



Spring 2015

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The *MUST News* is moving to a biennial publication schedule. Learn more [here](#). We would also like to hear from you. Please take our short survey to help us better meet your needs: <https://www.surveymonkey.com/s/CDDCSMX>

[2014 Tank Autopsy Report](#)

Find out what kind of fuel spills occurred in Montana last year, and the trends DEQ is seeing.

[Spill Busters!](#)

This technology has proven successful in recovering several thousand gallons of floating gasoline and diesel on the groundwater in Harlowton, Montana. Find out what it is and how it works in this article.

[Consultants Meeting \(Friday, May 15, 2015, 10:00 a.m. - 12:00 p.m. at the Metcalf Building, 1500 E. 6th Ave., Helena\)](#)

Several changes will be implemented in 2015 that are aimed at increasing owner/operators involvement in cleanup, and how environmental consultants do business. If you are a consultant, these changes could potentially affect your bottom line, so it is critical that you attend this meeting.

[Your Flex Connectors and You](#)

Have you checked your flex connectors today? Have you checked them in the last year? What would you look for if you DID check them?

Emerging Issues with USTs

One constant in the underground storage tank world is evolving fuel compositions. From biodiesel to ethanol-blended gasoline, tank owner/operators must always ask themselves, "Is the fuel I'm putting in my tank compatible with my tank system?"

Leveraging Petroleum Brownfields Sites

The petroleum cleanup project known as "901 Central Avenue, Great Falls" has achieved state cleanup standards and is officially resolved. The property saw a number of uses over the years, and then sat vacant for 10 more. Learn more about this Brownfields success story in this article.

Brownfield Workshop Invitation

Attend a free Brownfields workshop on May 19 in Helena, co-hosted by the Montana Department of Commerce and the Technical Assistance to Brownfields Program at Kansas State University.

Montana Petroleum Marketers Position on EPA Proposed Revisions to UST Regulations

MPMCSA Executive Director, Ronna Alexander, has written a guest article on the Association's stance on the EPA Proposed Revision to UST Regulations. We thank Ronna for her contribution.

Enforcement Blotter

Find out who the DEQ Enforcement Division has been working with to rectify violations and the penalties that have been assessed.

UST Class Recap

The DEQ Underground Storage Tank section recently held another incredibly successful refresher class for approximately 60 department-licensed installers, removers, and compliance inspectors. Find out more in this article!

Strides Taken for Tanks Systems

The Underground Storage Tank Section has tentative funding to develop a model and a risk profile for underground storage tank systems across Montana, focusing particularly on systems reaching the end of their useful life.

Remediation Division Relocates

The DEQ Remediation Division has relocated to 1225 Cedar Street in Helena.

Fund and Release Status Report

Petro Board Meeting Schedule and Minutes

Don't forget DEQ's Data Search Tools are a great resource for UST information and data!

For More Information

- [Mike Trombetta](#) (Bureau Chief): 444-6463
 - [Hazardous Waste Cleanup Bureau](#)
- [Rebecca Ridenour](#) (Section Supervisor): 444-6436
 - [Petroleum Cleanup Section](#)
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 - [Underground Storage Tanks Program](#)
- [Terry Wadsworth](#) (Executive Director): 444-9712
 - [Petroleum Tank Release Cleanup](#)
- [Jeni Flatow](#) (Public Information Officer): 444-6469
 - [Remediation Division](#)

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Petroleum Tank Cleanup Section | Federal Facilities and Brownfields Section

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Petroleum Tank Release Compensation Board

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PTRCB Web: <http://www.deq.mt.gov/pet/default>

