

## Environmental Site Evaluation

Long Valley Middle School  
51 West Mill Road  
Long Valley, Morris County, New Jersey 07853  
Block: 34, Lot: 49

August 2019

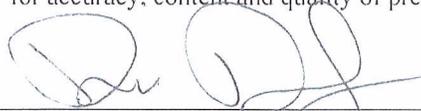
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## **Executive Summary of Findings**

On June 11, 2019, Site Remediation Group LLC (SRG) and Garden State Environmental, Inc. (GSE) performed an Environmental Site Evaluation for a parcel of land located at 51 West Mill Road in Long Valley (Washington Township), Morris County, New Jersey. The property is developed with a single-story school building (with partial second story areas), which is utilized as a middle school (sixth through eighth grade). In addition, SRG reviewed federal, state, and local data sources to evaluate the present and historical uses of the subject property, and to determine the likelihood of soil and/or groundwater contamination to be present on the subject property as a result of on-site releases or from adjacent and neighboring properties.

The following Recognized Environmental Conditions (RECs) were identified for the subject property:

- Based on a review of the Historical Aerial Photographs provided by Environmental Data Resources, Inc. (EDR), the original section of the present day school building was constructed sometime between 1939 and 1951. Additional sections were constructed sometime between 1954 and 1961, 1963 and 1971, and 1986 and 1992, which completed the present day school building. Prior to the construction of the present day building, the property appears to have consisted of farmland and cleared fields. Additionally, the surrounding area appears to have historically been utilized as farmland, and the subject property is currently bordered to the east and south by farmland. The potential of the historic use of pesticides on the subject property and on the surrounding properties exists.
- While inspecting the chemical storage room associated with the eighth grade science classrooms, a district employee informed SRG/GSE that underground trenching with glass piping runs beneath the floor of the eighth grade science rooms. The system was historically utilized to dispose of chemicals, and leads to a pit (possibly including a collection tank). The access point to the pit is located within a room utilized by teachers. Historically, the pit has been pumped and cleaned out. However, it is possible that the system is still connected to the current school drainage system and the sinks within the science classrooms. SRG was also informed that the glass piping beneath two (2) of the eighth grade science room floors had shattered, and has been replaced. Reportedly, the underground trenching and glass piping runs the length of the eighth grade science wing, then runs towards the northern section of the building, to an unknown location. Please note, staining was identified within the sink located within the chemical storage room, indicating that the sink may be being used for the disposal of liquids associated with classroom activities. The chemical disposal system may potentially be a pathway to the environment, including soils and groundwater.

- One (1) 15,000-gallon No. 2 heating oil Underground Storage Tank (UST) was removed from the Long Valley Middle School located at 51 West Mill Road in August 1992 under closure approval # C92-2001. At the time of the closure activities, groundwater was observed within the excavation at a depth of approximately 18-feet bsg. The groundwater was observed to be slightly green in color with a muddy texture. No sheens, floating oil, or odors were identified. Asphalt-like material was observed at the base of the excavation, which was believed to have caused the groundwater to have a slightly green color and muddy texture, however, no groundwater samples were collected. Please note, the underground trenching and glass piping previously discussed runs the length of the eighth grade science wing, then runs towards the northern section of the building, to an unknown location. The 15,000-gallon No. 2 heating oil UST was formerly located to the north of the known underground trenching and glass piping, and may have been located in the vicinity of the area of the disposal system which is currently unknown.
- One (1) 15,000-gallon No. 2 heating oil UST was removed from the Long Valley Middle School located at 51 West Mill Road in August 1992 under closure approval # C92-2001. At the time of the closure activities, slight soil staining was identified in the area around the fill cap and lines. These soils were sampled, removed, and staged for disposal. During the excavation of the piping at the top of the tank, approximately 2-quarts of heating oil was spilled. Absorbent pads were used to clean up the spill, and the impacted soil was removed and staged for disposal. Additional soil staining and asphalt-like material were observed at the base of the excavation. The stained soils and asphalt material were removed and staged for disposal. The removal contractor arranged for the proper disposal of the soils. Soils were screened with a Photo Ionization Detector (PID) during excavation activities, and slightly elevated readings were detected at the base of the excavation. New Jersey Department of Environmental Protection (NJDEP) Case # 92-08-31-1517-18 was assigned to the heating oil UST removal. Soil samples were collected, and the results reported Total Petroleum Hydrocarbons (TPH) at concentrations greater than 1,000 ppm. Therefore, three (3) of the soil samples were analyzed for Volatile Organic Compounds (VOC+15). The results did not detect any targeted compounds. On February 19, 1993, the NJDEP issued a No Further Action (NFA) letter for TMS # C92-2001 and NJDEP Case # 92-08-31-1517-18. However, according to the NJDEP Analytical Requirements for Petroleum Storage and Disposal Areas (Table 2-1), the current contingent analysis for Petroleum Hydrocarbons above 1,000 mg/kg is 2-Methylnaphthalene and Naphthalene, as the NJDEP has determined that heating oil does not contain high concentrations of VOCs.
- One (1) 2,000-gallon unleaded gasoline UST and one (1) 4,000-gallon diesel fuel UST were removed from the School Bus Parking Lot located at 53 West Mill Road in November 1993 under closure approval # C93-4932. At the time of the closure activities, the excavation was inspected, and a gasoline odor was identified. The odor of gasoline from the excavation was from incidental spillage over a period of time, which occurred during the filling of the gasoline UST. The soils which exhibited Flame Ionization Detector (FID) readings were removed from the excavation and staged for disposal. Impacted soils were observed from the surface to approximately 3-feet in depth in the area around the fill cap. Approximately 11-yards of soil was removed from the

excavation. The soil was disposed of by the ABC Tank Company, Inc. Soil samples were collected, and the results were below the New Jersey regulatory limits. On September 6, 1994, the NJDEP issued a NFA letter for TMS # C93-4932. However, as per the UST Closure Report, no soil samples were collected from beneath the dispensers or dispenser pad. Additionally, the use of leaded gasoline ceased in 1986, and since the gasoline tank was installed prior to 1986, the UST may have contained leaded gasoline. Lead samples were not collected at the time of UST closure activities.

The following Historical Recognized Environmental Condition (HREC) was identified for the subject property:

- One (1) 6,000-gallon No. 2 heating oil UST was removed from the Long Valley Middle School located at 51 West Mill Road in August 1994 under closure approval # C94-1453. Soil samples were collected, and the results were below the New Jersey regulatory limits. On December 27, 1994, the NJDEP issued a NFA letter for TMS # C94-1453.

**No Controlled Recognized Environmental Conditions (CRECs) or *De minimis* Conditions were identified for the subject property.**

Various properties and facilities within a 1-mile radius of the subject property with environmental conditions relative to the operations are included in the database information as detailed in this report. None of these sites are within 1/8-mile of the subject property, or are considered to have an adverse environmental impact on the subject property due to the nature of the condition, distance from, and/or location down-gradient of the subject property.

## **1.0 INTRODUCTION**

SRG was retained by Garden State Environmental, Inc. (GSE), to perform an Environmental Site Evaluation for the Long Valley Middle School property located at 51 West Mill Road in Long Valley (Washington Township), Morris County, New Jersey. The property is identified as Block 34, Lot 49 by the Township of Washington. The purpose of the evaluation was to identify, to the extent feasible, potential areas of environmental concern. The potential areas of environmental concern have been evaluated to determine whether such areas at the subject site or at adjacent sites may affect the subject site, and to determine if they are Recognized Environmental Conditions (RECs), Controlled Recognized Environmental Conditions (CRECs), Historical Recognized Environmental Conditions (HRECs), or *De minimis* Conditions.

RECs are defined as “*the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment*”.

CRECs are defined as “*a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (e.g., as evidenced by the issuance of a NFA letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products*”.

*allowed to remain in place subject to the implementation of required controls (e.g., property use restrictions, AULs, institutional controls, or engineering controls)”.*

HRECs are defined as “*a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria established by a regulatory authority, without subjecting the property to any required controls*”.

