Memorandum

TO: Dean Tagliaferro, USEPA
K.C. Mitkevicius, CENAE

cc: Holly Inglis, USEPA
Skip Hull, USEPA

FROM: Tom Czelusniak DATE: December 7, 2007

PROJECT: Pittsfield SSERC – TO4 W.O. NO.: 20124.001.098
SUBJECT: Summary Report – Piezometer installation and gauging at Allendale School
DCN GE-120707-ADSI

This memorandum has been prepared as a Summary Report for the installation and gauging of groundwater piezometers at Allendale School, located at 180 Connecticut Avenue in Pittsfield, Massachusetts. The United States Environmental Protection Agency (US EPA) requested that Weston Solutions, Inc. (WESTON) install four piezometers in order to better define groundwater flow direction beneath the Allendale School property. This Summary Report includes descriptions of the following:

- Objectives
- Rationale for selection of piezometer locations
- Installation and monitoring procedures
- Preliminary groundwater contour interpretation

The activities described in this report were conducted in accordance with project-wide and area-specific planning documents. These planning documents include the following:

- Project Field Sampling Plan
- Project Quality Assurance Project Plan and Addendum (QAPP)
- Project Health and Safety Plan (HASP)
- Site Specific Health and Safety Plan

Objectives

The main objective of the piezometer installations and gauging was to refine the interpretation of groundwater flow direction beneath the Allendale School property.

Rationale for Selection of Piezometer Locations

Figure 1 depicts current site features, the location of an existing monitoring well located on Allendale School property, the locations of existing nearby monitoring wells which are located along Tyler Street Extension and are part of the General Electric (GE) abutting Groundwater Management Area 4 (GMA-4) and its On-Plant Consolidation Area (OPCA) Groundwater Monitoring Program, and the locations of the four piezometers installed on the Allendale School property by WESTON on November 6, 2007. Piezometer locations were selected to provide sufficient data points across the property to interpret groundwater contours without adversely impacting the on-site playing fields.