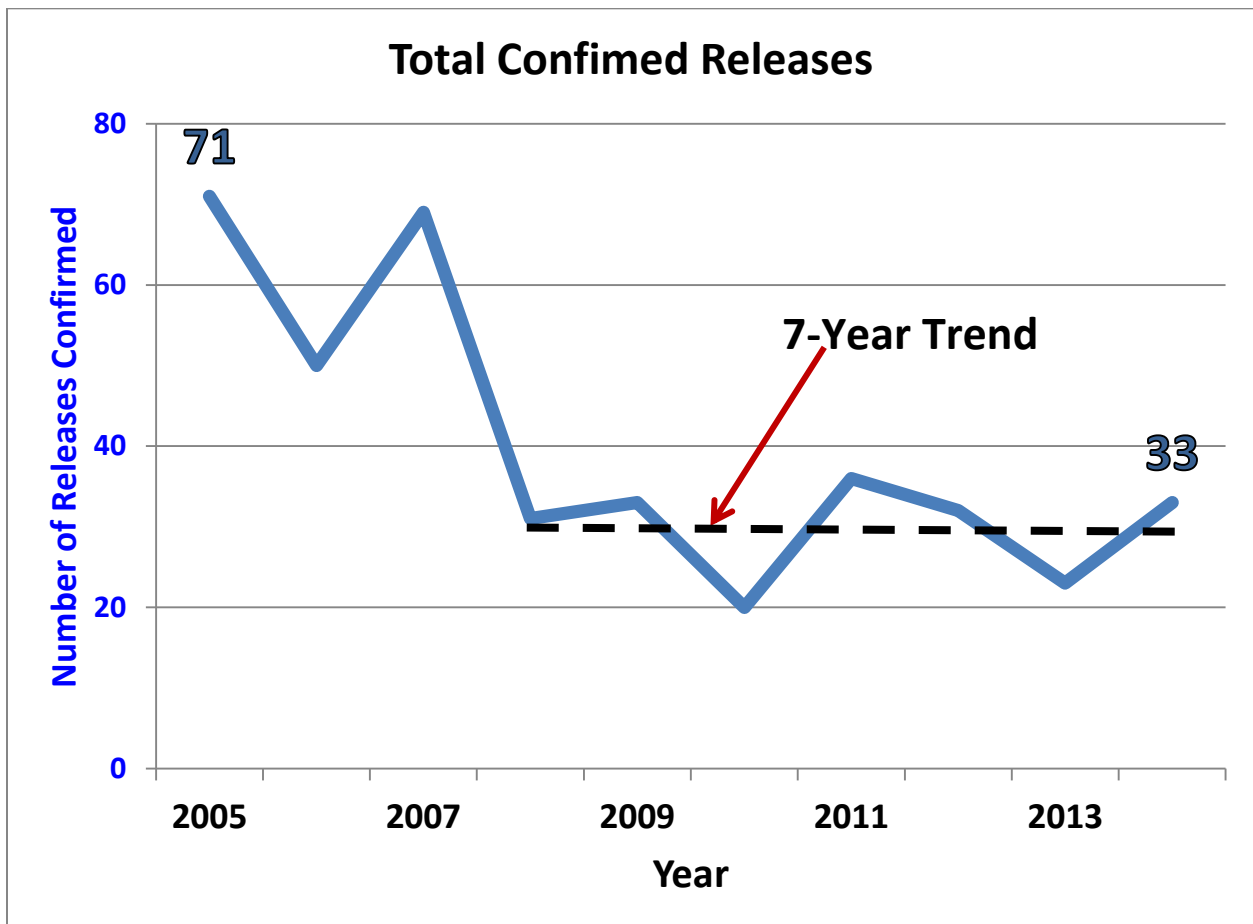


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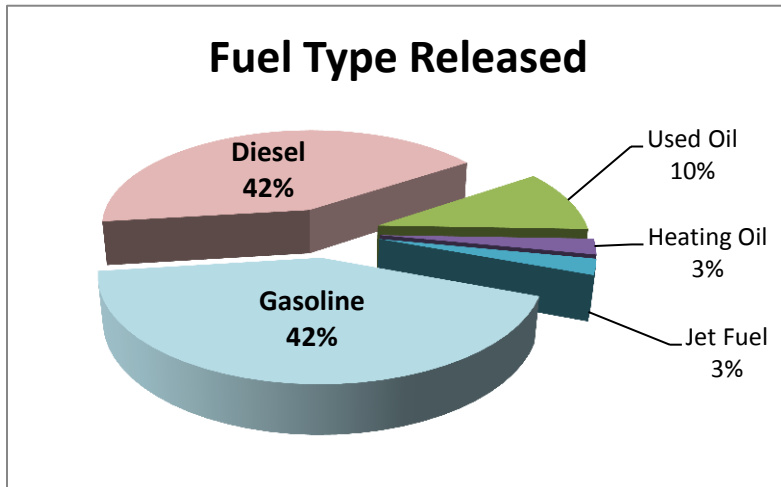
2014 Leak Autopsies

Mike Trombetta, DEQ

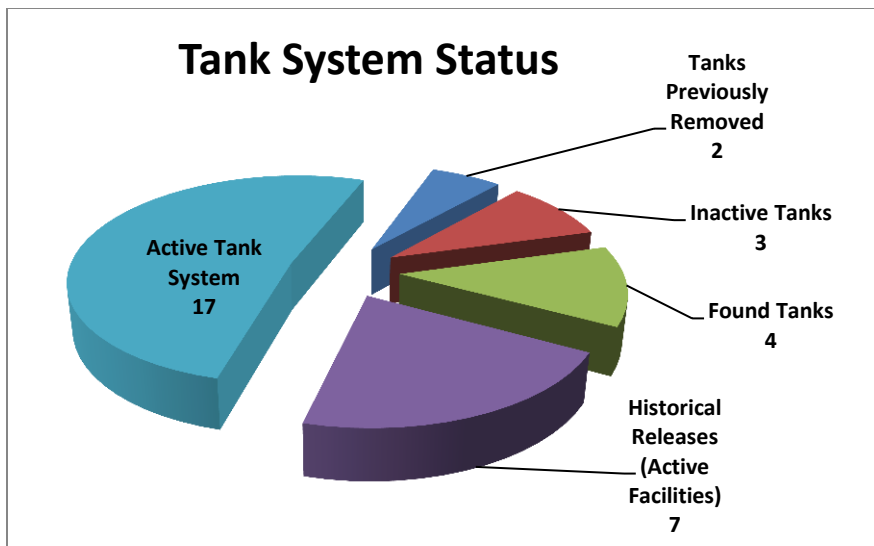
Montana's 33 confirmed petroleum storage tank releases in 2014 is up from 23 new releases the previous year. However, this is right in line with the fairly flat trend of about 30 new releases confirmed each year since 2008.



The majority of the fuel types released were split equally between gasoline and diesel, with a minor smattering of used oil, heating oil, and jet fuel.

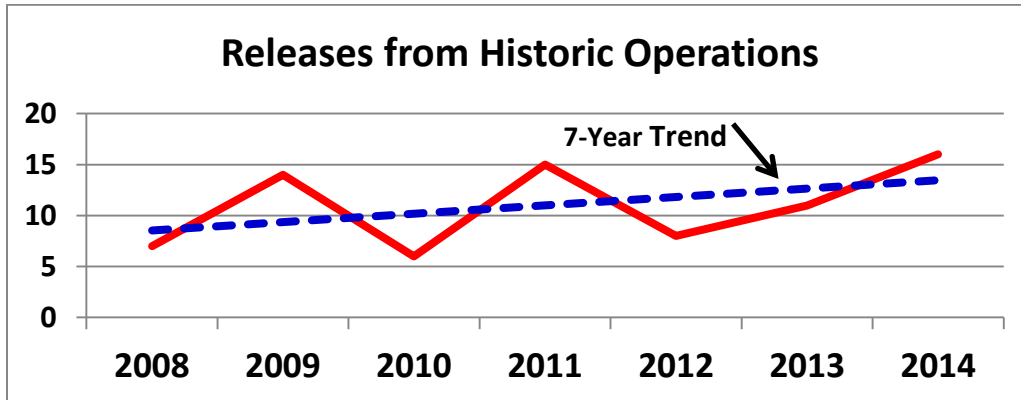


Seventeen, or a little over half, of these releases originated from active tank systems, with the remainder coming from historical releases, "found" tanks, or inactive (sub-standard) tanks.