A *De minimis* Condition is defined as “*a condition that does not represent a threat to human health or the environment; and a condition that would not be subject to enforcement action if brought to the attention of a regulatory agency*”. *De minimis* Conditions are not RECs.

On June 11, 2019, an on-site evaluation was performed to assist in preparing this document.

## **2.0 SITE DESCRIPTION**

The subject property is situated on one (1) parcel, encompassing approximately 25.179-acres, located at 51 West Mill Road in Long Valley (Washington Township), Morris County, New Jersey. The property is identified as Block 34, Lot 49 by the Township of Washington, and is located in an R-5 zone (designated as Washington Township Conservation). The property is developed with a single-story school building (with partial second story areas), which is utilized as a middle school (sixth through eighth grade). The remainder of the subject property consists of asphalt, concrete, grass, and vegetation. The subject property is shown on the Site Map included as **Figure 1**. Photographs of the subject property are included in **Appendix A**.

The subject property is bordered to the north by West Mill Road with residential properties and a public property owned by the Township of Washington beyond, to the east by a residential property and farmland, to the south by farmland and a public property owned by the Township of Washington, and to the west by public property owned by the Township of Washington and a public property owned by the Township of Washington Board of Education (53 West Mill Road).

Various properties and facilities within a 1-mile radius of the subject property with environmental conditions relative to the operations are included in the database information as detailed in this report. None of these sites are within 1/8-mile of the subject property, or are considered to have an adverse environmental impact on the subject property due to the nature of the condition, distance from, and/or location down-gradient of the subject property.

A current United States Geological Survey (USGS) 7.5 Minute Topographic Map (Hackettstown, New Jersey Quadrangle) showing the subject property was reviewed. According to the Topographic Map, the elevation of the subject property is approximately 558-feet above sea level. The latitude and longitude of the subject property are 40.7815770 degrees north and 74.7833230 degrees west. The Topographic Map is included in **Appendix B**.

According to the New Jersey tax records, the subject property is owned by the Washington Township Board of Education. A formal chain of title search of property ownership was not performed by SRG as part of this evaluation.

## **2.1 Geology and Hydrogeology**

According to the New Jersey Department of Environmental Protection's (NJDEP's) web based Geo-Web mapping service, the subject property is located within the Highlands Physiographic Province. Surficial geology at this location is classified as Weathered Carbonate Rock (Qwcb) of the Pleistocene geologic age. Weathered Carbonate Rock consists of red, reddish yellow, and yellow clayey silty sand to silty clay with fragments of carbonate rock, chert, and shale, as much as 300-feet thick, however, thickness varies greatly over short distances. Bedrock geology is classified as Leithsville Formation (Cl), consisting of dolomite, dolomitic sandstone, siltstone, and shale. It should be noted that site-specific soil characteristics studies were not conducted for the subject property.

Under natural, undisturbed conditions, shallow groundwater flow generally and most likely follows the topography of the land surface and on this basis the topography suggests that groundwater flow across the site is in a northwesterly direction. However, localized conditions can alter flow directions and thus the expected flow may not coincide with actual groundwater flow in the subject area. Storm water from the onsite building is discharged to the asphalt, concrete, and grass surrounding the building. Storm water drains were observed throughout the asphalt, concrete, and grass areas immediately surrounding the school building. Additionally, storm water drainage tunnels are located beneath the school building.

According to the NJDEP's web based Geo-Web mapping service, the closest surface water body to the subject property is the South Branch Raritan River, which is located approximately 227-feet to the northwest of the site. The subject property is not located within an area mapped as state-designated wetlands.

## **2.2 Site Utilities**

Water and sewer services are provided by the Township of Washington Municipal Utilities Authority. Solid waste is removed and processed off-site. Jersey Central Power & Light (JCP&L) supplies electricity and Elizabethtown Gas Company supplies natural gas to the property. No evidence of a heating oil Underground Storage Tank (UST) or Aboveground Storage Tank (AST) was identified at the time of the site inspection.

## **3.0 SITE HISTORY**

SRG researched the history of site usage by reviewing Sanborn Fire Insurance Maps, City Directories, Historical Aerial Photographs, and Historical Topographic Maps, which were provided by Environmental Data Resource, Inc. (EDR).

### **3.1 Sanborn Fire Insurance Maps**

Sanborn Fire Insurance Maps covering the target property were not found in the Sanborn Library, LLC collection. A copy of the Sanborn Fire Insurance Map Report is included in **Appendix C**.

### **3.2 City Directories**

SRG reviewed a search of City Directories dating from 1972 through 2014 to determine historical uses of the subject property. Copies of the City Directories are included in **Appendix D**. The listings retrieved indicate the following uses:

1992 - LONG VALLEY MIDDLE SCHOOL

1995 - LONG VALLEY MIDDLE SCHOOL

2000 - WASHINGTON TWP BD/EDTN (INC)

2005 - WASHINGTON TOWNSHIP BD EDUCATION

2010 - WASHINGTON TWP SCHOOL DISTRICT

2014 - LONG VALLEY MIDDLE SCHOOL PTA, WASHINGTON TOWNSHIP SCHOOLS

### **3.3 Aerial Photographs**

Historical Aerial Photographs from the years 1939, 1951, 1954, 1961, 1963, 1971, 1974, 1984, 1986, 1992, 2006, 2010, 2013, and 2017 were reviewed to determine past usage of the subject property. Copies of the Historical Aerial Photographs are included in **Appendix E**. Based on a review of the Historical Aerial Photographs, the original section of the present day school building was constructed sometime between 1939 and 1951. Additional sections were constructed sometime between 1954 and 1961, 1963 and 1971, and 1986 and 1992, which completed the present day school building.

#### 1939

The subject property appears to be developed with a structure along West Mill Road. The remainder of the subject property appears to consist of farmland.

#### 1951

The structure in the 1939 Historic Aerial Photograph appears to have been removed. An additional structure, which appears to be the original section of the present day school building, has been constructed on the northern portion of the property. The area to the west of the structure appears to be a parking area. The remainder of the subject property appears to consist of farmland and/or undeveloped fields.

#### 1954

The Historic Aerial Photograph does not clearly depict the subject property, however, appears the same as the 1951 Historic Aerial Photograph.

### 1961

Additional sections have been added to the original section of the present day school building. The area to the west of the structure appears to be a parking area. The remainder of the subject property appears to consist of farmland and/or undeveloped fields. The Washington Township Board of Education building has been constructed on the adjacent property to the west.

### 1963

The Historic Aerial Photograph does not clearly depict the subject property, however, appears the same as the 1961 Historic Aerial Photograph.

### 1971

Additional sections have been added to the school building. The area to the west of the structure appears to be a parking area. The remainder of the subject property appears to consist of farmland and/or undeveloped fields.

### 1974, 1984, 1986

The school building appears the same as the 1971 Historic Aerial Photograph. The area to the west of the structure appears to be a parking area. The area to the south of the structure appears to be a baseball field. The remainder of the subject property appears to consist of farmland and/or undeveloped fields.

### 1992

Additional sections have been added to the school building, which now appears to have the same footprint as the present day school building. The area to the west of the structure, as well as along the western property boundary, appears to consist of parking areas. The area to the south of the structure appears to be a baseball field. A play area appears to be located to the west of the baseball field, and a tennis court appears to be located to the south of the baseball field. The remainder of the subject property appears to consist of grass fields.

### 2006, 2010, 2013, 2017

The subject property appears as it did at the time of the site inspection. The school building appears to have the same footprint as the present day school building. The area to the west of the structure, as well as along the western property boundary, appears to consist of parking areas. The area to the south of the structure appears to be two (2) baseball fields. Two (2) play areas appear to be located to the west of the baseball fields, and a tennis court appears to be located to the south of the baseball fields. The remainder of the subject property appears to consist of grass fields.

## **3.4 Historical Topographic Maps**

Site history was researched by reviewing Historical Topographic Maps for the years 1888, 1894, 1898, 1900, 1905, 1943, 1953, 1971, 1976, and 2014. Copies of the Historical Topographic Maps are included in **Appendix B**. Based on a review of the Historical Topographic Maps, the following conclusions were made:

1888, 1894, 1898, 1900

No buildings are depicted on the subject property. West Mill Road is located along the northern property boundary. The South Branch of the Raritan River is located beyond West Mill Road.

