

Town of Leicester



Elementary School Oil Leak

April 16, 2021

After Action Report/Improvement Plan

Report date: 01/17/2023

Updated: 01/23/2023

INCIDENT OVERVIEW

**Incident:
Elementary
School Oil Leak**

**Date of
Incident:
04/16/2021**

**Scope: Leak of
heating
oil/remediation
efforts**

**Threat or
Hazard:
Groundwater
Contamination
Indoor Air
Quality**

After-Action Report/Improvement Plan

INTRODUCTION

A significant leak of heating oil the Leicester Elementary due to an oil line being pierced by a tent spike resulted in a remediation that cost over 1.2 million dollars. The purpose of this report is to summarize events, analyze the response to the event, and identify improvements to be made going forward.

Below is a timeline of the events relating to the oil leak found in the rear of the Elementary School on Friday, 4/16/2021:

The School Department contracted with a tent company to erect large vinyl tents to host parents for a discussion centered around reopening the school on a full-time basis could be discussed. One of these locations was in an open area at the rear of the Elementary School. A Dig Safe, which showed the area to be clear was ordered on 03/14/2021. The tents were erected by company personnel on 03/31/21

The tents were anchored by 44-inch stakes. While the tents were being erected, one of the stakes contacted an underground oil feed pipe that runs from the outside tank to the boilers inside the building. The stake ruptured the pipe and heating oil leached into the ground.

The leak was underground and was not immediately noticed. However, the teacher in classroom 106 reported a foul odor on 04/05/2021. This was passed on by the Principal of the building to the School Facilities Director. Over the next week, the Facilities Director searched various potential sources of the odor on the inside of the building, utilizing various contractors for assistance. The search then continued outside of the building.

The smell was determined to be coming from outside of the building, but there were no external signs of leakage. On 04/14/2021 Room 106 was closed down. On 04/15/2021 the Facilities Director dug a test pit outside the building, which quickly led to an oil sheen appearing on the ground water in the pit. At that point the boilers were turned off, and the Town's Insurance provider, Braley Wellington was notified and a claim opened. The Town requested that Dig Safe grant an emergency order allowing for excavation to begin immediately; order was refused.

An environmental specialist, Mr. Cedwyn Morgan of HETI Services, Inc. was called, and on 04/22/2021, excavation began. The oil line and return line were both disconnected, evacuated, and fitted with emergency shutoffs. The excavation included unearthing the pipe and testing the soil around it. Oil was detected in a one hundred foot stretch outside classroom 106 and in the underground catch basins near the school and near the chain link fenced-in shed is located. Oil has also been detected in a wetlands area near this shed. The oil somehow seeped into a catch basin that has an approximately 500 foot gravity-fed run which releases the water into a field not owned by the town.

This seepage and contamination was reported to the DEP (Massachusetts Department of Environmental Protection) pursuant to protocol. Indoor air quality testing was begun on 04/27/2021. On 04/28/21 the Conservation Commission was notified. Sorbents and booms were placed in catch basins and wetlands.

After-Action Report/Improvement Plan

Excavation and remediation took place through the entire months of May and June with impacted soil removed from the site. Other actions within the timeline were:

- In addition to the main trench along the fuel lines, two smaller excavations took place; one adjacent to the testing area and one along the pipe leading to the catch basin adjacent to the school
- Air sampling was started in the school
- Sorbents were maintained in the affected wetlands
- Oily debris and sediment were removed from the site
- Monitoring wells were installed in accordance with Massachusetts GW-1 ground water standards
- Water samples were taken from Sargent's Pond, with no contamination discovered
- Soil extending to five feet under the school was removed in multiple locations to remove seepage of oil
- Remediation of soils was completed by July 31st.
- Indoor air quality stands were effectively met by July 31st, 2021, with long term risk of exposure of 5 years or longer noted in two classrooms, and an imminent hazard remaining in Room 106. There is now specialized equipment in that room that has mitigated that risk.

Total costs of the incident stood at \$1,191,963.27 as of May 3, 2022. \$500,000 of this cost was covered by insurance. The remaining cost of \$691,963.27 was paid through a transfer from the FY 2022 Leicester Public Schools Budget.

