

TURNER ENVIRONMENTAL, LLC

P.O. Box 581

East Lyme, CT 06333

(860) 705-8704

June 27, 2024

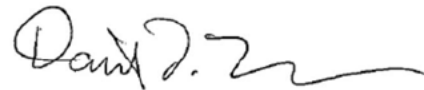
Moises Torrent
Department of Energy and Environmental Protection
Emergency Response and Spill Prevention Division
79 Elm Street
Hartford, Connecticut 06106-5127

Re: Regional School Board District 18
Consent Order Number COWSERU
23-001 Monthly Progress Report June

Dear Mr. Torrent:

Turner Environmental, LLC has been working on the oil spill response for Region 18 in Old Lyme. Pursuant to Section B.2. of Consent Order Number COWSERU 23-001 please find our Progress Report and the required certification page for this submittal. Please feel free to contact me at (860) 705-8704 if you have any questions.

Sincerely,
Turner Environmental, LLC



David T. Turner, L.E.P.

Attachments – Certification Page COWSERU 23-001
June 2024 Update

cc: Ian Neviasher
Ronald Turner
Ann Catino

CERTIFICATION REQUIRED BY CONSENT ORDER COWSERU 23-001

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law."

Turner Environmental LLC

David T. Turner

Signature Name

(Print)/Title: David Turner, LEP

Date: 6-27-024

Regional School District No. 18

Jan Neviasek

Signature

Name (Print): Jan Neviasek

Date: June 27, 2024

June 27, 2024 Update

Summary of Tasks Completed Pursuant to Consent Order COWSERU 23-001

Region 18, Lyme-Old Lyme Middle School

Turner Environmental has continued to work on the investigation and clean-up of the oil spill at Lyme-Old Lyme Middle school. In June, the primary tasks involved: operation of the *Pump and Treat* groundwater remediation system, a comprehensive round of groundwater monitoring and off-site drinking water sampling.

The site location is shown in Figure 1 including the location of the monitoring well network. Groundwater elevations and flow directions from the March/April groundwater sampling event are shown in Figure 2.

Nearby shallow drinking water wells were resampled on June 5, 2024 for [REDACTED] and June 21, 2024 for [REDACTED]. The June 5 sampling at [REDACTED] was designed to be a repeat sample due to a previous detection of toluene at 2.3 ug/L on May 20, 2024. Results are subsequently discussed. Results for the other drinking water analyses are pending.

Off-site Drinking Water Well

No compounds were detected in the April drinking water analyses for the drinking water wells at [REDACTED]. At [REDACTED], toluene was detected in the May 20, 2024, at 2.3 ug/L, which is well below the CT DPH Action Level for toluene (150 ug/L) and the CT DEEP RSR criteria for toluene (1,000 ug/l). This constituent has not been detected previously and is the only compound detected. The laboratory subsequently re-analyzed the sample and confirmed the presence of toluene in the May sampling event. This property is a commercial office which is occupied part time. The well is not used for drinking as this address already exclusively uses bottled water for drinking. The well was resampled on June 5, 2024. Neither toluene nor any of the compound listed on the standard VOC analytical list for VOCs were detected in the repeat sample. ETPH was below the laboratory detection limit. One tentatively identified compound (TIC), **Furfural isomer was found at 2.3 ug/L**. Based on discussions with the laboratory director this compound is an aldehyde that is not associated in any way with this petroleum release and has not been detected in any prior sampling round. This is an anomalous detection of an uncommon constituent, not detected before and not an aromatic typically associated with petroleum releases elute in the method.

The drinking water wells at [REDACTED] Street were sampled on June 21, 2024. Results are pending and will be discussed on our upcoming update call.

As previously discussed, the drinking water well at [REDACTED] is a drilled well which we previously believed to be served by a shallow dug well on the eastern portion of this property. We have discovered a drilled well on the northwestern portion of this property from which drinking water is currently obtained. No well information on the drilled well was available from Old Lyme Town Hall or Ledge Light Heath District. The depth of the well is unknown. We continue to research this to identify additional well construction details.

