently two small businesses, April, 2014.

Soil boring at former Coal Corral.

Former Chiropractor Office

Corvallis

Facility ID# 41-10839
Release ID# 0260

The property was once a fueling station and small bulk plant distribution facility that operated from the 1940s through the 1960s. A chiropractor purchased the facility in 1986 and opened a practice in this location. He never owned or operated the tanks. The release was discovered on April 6, 1990, while conducting a site assessment for sale of the property. The extent and magnitude of this release was not defined for soil or groundwater either on or off-site.

A private drinking water well was located on the property with numerous other wells located in the area. At the time, some neighbors stated their water smelled and tasted of fuel. Two nearby irrigation ditches and Willow Creek are located within one mile of the release.

The property has been sold at least twice and is now a coffee kiosk and second-hand store. The current owner stated that he was not aware of the release when he purchased the property. The facility is located in the middle of Corvallis at a major road intersection.

Fast Facts

Release Confirmed:
April 6, 1990

Remediation Status:
Potentially Resolved

Unknown USTs & ASTs,
Gasoline and Diesel

Petroleum Tank Release Compensation Funds Spent: Not eligible

DEQ is using this pilot program to determine the extent of soil and groundwater contamination at this site, and to survey the area for properties and persons potentially impacted by this release. Initial results indicate that conditions at the site do not pose an unacceptable risk to human health or the environment. If water samples collected in the spring of 2015 are within limits, the release may be resolved

The release is not eligible for PTRCB reimbursement because tanks were not present on the property when the PTRCB law was enacted (this requirement has since changed, but the time to appeal the finding has passed). The site is eligible for Brownfields funding; however, no funds are available for this location.

Former Chiropractor Office, Corvallis, Montana.

Helena Valley Irrigation District

Helena

Facility ID# 25-03923
Release ID# 0458

In 1988, residents of the Treasure State Acres Helena Subdivision complained of an odd taste and odor in the water from their domestic wells. A 1,000 gallon underground storage tank system containing gasoline was found 5,000 feet southwest of the subdivision and was determined to be the source of contamination. The tank was removed from service.

The tank was located on property leased by the Helena Valley Irrigation District (HVID) from the Montana Department of Natural Resources and Conservation. HVID completed significant cleanup actions following discovery of the release which included the following:

- Replacing 7 private wells in Treasure State Acres,
- Excavated 45 cubic yards of contaminated soil,
- Installed and operated a vapor extraction system to address soil vapors,
- Installed 18 groundwater monitoring wells, and
- Sampled 25 private wells and 2 public water supply wells,

Currently, an undeveloped but impacted neighboring property is actively selling parcels for development.

Fast Facts

Release Confirmed: 1988

Remediation Status: Pending Closure

UST System: 1 gasoline tank

Petroleum Tank Release Compensation Funds Spent: $0 (Release confirmed before fund was enacted)

The HVID is a non-profit organization that does not have existing assets to fund the required work. All funds are ear-marked for capital improvement projects necessary to maintain their services. This release is not Petro Fund eligible because it was discovered prior to enactment of the PTRCB statutes.

DEQ used this pilot program to complete confirmation soil sampling, sample surrounding private wells and monitoring and abandoned monitoring wells. The data gathered and work completed will allow DEQ to resolve this release.

Left: *The original 1,000 gallon storage tank was removed in 1988.*

Right: *The leaking pipe fitting with soil removed below the leak site.*

Sportsman's Conservation Club

Huntley

Facility ID# 56-04664
Release ID# 2441

The Sportsman's Conservation Club property is located in a commercial and residential area in Huntley, about 500 feet from the Yellowstone River. The Site is owned by the Sportsmen's Conservation Club, a small non-profit operated by member volunteers. The property is used for recreational trap shooting.

In 1994, a 550-gallon underground storage tank (UST) was permanently removed from the site after the owner discovered approximately 500 gallons of heating oil had leaked. About 55 cubic yards of contaminated soil was excavated from the tank basin and placed in an on-site landfarm. No further work was completed. The release is eligible for reimbursement from the PTRCB. Prior to the 2014 work, only a fraction of the copay had been met.

In April 2014, DEQ conducted a remedial investigation under this pilot program. A receptor survey was completed and soil borings were drilled. Soil and groundwater samples collected showed the prior excavation had cleaned up the release adequately to eliminate the Yellowstone River as a potential down-gradient receptor. DEQ resolved this release in August 2014.

Fast Facts

Release Confirmed:
November 14, 1994

Remediation Status:
Release Resolved

UST System:
1 heating oil tank

Petroleum Tank Release Compensation Funds Spent: $14,440

Soil boring installation at the former heating oil UST location. Cottonwoods in the background mark the edge of the Yellowstone River.

Powder River Manor

Broadus

Facility ID# 38-00549
Release ID# 1898

The Powder River Manor is a nursing home for residential long-term care, and is located on the eastern edge of Broadus, about 2,000 feet from the Powder River.

In 1993, a 250-gallon underground storage tank (UST) containing diesel that was used for an emergency generator was permanently removed from the site. Soil contamination was present underneath the tank and approximately 25 cubic yards of petroleum-stained soil was excavated from the site. The release is eligible for reimbursement from the PTRCB. Prior to the 2014 work, $1,075 of the $17,500 copay had been met.

DEQ used this pilot program to determine the extent of soil and groundwater contamination at this site, and survey the area for properties and persons potentially impacted by this release. Soil and groundwater samples collected show the prior excavation removed the bulk of the lost petroleum and no unacceptable risks exist from this release. DEQ will resolve this release.

Fast Facts

Release Confirmed: October 12, 1993

Remediation Status: Release Resolved

UST System: 1 diesel tank for emergency generator

Petroleum Tank Release Compensation Funds Spent: $10,353

Looking northwest from the rear of the Powder River Manor. The pickup truck is parked over the location of the former underground storage tank.

P & R Distributing

Whitefish

Facility ID# 1508838
Release ID# 1904

This former bulk storage/distributing facility is located along the railroad and historically received fuel from rail tanker cars. The responsible party for this release is the tank owner who leases the property from BNSF Railway. The facility ceased fuel storage operations in 2000 when the tank owner retired from the fuel operation business. The property is currently sub- leased to a cabinet maker.

The release was discovered in 1993 when a surface spill of diesel occurred. Immediate site response included excavation and the collection of soil samples. DEQ collected additional soil samples in 1994 to assess the extent of the release, and discovered additional petroleum contamination on this property. DEQ approved a work plan to conduct a soil and groundwater investigation in 2009; however, the owner was unable to complete the work.

The PTRCB found the release ineligible for reimbursement because it was not reported to DEQ within 24 hours.