There are ongoing costs for air quality testing and wetlands analysis that will be paid out of the School Department budget. The updated overall cost of the remediation, as of December 9, 2022 is \$1,495,019.

Further information and reporting regarding this incident can be located on the Town website at <https://www.leicesterma.org/home/pages/oil-incident>.

STRENGTHS

- 1.) **Appropriate Notification:** Appropriate agencies were notified after the scope location and magnitude of the oil leak was discovered including:
 - Mass DEP
 - Town Conservation Commission
 - The Town's Insurer
- 2.) **Start of Work:** Work began as soon as the Town was cleared by Dig Safe to excavate the school property.
- 3.) **Continuation of Work without interruption** -Work was constant during the following three months to ensure that the oil was removed and the wetlands restored. Monitoring/testing remains ongoing.
- 4.) **No Negligence** - The incident itself was deemed by our insurer as accidental, without any third-party negligence. Subrogation (Pursuing the insurance of the tent company for reimbursement), was deemed not possible by the insurer.

AREAS OF IMPROVEMENT

- 1) **Marking** – All non-public utility lines in areas of potential activity should be marked
- 2) **Location** – There should be no ground disturbance in any part of the area between an oil tank and any building that tank serves
- 3) **Lack of Sensors** – 10,000-gallon oil tanks should be equipped with sensors that report amounts of oil within the tanks, as well as fills, discharges and leaks
- 4) **Original Response** – It took eight days of searching the interior before moving to the outside of the building
- 5) **Incomplete notification** – The Select Board received notification of the incident from the Town Administrator on the day that he was notified by the School Department (04/28/2021). This was 12 days from the initial report of odor
- 6) **Continuity** – The School Department is on its second Facility Director since this incident. There have been five (5) facility managers since 2017. There needs to be continuity in this position, so that there is institutional knowledge

APPENDIX A – IMPROVEMENT MATRIX

Improvement Plan					
#	Area of Improvement/Category	Corrective Action	Responsible Party	Status	Estimated Completion Date
1	Marking – All non-public utility lines should be marked	Mark the utility lines on locations on the campus where oil lines are located	Facilities Director	Planned	April 15, 2023
2	Location – There should be no ground disturbance in any part of the area between an oil tank and any building that tank serves	Do not allow activities that involve stakes, excavations, poles, or other inground activities at any areas between oil tanks and buildings	Town Administrator	Planned Discussion	February 1, 2023
3	Lack of Sensors – Large oil tanks should be equipped with sensors that report amounts of oil within the tanks, as well as fills, discharges and leaks	Price and order sensors for 10,000 gallon tanks that report changes via alerts sent to monitoring parties	Facilities Director	Currently under estimate; installed on 1 tank	Est June 30, 2023, assuming funding is available

After-Action Report/Improvement Plan

#	Area of Improvement/Category	Corrective Action	Responsible Party	Status	Estimated Completion Date
4	<p>Original Response – It took eight days of searching the interior before moving to the outside of the building</p>	<p>Faster mobilization, utilizing Fire Department and Emergency Management Director</p>	<p>Affected Department Heads</p>	<p>Completed – Facilities Director has been incorporated into Town operations</p>	<p>Completed</p>
5	<p>Incomplete notification – The Select Board received notification of the incident from the Town Administrator on the day that he was notified by the School Department (04/28/2021). This was 12 days from the initial report of odor</p>	<p>Insure that Boards are notified when major incidents are reported.</p>	<p>Facilities Director/Town Administrator</p>	<p>Completed – Director meets with the Town Administrator Daily</p>	<p>Completed</p>
6	<p>Continuity – The School Department is on its second Facility Director since this incident. There needs to be continuity in this position, with the Town retaining personnel with knowledge of operations.</p>	<p>The Town, with the agreement of the School Department, has incorporated the Facilities Director into Town Operations, which through some changes to duties, may encourage continued continuity. A second position has also been added in order to allow for a transfer of knowledge.</p>	<p>Select Board/School Committee</p>	<p>Completed – Facilities Director has been incorporated into Town operations</p>	<p>Completed</p>

APPENDIX B – AFTER ACTION REPORT PARTICIPATING DEPARTMENTS

Town Administrator

Facilities Director

Emergency Management Director