Figure 3 shows the nearby drinking water wells, the monitoring well network and location of the plume based on the information collected and sample results received to date.

Groundwater Pump and Treat System

As previously reported the pump and treat system was installed during the second week of September and started operation on September 18, 2023. The general location of treatment system components is shown on Figure 4. The compressor and pump skid are in the boiler room. The treatment system itself, including the oil/water separator, transfer

pump, controls, bag filters and carbon vessels are located in a “conex box” located just outside the eastern wall of the boiler room.

Since start-up in mid-September over 650,000 gallons of water have been collected and treated. The current pumping rate averages from approximately 1,800 to 4,000 +/- gallons per day. Previous sampling of the discharge shows the discharge meeting all General Permit conditions. Additional discharge monitoring samples were collected in June and results will be reported when obtained.

The treatment system is currently pumping from wells RW-11, RW-10 and RW-7 which includes the former holding tank area and boiler room where free product has been observed and where ETPH concentrations are the highest.

The treatment system is set up with three air operated pneumatic pumps. These pumps are currently set-up in RW-11 (former holding tanks area), RW-10 (southern portion of the boiler room) and RW-7 (northernmost portion of the boiler room). The intakes of these wells are currently set to extract water from 2 to 3 feet below the standing water table.

In June, free product (FP) continues to be observed in some of these wells. Oil absorbent “pigs” continue to be used to recover FP from the recovery wells. Oil is collected by wringing out these pigs approximately once per week and measuring the amounts of oil recovered. The amounts recovered since treatment system start up include: October 2.5 L of FP, November 3.7 L, December 1.0 + L, January 1.2 L, February 3.25 L, March 4.9 L, April, 9.0 L, May, 5.8 L and June approximately 4.5 L.

In general, the majority of FP is being recovered from RW-7 which is in the northwestern portion of the boiler room. To date approximately 35+ L of free product has been removed for the recovery wells.

We also estimate that over 2.0+ L of “dissolved” petroleum was removed from impacted groundwater pumped through the treatment system.

During the operational cycle recovery well drawdowns are approximately 1.5 feet. Water table rebound occurs relatively quickly in these wells in the range of several minutes. Overall, the water table in the general vicinity of the pumping wells is lowered approximately 0.5 to 1.0 feet below ambient levels. Water tables continue to be highly influenced by precipitation events. In June, the water table has continued to fall from the maximum encountered in the winter/spring months. Currently approximately two feet below levels found in the winter.

Groundwater Monitoring

The previous groundwater monitoring was performed on all existing monitoring wells on March 24 using Low Flow Sampling Methods. Twenty-three monitoring wells were sampled and analyzed. These samples were submitted to York Analytical for analyses of VOCs by EPA Method 8260, ETPH and PAHs. Results of the March samples are summarized in Table 1. Water table elevations were obtained, and groundwater flow directions were used to create Figure 2. This is the same information previously reported in our April update.

Concentrations of VOCs and ETPH from the March sampling were all lower than those reported for December 2023. With the exception of a low concentration of naphthalene at 0.201 ug/L and toluene at 0.950 ug/L in MW-19, no other VOCs, PAHs or ETPH concentrations were reported in any of the off-site wells. Benzene exceeded its RSR Criteria in only one well, MW-17 and benzene concentrations were lower in all other monitoring wells than previous sampling rounds. ETPH concentrations were the same or lower in all monitoring wells with no exceedances identified in this sampling round.

The second quarter groundwater sampling was performed on June 25 and 26, 2024. Samples have been submitted for analyses and should be available for our upcoming update call. We will also revise groundwater contours in Figure 2 based on the June water table elevation data.