1905

A building is depicted on the subject property, along West Mill Road. West Mill Road is located along the northern property boundary. The South Branch of the Raritan River is located beyond West Mill Road.

1943

No buildings are depicted on the subject property. West Mill Road is located along the northern property boundary. The South Branch of the Raritan River is located beyond West Mill Road.

1953

A symbol identifying a school is depicted on the subject property. Additionally, the property is labeled as “Township School”. West Mill Road is located along the northern property boundary. The South Branch of the Raritan River is located beyond West Mill Road.

1971, 1976

A symbol identifying a school is depicted on the subject property. Additionally, the property is labeled as “Township School”. The outline of the school building is also depicted on the subject property. West Mill Road is located along the northern property boundary. The South Branch of the Raritan River is located beyond West Mill Road.

2014

A symbol identifying a school is depicted on the subject property. West Mill Road is located along the northern property boundary. The South Branch of the Raritan River is located beyond West Mill Road.

#### **4.0 SITE RECONNAISSANCE**

SRG/GSE performed a site inspection on June 11, 2019 to visually observe the subject property. The subject property is situated on one (1) parcel, encompassing approximately 25.179-acres, located at 51 West Mill Road in Long Valley (Washington Township), Morris County, New Jersey. The average elevation of the subject property is approximately 558-feet above sea level. The property is developed with a single-story school building (with partial second story areas), which is utilized as a middle school (sixth through eighth grade). The remainder of the subject property consists of asphalt, concrete, grass, and vegetation. A Site Map is included as **Figure 1**. Photographs of the subject property are included in **Appendix A**.

During the site inspection along the exterior of the school building, a total of three (3) electrical transformers and an electrical panel box were observed on concrete slabs. No staining was identified within the vicinity of the transformers. Storm water drains were observed throughout the asphalt, concrete, and grass areas immediately surrounding the school building. Storm water from the onsite building is discharged to the asphalt, concrete, and grass surrounding the building. Additionally, storm water drainage tunnels are located beneath the school building.

Within the interior of a storage shed, containers of propane and gas, maintenance supplies, and gas powered equipment were observed. Minor staining was observed on the wooden floor of the shed, however, the floor appeared to be competent. No evidence of USTs or ASTs was identified at the time of the site inspection.

SRG/GSE also inspected all storage sheds located along the exterior of the school building with no evidence of environmental issues of concern identified.

#### **4.1 Building Interior**

SRG/GSE was accompanied during the site inspection by AJ Whitmore, Facilities Manager for the District. Mr. Whitmore provided background information and access to all required areas of the building. Within the interior of the school building, SRG/GSE inspected the boiler/utility rooms, the custodial office and closets, the kitchen, all chemical storage areas and other sections of the building with potential indoor environmental concerns.

Within the interior of the first floor boiler/utility room, multiple floor drains were observed within the concrete floor throughout the room. Minor cracking was observed within the concrete floor, however, the concrete appeared to be competent, and no petroleum staining was observed. Condensation/water lines associated with the equipment within the boiler room were observed to discharge into the floor drains. No sump pump was observed within the boiler/utility room. Maintenance supplies, including paint and general purpose oils, were observed. The containers appeared to be in good condition. An electrical transformer was observed within the boiler/utility room. The floor within the vicinity of the transformer appeared to be in good condition, and no staining was identified.

Within the interior of the basement boiler/utility room, a sump pump was observed. At the time of the inspection, water was observed on the concrete floor in the vicinity of the sump pump. Additionally, multiple pipes were identified to be discharging into the sump pump pit. Multiple floor drains were observed within the concrete floor throughout the room. The concrete floor appeared to be competent, and no petroleum staining was observed in the areas of the floor drains. Condensation/water lines associated with the equipment within the boiler room were observed to discharge into the floor drains. Access points to the storm water drainage tunnels located beneath the school building are located within the basement boiler/utility room. Minor staining was observed on the concrete floor within the vicinity of a piece of equipment located within the boiler/utility room, however, the concrete floor appeared to be competent. No electrical transformers were observed within the basement boiler/utility room.

Within the interior of the custodial closet, shelving units containing cleaning and maintenance supplies and a utility sink were observed. The containers appeared to be in good condition. Within the interior of two (2) chemical storage areas, shelving units of maintenance and cleaning supplies were observed. The containers appeared to be in good condition, and no staining was identified on the floors in the vicinity of the storage shelves.

Within the interior of the kitchen, floor drains were observed throughout the area. Additionally, containers of cleaning supplies were observed. The floor within the kitchen area appeared to be in good condition, and no staining was observed.

Within the interior of the chemical storage room associated with the eighth grade science classrooms, multiple chemical storage cabinets were identified. Some of the items observed within the chemical storage cabinets included:

- Calcium Chloride
- Calcium Oxide
- Sodium Chloride
- Sodium Hydroxide
- Sodium Borate
- Sodium Carbonate
- Sodium Nitrate
- Potassium Chloride
- Potassium Nitrate
- Potassium Iodide
- Barium Chloride
- Lithium Chloride
- Magnesium
- Magnesium Oxide
- Sulfur
- Cupric Sulfate
- Iron Filings
- Ammonium Nitrate
- Aluminum Potassium Sulfate
- Zinc Sulfate
- Iodine
- Preserved animals
- Hydrochloric Acid
- Boric Acid
- Fuel for burners
- Isopropyl Alcohol
- Ethyl Alcohol
- Ethanol
- Phenol Red

The containers appeared to mainly be in good condition, however, some of the containers appeared to be showing evidence of aging, and corrosion was identified on a chemical storage can, as well as on the interior of a chemical storage cabinet. Staining was identified within the sink located within the chemical storage room. No evidence of chemical container leaks or related odors were detected.

While inspecting the chemical storage room associated with the eighth grade science classrooms, a district employee informed SRG/GSE that underground trenching with glass piping runs beneath the floor of the eighth grade science rooms. The system was historically utilized to dispose of chemicals, and leads to a pit (possibly including a collection tank). The access point to the pit is located within a room utilized by teachers. Historically, the pit has been pumped and cleaned out. However, it is possible that the system is still connected to the current school drainage system and the sinks within the science classrooms. SRG/GSE was also informed that the glass piping beneath two (2) of the eighth grade science room floors had shattered, and has been replaced. Reportedly, the underground trenching and glass piping runs the length of the eighth grade science wing, then runs towards the northern section of the building, to an unknown location.

The subject property was built in approximately 1965 and is constructed of a poured concrete foundation with cinder blocks and metal framing. A mixed source of air conditioning and heating are installed throughout the school ranging from univent systems to ducted forced air heating and cooling systems.

#### **4.1.1 Mold**

A limited visual mold inspection was completed as part of this environmental assessment. GSE's inspection did not identify any visual evidence of mold growth that suggests an unusual mold condition. There were signs of water intrusion issues in the 7th grade wing and in the subgrade boiler room and water loss issues in both boiler rooms.

The 7th grade wing area outside of Room 10 has beige 12" x 12" inch tiles with interspersed blue and gray patterned tiles with evidence of warping, cracking and separating. The tiles nearest to the exit double doors in this hallway by Room 10 are slanted and uneven. There is a crawlspace located directly underneath this hallway with pipes for electrical wiring and plumbing. Mr. Whitmore reported that there was a water pipe break that flooded the crawlspace with water. The pipe break was addressed, fixed and no water loss events have been reported since the event.

There are two (2) boiler rooms located in this building. One is located on the first floor and the second one is located subgrade. The first floor boiler room had an active water loss issue. The insulated pipe elbows were actively leaking water and staining on various materials around the pipes indicated previous water loss events.

The boiler room located subgrade also had an active water intrusion issue. Approximately one half of (1/2) an inch of water was pooled on the floor in the back of the boiler room. Visible water markings on the cinder block wall and drip marks on the concrete slab ceiling indicated previous water intrusion events.

The crawlspace located in the boiler room area is inaccessible and boarded off due to a confined space warning posted on a wooden board. A limited visual inspection could be conducted via a small six (6) inch horizontal cut in the wooden board. Condensation was accumulating in the crawlspace and an audible water droplet sound was heard when standing near the crawlspace.