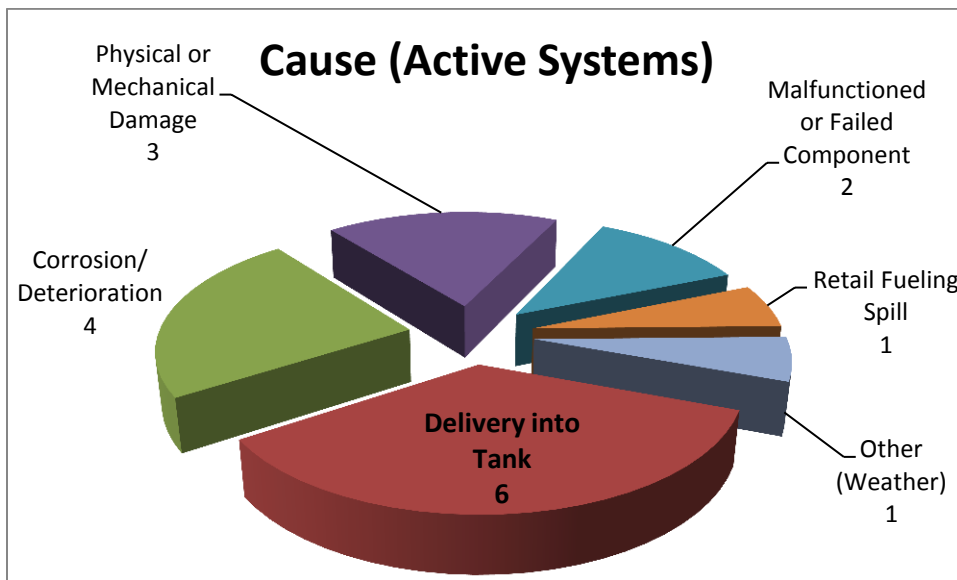


The number of releases from other than active tank system has risen to its highest number since 2007, at 16. This is consistent with the seven-year trend that shows a continuous rise in these types of non-active sources, but is unexpected since the number of historical releases and unfound tanks is finite, and must also be getting smaller as we discover them. This increase could very likely be due to increases in construction projects and property transactions. Six of these releases were found through environmental assessments (typically associated with land sales/development), and four were discovered through on-site and off-site construction projects.

It is also worth noting that seven historical releases were discovered at facilities with active storage tanks. Although petroleum storage systems were currently operating at these sites, DEQ determined that the contamination pre-dated the existing equipment and was associated with older operations. This was significant enough to break it out as a separate category: Historical Releases at Active Facilities.



These “Leak Autopsy” reports provide good lessons learned on how to prevent future releases. Because data from active tanks provides the best information to improve current systems and procedures, the remainder of this discussion will focus on the 17 releases from active tank systems. Six of the releases involved overfilling a storage tank (UST or AST).



Five releases were caused by fuel being pumped into the wrong tank; four of which were operator error; and one was due to a malfunction in a valve relay. One downspout adapter came off while offloading into an UST. The precise cause of one

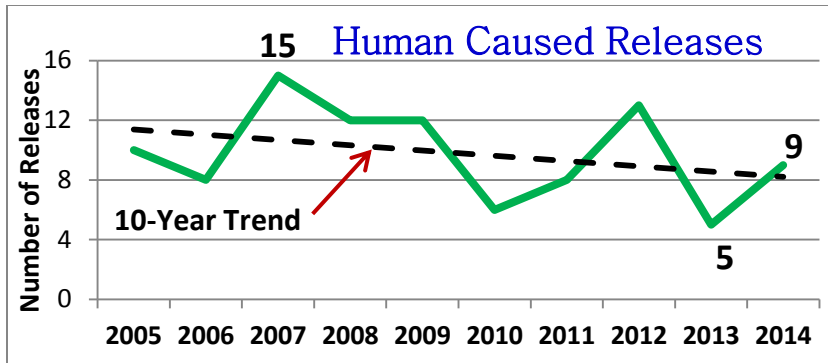
delivery problem is not known as the contamination was only discovered after the fact and was attributed to tank overfills and spills.

It is noteworthy that four releases were caused by corrosion or deterioration of active tank systems. One release was from a pin-sized corrosion hole in a short length of galvanized steel pipe directly below a dispenser. Another corrosion release was caused by a hole that rusted through an above-ground heating oil tank.

Two "deterioration" releases originated from flex connectors that failed approximately one month apart at the same facility that highlight issues concerning aging tank equipment. In both cases the flex connectors deteriorated and developed leaks. As stated in a companion article in this issue, *Your Flex Connectors and You*, these flexible sections of pipe have a finite life cycle and are not designed to last forever. This life cycle may be shortened when they are installed with tighter bend radii. The good news is that both of these releases were discovered through leak detection equipment. Line leak detectors went into slow flow mode and alerted the facility operators, who properly managed complaints of slow pumping, were able to limit environmental impacts, and reduce remediation costs.

Three releases were caused by physical damage to the tank system. One product line was damaged during underground utility work and another above-ground dispenser was struck by a vehicle. The third release occurred from a 300 gallon dyed diesel AST at a ranch. The owner was standing on top of the AST when the support failed, causing the tank and owner to fall to the ground. Approximately 65 gallons of dyed diesel were released on the ground and the rancher broke his ankle.

Two releases occurred when components malfunctioned. One was a faulty switch that did not disengage a pump and continued to run. Fuel slowly pushed through two closed gate valves into, and overfilling, another tank. The other equipment failure was a pump on a waste oil collection truck. Instead of removing the contents of a collection tank at an automobile dealership, the truck pumped its on-board contents into, and overfilling, the 500 gallon collection tank.



Although the ten-year trend of human caused releases is continuing to decline, this year's number of nine nearly doubles the all-time low of last year's five human caused releases. Two-thirds, or six, of these releases were initiated by errors of the facility or delivery truck operators during tanker offloading operations. This is a disturbing and continuing trend we have seen where releases are caused r by professionals in our industry each year. If operators took proper care to ensure connections are made correctly, valves are set right, and pumps are turned off following deliveries, these types of releases could have been avoided. It is also critical that operators and/or drivers stay in clear sight of the tankers and tanks throughout the entire delivery. Please be careful out there!



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Innovative Free Product Recovery in Harlowton, Montana

Jeff Kuhn, DEQ

The Magnum Spill Buster™ by Clean Earth Technology, Inc. was selected to recover light non-aqueous phase liquids (LNAPL) consisting of a mixture of floating gasoline and diesel at the Harlowton Area Wide Petroleum Release Site in Harlowton, Montana. The LNAPL plume is in a fractured bedrock aquifer at a depth of approximately 35 feet below ground surface. The source(s) of the contamination has not yet been identified. Three Magnum Spill Buster assemblies consisting of a product probe, Auto Seeker reel assembly and a processor control box were installed in October 2013, in product recovery wells to address the extensive LNAPL plume.

The 1.93" diameter product probe contains interface sensors, as well as a modified off the shelf diesel fuel pump. With a diameter of 1.93 inches, the probe is designed to fit in 2 inch diameter recovery wells. The Auto Seeker is a small, motorized, reel assembly that automatically raises and lowers the probe to follow the LNAPL interface through the entire depth of the well. The Magnum Spill Buster™ control box coordinates and displays the condition of the system operation.

