



for Linden, MI Residents

DECEMBER 2015 – *This note is provided by the Remediation and Redevelopment Division (RRD) of the Michigan Department of Environmental Quality (DEQ), Lansing District Office. Our goal is to keep you informed on the environmental project underway in the city of Linden. Marjorie Frisch is the DEQ project manager for the ongoing investigation into recent and historic underground storage tank (UST) releases. She can be reached at RRD, DEQ Lansing District Office, 525 W. Allegan St, Constitution Hall, P.O. Box 30242, Lansing, MI 48909, 517-284-5101, or email frischm1@michigan.gov. Please feel free to share any information or call with questions.*

REVIEWING THE HISTORY

Discovery: In June 2014, the DEQ Lansing District Office began receiving complaints of petroleum odors in occupied downtown structures and emanating from storm drains. The DEQ-RRD sampled a storm drain near 208 Bridge Street and a sump located at a downtown Bridge Street business. Analysis of the samples revealed the presence of benzene and other petroleum vapors in excess of DEQ indoor air screening levels in the downtown business. As a result of these findings, emergency actions were taken to eliminate the risks posed by the vapors in the business, which were mostly restricted to the basement.

Emergency Solution: In July 2014, the DEQ hired ECT, Inc., an environmental consultant, who built and installed a vapor mitigation system that captures the vapors from the sump and treats them with two air purification units. This system traps the vapors being released from the sump water and runs them through a carbon treatment system before the air is released above the roof of the building. The system removes the vapor inhalation risks that were previously present inside the Bridge Street business location. In addition, basement floor drains and cracks were sealed to prevent vapors from entering the building through those openings. The vapor mitigation system will continue to operate until the source of the contamination is identified and controlled. As part of the ongoing monitoring of the situation, the effluent discharged to the storm drain nearest the business is checked for gasoline on a monthly basis, but so far no gasoline had been observed.

Results of EPA Indoor Air Sampling: Also in July 2014, the U.S. Environmental Protection Agency (EPA) monitored ambient indoor air from 13 buildings and performed follow-up sampling at nine properties along North Bridge Street, East Broad Street, and Mill Street. In November 2014, the results of the EPA air monitoring were presented at a public meeting held in Linden. The EPA's sampling results revealed benzene in the air space of 11 of the 12 structures; however, the results were complicated by products stored and in use in the buildings (e.g. paints, hair and nail products, or engines/cars stored in several of the structures). Only one structure exceeded the minimum reporting level. Outdoor monitoring was completed at 50 locations, mostly related to storm sewers and drains. Although the results of this sampling detected vapors in some locations, the EPA concluded that the source of the contamination could not be determined.

Preliminary Pathway Evaluation Technical Memorandum: The Technical Memorandum - a Preliminary Pathway Evaluation by ECT, Inc. was also discussed in the Linden public meeting held in November 2014. The report describes the results of the groundwater and soil quality and groundwater flow direction investigations in the downtown area along street right-of-ways, based on the information available at the time. Historical information identified that there were several additional UST systems located in the downtown area. It is not known if all of these UST systems were removed or closed in place, or if there are historic gasoline releases from these systems that may still be acting as sources of contamination in the downtown area. The DEQ-RRD conducted preliminary soil and groundwater investigations in these areas in November, 2015. A report on the findings of this investigation work should be completed during the winter.

Quick-Sav Initial Assessment Report: On November 14, 2014, Beacon & Bridge Market #8 (B&B), owned by Quick Sav Foods Stores, Ltd., (Quick-Sav) reported a confirmed release from the UST system located at 110 East Broad Street. A subsequent tank system inspection indicated corrosion in the top of one UST. B&B made repairs to their system during the summer 2015. As a result of confirming an UST release, B&B entered into the Part 213 process requiring an investigation into the extent of the release, an evaluation of the human and environmental risks resulting from the release and remediation of the unacceptable risks. B&B submitted the Initial Assessment Report (IAR) on May 13, 2015, in compliance with the time frame required for submittal of an IAR under Part 213. The IAR identified the need to do more investigation to define the horizontal extent of contamination, and the DEQ-RRD comments on the IAR agreed with that conclusion. B&B agreed to perform this work and is in the process of conducting the additional investigation and analyzing the results.

THE NEXT STEPS

Beacon & Bridge Market #8: B&B's next step is to complete the additional investigation activities proposed in the IAR, which includes further soil and groundwater analysis beyond their property boundaries, and submit the Final Assessment Report (FAR). The due date for submittal of the FAR was November 14, 2015; however, on October 30, 2015, the DEQ received a letter from Quick Sav's environmental consultant requesting a 180-day extension to the FAR due date. Report due date extensions are allowed under Part 213 upon approval by the DEQ. The DEQ-RRD evaluated the request and in a November 10, 2015 letter denied the 180-day extension request and alternatively approved a 90-day due date extension for the FAR. The DEQ did not grant the 180-day extension because RRD staff believe that the remaining investigation and preparation of the FAR can be completed within a 90-day extension time frame. The FAR is required to include a Corrective Action Plan (CAP), which will be the plan B&B proposes to implement to address the risks occurring as a result of the release at 110 East Broad Street. The DEQ will promptly audit the FAR, including the CAP, to determine if it meets the risk-based corrective action requirements of Part 213.