Mold air sampling was conducted by Aero Environmental Services in September 2013. Testing identified elevated airborne mold spore concentrations in Rooms 107, 108 and 109. We were informed that disinfectant cleaning and air scrubbing was subsequently completed in those rooms. In October 2018, proactive mold air sampling by Aero Environmental Services identified acceptable airborne mold-related indoor air quality in representative areas of the building.

We were informed that the District is actively monitoring relative humidity on an ongoing basis.

#### **4.1.2 Asbestos**

GSE did not complete a comprehensive asbestos inspection in this school. During our limited site visit, we observed Suspect Asbestos Containing Material (SACM) in the cafeteria/lunch area, custodial closet, some classrooms and boiler room. All SACM observed was in good condition. This is a common finding in school buildings and we were informed that the District has an active asbestos management program including periodic inspections of all suspect or known ACMs in accordance with 40 CFR Part 763 (ASHERA) regulation.

The boiler room in this school underwent asbestos abatement of insulation around boilers about six (6) years ago. GSE did not review the abatement records related to that abatement but were informed they are filed in the District's Asbestos Management Plan files. Mr. Whitmore reported that no asbestos fiber release incidents have been recorded.

There are various classrooms with 9" x 9" floor tiles that are considered SACM. Mr. Whitmore reported that two to three classrooms are abated and renovated every year.

#### **4.1.3 Radon**

The Federal EPA Radon Zone designation for Morris County is Zone 1, which indicates that the average indoor radon levels are greater than 4 pico curies per liter (pCi/L).

Radon is a colorless, tasteless, radioactive gas with an Environmental Protection Agency (EPA) specified action level of 4.0 PicoCuries per liter of air (pCi/L) for residential properties. Radon gas has a very short half-life of 3.8 days. The health risk potential of radon is primarily associated with its rate of accumulation within confined areas near or in the ground, such as basements, where vapors can readily transfer to indoor air from the ground through foundation cracks or other pathways. Large, adequately ventilated rooms generally present limited risk for radon exposure. The radon concentrations in buildings and homes depend on many factors, including soil types, temperature, barometric pressure, and building construction (EPA, 1993).

GSE reviewed past radon test results for this school. In February 2004, Radon Testing Corp of America (RTCA) conducted radon measurements. They identified two areas with readings of 4.5 pCi/L in Room 209 and 4.2 in Room 221. Further testing in December 2018 in those and other locations in the school showed all radon levels at or below 3.3 pCi/L with readings of 3.1 and 3.3 in the Schiess area.

#### **4.1.4 Lead Based Paint**

Based on the age of this building, there is the potential for lead based paint beneath newer paint or other surfacing materials applied in the mid 1980's and beyond. However, all accessible painted surfaces were in good condition with no observed paint chipping or other conditions indicative of a lead exposure risk to building occupants.

#### **5.0 UNDERGROUND AND ABOVEGROUND STORAGE TANK (USTS and ASTS)**

According to the NJDEP online database, DataMiner, the site previously utilized the following USTs:

- One (1) 15,000-gallon No. 2 heating oil UST (E1)
- One (1) diesel fuel UST (E2)
- One (1) No. 2 heating oil UST (E3)
- One (1) 4,000-gallon kerosene UST (E4)

However, based on a review of the documents obtained from the NJDEP Open Public Records Act (OPRA) file review:

- The E2 UST (registered as a diesel fuel UST) was actually a 6,000-gallon No. 2 heating oil UST.
- The E3 UST (registered as a No. 2 heating oil UST) was actually a 2,000-gallon unleaded gasoline UST.
- The E4 UST (registered as a 4,000-gallon kerosene UST) was actually a 4,000-gallon diesel fuel UST.

Additionally, the E3 and E4 USTs were identified as located at the School Bus Parking Lot at 53 West Mill Road. Please refer to Section 6.0 for additional information.

At the time of the site inspection, no evidence of additional USTs or any ASTs was identified.

## 6.0 SURROUNDING LAND USE

The surrounding land use consists of the following:

- To the north: The subject property is bordered to the north by West Mill Road with residential properties and a public property owned by the Township of Washington beyond.
- To the east: The subject property is bordered to the east by a residential property and farmland.
- To the south: The subject property is bordered to the south by farmland and a public property owned by the Township of Washington.
- To the west: The subject property is bordered to the west by public property owned by the Township of Washington and a public property owned by the Township of Washington Board of Education (53 West Mill Road).

## 7.0 RECORDS REVIEW

EDR prepared an environmental database report for the subject property and the surrounding area, which is included in **Appendix F**. The EDR report is a screening tool that identifies sites with potential or existing environmental liabilities. Specified government computer databases are searched, a listing of which follows. Please note, the subject property was identified on the following databases:

- NJEMS database under ID # 3290. The site is listed on the Air Program list (PI # 25830), the Site Remediation Program list (PI # 008994), the Pesticides Program list (PI # 5520-035-27), the Land Use Program list (PI #'s 1438-13-0003.1, 1438-13-0005.1, and 1438-13-0005.2), and the Water Quality – NJPDES Program list (PI # 647341).
- FINDs database under Registry ID #'s 110004239379, 110070220733, and 110015205810.
- ECHO database under Registry ID #'s 110004239379 and 110070220733.
- RCRA NonGen / NLR database under EPA ID # NJD986643310.
- NJPDES database under Permit # NJG0228877.
- SHWS database under PI # 008994. TMS # C93-4932 was issued a No Further Action (NFA) letter in August 1994. NJDEP Case # 92-08-31-1517 was issued a NFA letter in February 1993. Please refer to Section 6.0 for additional information.
- LUST HIST database under ID # 008994. TMS # C92-2001 and NJDEP Case # 92-08-31-1517 were issued a NFA letter in February 1993. Please refer to Section 6.0 for additional information.
- UST database under ID # 008994. One (1) heating oil UST (E3) and one (1) 4,000-gallon kerosene UST (E4) were removed from the site in 1993. One (1) No. 2 heating oil UST (E1) and one (1) diesel fuel UST (E2) were removed from the site in 1994. Please refer to Section 4.1 for additional information.
- AIRS database under Facility # 25830.

<b>Database</b>	<b>Minimum Search Distance (MSD) (in miles)</b>	<b>Target Property</b>	<b>Number of Sites Within MSD</b>	<b>Number of Sites Within 1/8-mile</b>
Federal National Priorities List (NPL) Site List	1	No	0	0
Federal De-listed NPL Site List	1	No	0	0
Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List	½	No	0	0
Federal Resource Conservation and Recovery Act (RCRA) Corrective Action Tracking System (CORRACTS) Facilities List	1	No	0	0
Federal RCRA non-CORRACTS TSD Facilities List	½	No	0	0
Federal RCRA Generators List	¼	No	0	0
Federal Institutional/Engineering Control Registries	½	No	0	0
Federal Emergency Response Notification System (ERNS) List	NA	No	NA	NA
State and Tribal Lists Hazardous Waste Sites Identified for Investigation and/or Remediation (SHWS)	1	Yes	42	2
State and Tribal Landfills or Solid Waste and Recycling Facilities List	½	No	0	0
State and Tribal Leaking and Historic Leaking UST (LUST, HIST LUST)	½	Yes	7	1
State and Tribal Registered Storage Tank Lists (UST)	¼	Yes	4	0
State and Tribal Institutional/Engineering Control Registries	½	No	1	0
State and Tribal Voluntary Cleanup Sites	½	No	7	2
State and Tribal Brownfield Sites	½	No	0	0
State Spill (NJ Spills)/Release List (NJ Release)	NA	No	NA	NA
NJ ISRA	½	No	0	0
Drycleaners	¼	No	0	0

## **7.1 Federal Database Review**

### **7.1.1 Federal NPL Site List**

The NPL database is a listing of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or “Superfund”). A site must be on the NPL to receive money from the Trust Fund for Remedial Action.