The interface sensor in the probe detects the product/water interface and sends a signal to the control box. The control box activates the Auto Seeker reel and positions the probe in the well so it remains just above the LNAPL interface. Since the probe and pump inlet are positioned above the LNAPL interface, very little water is pumped potentially reducing product disposal costs.

There are several compelling reasons to consider using the Magnum Spill Buster system:

- Rapid removal of LNAPL - each pump is capable of pumping up to 46 gallons an hour.
- Automatically adjusts the position of the probe to account for changing interface levels.
- Reduces or eliminates line freeze up. Very little water is pumped so line freeze ups are not problematic.
- Low utility costs – the electric bill for the 3 pump recovery system that was installed in Harlowton is ~\$125 annually.

- Product probe fit inside 2" wells – don't have to install larger diameter wells.

The Magnum Spill Busters worked exceedingly well. After a little more than a year of operation, the system recovered over 18,000 gallons of LNAPL and the thickness of the LNAPL plume has substantially decreased.

Project photos



Auto Seeker Reel Assembly



Reel Assembly in protective vault



Product probe



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Improvements in DEQ's Approach to Tank Release Cleanup

Rebecca Ridenour, DEQ

Terry Wadsworth, PTRCB

DEQ has reviewed and improved its business processes over the past five years. Several changes have been made to improve effectiveness and efficiency, and we continue to look for ways to move a release to closure in a shorter timeframe.

DEQ will need a cleanup plan for every open petroleum release. A plan will need to lay out how the release will be closed and must be created and supported by the owner/operator. We have elected to make closure-focused project management of petroleum releases our standard in response to both legislative mandates and US EPA directives.

Several changes will be implemented in 2015 that are aimed at increasing owner/operators involvement in cleanup and how environmental consultants do business. We will be reaching out to owner/operators of petroleum releases more consistently and will encourage active decision making in clean-up and commitments to closures.

Some of the specific processes to be updated include:

1. Remedial Alternatives Analysis
2. Including petroleum mixing zones as a closure alternative
3. Defining the amount of mass removed
 - a. Excavations
 - b. In-Situ systems
4. Work plan and report expectations
5. Scoping and strategic planning for all releases from the start

In addition to business changes, DEQ and PTRCB are adopting a new database that will assist business process improvements and communications to the public. The database will help us be proactive and move a release to closure.

The spring consultants meeting will focus on the business process updates that DEQ will be making in the upcoming year. The meeting will be an open forum for questions. Anyone interested in these changes and how they will impact petroleum cleanup is strongly encouraged to attend.



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Your Flex Connectors and You

Wally Jemmings, DEQ

Have you checked your flex connectors today? Have you checked them in the last year? In the last three years? What would you be looking for if you DID check them? PEI/RP-900 *Recommended Practice for the Inspection and Maintenance of UST Systems* suggests checking visible flex connectors annually to make sure they are not twisted, kinked, or bent beyond the manufacturer's specifications and that they are protected from corrosion.

However, the proper installation of flex connectors is just as important as inspection. DEQ *Underground Storage Tank Critical Installation Requirements* states that flex connectors must be installed in the product and vapor recovery piping at the tank, at the base of dispensers, and anywhere a direction change of 30 degrees or more occurs with less than a 4' straight run on either side of it. It also states that flex connectors in contact with soil must be protected from corrosion by heat shrink sleeves, watertight boots, or STI coating and anodes. Flex connectors must be UL listed for hydrocarbons, and if they are exposed to the atmosphere, they must be fire rated.

UL 2039, *Outline of Investigation for Flexible Connector Piping for Fuels*, outlines the vigorous "worst case scenario" situations that flex connectors are subjected to in order to become UL listed, including up to 250,000 cyclic tests, bending tests, drop tests, and UV exposure tests. Manufacturers of UL listed flex connectors refer to UL 2039 as a reference for the cycle life, or the number of cycles completed by an assembly before failure, of their flexes. What that means to owners and operators of UST systems is that flex connectors have a cycle life! There is a limited number of times flex connectors can withstand vibration, cyclic pressure surges, and cyclic displacement and twisting.

UL 2039 also requires that installation instructions and maintenance instructions be supplied with every flex connector. Installation instructions must provide information about pressure rating, location rating, fitting torque ratings, and minimum bend radius. Maintenance instructions must include a recommended field leak test method and procedure and information about the maintenance required for continued leak-tight use.

Bend radius (figure 1), measured from the inside curvature to the centerline of the bend, is the minimum radius a flex connector can be bent without kinking it or damaging it. Exceeding the rated minimum bend radius can shorten the life of a flex connector considerably. The bend should be located as close to the center of the flex connector as possible.

An easy way to check the bend radius of a flex connector during installation is with a cardboard template:

- Cut a piece of cardboard to the minimum bend radius of the particular flex connector you want to check, then hold the template against the inside of the bend.
- If the bend is the same size or larger than the radius on the template, the bend is okay.
- If the template doesn't fit, the bend radius is too small!

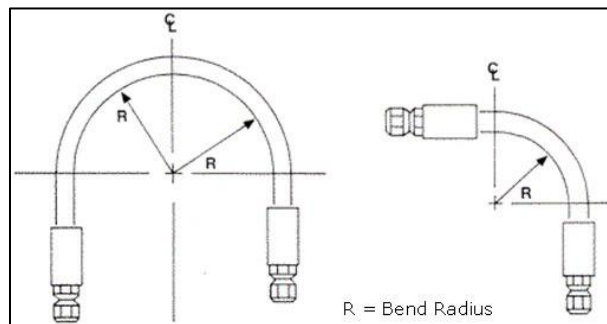


FIGURE 1: Bend Radius (R) is measured from the inside curvature to the center line of the bend (CL).

Don't let a failed flex connector happen to you (figure 2)! Owners, operators, installers, and inspectors of UST systems need to be aware that flex connectors, like all other components of an UST system, have a limited service life. Special care must be taken during installation of flex connectors to ensure they are installed correctly, that they are rated for the environment they will be in, and that they are designed for the substance they will contain (contact the manufacturer for this information). Flex connectors that are visible should be inspected, at least annually, to ensure they are not twisted, kinked, or bent.



FIGURE 2: A failed flex connector.

Have you checked your flex connectors today?



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Emerging Issues with Montana's Underground Storage Tanks

Leanne Hackney, DEQ

Leaking underground storage tanks (USTs) are a threat to ground water and, therefore, public health. This is why the Environmental Protection Agency (EPA) created regulations for state agencies to implement to protect ourselves, future generations, and the environment. Underground storage tank regulations have matured over the years to help mitigate threats to the integrity of USTs as we become more aware of the hazards of releases. Recently, two new issues have come to the forefront of underground storage tank management that owners and operators need to be aware of. Fuel incompatibilities with UST systems and microbial-induced corrosion are today's topics on protecting your underground storage tanks from their deleterious effects.