DEQ used this pilot program to determine the extent of soil and groundwater contamination. Contaminated soil is limited in extent and inaccessible due to its proximity to an active railroad spur. Groundwater monitoring will allow the assessment of attenuation rates and a groundwater remedial strategy will be determined. DEQ is working with the current owner to find funding to assist with the required work. A funding source has not been identified.

Fast Facts

Release Confirmed:
October 4, 1993

Remediation Status:
Cleanup Selection

Number of Tanks:
9 Above Ground Tanks

Type of Petroleum Lost:
Gasoline and Diesel

Petroleum Tank Release Compensation Funds Spent: Not Eligible

Current view of P & R Distributing facility. All petroleum equipment has been removed and it is currently being sub-leased by a local small business that makes cabinets.

Sleeping Buffalo Hot Springs Resort

Saco

Facility ID# 36-06664
Release ID# 4246

The Sleeping Buffalo Hot Springs resort has been purchased by an owner who is refurbishing the facility in an effort to put it back into business. The current owners are working diligently to correct issues at the facility, develop the site as a future Kampgrounds of America (KOA) campground, and restore the Sleeping Buffalo Resort as a destination for tourists and recreationists.

The petroleum release was discovered in 2001 when two gasoline underground storage tanks (USTs) were removed from the facility. In 2011, approximately 200 cubic yards of contaminated soils were removed and treated in an off-site land farm. In 2012, DEQ approved a work plan to conduct a remedial investigation but the previous owner was unable to complete the work. The property was transferred through foreclosure, and transferred again to the current owner.

DEQ used this pilot program to install five monitoring wells, to measure the impact to groundwater, and to determine risks to domestic and public supply wells at the facility. Preliminary results indicate groundwater is contaminated at levels that may need additional active cleanup of remaining soil contamination.

This release is not eligible for PTRCB reimbursement because the former owner did not operate the tanks in compliance with applicable standards at the time the release was confirmed. DEQ is working with the current owner to find funding to assist with the required work. A funding source has not been identified.

Fast Facts

Release Confirmed:
May 1, 2001

Remediation Status:
Cleanup

UST System:
2 gasoline tanks

Petroleum Tank Release Compensation Funds Spent: Not Eligible

Digging test pits to determine the extent of soil contamination.

Gray, petroleum contaminated soil, before it was removed via excavation, 2011.

Former Bairs Self-Serve

Billings

Facility ID# 56-05757
Release ID# 1506

The former Bair's Self Service is located in a commercial/residential area in south Billings. It operated as a gas station (Comet Oil) from approximately 1959 until the 1990s. The site is currently unoccupied and in a prime location for redevelopment. Environmental issues have hindered interested prospective purchasers, developers, and lenders from considering this property.

The petroleum release was reported following removal of underground product piping and dispensers 1992. In 1993, approximately 30 cubic yards of contaminated soil were removed from below the gasoline-dispensing area and 15 to 20 cubic yards from the diesel-dispensing area. In 2006 and 2007 DEQ conducted a corridor investigation using EPA "USTFields" funds, and confirmed soil and groundwater contamination exceeded DEQ risk-based screening levels at this site.

The corporation is insolvent. DEQ used federal grant funding to hire a contractor in 2012 to investigate the extent and magnitude of the contamination. In 2013, the corporation used its limited financial resources to remove the building and excavate a 140 cubic yard from the former gasoline release area.

DEQ used this pilot program to complete a vapor intrusion (VI) investigation at two neighboring homes at risk from migration of subsurface petroleum vapors, and to conduct groundwater monitoring. Results of the VI investigation indicate concentrations of petroleum concentrations were present in both of the residential houses sampled. DEQ's next steps will be additional vapor monitoring or mitigation.

Fast Facts

Release Confirmed:
November 24, 1992

Remediation Status:
Cleanup

UST system:
5 diesel & gasoline tanks

Petroleum Tank Release Compensation Funds Spent: Not Eligible

Excavation of 140 cubic yards of heavily contaminated soil.

Monitoring well showing proximity of contamination to residences.

View of the property, previously abandoned, following DEQ excavation, February 2013.

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MONTANA UNDERGROUND STORAGE TANK NEWSLETTER

TREADing Forward

Staci Stolp, DEQ

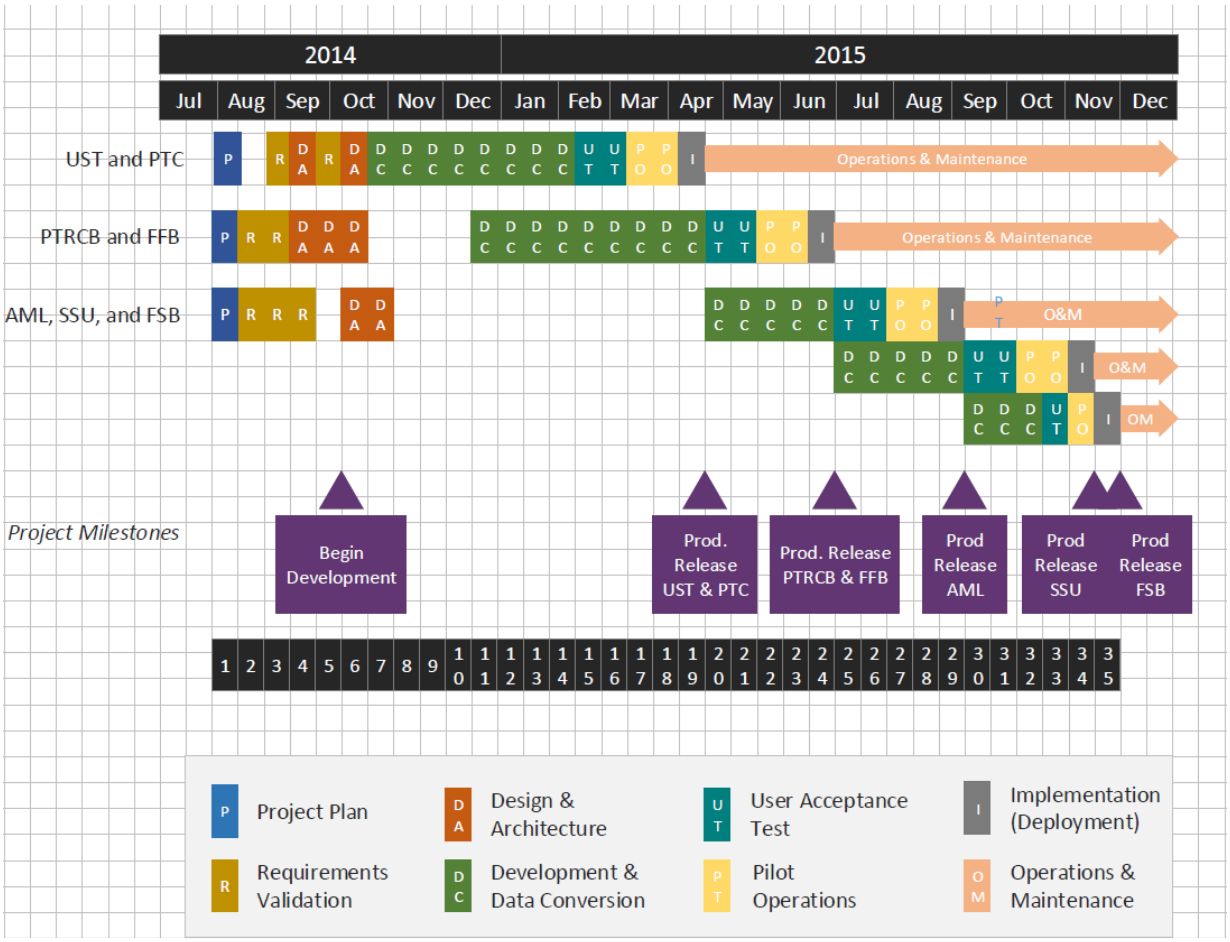
In the spring 2014 issue of the MUST News, we introduced you to the RIMS Project for which DEQ was planning for a July 2014 start on the Design, Development, and Implementation (DDI) phase of the project.This phase of the project will ultimately result in an extensive database and e-Service upgrade for several DEQ associated programs, including:

- Underground Storage Tanks (UST)
- Petroleum Tank Cleanup (PTC)
- Federal Facilities and Brownfields (FFB)
- Petroleum Tank Release Compensation Fund (PTRCB)
- Abandoned Mine Lands (AML)
- State Superfund Unit (SS)
- Federal Superfund (FS)

We are pleased to announce that DEQ successfully kicked off the DDI phase of the RIMS project on schedule this past July.

The new system, referred to as TREADS (Tracking Remedial and Environmental Actions Data System), will help DEQ manage its data more efficiently. TREADS will also allow external users (e.g., contractors, consultants, laboratories, owners/operators, licensees and permittees) to submit and review information related to business activities they conduct with the DEQ in a more effective manner.

DEQ, in partnership with its development contractor, Windsor Solutions, is developing TREADS in two-week sprints, or intervals where various program support functionalities will be created and tested (refer to schedule below). Functions supporting the UST and PTC programs will be developed first. For UST and PTC we anticipate TREADS functionality and support will take about three months to construct.



Every two weeks, the process calls for a “User Experience” meeting designed to obtain feedback from both internal and external users regarding the system’s capabilities, including but not limited to:

- Electronic submissions of:
  - Reports
  - Permit Applications
  - Sample Data
  - Claims

- Public facing tools displaying environmental sites (tanks, petroleum releases, abandoned mines, etc.) and their associated information.

Interested parties are welcome to attend the User Experience meetings.The intent of these meeting is to allow users to see the progress of the new system and to provide our development team with early feedback from customers like you.

The meeting schedule for UST and PTC is:

- Thursday, Oct 30 1:00-2:00
- Wednesday, Nov. 12, 9:30-10:30

- Tuesday, Nov. 25, 9:30-10:30
- Wednesday, Dec. 10, 9:30-10:30
- Wednesday, Jan. 7, 9:30-10:30
- Wednesday, Jan. 21, 9:30-10:30
- Wednesday, Feb. 4, 9:30-10:30

DEQ will forward Outlook meeting invitations to you. You will be able to attend either in person (Helena office – Metcalf Building, Room 40), or electronically using Go-To-Meeting.

If you have questions please contact Staci Stolp, the DEQ project manager for TREADS at (406) 841-5083 or Sstolp3@mt.gov.

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Meet the New Petroleum Brownfields Coordinator

Hayden Janssen has recently joined the Montana DEQ Brownfields team as the new Petroleum Brownfields Coordinator. Hayden most recently worked as a project manager with DEQ's Abandoned Mine Lands program, where he worked closely with city and county officials, private landowners, and various state and federal entities to successfully reclaim dozens of abandoned mines throughout Montana. Previously, Hayden worked as a research assistant at the University of Montana's O'Connor Center for the Rocky Mountain West, where he spearheaded a project assessing the economic longevity of environmental restoration projects throughout Montana. Several of his study areas were Brownfields successes.

Hayden looks forward to continuing his work as a public servant by assisting in the redevelopment of eligible properties impacted by petroleum releases. He may be contacted at (406)841-5057 or HJanssen@mt.gov.

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MONTANA UNDERGROUND STORAGE TANK NEWSLETTER

MUST News

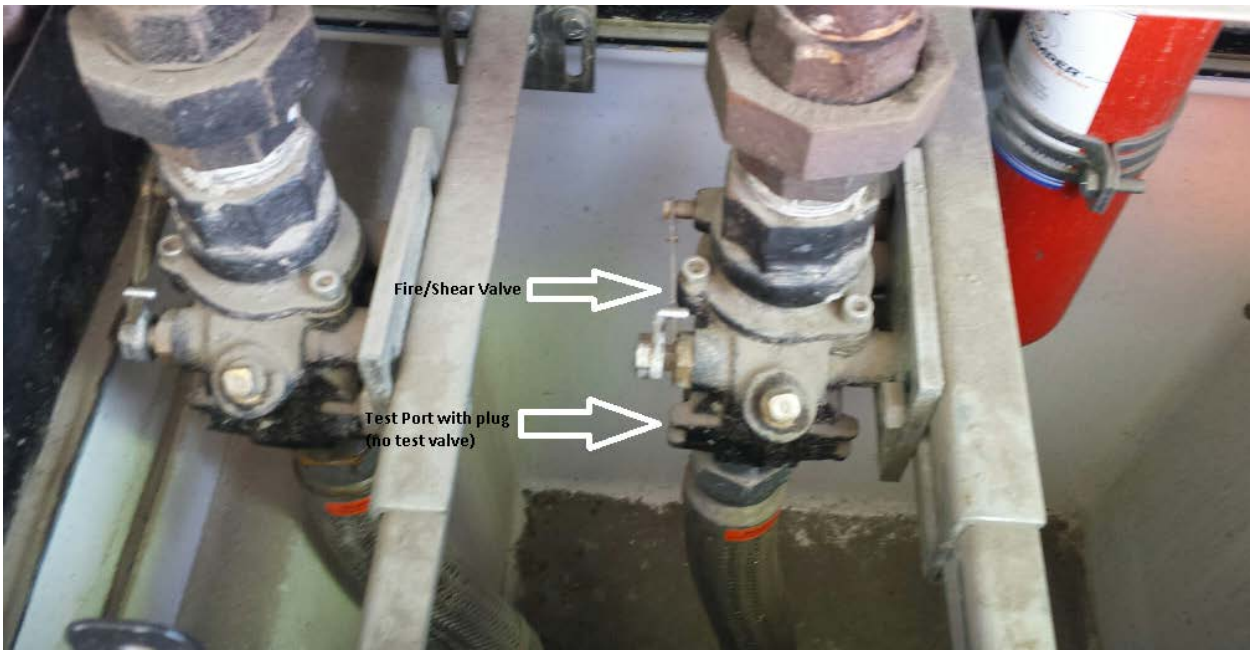
Montana Department of Environmental Quality