**Findings:** No sites have been identified within the MSD of the subject property.

### **7.1.2 Federal De-listed NPL Site List**

The EPA may delete a final NPL site if it determines that no further response is required to protect human health or the environment. Under Section 300.425(e) of the National Contingency Plan (55 FR 8845, March 8, 1990). Sites that have been deleted from the NPL remain eligible for further Superfund-financed remedial action in the unlikely event that conditions in the future warrant such action. Partial deletions can also be conducted at NPL sites.

**Findings:** No sites have been identified within the MSD of the subject property.

### **7.1.3 CERCLIS List**

CERCLIS is the USEPA’s system for tracking potential hazardous-waste sites within the Superfund program. A site’s presence on CERCLIS does not imply a level of federal activity or progress at a site, nor does it indicate that hazardous conditions necessarily exist at the location. Within one year of being entered into CERCLIS, the USEPA performs a preliminary assessment of a site. Based upon the results of the preliminary assessment, the USEPA may conduct additional investigation, which could lead to a site being listed on the NPL.

**Findings:** No sites have been identified within the MSD of the subject property.

### **7.1.4 CERCLIS NFRAP Sites**

As of February 1995, CERCLIS sites designated “No Further Remedial Action Planned” (NFRAP) have been removed from the CERCLIS list. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to warrant Federal Superfund Action or NPL consideration.

**Findings:** No sites have been identified within the MSD of the subject property.

### **7.1.5 RCRA CORRACTS Facilities List**

CORRACTS is a list of facilities that are found to have had hazardous waste releases and require RCRA corrective action activity, which can range from site investigations to remediation.

**Findings:** No sites have been identified within the MSD of the subject property.

#### **7.1.6 Federal RCRA non-CORRACTS TSD Facilities List**

The Federal RCRA non-CORRACTS TSD facilities list contains information pertaining to those facilities that treat, store, or dispose of hazardous waste. While these facilities represent some form of hazardous waste activity, they are most significant if determined to be out of compliance or to have violations.

**Findings:** No sites have been identified within the MSD of the subject property.

#### **7.1.7 Federal RCRA Generators List**

This is a list of sites that have filed notification with the USEPA in accordance with RCRA requirements. These sites include generators of hazardous waste regulated under RCRA. Under RCRA, hazardous waste generators are classified by the quantity of hazardous waste generated in a calendar month into the following categories: Large Quantity Generator (LQG), greater than 1,000 kilograms (kg); Small Quantity Generator (SQG), 100 to 1,000 kg; and Conditionally-Exempt Small Quantity Generator (CESQG), less than 100 kg. RCRA Generators, while they represent some form of hazardous waste activity, are most significant if they are determined to have Class I Violations or to be non-compliant.

**Findings:** No sites have been identified within the MSD of the subject property.

#### **7.1.8 Federal Institutional/Engineering Control Registries**

These Federal registries contain listings of those sites that have either engineering and/or institutional controls in place. Engineering controls include various physical control devices such as fences, caps, building slabs, paved areas, liners and treatment methods to eliminate pathways for regulated substances to enter the environment or effect human health. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions (Activity and Use Limitations) are generally required as part of institutional controls.

**Findings:** No sites have been identified within the MSD of the subject property.

#### **7.1.9 Federal ERNS List**

The ERNS is a database of notifications of oil discharges and hazardous substance releases made to the Federal government. These notifications are used by “On-Scene Coordinators” to determine an emergency response and release prevention. When a call is made to the National Response Center or one of the 10 USEPA Regions, a report is created containing all of the release information that the caller provided. This report is transferred to an appropriate agency to evaluate the need for a response and the records are electronically transferred to the ERNS

database. As such, if a reported release of oil or a hazardous substance is deemed to require a response, it should also be listed in the appropriate federal or state environmental database such as CERCLIS, state equivalent CERCLIS, or state leaking underground storage tank or spills lists.

**Findings:** The subject property has not been identified on the ERNS database.

## **7.2 NJDEP Database Review**

### **7.2.1 New Jersey SHWS**

The Known Contaminated Sites in New Jersey includes sites under the purview of the Site Remediation Program, which have contamination present at levels greater than the applicable cleanup criteria for soil and/or groundwater standards. The sites appearing in Known Contaminated Sites in New Jersey are classified as either active, where the site is assigned to a specific remedial program area, or pending, where the site is awaiting assignment to a specific remedial program area. Sites where no further action (NFA) designation has been given are not included in this report unless there are other areas of identified contamination, which have not been remediated. This report includes sites being remediated under all of the various regulatory programs administered by the Site Remediation Program such as: Federal Superfund Program, Federal Resource Conservation and Recovery Act (RCRA), New Jersey's Underground Storage of Hazardous Substances Act, New Jersey's Spill Compensation and Control Act, New Jersey's Solid Waste Management Act, New Jersey's Water Pollution Control Act. The New Jersey and Tribal NPL Equivalent HWS list is an inventory of toxic sites listed by New Jersey and/or Tribal Environmental and Health Authorities. These sites are either under remediation, or are currently under evaluation for further action, if necessary. Also included is the Recovered Government Archive (RGA) list of historical cases that no longer appear on current government lists.

**Findings:** Forty-two (42) sites, including the subject property, have been identified within the MSD of the subject property. Based on industry standards, those sites within 1/8-mile or less from the subject property present a greater potential environmental concern. Two (2) of the identified sites are within this range.

- Washington Township Board of Education (53 West Mill Road) is located at a higher elevation than the subject property. The site has the closed non-regulated UST NJDEP Case # 06-07-10-1521-09 under PI # 293721. NJDEP Case # 06-07-10-1521-09 was issued a NFA letter in April 2009, indicating that remediation had been completed to the satisfaction of the NJDEP. Please refer to **Appendix I** for additional information.
- 33 West Mill Road is located at a lower elevation than the subject property. The site has the closed unregulated heating oil UST NJDEP Case # 09-12-08-1131-41 under PI # 520000. NJDEP Case # 09-12-08-1131-41 was issued a NFA letter in April 2010, indicating that remediation had been completed to the satisfaction of the NJDEP.

### **7.2.2 Landfills or Solid Waste and Recycling Facilities List**

The SWF list is an inventory of landfills, incinerators, transfer stations, and other sites that manage solid wastes.

*Findings:* No sites have been identified within the MSD of the subject property.

### **7.2.3 Leaking and Historic Leaking UST (LUST, HIST LUST)**

The LUST list is an inventory of reported spills and leaks, both active and inactive. It includes stationary and non-stationary source spills reported to state, tribal and federal agencies, including remediated and contaminated leaking UST sites. Also included is the Recovered Government Archive (RGA) list of historical LUSTs that no longer appear on current government lists.

*Findings:* One (1) LUST site and six (6) HIST LUST sites, including the subject property, have been identified within the MSD of the subject property. Based on industry standards, those sites within 1/8-mile or less from the subject property present a greater potential environmental concern. The identified LUST site is not within this range. One (1) of the identified HIST LUST sites is within this range.

- Chris' Gulf Station AKA Long Valley Gulf (Route 24) is located at a lower elevation than the subject property. The site has the closed NJDEP Case #'s 90-04-11-1112 and 97-06-24-1143-37. NJDEP Case # 90-04-11-1112 was issued a NFA letter in April 1992, and NJDEP Case # 97-06-24-1143-37 was issued a Response Action Outcome (RAO) in September 2013, indicating that remediation had been completed to the satisfaction of the NJDEP.

### **7.2.4 State and Tribal Registered Storage Tank Lists (UST)**

The UST facility list is an inventory of registered liquid bulk storage tanks. Inclusion of a site on the UST list does not necessarily constitute environmental contamination, but instead merely indicates the presence of registered bulk storage tanks.

*Findings:* Four (4) sites, including the subject property, have been identified within the MSD of the subject property. Based on industry standards, those sites within 1/8-mile or less from the subject property present a greater potential environmental concern. The identified sites are not within this range.

### **7.2.5 State and Tribal Institutional/Engineering Control Registries**

The New Jersey and Tribal Institutional Control/Engineering Control Registries contain listings of those sites that have either engineering and/or institutional controls in place. Engineering controls include various physical control devices such as fences, caps, building slabs, paved areas, liners and treatment methods to eliminate pathways for regulated substances to enter the environment or effect human health. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions and post remediation care requirements intended to prevent exposure to contaminants remaining on site.