One constant in the underground storage tank world is that we can always count on fuel compositions evolving. Within a decade, biofuel blends such as biodiesel and ethanol-blended gasoline have taken a prominent seat in the marketplace. The sulfur content in highway diesel has also been greatly reduced. Ongoing research in fuels science promises greater fuel innovations for the future. With all these advancements in fuels, UST owners must ask themselves one question: "Is the fuel I'm putting in my tank compatible with my tank system?" Different fuels mean different chemical compositions and different chemical compositions mean different chemical properties. Here are some things to consider:

Fiberglass reinforced plastic tanks and piping older than 1984 may not be compatible with biofuels, and exposure to these fuels can lead to degradation of the material.

- System components such as pump heads may also be susceptible to alternative fuel types.
- Lining material used to line old steel tanks may not be compatible with the newer fuels.
- Unlined steel tanks are compatible with almost any fuel, however, keep in mind that ethanol fuels have solvent properties and can dislodge old tank repairs.
- Adhesives, glues, sealants and gaskets used around piping and other parts of a UST may not be compatible with certain fuels, including E10 (10% ethanol).

As an UST owner, it is by law, your responsibility to demonstrate system compatibilities with the fuel your tank is intended to store. If the fuel is not compatible with your UST system, the fuel cannot be stored in your tank.

With the introduction of biofuels, a new type of corrosion has entered the scene. This new type of corrosion is known as microbial-induced corrosion or MIC, and as the name implies, is caused by microbes. Given the right conditions, microbial-induced corrosion can be very aggressive and certainly a threat to an underground storage tank system. This type of corrosion is different from galvanic corrosion in that it occurs internally, rather than from the tank exterior, and it all starts with water entering the tank. As we know, water in any tank is not good, but water in ethanol-blended fuel tanks is a death wish for steel tanks and metal components in a tank system. Water can be introduced into a tank by leaking gaskets, water in delivery trucks, spill bucket drains, or other methods of entry. The ethanol in the fuel has a very high affinity for water and will absorb water until it reaches its saturation point. When this saturation point occurs, the water separates from the fuel and forms a layer. Like humans, microbes must have water to survive and once this water layer is produced (as little as 0.25 inches), specific microbes, most notably *Acetobacter* (genus) bacteria, which are normally present in the environment, settle at this water-ethanol interface. *Acetobacter* bacteria and other microbes that use ethanol as a food source, begin to feed on the ethanol, and in the process, produce acetic acid as a byproduct. This acid easily disperses into the ullage space of the tank and with a constant cycle of wetting and drying of the tank's metallic surfaces, this aggressive corrosion begins.

Microbial-induced corrosion can also occur on metals components present in tank top sumps. If vapor is present due to vapor leaks and if there is enough humidity in the sump, these ethanol-loving microbes, once again, can proliferate and produce their acid byproduct. Some of the reports from other states with high humidity have been astounding, with rapid corrosion of newly installed pumping systems occurring within months.

Microbial-induced corrosion has also been found in Ultra-low sulfur diesel (ULSD). Ethanol is not a component of ULSD, but shared fuel trucks that deliver both ethanol fuels and diesel fuels can contain residual ethanol if the truck is not cleaned between loads. Ethanol vapor can also make its way into a diesel tank if the tank shares manifolded ventilation systems with a gasoline tank. Again, when water enters the system, the process begins.

So, what can an underground storage tank owner or operator do to protect their tanks from these threats? If it hasn't become apparent already, proactive maintenance is vital. Know the challenges that relate to your UST systems. Determine if your system is compatible with the fuel you intend to store. If the fuel is not compatible with your tank system, you cannot store that product in your tank. The Association of State and

Territorial Solid Waste Management Officials (ASTSWMO) has a very useful publication, "*Compatibility of UST Systems with Biofuels*". This report contains a checklist, as well as recommendations to aid the owner in making compatibility decisions (go to www.ASTSWMO.org for the publication). The EPA also has two online resources to help owners determine system compatibility with alternate fuels greater than E10 and B20 (20% biodiesel). Go to <http://www.epa.gov/oust/altfuels/biofuels.htm> for the publications.

Water management in your UST system is more important now than ever. Ensure that entry points into your tanks are tight by replacing gaskets, fittings, and plugs regularly. Remove liquid from spill buckets and sumps promptly. It is best not to drain liquid back into the tank, as water may be present. The lower concentration ethanol fuels phase-separate quicker than fuels with higher concentrations of ethanol. Once phase separation has occurred, it is irreversible, so early water detection is essential. Check for water in your tank frequently. Automatic tank gauges can detect water in your tank system. At least two ATGs on the market have the capability of detecting water in the fuel before it separates out. You can also stick your tanks manually for water with the appropriate water-finding paste. Once water has been detected in your tank, have the water removed immediately, as phase separation is irreversible. The Steel Tank Institute has a helpful, free publication, "*Keeping Water out of Your Storage System*". Go to www.steeltank.com to download the publication.

Finally, be aware that UST systems have a finite life-span. Tank life depends on a number of factors including quality of installation, construction activities at the site, fluctuating groundwater conditions, change in product storage, galvanic and microbial-induced corrosion, to name a few. Montana considers steel tanks older than ten years, and fiberglass reinforced plastic tanks older than twenty years, at risk. Needless to say, replacing your tank systems before failure is less costly than environmental remediation.

In today's changing world, staying current with issues affecting underground storage tank life and integrity is paramount. System fuel incompatibilities and microbial-induced corrosion are real issues surrounding underground storage tanks. Taking simple steps, such as determining fuel compatibility and managing water in your tank systems can mean the difference between success and UST failure.



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Leveraging Petroleum Brownfields Sites: 901 Central Avenue, Great Falls

Jeff Kuhn, DEQ

The petroleum cleanup project known as "901 Central Avenue, Great Falls" has achieved state cleanup standards and is officially resolved. The business that now occupies the property, "True Brew," is open and thriving. The site is a great example of a blighted commercial site that has found new life after environmental cleanup leveraged by the Brownfields Program. The Brownfields Program utilizes federal funding to assist underutilized properties whose redevelopment is hindered due to the stigma of an environmental problem. Sites must qualify for the Brownfields Program and have a demonstrated community benefit.