Respectfully submitted,

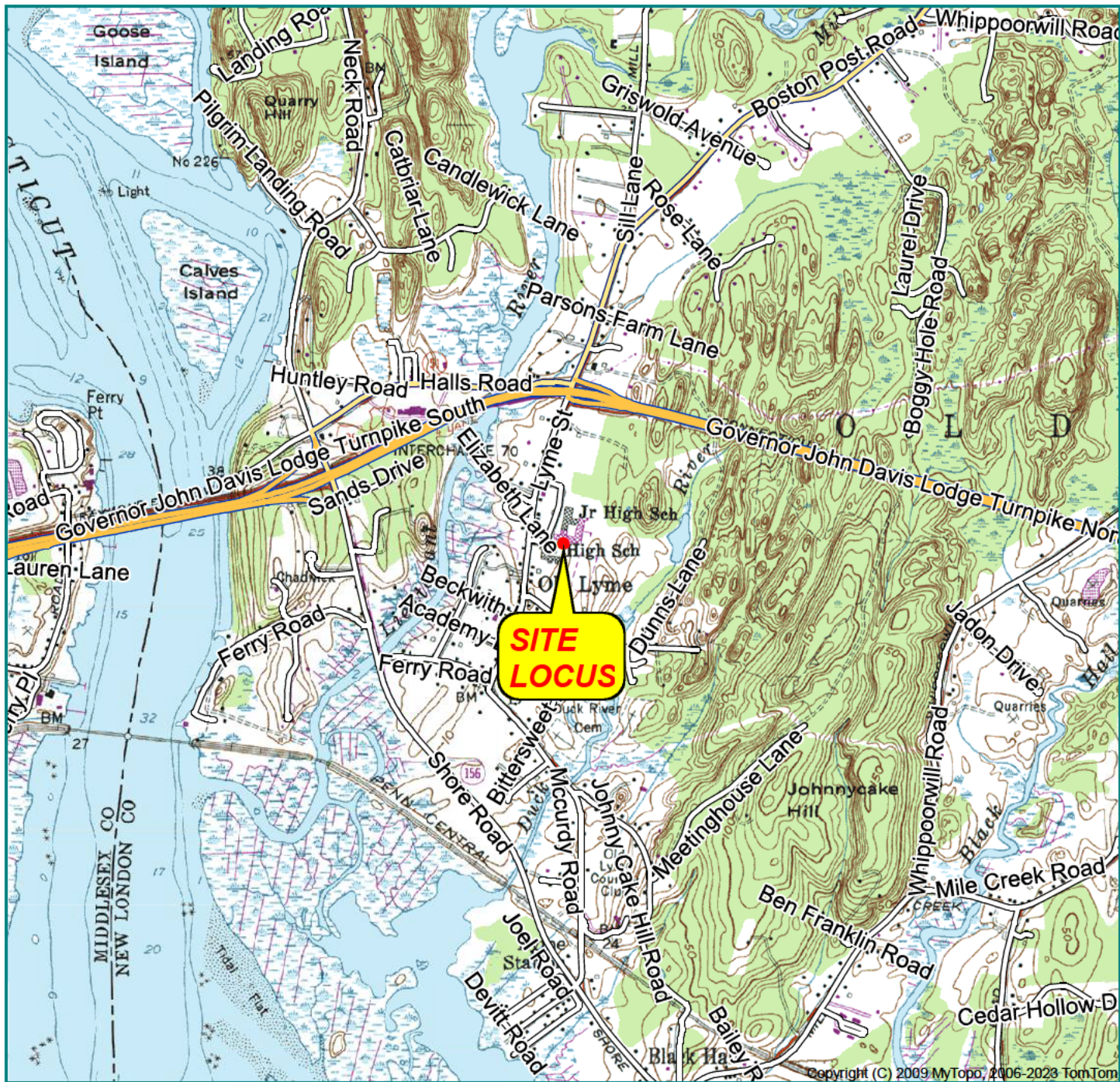
TURNER ENVIRONMENTAL, LLC

A handwritten signature in blue ink that reads "David T. Turner". The signature is cursive and fluid.