The Significantly Effective Shear Valve

Seth Hendrix, DEQ

Shear valves are one of the most important pieces of Underground Storage Tank (UST) equipment, but they often get overlooked by owners/operators and sometimes even inspectors. They are designed to stop the flow of fuel from pressurized underground storage tank piping systems when activated by a fire or impact. Shear valves are also identified as emergency shut-off valves, crash valves or impact valves.

They are installed on product lines and sometimes on the vapor lines inside each fuel dispenser. If product is dispensed using a submersible turbine pump, a shear valve must be present on each product riser at the base of the fuel dispenser. The shear valve is required to be installed at grade level (½ inch above or ½ inch below the level of the top surface of the dispenser island is sufficient) and securely anchored to function properly. Shear valves should be properly installed per manufacturers specifications. The shear valve must be rigidly anchored to the dispenser box frame or the concrete dispenser island using hardware and materials specifically designed for this purpose. When activated by a fire or impact, the shear valve closes (closed position) and blocks the flow of fuel from the dispenser supply lines. The picture below shows how a shear valve should look.



Some UST owners/operators have experienced the importance of shear valves first-hand, after a worst case scenario (e.g. catastrophic fuel release) caused by an improperly installed shear valve, unanchored shear valve, or other UST deficiencies that are undetected. If a driver were to run into a gas station dispenser during a late night or early morning excursion and the shear valve does not properly activate, a large leak and/or fire could occur. A shear valve must be able to function properly when a fire situation or impact situation suddenly occurs. DEQ also has other UST regulations in place to help prevent catastrophic leaks from occurring.

Shear Valve Problem Areas

1. Test Ports Left in the Shear Valve Access Port

A testing access port is located on the shear valve under the dispenser. The test access port is required to be plugged at all times except for when a technician is performing a line tightness test. The test port allows UST technicians to simulate a leak in the underground piping system. Sometimes testing technicians are negligent and leave test ports in the shear valve access area which is not acceptable. The UST owner will be issued a violation and corrective action plan when this violation is found during an UST inspection. Leaving the test port in the access port of the shear valve disables the function of the shear valve and would allow product to move past the shear when the shear is activated during a fire or impact situation. This error can cause catastrophic releases and the department is increasing its focus on catching and correcting the issue.

Test port installed in the access port for line tightness testing purposes.

Shear valves with test ports left in the access port by a negligent tester.

2. Improper Installation of Product Pipe Manifold

The installation of a product pipe manifold above the shear valve can also be problematic. A product pipe manifold is a common practice in the petroleum industry. A pipe manifold is often used to increase product storage, installed when switching product type, and widely used when a station discontinues storing mid-grade gasoline fuel and converts to regular gasoline. A product pipe manifold installed above the dispensers shear valve may cause a safety and fire hazard. In the event of a break in one of the shear valves, the product flow would not shut off in the companion pipe, thus allowing product to continue to discharge product. This would result in a catastrophic release to the environment. For this reason, DEQ does not allow product pipe manifolds to be installed above the shear valve regardless of the type of shear valve (standard single poppet shear valve, double poppet shear valve, and/or double-poppet shear valve with bladder triggering device).

Both shear valve issues listed above are problematic and the Montana DEQ UST program seeks to increase awareness of these issues in order to assist UST owners/operators in the program's mission.

Above Shear Valve Manifolds

Many hazards exist at fueling stations, particularly with vehicles constantly pulling in and out of the parking lot. Delivery drivers with large trucks are often on site off-loading their shipments of soda pop, candy bars and chips. Drivers and pedestrians enter the store to use the bathroom and rehydrate. Rush hour and lunch rush increase traffic and the possibility of incidents even more. Vehicles sometimes run into dispensers, drive off with the dispenser fuel hose still inserted in their fuel tanks and back into each other. And occasionally someone puffing on a cigarette while filling up can be spotted. It is amazing that more accidents don't occur at convenience store sites!

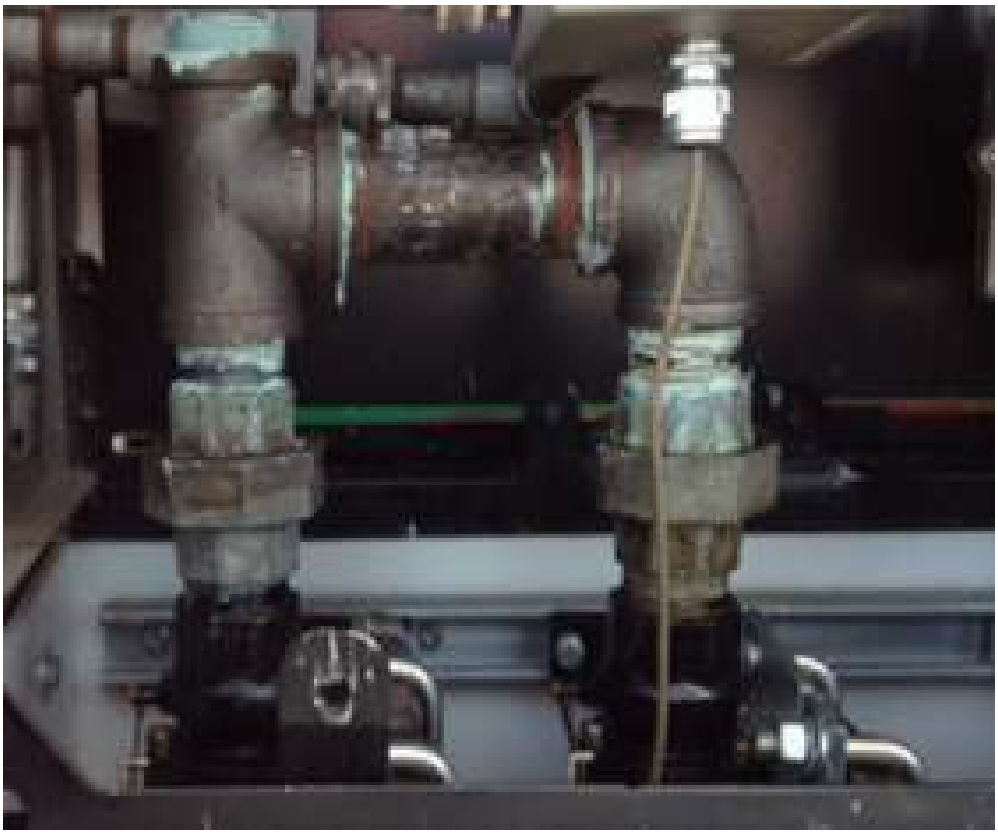
An errant vehicle at a convenience store.