Deed restrictions (Activity and Use Limitations) are generally required as part of institutional controls.

**Findings:** One (1) site has been identified on the Institutional Control database within the MSD of the subject property. Based on industry standards, those sites within 1/8-mile or less from the subject property present a greater potential environmental concern. The identified site is not within this range.

#### **7.2.6 State and Tribal Voluntary Cleanup Sites**

Through the VCP, responsible parties, developers, local officials, or individuals may work with the department to remediate non-priority contaminated sites that pose no immediate threat to human health or the environment.

**Findings:** Seven (7) sites have been identified within the MSD of the subject property. Based on industry standards, those sites within 1/8-mile or less from the subject property present a greater potential environmental concern. Two (2) of the identified sites are within this range.

- Washington Township Board of Education (53 West Mill Road) is located at a higher elevation than the subject property. The site has the closed non-regulated UST NJDEP Case # 06-07-10-1521-09 under PI # 293721. NJDEP Case # 06-07-10-1521-09 was issued a NFA letter in April 2009, indicating that remediation had been completed to the satisfaction of the NJDEP. Please refer to **Appendix I** for additional information.
- Scott Farm (99 West Mill Road) is located at a lower elevation than the subject property. The site has the historical NJDEP Case # 05-09-13-0913-14 under PI # 282964, which was issued a NFA letter in May 2006, indicating that remediation had been completed to the satisfaction of the NJDEP.

#### **7.2.7 State and Tribal Brownfield Sites**

A Brownfield site was defined in the 2002 Small Business Liability Relief and Brownfield Revitalization Act (Brownfield Law) as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant". In connection with the passage of the Brownfield Law, the Environmental Protection Agency grants awards to states and tribes for activities under Section 128 (a).

**Findings:** No sites have been identified within the MSD of the subject property.

#### **7.2.8 State Spill (NJ Spills) / Release (NJ Release) List**

The NJ Spills and NJ Release lists are an inventory of reported spills and leaks, both active and inactive. It includes stationary and non-stationary source spills reported to state, tribal and federal agencies, including most LUST sites.

**Findings:** The subject property was not identified on the NJ Release or the NJ Spills databases.

### **7.2.9 New Jersey Industrial Recovery Act (ISRA) Sites**

The ISRA process begins with determining if the Act applies to your type of business and transaction. The provisions of ISRA only apply to industrial establishments. The term “Industrial establishment” refers to the type of business operations and transactions that would subject a facility to review under ISRA. An industrial establishment must meet each of the following three criteria: The place of business or real property at which such business is conducted, having a North American Industry Classification System (NAICS) code listed in N.J.A.C. 7:26 B – Appendix C subject to the specified expectations and limitations. The place of business must involve the generation, manufacture, refining, transportation, treatment, storage, handling, or disposal of hazardous wastes.

**Findings:** No sites have been identified within the MSD of the subject property.

### **7.2.10 Dry Cleaners**

The database lists dry cleaners that are registered. It is by no means indicative of any spills or leaks from such facilities. Any facilities with spills or leaks would also be listed on one, some or all of the other databases discussed herein such as State Hazardous Waste Sites (SHWS), NJ Spills, Leaking Underground Storage Tanks (LUST), RCRA Generators and Voluntary Cleanup Sites (VCP).

**Findings:** No sites have been identified within the MSD of the subject property.

## **7.3 Previous Environmental Site Evaluations**

SRG was not provided with any previous Environmental Site Evaluations.

## **8.0 INTERVIEWS**

SRG attempted to further research the history of the subject property by conducting an OPRA request with the County of Morris. The County of Morris (Office of Health Management) reviewed its files and did not identify any records. The Morris County OPRA request is included in **Appendix G**.

Additionally, SRG conducted an OPRA request with the NJDEP. The following documents were obtained and are included in **Appendix H**.

- UST Registration documentation, including a correspondence letter indicating that as of November 4, 1994, all USTs at the Long Valley Middle School had been removed. Please note, according to the NJDEP online database, DataMiner, the site previously utilized one (1) 15,000-gallon No. 2 heating oil UST (E1), one (1) diesel fuel UST (E2), one (1) No. 2 heating oil UST (E3), and one (1) 4,000-gallon kerosene UST (E4). However, based on a review of the documents obtained from the NJDEP OPRA file

review, the UST registered as E2 was actually a 6,000-gallon No. 2 heating oil UST. Additionally, the USTs registered as E3 and E4 were actually a 2,000-gallon unleaded gasoline UST and a 4,000-gallon diesel fuel UST, respectively, and were located at the School Bus Parking Lot at 53 West Mill Road.

- Compliance Evaluation Summaries associated with the Pesticide Program.
- A Pesticide Program Notice of Violation (NOV) associated with a site visit conducted on June 10, 2011, and Communication Center Notification Reports.
- Correspondence documents from Duke's Landscape Management, Inc. regarding pesticide application.
- A UST Closure Application, dated September 20, 1993, for the removal of one (1) 2,000-gallon unleaded gasoline UST and one (1) 4,000-gallon diesel fuel UST (identified as E3 and E4, respectively).
- A NJDEP UST Closure Approval for the removal of one (1) 4,000-gallon diesel fuel UST, one (1) 2,000-gallon gasoline UST, and the associated piping under TMS # C93-4932. Please note, the location of the UST removals was identified as the School Bus Parking Lot at 53 West Mill Road.
- UST Closure Report prepared by Environmental Health Inspections/Commercial, Inc. of Lakewood, New Jersey (dated February 4, 1994) for TMS # C93-4932. According to the UST Closure Report, on November 4, 1993, one (1) 2,000-gallon unleaded gasoline UST and one (1) 4,000-gallon diesel fuel UST were removed from the School Bus Parking Lot located at 53 West Mill Road. Prior to removal, the USTs and the associated piping were cleaned. Upon removal, the USTs were inspected, and no holes were observed. The excavation was also inspected, and a gasoline odor was identified. The soils which exhibited Flame Ionization Detector (FID) readings were removed from the excavation and staged for future disposal. A Washington Township Building Inspector conducted a site inspection and issued approval for the closing of the excavation. The USTs were disposed of by the State of New Jersey, Morris County Transfer Station, Inc. The excavation was backfilled with certified clean fill from the Blue Circle Company. Groundwater was not observed at the base of the excavation. The 2,000-gallon unleaded gasoline UST had two (2) soil samples collected in the area of the piping and seven (7) soil samples collected from the base of the excavation. The 4,000-gallon diesel fuel UST had two (2) soil samples collected in the area of the piping and seven (7) samples collected from the base of the excavation. The soil samples were analyzed for Total Petroleum Hydrocarbons (TPH) for the diesel tank and Volatile Organic Compounds + 10 (VOC+10) for the gasoline tank. The soil sample results for both tanks were below the New Jersey regulatory limits. However, please note, as per the UST Closure Report, no soil samples were collected from beneath the dispensers or dispenser pad. Additionally, the use of leaded gasoline ceased in 1986, and since the gasoline tank was installed prior to 1986, the UST may have contained leaded gasoline. Lead samples were not collected at the time of UST closure activities.