DEQ-RRD: The RRD's next step, independent of monitoring B&B's actions under Part 213, is to evaluate the results of the DEQ investigation into possible historical releases in the downtown area. Once the investigation results report is done, RRD staff will determine if state funded corrective action is needed to address unacceptable risks that may be discovered as a result of releases not associated with the B&B release at 110 East Broad. This information will be provided to the public after the investigation report is completed. Presently, the only known human health risk was the confirmed indoor air petroleum vapor concentrations located at a downtown Bridge Street business location that, as noted above, is being addressed with a vapor mitigation system using state funds.

REVIEWING THE PART 213 PROCESS

Part 213, Leaking Underground Storage Tanks, is the law that regulates releases from underground storage tank systems. It provides for investigation and remedies that are centered on the risk-based corrective action (RBCA) process developed by ASTM International (formerly known as the American Society for Testing and Materials). RBCA is a decision-making process for the assessment and response to petroleum releases, based on the risks present and protection of human health and the environment. There are several steps to the Part 213 process. The first of these is completion of an initial assessment report (IAR). The owner or operator who is responsible for the release is required to complete and submit an IAR to the DEQ within 180 days of confirming the release. In simple terms, the purpose of the IAR is to identify the source of the release and any potentially impacted humans or environmental receptors, and begin to identify the extent of the area contaminated. Subsequently, the Final Assessment Report (FAR) is required to be submitted within 365 days after a release has been discovered. The FAR includes a conceptual site model explaining the extent of the contamination and known or potential risks posed by the contamination. The FAR also includes the Corrective Action Plan (CAP), which describes the remedy proposed by the owner or operator to address the identified risks. Once the risks are acceptably addressed, the owner or operator can submit the Closure Report. The State must audit the FAR or Closure Report within 180 days of receipt of the report. The audited report may be approved, approved with conditions, denied, or found to contain insufficient information. [Note: IARs are not subject to a DEQ audit.] Following approval of the FAR by the DEQ, the liable owner or operator implements the remedy that is described in the CAP with the goal of closing the release. Part 213 does not specify a time frame within which a release must be brought to closure. Closure Reports may be submitted at any time during the Part 213 process if the owner or operator believes they have implemented the corrective actions necessary to reduce risks to human health and the environment to an acceptable level.

Additional information is available on the DEQ's web site at: www.mi.gov/deq
Land > Remediation > Leaking Underground Storage Tanks

Figure 1. - Simplified Flow Diagram of the Part 213 Process

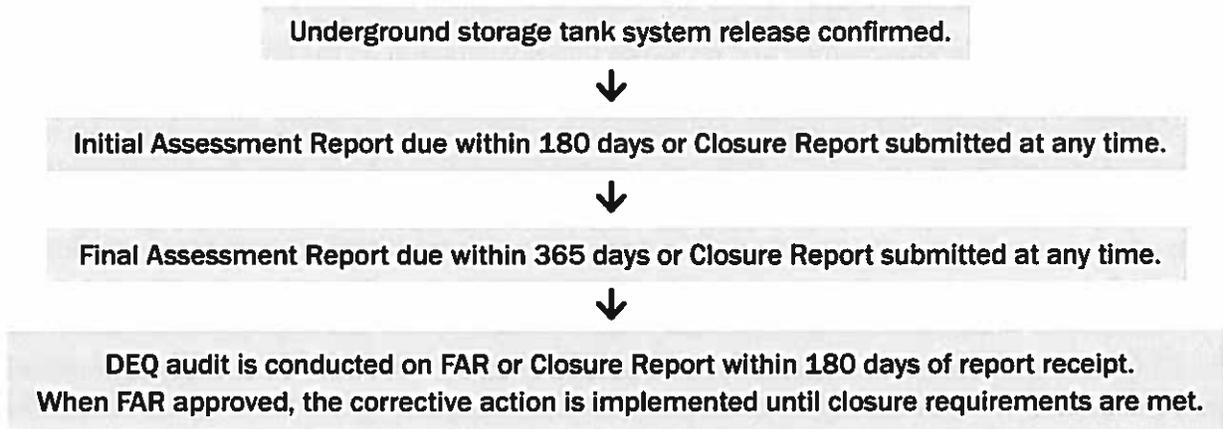


Figure 2. - Gas/service stations in Linden from 1960-1982 taken from Polk directory listings. (MI Historical Library)



The areas where the DEQ - RRD investigated former underground storage tank locations in downtown Linden is largely based on the historical information presented in this figure.

Please contact Marjorie Frisch at 517-284-5101, or email at frischm1@michigan.gov if you have any questions or would like to discuss the investigation.



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