Shear valves are designed to mitigate threats presented due to these hazards and increase the safety of UST sites. They must be properly installed and maintained in order to function properly. PEI-recommended practice 1200-12 (see PEI catalog for PEI documents) describes how to properly inspect and test shear valves. The shear valve function test described in this recommended practice advises the UST technician to prepare the site first (barricades, etc.) and then conduct the function test by tripping the product shear valve and attempting to pump fuel through the nozzle into the test can. After the test, the shear valve is reset into the open position using a wrench. The dispenser cover is put back on and the barricades are removed. The following items are required for a passing test:

- The shear valve must be properly anchored to the dispenser box frame or dispenser island,

- The shear valve must be installed and located between ½ inch above and ½ inch below the level of the top surface of the dispenser island,
- The shear valve lever arm must be free to rotate and able to snap the poppet valve shut/closed, and
- No fuel must flow from the dispensing nozzle when the product shear valve is closed during the test.

If any one of the items listed above is not met, then the shear valve fails the test and is required to be replaced. Montana DEQ UST program currently does not require this shear valve function test to be conducted at UST sites, but it is highly recommended. The department will likely add shear valve function testing to the existing regulatory requirements in the near future. It is the concern of the department that many shear valves in Montana may not pass this function test.



Improperly installed product pipe manifold above the shear valve.

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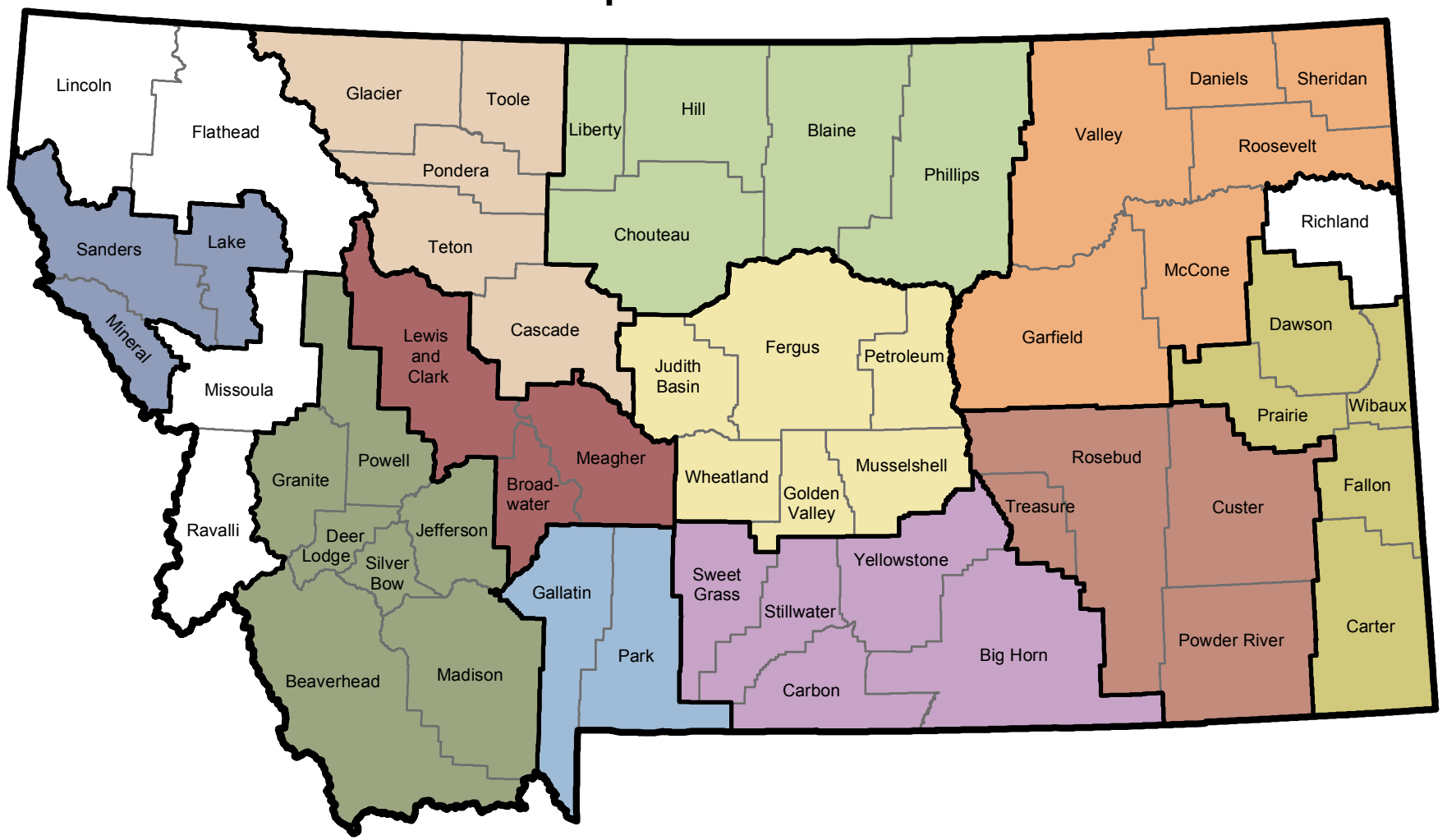
CERTIFIED REGIONAL DEVELOPMENT CORPORATION REGIONS
Montana Department of Commerce



- Bear Paw Development Corporation
- Great Northern Development Corporation
- Montana Business Assistance Connection
- Southeastern Montana Development Corporation
- Beartooth Resource Conservation & Development
- Headwaters Resource Conservation & Development
- Prospera Business Network
- Sweetgrass Development
- Eastern Plains Economic Development Corporation
- Lake County Community Development Corporation
- Snowy Mountain Development Corporation
- Currently Unassigned

Map by: Census and Economic Information Center, Montana Department of Commerce, P.O. 301 S. Park Ave, Helena, MT 59620-0505, Phone: 406-841-2740, email: ceic@mt.gov, http://ceic.mt.gov