The property has seen a number of uses over the years, including a Phillips 66 Service Station, an automotive service center, and A-1 Transmission. After the closure of A-1 Transmission, the property sat vacant for 10 years.



Before Brownfields Funding (2009)



After Brownfields Funding (2015)

A local developer, Platinum, LLC, envisioned the redevelopment potential for the property and conducted an environmental site assessment (ESA) 2007. The ESA confirmed the presence of a petroleum release. Platinum, LLC worked with the previous owner to meet DEQ's petroleum site assessment requirements. Fortunately, the site was eligible for Petroleum Tank Release Compensation Fund (PTRCF, or "Petro-Fund") reimbursement. The Petro-Fund's assurance of cleanup reimbursement facilitated Platinum, LLC's purchase of the property in 2008. A cleanup plan for the site was approved by DEQ in early 2009. However, at that time money was not available from the Petro-Fund to be obligated for the work, and it appeared that the site might continue to sit vacant for an extended period of time.

Petroleum Brownfields to the rescue! The Great Falls Development Authority (GFDA) received a Brownfields Revolving Loan Fund (RLF) Grant from the U.S. Environmental Protection Agency in 2005. A portion of this grant is earmarked for eligible petroleum brownfield sites. During the summer of 2009, DEQ and GFDA partnered and identified the property at 901 Central Avenue as a potential candidate for a Brownfields RLF loan. PTRCF staff worked with Platinum, LLC and GFDA to negotiate repayment terms and write a letter of obligation for repayment of the loan.

In May 2010, approximately 3,060 cubic yards of contaminated soil was excavated and hauled to a landfarming site for remediation. Confirmation soil sampling at the time of cleanup demonstrated that nearly all of the petroleum contaminated soil present on-site was successfully removed by the excavation work. Three new monitoring wells were subsequently installed on the property, and semi-annual groundwater monitoring confirmed that the site achieved DEQ cleanup levels.

The expedited cleanup allowed the immediate construction of a new Mountain Mudd Espresso coffee kiosk (now "True-Brew Espresso") and an adjacent

landscaped park. Because of the vision and patience of Platinum, LLC, an environmental liability was removed, jobs were created, and a valuable business now exists for the benefit of Great Falls. This was done through a collaborative effort between the private sector, GFDA, and the cooperation of federal and state agencies. This partnership successfully transformed a blighted, downtown corner with a dilapidated building and a significant environmental liability, into a walk-up and drive-through coffee shop with a small park.

Many communities in Montana currently have Brownfield assessment and/or RLF grant funds available to them for the redevelopment of similar blighted properties. DEQ, in partnership with local governments and economic development authorities, are looking for opportunities to use this funding to benefit local communities. The criteria used to evaluate the eligibility of possible Petroleum Brownfield sites can be found on-line at:

<http://deq.mt.gov/Brownfields/MTBrownfieldsPrograms.mcp>.

YOU ARE INVITED!

Removing Obstacles to Redeveloping Your Downtown

Free Brownfield Workshop in Helena, Montana!

May 19, 2015, 8:30 – 4:00

301 South Park Avenue, Room #228, Helena, MT 59601

Dear Colleagues, Community Leaders, Planners and Consultants!

You are invited to attend a free Brownfields workshop on May 19 in Helena, which is being co-hosted by the Montana Department of Commerce and the Technical Assistance to Brownfields (TAB) Program at Kansas State University.

Does your community have an abandoned building, old gas station, junk yard or other potentially contaminated property that is impeding your communities' future growth? This workshop is designed to help you gain a better understanding of what a Brownfields is, learn how Brownfields revitalization can be a part of your business development strategy, and hear from state and national leaders on resources available to assist local government with redevelopment of contaminated or potentially contaminated property. Bring your community-specific project and join in the discussion!

Who should attend? Local and regional government officials, not-for-profit economic and community development organizations, real estate, legal and banking professionals, contractors and developers, and anyone interested in learning about Brownfields or about financial resources for local redevelopment.

For more information contact:

Mark Walker, KSU TAB, mewalker@ksu.edu, 303-902-1441

Tash Wisemiller, Main Street Program Coordinator, twisemiller@mt.gov, 406-841-2756

Attendance is FREE and lunch will be provided, but registration is required.

To register, visit the workshop webpage at: <https://www.ksutab.org/education/workshops/>

Please share this information with your colleagues, clients, listservs and anyone you think would benefit from attending this workshop.



We hope to see you there!

**These workshops are made possible with
Funding provided by U.S. EPA**





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Montana Petroleum Marketers and Convenience Store Association's Position on EPA Proposed Revisions to Underground Storage Tank Regulations

Ronna Alexander, MPMCSA Executive Director

Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the official policy or position of the Montana Department of Environmental Quality.

The long awaited final ruling on the EPA's proposed revisions to the underground storage tank regulations may finally be imminent. We expect the Office of Management and Budget (OMB) to release the final rule any day. The OMB is part of the Executive Office of the President and reviews all proposed federal rules before they are made final.

For some background, the Montana Petroleum Marketers and Convenience Store Association is affiliated with a national organization, the Petroleum Marketers Association of America, that has been integrally involved in assessing and ultimately opposing certain sections of the EPA's proposed new requirements for underground storage tank (UST) systems. The Petroleum Marketers Association of America (PMAA) is a federation of 48 state and regional trade associations representing more than 8000 petroleum marketers nationwide.

In 2011, PMAA formed a UST Task Force made up of petroleum marketers and professional engineers to assess the costs of the proposed new inspection and monitoring requirements, and draft a less costly alternative proposal. The PMAA Task force has met on multiple occasions with the EPA to discuss its opposition to the rule. These meetings:

- Won the support of the U.S. Small Business Administration (SBA) in the fight against the EPA's inaccurate small business impact analysis,
- Launched a successful grass roots campaign in Congress to pressure the EPA to delay the rule in order to reconsider the cost burdens it would impose, and
- Offered an alternative proposal that would achieve the same environmental protection at a fraction of the cost.

These efforts by PMAA together forced the EPA to reconsider and redraft the rule.

PMAA believes that the proposed rule to amend federal UST regulations is seriously flawed. First, the EPA's Regulatory Impact Analysis (RIA) significantly underestimated compliance costs imposed by the Notice of Proposed Rulemaking (NPRM). In the RIA, the EPA estimated that annualized compliance costs imposed by the NPRM for small business marketers would amount to \$900. Based on input received from UST equipment and service vendors, PMAA calculated annualized compliance costs imposed by the NPRM to be \$6,100. These costs increase significantly when the expense associated with the storage, handling and disposal of potentially contaminated water used to conduct mandatory integrity testing for spill buckets is added. Depending on the number of spill buckets at an UST site, this one requirement alone could add \$4,000 per year to the \$6,100 in annualized compliance costs imposed by the NPRM.