- UST Closure Addendum (dated August 25, 1994) for TMS # C93-4932. The addendum clarified that the odor of gasoline from the excavation was from incidental spillage over a period of time, which occurred during the filling of the gasoline UST. Impacted soils were observed from the surface to approximately 3-feet in depth in the area around the fill cap. Approximately 11-yards of soil was removed from the excavation and staged for disposal. The soil was disposed of by the ABC Tank Company, Inc. on November 6, 1993.
- A NFA letter issued by the NJDEP (dated September 6, 1994) for TMS # C93-4932. The NFA was issued for the removal of one (1) 2,000-gallon unleaded gasoline UST, one (1) 4,000-gallon diesel fuel UST, dispenser, and all associated piping. The results of the soil analysis indicated contaminant levels were below the cleanup standards, and no groundwater was encountered.
- A NJDEP UST Closure Approval for the removal of one (1) 6,000-gallon No. 2 heating oil UST under TMS # C94-1453. Please note, the location of the UST removal was identified as the Long Valley Middle School at 51 West Mill Road.
- UST Closure Report prepared by Environmental Health Inspections/Commercial, Inc. of Lakewood, New Jersey (dated November 14, 1994) for TMS # C94-1453. According to the UST Closure Report, on August 30, 1994, one (1) 6,000-gallon No. 2 heating oil UST was removed from the Long Valley Middle School located at 51 West Mill Road. Prior to removal, the UST and the associated piping was cleaned, and all residual oil and water was properly disposed of by Lorco Petroleum Services. Upon removal, the UST was inspected, and no holes were observed. The excavation was also inspected, and no visual evidence of contamination was identified. The soils were screened with a FID, and no readings were detected above 2 ppm. A Washington Township Building Inspector conducted a site inspection and issued approval for the closing of the excavation. The UST was disposed of by Herbert Lutz and Co. of Linden, New Jersey and White Bros. Trucking Co. of Elizabeth, New Jersey. The excavation was backfilled with certified clean fill from the Oxford Quarry, Inc. of Oxford, New Jersey. Groundwater was not observed at the base of the excavation. Six (6) soil samples were collected from the base of the excavation and one (1) soil sample was collected in the area of the piping. The soil samples were analyzed for TPH, and the results were below the New Jersey regulatory limits.
- A NFA letter issued by the NJDEP (dated December 27, 1994) for TMS # C94-1453. The NFA was issued for the removal of one (1) 6,000-gallon No. 2 heating oil UST and all associated piping. The results of the soil analysis indicated contaminant levels were below the cleanup standards, and a groundwater investigation was not required.
- A UST Closure Application, dated June 10, 1992, for the removal of one (1) 15,000-gallon No. 2 heating oil UST (identified as E1).

- A NJDEP UST Closure Approval for the removal of one (1) 15,000-gallon No. 2 heating oil UST under TMS # C92-2001. Please note, the location of the UST removal was identified as the Long Valley Middle School at 51 West Mill Road.
- UST Closure Report prepared by Environmental Health Inspections/Commercial, Inc. of Lakewood, New Jersey (dated November 11, 1992) for TMS # C92-2001 and NJDEP Case # 92-08-31-1517-18. According to the UST Closure Report, on August 21, 1992, one (1) 15,000-gallon No. 2 heating oil UST was removed from the Long Valley Middle School located at 51 West Mill Road. Prior to removal, the UST and the associated piping was cleaned. Upon removal, the UST was inspected, and no holes were observed. Slight soil staining was identified in the area around the fill cap and lines. These soils were sampled, removed, and staged for disposal. During the excavation of the piping at the top of the tank, approximately 2-quarts of heating oil was spilled. Absorbent pads were used to clean up the spill, and the impacted soil was removed and staged for disposal. Additional soil staining and asphalt-like material were observed at the base of the excavation. The stained soils and asphalt material were removed and staged for disposal. The removal contractor arranged for the proper disposal of the soils. Soils were screened with a Photo Ionization Detector (PID) during excavation activities, and slightly elevated readings were detected at the base of the excavation. A Washington Township Building Inspector conducted a site inspection and issued approval for the closing of the excavation. The UST was disposed of by Parkway Iron & Metal Co., Inc. of Clifton, New Jersey. The excavation was backfilled with certified clean fill from offsite. Groundwater was observed within the excavation at a depth of approximately 18-feet bsg. The groundwater was observed to be slightly green in color with a muddy texture, which was believed to have been caused by the asphalt found buried below the bottom of the excavated UST, however, no groundwater samples were collected. No sheens, floating oil, odors, or soil staining were observed. Please note, the underground trenching and glass piping runs the length of the eighth grade science wing, then runs towards the northern section of the building, to an unknown location. The 15,000-gallon No. 2 heating oil UST was formerly located to the north of the known underground trenching and glass piping, and may have been located in the vicinity of the area of the disposal system which is currently unknown. Five (5) soil samples were collected in the area of the piping and nine (9) soil samples were collected from the base of the excavation. The soil samples were analyzed for TPH, and three (3) of the samples reported TPH at concentrations greater than 1,000 ppm. Therefore, three (3) of the soil samples were analyzed for VOC+15. The results did not detect any targeted compounds. However, please note, according to the NJDEP Analytical Requirements for Petroleum Storage and Disposal Areas (Table 2-1), the current contingent analysis for Petroleum Hydrocarbons above 1,000 mg/kg is 2-Methylnaphthalene and Naphthalene, as the NJDEP has determined that heating oil does not contain high concentrations of VOCs.
- Correspondence documents associated with NJDEP Case # 92-08-31-1517-18.
- A NFA letter issued by the NJDEP (dated February 19, 1993) for TMS # C92-2001 and NJDEP Case # 92-08-31-1517-18.

SRG was provided with documentation associated with the removal of one (1) unregulated 1,000-gallon No. 2 heating oil UST from the Washington Township Board of Education property located at 53 West Mill Road. The obtained documents are included in **Appendix I**.

Based on our research, the subject property is associated with the following NJDEP programs:

- Air – PI # 25830 (Washington Twp. Board of Education)
- Land Use – PI # 1438-13-0003.1 (Washington Township)
- Land Use – PI #'s 1438-13-0005.2 and 1438-13-0005.1 (Washington Township Board of Education)
- Pesticides – PI # 5520-035-27 (Long Valley Middle School)
- Site Remediation (SRP) – PI # 008994 (Long Valley Middle School)

## 9.0 CONCLUSIONS AND RECOMMENDATIONS

The following RECs were identified for the subject property:

- Based on a review of the Historical Aerial Photographs provided by EDR, the original section of the present day school building was constructed sometime between 1939 and 1951. Additional sections were constructed sometime between 1954 and 1961, 1963 and 1971, and 1986 and 1992, which completed the present day school building. Prior to the construction of the present day building, the property appears to have consisted of farmland and cleared fields. Additionally, the surrounding area appears to have historically been utilized as farmland, and the subject property is currently bordered to the east and south by farmland. The potential of the historic use of pesticides on the subject property and on the surrounding properties exists.

Based on the historic site usage as farmland, SRG recommends conducting a limited surficial soil sampling event in the areas of grass cover surrounding the school with emphasis on areas most likely to be used by students, to determine whether historic pesticides are present in onsite soils as a result of historical farming activities.

- The chemical disposal system beneath the eighth grade science classrooms (as described in section 4.0 of this report) may potentially be a pathway to the environment, including soils and groundwater.

SRG recommends that the components of the disposal system be located and inspected. Should the inspection of the disposal system reveal evidence of leakage or other possible chemical contamination of soil in the area, SRG recommends conducting a site investigation to assess soil and/or groundwater conditions in association with the chemical disposal system.

- One (1) 15,000-gallon No. 2 heating oil UST was removed from the Long Valley Middle School located at 51 West Mill Road in August 1992 under closure approval # C92-2001. At the time of the closure activities, groundwater was observed within the excavation at a

depth of approximately 18-feet bsg. The groundwater was observed to be slightly green in color with a muddy texture. No sheens, floating oil, or odors were identified. Asphalt-like material was observed at the base of the excavation, which was believed to have caused the groundwater to have a slightly green color and muddy texture, however, no groundwater samples were collected. Please note, the underground trenching and glass piping previously discussed runs the length of the eighth grade science wing, then runs towards the northern section of the building, to an unknown location. The 15,000-gallon No. 2 heating oil UST was formerly located to the north of the known underground trenching and glass piping, and may have been located in the vicinity of the area of the disposal system which is currently unknown.