March, 2012, CRDC_03_12.mxd

Montana EDAs, their Jurisdictions, and Monies Received

EDAs and Local Governments with Funding

Bear Paw Development Corp

Blaine, Chouteau, Hill, Liberty, and Phillips Counties

$400,000 Assessment Grant - 2014; $1m RLF – 2011

Brittnee Zanto-DeLaRosa, Director of Loan Services: bdelarosa@bearpaw.org; (406)265-9226 x22

Michele Turville, Director of Community Development: mturville@bearpaw.org; (406)265-9226 x27

Pamela Lemer, Infrastructure Specialist: pam@bearpaw.org; (406)265-9226 x23

Big Sky Development Corporation

City of Billings

$400,000 Assessment Grant- 2014

Dianne Lehm, Director of Community Development: lehm@bigskyeda.org; (406)869-8409

Great Falls Development Corporation *(City only)*

$1m RLF- 2005

Lillian Sunwall, Project Manager and Business Strategist: lsunwall@gfdevelopment.org; (406)771-9024

Kalispell *(City only)*

$1m RLF – 2011

Katherine Thompson, Community Development Manager: kthomspon@kalispell.com; (406)758-7713

Missoula *(City only)*

$1m RLF – 2003

John Adams, Missoula Grant Coordinator: jadams@co.missoula.mt.us; (406)258-3688

Brownfields Coalitions

Eastern Montana Brownfields Coalition

$600,000 Assessment Grant- 2014; $1.5m RLF – 2010

Great Northern Development Corporation

Daniels, Garfield, McCone, Roosevelt, Sheridan, and Valley Counties

Reuben Vincent, Brownfields Program Manager: reuben@gndc.org; (406)653-2590

Eastern Plains Economic Development Corporation

Carter, Dawson, Fallon, Prairie, and Wibaux Counties

Jason Rittal, Executive Director: jrittal@midrivers.com; (406)698-3255

Southeastern Montana Development Corporation

Custer, Powder River, Rosebud, Treasure Counties

Jim Atchison, Executive Director: jatchison@semdc.org; (406)748-2990

Central Montana Brownfields Coalition

$1.6m - 2009

Snowy Mountain Development Corporation

Fergus, Golden Valley, Judith Basin, Musselshell, Petroleum, and Wheatland Counties

Kathy Bailey, Executive Director: smdcdist6@hotmail.com; (406)535-2591 x11

Montana Business Assistance Connection

Broadwater, Lewis and Clark, and Meagher Counties

Brian Obert, Economic Development Specialist: bobert@mbac.biz; (406)465-0619

Prospera Business Network

Gallatin and Park Counties

Stuart Leidner, Executive Director: sleidner@prosperabusinessnetwork.org; (406)587-3113

EDAs Without Current Funding

Beartooth Resource Conservation & Development

Big Horn, Carbon, Stillwater, Sweetgrass, and Yellowstone Counties

Luke Walawander, Economic Development Director: lwalawander@beartooth.org: (406)962-3914

Headwaters Resource Conservation & Development

Beaverhead, Deer Lodge, Granite, Jefferson, Madison, Powell, and Silver Bow Counties

Barbie Durham, Executive Director: bdurham@headwatersrcd.org; (406)533-6786

Lake County Community Development Corporation

Lake, Mineral, and Sanders Counties

Billie Lee, Director of Special Programs: billie.lee@lakecountycdc.org; (406)676-5901 x114

Sweetgrass Development

Cascade, Glacier, Pondera, Teton, and Toole Counties

Sarah Converse, Executive Director: sweetgrassdevelopment@gmail.com; (406) 727-5173

Wander LUST

...a walkabout with Jeff Kuhn.....

Jeff Kuhn is with the Montana Department of Environmental Quality (MDEQ) and a venerable veteran of petroleum remediation at the state and national levels. Through this column he takes us on "walk abouts" across the fascinating world of underground storage tanks. Jeff welcomes your comments and suggestions and can be reached at jkuhn@mt.gov.

Oil Trains and the UST Program

We've had a beautiful fall here in Montana. Recent vivid sunrises and sunsets and the clear, full moon remind me how fortunate I am to live in a beautiful place. With this November being the 30th anniversary of the national UST Program, it's a good time to reflect on our accomplishments. In fact, the program has made tremendous progress in 30 years through the dedicated efforts of a number of folks who will never receive the credit that is due.

But it's hard to appreciate that in these days of shrinking budgets, staff reductions, and difficult decisions we have something about which we can be truly proud. State UST Programs have cleaned up and closed some 447,000 petroleum releases nationwide, many of which directly impacted or threatened drinking water supplies. And the job is far from over. But there's always something…and now many states are grappling with a new threat to water quality, a threat created by tremendously successful petroleum extraction from historic oil production areas: Enter the oil trains.

In our National Tanks Conferences we've often discussed the difficulty of gauging the success of the UST Program, where extensive cleanups of soil and groundwater go mostly unnoticed by the public. Often neither the damage done by an underground release, nor the progress made in remediating and minimizing the damage, is clearly visible. Contrast that with any of dozens of major oil train derailments such as the horrific accident in July 2013 in Lac-Mégantic, Quebec that killed 47 people—one of the worst disasters in Canadian rail history. There have been many other oil train accidents in the last two years due to the huge increase in oil train traffic (Figure 1). Most have resulted in significant environmental impact and subsequent cleanup.

An oil train running through Montana.

We're Talking Mobile

Many of us in the UST Program would simply define oil trains as "mobile storage tanks," no different from any other petroleum tanker transport. But here's the rub, we're talking about a train length that runs about two kilometers (1.2 miles) with one hundred DOT-111 tanker cars. Furthermore, assume a full tanker contains approximately 30,000 gallons—a total volume of 3.0 million gallons. Even smaller, partially loaded 50-car oil trains carry more than a million gallons. That's a lot of fuel.

As early as 1991 the National Transportation Safety Board (NTSB) noted design flaws that make DOT-111 tankers prone to failure in derailment incidents[1]. These weaknesses were again noted when ethanol tanker traffic increased in the mid-2000s; increased production created the need to move more and more ethanol to petroleum terminal blending facilities. During that time the mid-west experienced a series of well-documented ethanol tanker car derailments that resulted in large spills (a number of those ethanol spills are the subject of ongoing groundwater and vadose zone research). In July 2014, the U.S. Department of Transportation (USDOT) proposed rules that would phase out rupture-prone DOT-111 tanker cars that comprise most of the Canadian tanker fleet and a large portion of the U.S. fleet[2].