Second, PMAA was not convinced that the EPA conducted the extensive outreach to stakeholders that the agency claimed in the preamble to have made, prior to the publication of the NPRM. While the EPA worked closely with PMAA on a number of the regulatory mandates required by the Energy Act of 2005, including operator training requirements, the agency did not engage in the same vigorous outreach to the regulated community with regard to the onerous release protection and prevention provisions contained in the NPRM. By failing to fully engage small business petroleum marketers in the regulatory process, the EPA missed out on valuable input from stakeholders that would have resulted in a more cost effective and realistic regulatory proposal.

While PMAA did not object to every proposed requirement, we will briefly summarize the specific objections that if retained in the final rule may affect how owner/operators do business in Montana in the future.

1. Alternative Fuel Compatibility: PMAA has major concerns about the alternative fuel compatibility provisions in the proposed rule and does not believe that any of the options put forward in the rule will overcome marketer resistance to supply mid-level alternative fuel blends without liability protection. There is nothing in the proposed rule that would offer such liability protection.

2. Interstitial Monitoring-Reporting of Suspected Releases: The EPA is proposing to require immediate reporting of an interstitial monitoring alarm as a suspected release. PMAA strongly opposes this section as it believes the sounding of an interstitial alarm is not always the result of a release as sensors can give false alarms. Change in temperature can cause brine levels, resulting in an alarm. Water intrusion and faulty wiring can also cause alarms. While Montana rules require reporting of a suspected release from a monitoring alarm, there is a variance clause that allows the owner/operator 24 hours to investigate the cause, correct the condition, and document that a release has not occurred. This is what PMAA is recommending in the objection; that owner/operators be required to report any interstitial alarms that have been investigated and confirmed to be a release from a sump.

3. Under-Dispenser Containment: The EPA is proposing that owners and operators install under dispenser containment beneath new dispensers; "new" meaning when both the dispenser and the *equipment* needed to connect it to the UST system are installed at a

UST facility. The proposed rule lists replacement of check valves, shear valves, unburied risers or flexible connectors as constituting a "new" dispenser system. Montana rule currently requires that UDC containment be installed when a new UST system is installed; dispensers and any associated hardware used to attached the dispenser to the product piping is replaced; product piping is repaired or replaced; or significant modifications are made to the concrete at a dispenser island. The EPAs proposal would *trigger* UDC for any and all upgrades to the equipment. PMAA argues that the *trigger* for UDC should be the replacement of ALL equipment in the vertical footprint of the dispenser, down as far as the horizontal supply line. The provision, as proposed, creates a powerful disincentive to upgrade older UST equipment.

4. Walkthrough Inspections: The EPA is proposing that owners and operators perform walkthrough inspections of their UST systems once every 30-days. Inspections of the following equipment would be required: spill prevention equipment, sumps and dispenser cabinets, monitoring and observation wells, cathodic protection systems, and release detection equipment. The EPA is also proposing that owners and operators compile and keep inspection records for one year. PMAA opposes the 30-day walkthrough inspection unless the manufacturer specifically requires such inspection for the warranty and, best maintenance/operational practices for the equipment as specified in the operation manual. Further, a 30-day frequency is excessive; six months would be acceptable.

6. Spill Prevention Equipment Tests: The EPA is proposing owners and operators test spill prevention equipment, catchment basins, spill buckets upon installation and, at least once every twelve months thereafter. PMAA opposes the proposed testing requirements. The industry believes it is unnecessary to conduct integrity testing on secondary containment sumps. Visual inspection alone is sufficient to ensure that spill buckets are free of cracks, holes, debris and water. If the sump area is dry and clean upon visual inspection, then integrity of the containment area is assured.

7. Overfill Prevention Equipment Tests: The EPA is proposing that owners and operators test for proper operation of overfill prevention equipment, including automatic shut-off valves, flow restrictors and high level alarms at installation, and once every three years. PMAA supports the testing of overfill prevention equipment at installation but opposes the EPA's proposed three-year testing requirement. First, most manufacturers do not provide recommendations for testing overfill prevention equipment. Nor are there industry standards or codes of practices currently available that address testing procedures for overfill prevention equipment. The EPA has recognized this deficiency in the preamble by stating that the agency "anticipates" that manufacturers and standard setting organizations will develop testing procedures in response to the final rule. PMAA contends that the regulatory costs associated with overfull prevention equipment testing cannot be accurately determined for a testing procedure that does not exist.

In November 2014, PMAA Task Force members met with the Office of Management and Budget to express its concerns over the UST rule that is both procedurally flawed and imposes unacceptable compliance costs. The OMB is not allowed to comment on rules under review but they asked a number of questions regarding compliance costs.

PMAA does not know which provisions made it to the final rule currently under review at the OMB, but it likely contains some of the cost saving alternative measures PMAA recommended. We hope to have clarification soon on what the final requirements will be; perhaps by the next publication of the MUST News!

From the industry's perspective, if the agency fails to reduce the compliance requirements in the final rule, PMAA will explore additional means to fight the rule, including legal action or defunding implementation. I thank the Montana DEQ and the Permitting and Compliance Division for allowing us to express the "industry perspective".



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Spring 2015 Enforcement Blotter

Shasta Steinweiden, DEQ

Mary P. Kendziorski entered into an Administrative Order on Consent (AOC) to resolve violations that occurred at the Henery's Hideaway in Trout Creek. The violations were for failure to empty inactive tanks and failure to correct the violation within the allotted timeframe. The AOC requires payment of a \$370 penalty, empty the tanks, and obtain a reinspection.

Oelkers, Inc. entered into an AOC to resolve violations at Oelker's Service Center in Culbertson. The violations were for failure to conduct a compliance inspection 90 days before the expiration of the operating permit, failure to conduct leak detection monitoring, and failure to obtain a reinspection within the allotted timeframe. The AOC requires payment of a \$960 penalty, submission of leak detection records, and submittal of a reinspection.

Phillip Waltz entered into an AOC to resolve violations for failure to comply with construction permit requirements. The AOC requires payment of a \$195 penalty, submittal of documentation required in the specific installation conditions of the permits, and for Phillip Waltz to attend three consecutive years of DEQ sponsored courses.