1992 soil testing did not detect any volatile organic compounds and therefore it is not thought to represent a risk of vapor intrusion into the building. Despite these factors, if the District needs to excavate or dig in the immediate area of the former 15,000-gallon No. 2 heating oil UST, SRG recommends conducting a proactive soil and/or groundwater investigation to assess conditions in association with the

- One (1) 15,000-gallon No. 2 heating oil UST was removed from the Long Valley Middle School located at 51 West Mill Road in August 1992 under closure approval # C92-2001. At the time of the closure activities, slight soil staining was identified in the area around the fill cap and lines. These soils were sampled, removed, and staged for disposal. During the excavation of the piping at the top of the tank, approximately 2-quarts of heating oil was spilled. Absorbent pads were used to clean up the spill, and the impacted soil was removed and staged for disposal. Additional soil staining and asphalt-like material were observed at the base of the excavation. The stained soils and asphalt material were removed and staged for disposal. The removal contractor arranged for the proper disposal of the soils. Soils were screened with a PID during excavation activities, and slightly elevated readings were detected at the base of the excavation. NJDEP Case # 92-08-31-1517-18 was assigned to the heating oil UST removal. Soil samples were collected, and the results reported TPH at concentrations greater than 1,000 ppm. Therefore, three (3) of the soil samples were analyzed for VOC+15. The results did not detect any targeted compounds. On February 19, 1993, the NJDEP issued a NFA letter for TMS # C92-2001 and NJDEP Case # 92-08-31-1517-18. However, please note, according to the NJDEP Analytical Requirements for Petroleum Storage and Disposal Areas (Table 2-1), the current contingent analysis for Petroleum Hydrocarbons above 1,000 mg/kg is 2-Methylnaphthalene and Naphthalene, as the NJDEP has determined that heating oil does not contain high concentrations of VOCs.

While a No Further Action (NFA) letter was issued by the NJDEP in 1992, if the District needs to excavate or dig in the immediate area of this former tank, SRG recommends conducting a proactive soil investigation to assess conditions in association with the former 15,000-gallon No. 2 heating oil UST.

- One (1) 2,000-gallon unleaded gasoline UST and one (1) 4,000-gallon diesel fuel UST were removed from the School Bus Parking Lot located at 53 West Mill Road in November 1993 under closure approval # C93-4932. At the time of the closure activities,

the excavation was inspected, and a gasoline odor was identified. The odor of gasoline from the excavation was from incidental spillage over a period of time, which occurred during the filling of the gasoline UST. The soils which exhibited FID readings were removed from the excavation and staged for disposal. Impacted soils were observed from the surface to approximately 3-feet in depth in the area around the fill cap. Approximately 11-yards of soil was removed from the excavation. The soil was disposed of by the ABC Tank Company, Inc. Soil samples were collected, and the results were below the New Jersey regulatory limits. On September 6, 1994, the NJDEP issued a NFA letter for TMS # C93-4932. However, please note, as per the UST Closure Report, no soil samples were collected from beneath the dispensers or dispenser pad. Additionally, the use of leaded gasoline ceased in 1986, and since the gasoline tank was installed prior to 1986, the UST may have contained leaded gasoline. Lead samples were not collected at the time of UST closure activities. SRG recommends conducting a soil investigation of the former dispensers to assess conditions.

While a NFA letter was issued by the NJDEP in 1993, if the District needs to excavate or dig in the immediate area of this former tank, SRG recommends conducting a proactive soil investigation of the former UST excavation to determine whether lead is present in surrounding soils.

The following HREC was identified for the subject property:

- One (1) 6,000-gallon No. 2 heating oil UST was removed from the Long Valley Middle School located at 51 West Mill Road in August 1994 under closure approval # C94-1453. Soil samples were collected, and the results were below the New Jersey regulatory limits. On December 27, 1994, the NJDEP issued a NFA letter for TMS # C94-1453.

SRG does not recommend any additional investigative actions for this HREC.

No CRECs or *De minimis* Conditions were identified for the subject property.

Various properties and facilities within a 1-mile radius of the subject property with environmental conditions relative to the operations are included in the database information as detailed in this report. None of these sites are within 1/8-mile of the subject property, or are considered to have an adverse environmental impact on the subject property due to the nature of the condition, distance from, and/or location down-gradient of the subject property.

### Indoor Recommendations

- This building has a history of elevated relative humidity and dampness and mold. It is critical to actively control indoor relative humidity below 60% at all times to prevent mold colonization. This may involve:
  - Running air conditioning 24/7 during hot and humid periods
  - Running commercial dehumidifiers with drain kits
  - Increasing or upgrading air conditioning capacity

- Maintaining air conditioners in clean and sanitary condition including regular filter changes and effective condensation draining
  - Substantially reducing outside air intake during periods of high humidity
  - Proactive surveys of susceptible building materials for evidence of mold growth
  - Immediate response to signs of water intrusion
  - Training of maintenance staff to identify the signs of water intrusion and mold
- This building has a history of minor radon elevations as outlined in section 4.1.3 of this report. While all radon levels measured in this school in 2018 were acceptable, GSE recommends school-wide radon testing every five (5) years in accordance with NJDEP guidelines for radon testing in schools.
  - As in many schools, this school contains known and suspect asbestos containing materials. GSE recommends that the District continue active implementation of the AHERA-compliant asbestos management program including gradual abatement of asbestos containing materials as necessary for renovations or repairs or if the condition of any ACMs deteriorate and present a potential risk of asbestos exposure to occupants.
  - This building has a theoretical risk of the presence of lead based paint based on the age of the building. All painted surfaces must be maintained in good condition. If renovations are planned that may disturb older painted building materials, GSE recommends an XRF survey for lead based paint of areas to be disturbed in advance.
  - While our limited walk-through survey did not identify any rubber-like gym floor coverings, should such materials be identified in the building, the supplier should be contacted to document that the materials do not contain mercury or mercury related compounds. All suspect floors should be bulk sampled for mercury presence by a qualified environmental consultant and analytical laboratory.
  - All potable water outlets associated with human consumption must be tested for lead in water every six years in accordance with NJDOE regulations and NJDEP guidelines issued in 2017. All test results must be provided to the NJDOE and all related documentation must be filed for review by any interested party.

## **10.0 References**

### Documents

“The EDR Aerial Photo Decade Package” - Historical aerial photographs supplied by Environmental Data Resources, Inc. dated June 4, 2019.

“The EDR City Directory Image Report”– Historical city directories supplied by Environmental Data Resources, Inc. and dated June 6, 2019.

“The EDR Radius Map Report with GeoCheck®” Environmental database search supplied by Environmental Data Resources, Inc. and dated June 3, 2019.

“The EDR Certified Sanborn® Map Report” – Sanborn maps supplied by Environmental Data Resources, Inc. and dated June 3, 2019.

“The EDR Historical Topographic Map Report” – Historical topographic maps supplied by Environmental Data Resources, Inc. and dated June 3, 2019.

### Limitations

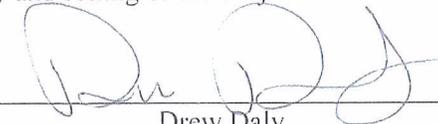
Our objective is to determine through visual inspection and regulatory and historical research if there are areas of environmental concern. Those areas are addressed in this report.

Not all areas of the building on site were inspected, however, the SRG representative accessed all areas of the building as deemed necessary to evaluate the subject site for existing and potential areas of environmental concern.

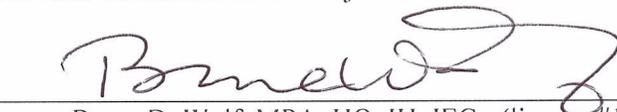
The information relied upon for this report has been obtained from publicly available and other secondary sources of information. SRG, therefore, disclaims liability for any errors, omissions, or inaccuracies inherent in any of the information obtained from such sources. This report is valid only for the geographical limit and the objectives specified in this report, and any alteration or deviation from this description will require a new report. SRG assumes no obligation to update this report should new information become available at any time subsequent to the date hereof.

### Environmental Professional Statements

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR 312 and I have the specific qualifications based on education, training and experience to assess a property of the nature, history and setting of the subject tract.

  
\_\_\_\_\_  
Drew Daly Date 8/14/19

I declare that, to the best of my professional knowledge and belief, I meet the definition of an Indoor Environmental Consultant for Child Care Centers and Environmental Facilities in New Jersey as defined and licensed by the New Jersey Department of Health. As such I have the specific qualifications based on education, training and experience to conduct an indoor environmental assessment in the subject school.

  
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Bruce D. Wolf, MPA, HO, IH, IEC (license #1124) Date 8/14/19