David T. Turner, LEP

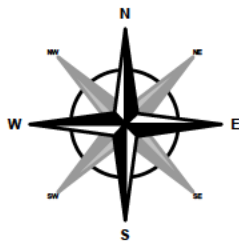
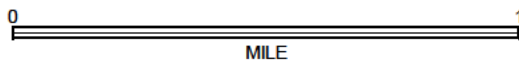
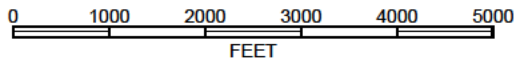
Attachments

Figures



OLD LYME Topographic 1958 41072-C3-TF-024 National Geodetic Vertical Datum 1929

SCALE 1:24000



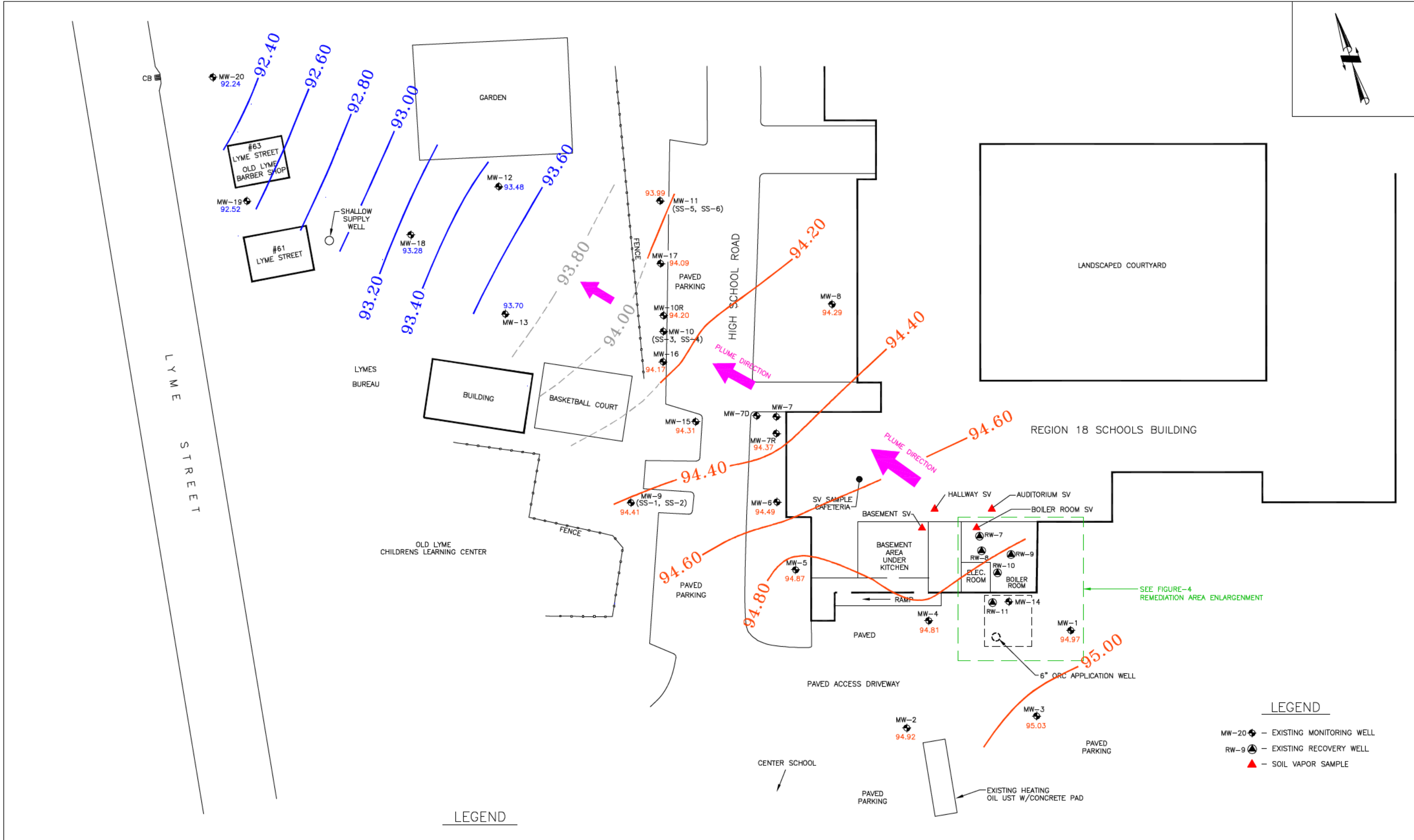
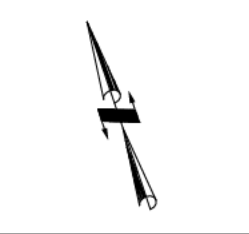
Site Coordinates:
041° 19' 04.35" N, 072° 19' 42.04" W