■ *continued on page 14*

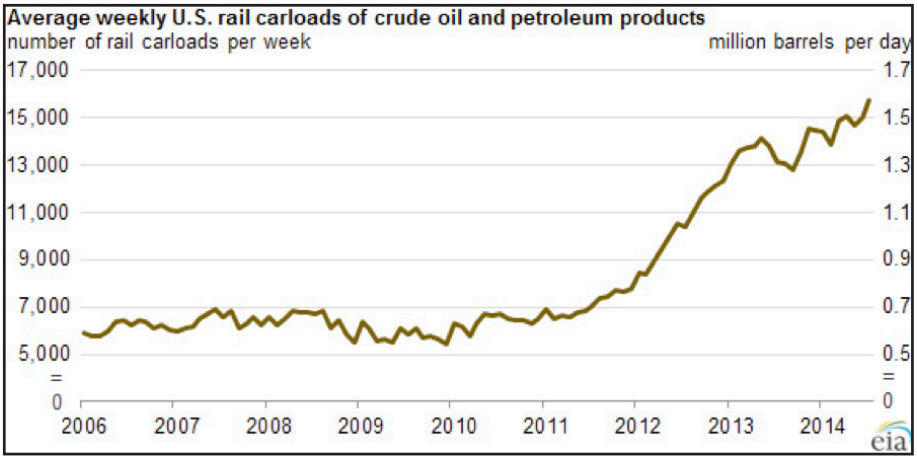


Figure 1. *U.S. railroads moved 9 percent more crude oil and refined products from January to July 2014, compared to the same period in 2013. U.S. Energy Information Administration, based on Association of American Railroads (http://www.ibtimes.com/us-oil-boom-2014-us-railroads-are-moving-greater-volumes-crude-oil-year-amid-bakken-1672564).*

■ Oil Trains and USTs *from page 13*

Despite heightened awareness and action on the part of the NTSB, the USDOT, the rail industry, and nearby communities who have beefed up oil spill response capabilities, the potential for disaster is still high along rail traffic corridors. Concern in my state and other nearby western states involves the probable impact to surface water since most major rail lines in our states follow river valleys.

Fragile ecological areas, such as the Middle Fork of the Flathead River, along the edge of Glacier National Park, are especially vulnerable to surface spills[3]. Washington's Governor, Jay Inslee, has taken significant steps to address possible derailment scenarios. He plans to ask the Washington legislature and the rail industry to share oil spill prevention and response costs. Washington currently does not tax oil moved through the state via rail or pipeline. Proposed legislation may change this in Washington in 2015 [4].

There are immediate solutions to the increased traffic of oil trains: better tanker cars, safer rail crossings, and lower speed limits through narrow canyons and river corridors. More permanent solutions could involve construction of pipelines, such as the Keystone XL Pipeline. Certainly one advantage of the pipeline would be the decrease in rail transportation of crude oil from production areas in Canada, Montana, and North Dakota. One big disadvantage would be a more immediate threat to groundwater resources.

The discussion easily evolves into a debate over what is best for the citizens of affected states and the vulnerability of specific areas (e.g., the Ogallala aquifer) the pipeline would cross. Still, my initial response to the current risk inherent in transporting large volumes of crude oil on railways across my state, is one of grave concern. Given the number of trains moving petroleum from production areas in Canada, North Dakota, and Eastern Montana, how can we assure residents that they and their water supplies will remain safe, and that ecologically fragile areas are protected? Like the issue of chemical tanks[5], many states, in the absence of clear regulatory guidance, are trying to catch up and tool up for more rapid response scenarios involving oil train derailments.

No Need to Reinvent the Wheel

There is a strong connection to the UST Program in this discussion. After all, we are cleaning up the same petroleum compounds as our counterparts in oil spill response programs. For states whose staff members are responsible for both regulatory program areas, kudos! For the rest of us, especially for states most affected by petroleum production, it's time to reach out across program boundaries to share expertise in the areas of emergency response and petroleum remediation.

More than other environmental regulatory programs, those of us who deal with LUST remediation have a wealth of experience to share in the area of assessing risks and cleaning up petroleum-contaminated soil and groundwater to acceptable standards. It would be a shame to see 30 years of progress in the UST/LUST program marginalized by huge surface spills of petroleum that many state spill response programs are poorly equipped to handle.

The petroleum industry is worthy of respect for its investment in horizontal drilling technologies, and the role this is playing in helping us be less dependent on foreign crude. The current glut of oil on the U.S. market has resulted in a decrease in gasoline prices nationwide—good for consumers and perhaps a gain for energy independence. But there are always "unintended consequences," and when disaster strikes we usually find out the consequences are a bigger deal than anticipated. Oil train derailments are finding the weakest links in our emergency response structures; links that we need to be able to diagnose and correct.

We can all take a page from the book of those who address natural disasters. Many of the response scenarios that affect humans also affect the environment directly linked to humans. And we know from Hurricane Katrina that there is a long-term delayed environmental response affecting humans in a way that is often difficult to quantify and even harder to estimate cost-wise due to the unintended consequences—the unforeseen ripple effects that last for years.

Since the UST Program has driven many of the advances in petroleum cleanup technology, we should share our experience before our aging workforce falls out of the formula and the wheel is reinvented at considerable cost both inside and outside of the UST program. Petroleum cleanup veterans, representing government, industry, and environmental consulting have a part to play in this discussion and should work together to get on the right track in the oil train debate. ■

References

1. NTSB Safety Recommendation, July 1, 1991.
2. USDOT website, July 23, 2014. *http://www.dot.gov/briefing-room/us-dot-announces-comprehensive-proposed-rulemaking-safe-transportation-crude-oil.*
3. "Flathead Basin Commission to ask federal agency to require oil trains to slow down near cultural and environmental landmarks."*Flathead Beacon*, Sept. 16, 2014.
4. *The Columbian*, June 12, 2014.
5. *LUSTLine* Bulletin #74, June 2014.

Source documentation: *International Business Times*, Nov. 8, 2014

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MONTANA UNDERGROUND STORAGE TANK NEWSLETTER

Ask the Expert

How does the underground storage tank program establish violation significance?

Redge R. Meierhenry, DEQ

Violations found during an underground storage tank (UST) compliance inspection review (required every three years) are separated into four different levels. These are Major, Moderate, Minor and N/A (Not Applicable).

Montana Code Annotated (MCA) 75-11-309 allows the underground storage tank program to not issue or renew an operating permit for an UST system "if the department finds that there has been significant noncompliance with this part or with rules, permits, or orders issued pursuant to this part." Because of this rule, the UST program considered each violation of department administrative rules and attached "significance" to that violation. The purpose in defining significance is to carry out the legislative mandate for determinations of what instances or situations the department was NOT going to issue an operating permit.