Jerry Hollis Jr. entered into an AOC to resolve violations for failure to comply with construction permit requirements. The AOC requires payment of a \$240 penalty.

Hotel West II LP had previously agreed to an AOC in January 2014, for violations that occurred at the Holiday Inn Grand, Billings. Hotel West did not meet the terms of the AOC. DEQ has imposed the \$1,140 suspended penalty for non-compliance.



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Installer/Remover/Compliance Inspector Refresher Class Recap Licensee Portal Introduction

Redge Meierhenry, DEQ

On February 26, 2015, the Underground Storage Tank (UST) section of the Department of Environmental Quality (DEQ) conducted a comprehensive refresher class for approximately 60 department-licensed installers, removers, and compliance inspectors.

Every three years, 16 hours of continuing education credits (CECs) are required to renew an underground storage tank installer or compliance inspector license. Four hours are required every three years if the licensee is an UST remover only. Our class contributes towards licensees meeting their obligatory continuing education requirements in order to maintain their license in good standing with the UST program.

Scott Wilson, NOV Fiber Glass systems representative, provided training to the class on the proper procedures for installation of NOV pipe (both Ameron and AO Smith). Scott began his training session with an explanation of the acquisition of Ameron by NOV/FGS that merges the two technologies of Ameron and Smith, now known as NOV Fiber Glass Systems. Scott's discussion included hands on product samples, training videos and a written test that attendees completed. Those that passed successfully received a certificate of completion from the manufacturer.



Jonathan McNeely, Tank Tech Inc.

Jonathan McNeely of Tank Tech, Inc. was a class favorite with a lively presentation on lining single wall tanks and the conversion of single wall tanks to double wall (both as an upgrade to double wall and as a structural upgrade). These lining procedures are described by API 1631, Interior Lining and Periodic Inspection of Underground Storage Tanks and UL 1856, Underground Fuel Tank Internal Retrofit Systems.

A popular topic was introduced by Leanne Hackney of the UST program. Leanne described the origins of microbial induced corrosion that is being observed inside steel underground storage tanks. This phenomenon results from the ubiquitous in nature, acetic acid bacteria and the presence of ethanol that is a food source for the bacteria. Ethanol, as you are aware, is commonly mixed into fuel stocks to meet the Renewable Fuel Standard as part of Energy Act of 2005 legislative requirements. All the more interesting, Leanne presented photos taken inside of a Montana steel tank recently removed from service that are purported to show evidence of MIC. This presentation may be accessed on the program web page at <http://deq.mt.gov/UST/UstTraining/MIC.pdf>.

DEQ's Wally Jemmings briefed the licensees on upcoming proposed changes to EPA's Code of Federal regulations that will be reflected in Montana's UST rules following federal adoption. Proposed changes are significant and include monthly UST facility walk-through inspections performed by owners or operators, spill and overfill prevention equipment testing, regulatory inclusion of previously deferred airport hydrant systems, and groundwater and vapor monitoring phase-out for release detection. These are just a few of many comprehensive updates coming to federal underground storage tank regulations.

Dalynn Townsend and Chet Amborn of Windsor Solutions kicked off the Friday morning training session with a focus on preparing licensee's for the new look and feel of the online applications for compliance inspection and construction permitting. This IT project is a joint effort between the UST program and the DEQ Remediation Division and is focused on moving to a modern database structure that allows online access to facility owners and licensees. The move to current IT technology will have tremendous benefits and flexibility for the program to provide real-time information to our customers. For instance, the new database will allow online access to a facility UST equipment configuration. It will also allow owners to submit Corrective Action Plans electronically rather than hard copy. An important benefit to our licensed compliance inspectors will be the ability to move compliance inspections from their tablet device to our database without having to submit the paper copies of the inspection. This IT project is scheduled to be completed by fall 2015.



Chet Amborn of Windsor Technologies, demonstrating our new database to licensees.

The course was well received by attendees. DEQ is determined to build on past trainings by continuing to provide quality learning opportunities for UST professionals in the future.



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Strides Taken for Tanks Systems

Redge Meierhenry, DEQ

The Underground Storage Tank Section (Waste and Tank Management Bureau) has focused these past 2 years on educating tank owners and operators on the environmental hazards that aging underground storage tank systems create.

Underground storage tanks are considered by the program to reach the end of their useful life at 30 years. There are hundreds of these older tank systems throughout Montana. Unfortunately, facility owners/operators often do not understand the environmental risk that older storage tank system present, or how system life may be extended with appropriate techniques and the use of redundant leak detection methods.

To address the concerns of aging tank systems in Montana, the section applied for and received tentative federal funding to develop a model that will create and assess a risk profile for each underground storage tank system. This will give the section additional capacity to inform and educate facility owners on the risk factors associated with aging tank systems.

The scope of work for this effort is to develop the schema for risk profiling underground storage tank systems based on the system equipment installed, the age of the various system components and the methods of leak detection in use. The expected federal grant funding will also include an automated software application as part of the ongoing TREADS database project that will capture the modeling criteria and provide real time updates to the risk measurement values when system equipment or leak detection method changes occur.

This risk assessment model will greatly enhance the section's ability to evaluate and educate owners as to how they may reduce tank system failures and the evolving environmental threat their systems create as tank system near the end of their design life. The section expects that this information will form the basis for facility owners to develop internal capital improvement plans that address various system risk factors.



Montana Department of Environmental Quality

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DEQ's Remediation Division Relocates

The Montana Department of Environmental Quality's Remediation Division has relocated to 1225 Cedar Street in Helena. This is the former Mountain West Bank building headquarters on the corner of Cedar Street and Montana next to Woody's Carwash. Please note that phone numbers for Remediation Division employees have changed due to the move and can be found here: <http://svc.mt.gov/deg/staffdirectory>. The LUST/Leak Hotline remains 800-457-0568.



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Fund and Release Status Report

Petroleum Fund Financial Status – Through March 31, 2015, Fiscal Year 2015 (July 1, 2014 – March 31, 2015)

Total Revenue: \$4,974,102

Current and prior year claims expenditures: \$3,531,731

Outstanding work waiting to be obligated: \$1,333,873

Petroleum Releases – Through March 31, 2015, Fiscal Year 2015 (July 1, 2014 – March 31, 2015)

New Releases: 41

Releases Resolved (Closed): 62

Summary of Total Petroleum Release Activity

Total Confirmed Releases: 4653

Total Active Releases: 1297

Total Releases Resolved (Closed): 3356

*Please note that these numbers include 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).