Turner Environmental LLC
P.O. Box 581, East Lyme, CT 06333
(860) 705-8704 turnerenviro@att.net

Site Location:
47 Lyme Street
New London County,
Old Lyme, CT

Figure-1
Site Locus Map

Project: TE 23-007 Date: 3/9/23

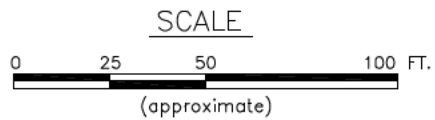


LEGEND

- MW-20 - EXISTING MONITORING WELL
- RW-9 - EXISTING RECOVERY WELL
- SOIL VAPOR SAMPLE

LEGEND

- 94.60 GROUNDWATER CONTOURS BASED ON 3/24/24 GAUGING DATA
- 93.40 GROUNDWATER CONTOURS BASED ON 4/9/24 GAUGING DATA
- 93.80 INFERRED GROUNDWATER CONTOURS



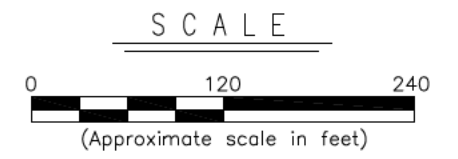
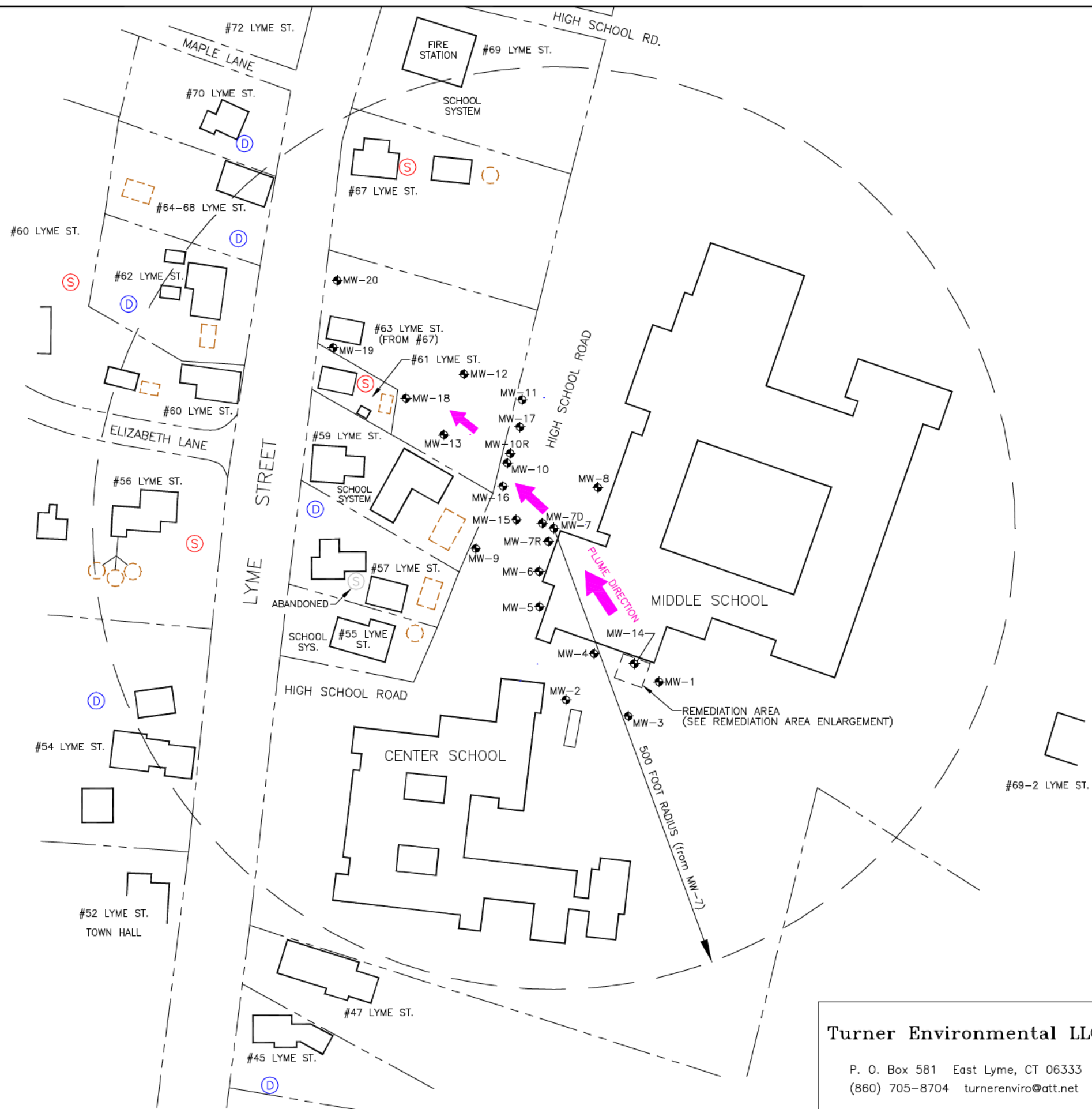
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**Figure 2 - Groundwater Contours
(3/24/24 & 4/9/24 gauging data)**