Consequently, the UST Program established significance of each UST violation based upon the following criteria:

- Risk of harm to the environment or human health,
- Federal Significant Operational Compliance (SOC) guidelines that include a requirement for the proper equipment, that the equipment functions properly, and any imminent threat of a regulated substance release, and
- Extent of deviation from rule.

For example, an UST system in violation of record keeping requirements (must have the past 12 months of tank leak detection records), would be in "major violation" if the system operator has no monthly tank leak detection records. Conversely, the UST system operator missing two monthly records but has the last two months of tank leak records, would be in "minor violation" of department administrative rule.

In the next issue, we will discuss the various kinds of operating permits that the UST program issues. The type of operating permits the UST program issues has a direct tie to the significance criteria noted above.

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MONTANA UNDERGROUND STORAGE TANK NEWSLETTER

Underground Storage Tank Act Enforcement Cases Resolved During the 3rd Quarter of 2014

Shasta Steinweiden, DEQ

The DEQ Enforcement Division closed the following enforcement cases during the 3rd quarter of 2014:

Mort Distributing, Inc. (Mort), resolved a violation for delivering fuel to underground storage tanks that did not have a valid operating permit. Mort delivered fuel to the Circle Exxon in Circle. Mort paid a $1,800 penalty for the violation.

J & J Curtiss, LLC, (Curtiss), resolved a violation for operating an underground storage tank without an operating permit at the Circle Exxon. Curtiss paid a $900 penalty for the violation.

Ricci's of Laurel, Inc. (Ricci's), resolved violations at Ricci's Express in Laurel. The violations were for failing to have 12 months of leak detection records, and failing to get a compliance inspection within the required timeframe. Ricci's paid a $630 administrative penalty, submitted 12 months of leak detection records, and obtained a re-inspection.

Mini Mart, Inc. (Mini Mart), resolved a violation for operating an underground storage tank without an operating permit at Loaf N Jug 714 in Fairview. Mini Mart paid a $750 penalty for the violation.

CHS, Inc. (CHS), resolved a violation for delivering fuel to underground storage tanks that did not have a valid operating permit. CHS delivered fuel to Loaf N Jug 714 in Fairview. CHS paid a $750 penalty for the violation.

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MONTANA UNDERGROUND STORAGE TANK NEWSLETTER

MUST News

Montana Department of Environmental Quality

Petroleum Storage Tanks: Planning for the Future

Terry Wadsworth, Petro Board
Mike Trombetta, DEQ

DEQ and the Petroleum Tank Release Compensation Board (Board) are currently working on a unified strategic plan to improve the programs that work with petroleum tanks, including both the management of active tanks to prevent releases, and the cleanup of tank releases. A collaborative strategic planning meeting between DEQ's underground storage tank section, petroleum tank cleanup section, brownfields section and Board staff was conducted to identify and prioritize unified goals and objectives.

DEQ and the Board reported on their strategic planning effort at the September 10 meeting of the Environmental Quality Council (EQC or Council). The update served to inform the Council that the department and the Board continue to work with federal and state partners, as well as stakeholders, to find ways to solve challenges and make program improvements.

There were many creative ideas during the brainstorming sessions. The ideas were grouped into three main areas determined most important. These areas included:

1. Risk,
2. Optimization of business processes, and
3. Managing the financial aspects of petroleum cleanup.

Risk is as an important factor in preventing releases, in determining when to close a release and where to put resources. Understanding, identifying and managing risks associated with petroleum storage tanks is an important part of the cleanup of a release. It is also an important component of Petroleum Tank Compensation Fund (Fund) management. DEQ staff is first assigned to the highest risk sites, from the emergency response sites down to the more routine cleanups. Part of the planning effort brainstormed ways to identify the riskier tanks and incentives that could be provided to owners for the removal and upgrade of those tanks. In addition, DEQ and the Board are working with stakeholders to improve the current Petroleum Mixing Zone administrative rules and statues. The department is requesting public comment on a rule amendment, and with the help of stakeholders, has helped craft a bill proposal for consideration by the legislature.

The optimization of business processes is also very important to the efficiency of DEQ and Board procedures. This includes increasing coordination and communication among state programs with overlapping interests in order to prevent and cleanup releases from tanks and to share vital tank

information with non-government entities. The implementation of an information management system currently under development will help to improve the speed, availability, and exchange of information between and among state programs and the community. It will also assist responsible parties and state agencies maintain deadlines, keep cleanups on schedule, and bring the right environmental information to the table when important cleanup decisions are being made. This information management system was briefly discussed at the recent consultants meeting.

Managing the financial aspect of petroleum cleanup was also brainstormed. The Fund works very well for the active gas stations. However many former facility owners have difficulty raising the $17,500 co-pay requirements, especially for those where the property does not generate any revenue, where the owners are on fixed incomes, or where the copay is a large portion of the property value. Another group struggling with the financial aspects of cleanup is the owners of former tank facilities who are ineligible for the Fund and have to pay for the entire cleanup themselves.

To-date, DEQ has been able to use funds allocated from the Orphan Share Fund (Senator Brenden's and Senator Keane's "boots on the ground" initiative) to assist some property owners with overcoming the aforementioned financial challenges. That financial initiative identified an ongoing financial need related to "orphaned" tank sites, and the common goal to leverage partnerships to meet the financial needs of petroleum cleanup. The initiative encouraged the leveraging of Fund assistance with other available funding sources, such as the $400,000 Orphan Share allocated funds, DNRC-RDG grants, Brownfields funding, EDA/local government grants, assessment grants, LUST Trust, etc.

Discussions and planning will be ongoing, but the ultimate goal of the tanks programs is for greater efficiency and more tank closures.

Staff from the DEQ tank programs and Petro Board attending the strategic

planning meeting at the Board of Investments in September.

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Fund and Release Status Report

Petroleum Fund Financial Status – Through September 30, 2014, Fiscal Year 2015
(July 1, 2014 – September 30, 2014)

Total Revenue: $1,349,880

Current and prior year claims expenditures: $1,178,897

Outstanding work waiting to be obligated: $1,085,317

Petroleum Releases – Through September 30, 2014, Fiscal Year 2015
(July 1, 2014 – September 30, 2014)

New Releases: 14
Releases Resolved (Closed): 28

Summary of Total Petroleum Release Activity

Total Confirmed Releases: 4621
Total Active Releases: 1301
Total Releases Resolved (Closed): 3321

*Please note that this number includes sites with the status “Transferred to Another Program or Agency.” The other agency or program could be the EPA or another state-lead program (e.g. the DEQ State Superfund Program).