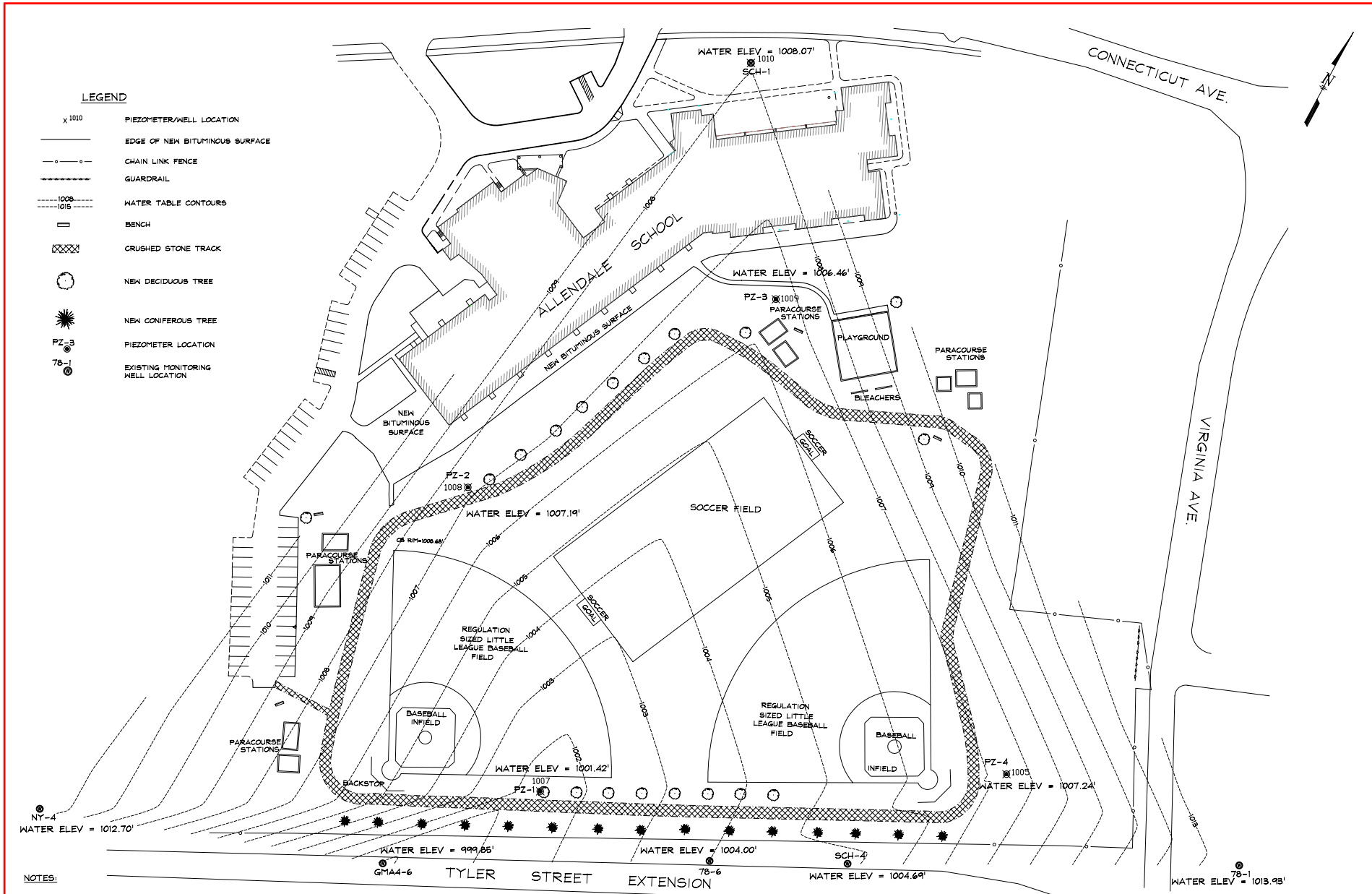
Installation and Monitoring Procedures

Piezometers were installed on November 6, 2007 using a pickup truck-mounted, direct-push sampling unit. At each location, a 2-inch diameter solid point was driven to 4 feet below grade and retracted to create a preliminary borehole. A macro-core barrel sampler with a cutting shoe and acetate sleeve was subsequently driven to 5.5 feet below grade and retracted to create the final piezometer bore hole. A 5-foot long by 1.25-inch diameter PVC piezometer, comprised of 3.5 feet of solid riser over 1.5 feet of slotted screen, was installed in the borehole, and the remaining annular space surrounding the piezometer backfilled with well sand. A small diameter cast iron road box was then installed over the piezometer flush to the ground surface and grouted into place with a small amount of concrete around its perimeter.

On November 7, 2007, the location and an elevation reference point on each piezometer (typically the highest point on the inner PVC casing) was surveyed by a licensed surveyor. In addition, a small volume of water was bailed from each piezometer in order to remove any accumulated sediments.

On November 12, 2007, WESTON recorded water levels from GE groundwater monitoring wells 78-1, SCH-4, 78-6, GMA4-6, and NY-4 along Tyler Street Extension; monitoring well SCH-1 on the Allendale School property; and newly installed piezometers PZ-1, PZ-3, and PZ-4. Piezometer PZ-2 was found to contain an accumulation of sediment which prevented an accurate water level measurement. WESTON utilized a peristaltic pump and tygon tubing to pump the sediment out of the piezometer, allowed the piezometer to equilibrate for 24 hours, and returned on November 13, 2007 and recorded the water level in PZ-2. Water level measurements, top of casing elevations, and resulting water table elevations are presented in Table 1.

Figure 1 depicts a preliminary interpretation of groundwater contours beneath the Allendale School property based on Weston's recorded water levels. The groundwater contours indicate a southwesterly flow in the eastern portion of the property, and a southeasterly flow in the western portion of the property, with overall flow direction leading away from the Allendale School building toward the abutting GE property to the south.



NOTES:

1. ALLENDALE SCHOOL AS-BUILT CONDITIONS SHOWN ARE AS OF NOVEMBER 11, 1999. NEW PIEZOMETERS #1 THROUGH 4 WERE LOCATED BY HILL-ENGINEERS, ARCHITECTS, PLANNERS, INC. ON NOVEMBER 7, 2007.
2. HORIZONTAL DATUM MASSACHUSETTS STATE PLANE (NAD 1927) AND VERTICAL DATUM, NATIONAL GEODETIC VERTICAL DATUM (NGVD 1929), SUPPLIED BY BLASLAND, BOUCK AND LEE, INC. AT THE TIME OF THE ORIGINAL SURVEY.
3. RESTORATION PLAN PROVIDED BY WHITE ENGINEERING, INC. PLAN ENTITLED "SITE RESTORATION PLAN AT ALLENDALE SCHOOL" AND DATED 6-14-99.
4. WATER ELEVATIONS RECORDED BY WESTON SOLUTIONS, INC. ON NOVEMBER 12, 2007.

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1007	535900.2286	135753.2220	1005.60	TOP-PVC PZ-1
1008	536112.1411	135563.5816	1009.89	TOP-PVC PZ-2
1009	536396.2822	135728.6256	1010.43	TOP-PVC PZ-3
1005	536116.0628	136119.1525	1007.96	TOP-PVC PZ-4
1010	536574.5664	135606.2383	1017.11	TOP-PVC SCH-1

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REV.	DESCRIPTION	DRN	CK'D.	DATE
A	ISSUED FOR COMMENT	JR		10-3-07
B	LOCATED PIEZOMETERS	JR		11-8-07
C	ADDED CONTOURS FOR WATER TABLE	JR		11-14-07

WESTON SOLUTIONS, INC.
10 LYMAN STREET
PITTSFIELD, MA

DRAWING TITLE: FIGURE 1 "NEW PIEZOMETER LOCATIONS"

PROJECT DESCRIPTION: ALLENDALE SCHOOL KII-7-29

DRAWN BY	JR
DATE DRAWN	10-2-07
SCALE	1"=40'
APV'D BY	

CAD CODE: SRV-1127-002.dwg

GRAPHIC SCALE: 0 40 80

PROJECT NUMBER: SRV-1127-002

DRAWING NUMBER	REV.
C-103	C

Table 1
Groundwater Measurements

Location	Top of PVC Elevation (ft above msl)	Depth to Water (ft)	Water Table Elevation (ft above msl)
78-1	1026.32	12.39	1013.93
SCH-4	1014.05	9.36	1004.69
78-6	1012.00	8.00	1004.00
GMA4-6	1009.12	9.27	999.85
NY-4	1024.24	11.54	1012.70
SCH-1	1017.11	9.04	1008.07
PZ-1	1005.60	4.18	1001.42
PZ-2	1009.89	2.70	1007.19
PZ-3	1010.43	3.97	1006.46
PZ-4	1007.96	0.72	1007.24

Msl – mean sea level