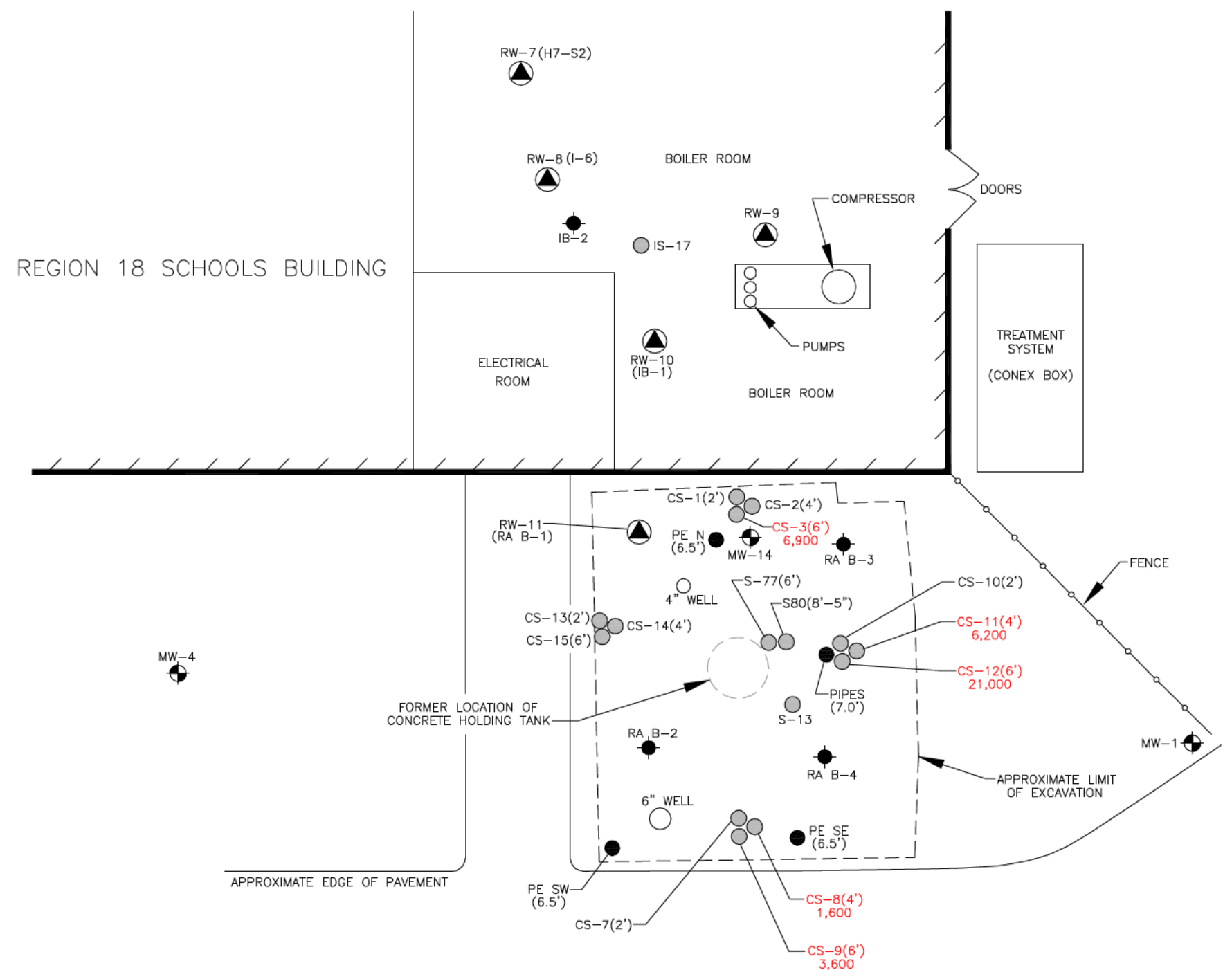
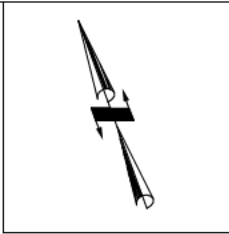
Client: REGION 18 SCHOOLS
47 Lyme Street
Old Lyme, Connecticut

Drawn:	K. Hazel
Date:	4/21/24
Scale:	AS SHOWN
Project:	TE23-007
Figure:	FIGURE 2

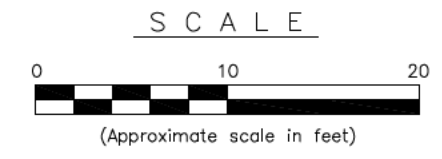


- LEGEND**
- MW-7 - GROUNDWATER MONITORING WELL
 - - - - - APPROXIMATE PROPERTY BOUNDARY
 - SHALLOW SUPPLY WELL (Approximate Location)
 - DEEP SUPPLY WELL (Approx. Location)
 - SEPTIC LEACHFIELD (Approx. Location)
 - SEPTIC LEACHING PIT (Approx. Location)

Turner Environmental LLC P. O. Box 581 East Lyme, CT 06333 (860) 705-8704 turnerenviro@att.net	Figure 3 - Drinking Water Well Locations	Drawn: K. Hazel Date: 4/30/24 Scale: AS SHOWN
	Client: REGION 18 SCHOOLS 47 Lyme Street Old Lyme, Connecticut	Project: TE23-007 Figure: FIGURE 3



- LEGEND**
- CS-12 (6.0) 21,000 - SOIL SAMPLE LOCATION OBTAINED BY KROPP ENVIRONMENTAL CONTRACTORS, INC. (August 2022)
 - (6.0) - DEPTH OF SAMPLE
 - 21,000 - SOIL SAMPLE DATA ABOVE RSR CRITERIA (IN PPM)
 - PE PW (7.0') - SOIL SAMPLE LOCATION OBTAINED BY TURNER ENVIRONMENTAL LLC (March 17, 2023)
 - (7.0') - DEPTH OF SAMPLE
 - ⊕ - GROUNDWATER MONITORING WELL
 - ⊕ - RECOVERY WELL
 - - SOIL BORING



Turner Environmental LLC P.O. Box 581 East Lyme, CT 06333 (860) 705-8704 turnerenviro@att.net	Figure 4 Remediation Area Enlargement	Drawn: K. HAZEL Date: 9/24/23 Scale: As Shown
	Address: 49 Lyme Street Town of Old Lyme, New London County, Connecticut	Project: TE 23-007 Figure: FIGURE-4

Tables

