

September 28, 2012

John Strang, P.E.  
New York State Department of Environmental Conservation  
Division of Environmental Remediation  
1130 N. Westcott Road  
Schenectady, New York 12306-2014

Re: PCB Mitigation Program  
Close-out Summary Report  
DEC File 04-0312-85-06 M1  
Amphenol Corporation - Sidney, NY

Dear Mr. Strang:

As noted in the second quarter 2012 status report for the referenced program, the repair of the Village of Sidney east trunk sanitary sewer, which traverses the Amphenol facility, has been completed. This project was the last construction related effort called for in the approved PCB Mitigation Program that was prepared per the directives in the modified order on consent (Modification of Order on Consent; DEC File 04-0312-85-06 M1; May 6, 2009) between the New York State Department of Environmental Conservation (NYSDEC) and Amphenol Corporation. This letter responds to your recent verbal request to provide a brief chronological summary of the completion of those primary program tasks as defined in the Supplementary Remedial Program (SRP) attached to the modified order on consent (copy attached).

Table 1 summarizes the SRP and the specific actions to be taken by Amphenol. These tasks are grouped into the two primary work sites; the Village wastewater treatment plant (WWTP) and the Amphenol facility. Articles A-1 through A-5 address the WWTP; articles B-1 through B-4 pertain to the Amphenol facility. At the WWTP, the requirements included establishing weekly influent and effluent monitoring and a program to accelerate the removal of bio-solids at the end of the activated sludge treatment process. At the Amphenol facility, the SRP efforts focused on investigation of the condition on the plant's and Village's sanitary sewers, assessing the presence of PCBs in the sewers and evaluating the feasibility of various sewer repair / replacement options compared to independent, on-site treatment for Amphenol sanitary wastewater. Discussions regarding the specific actions at each work site are provided below.

### ***Work at the Village of Sidney WWTP***

#### **PCB Influent and effluent monitoring program (A-1)**

Weekly monitoring of the total PCBs in the Village WWTP was begun December 31, 2009 and continues today. Twenty-four hour composite samples, between Tuesday and Wednesday, are collected at the influent weir and at the effluent compliance point. Samples are analyzed for PCBs and Total Suspended Solids. Results are reported to NYSDEC quarterly in the PCB Mitigation Program status reports.

Bio-solids generated as part of the Village's activated sludge treatment process are also sampled and analyzed for PCBs prior to off-site disposal. These data are also provided to NYSDEC in the quarterly status reports.

### Accelerated solids removal program (A-2 and A-3)

The Sidney POTW is made up of two mirror image treatment trains each of which consist of two contact-mixing (aeration) tanks, two clarifiers and chlorine contact chambers. Each train operates independently and receives waste water that has passed through a common bar screen, grinder, wet well and splitter (diversion) box. At the splitter box the operator can direct all or a portion of the influent flow to a given treatment train. Sludge is digested in aerobic digesters and then pumped to a sludge conditioning tank where polymer is added to promote thickening. After conditioning, sludge is de-watered using a plate and frame press.

The objective of the accelerated solids removal program (ASRP) was to remove the bulk of PCB containing bio-solids from the POTW. This was accomplished by isolating one of the treatment trains from influent flow, decanting the liquids that resided in a given vessel and removing the solids for conditioning, dewatering and off-site disposal.

The ASRP was run seven days per week and took seven weeks to complete from May 11 through June 29, 2009. A combined total of 437.9 tons of PCB containing sediments (318 tons) and sludge (119.9 tons) were removed from the treatment trains. This material accounted for 16.65 pounds of PCBs. The reconstruction of the sludge drying bed resulted in the removal of 329.3 tons of soil that accounted for 118 pounds of PCBs.

### 150 Day Report (A-4 and A-5)

Upon the completion of the ASRP and within 150 days of the date of the modified order, the SRP required a report be submitted discussing the results of the ASRP and associated data. The report, referred to as the 150 day report, and titled Summary of Work Completed and Findings, Supplemental Remedial Program, NYSDEC File 04-0312-85-06, 150 Day Submittal; JTM Associates, LLC was submitted to NYSDEC on September 9, 2009. In addition to presenting the results of the ASRP, the document also provided a proposed approach to mitigating PCBs in the influent to the treatment plant. This proposal, referred to as the PCB Mitigation Plan, called for:

1. Construction of a new sanitary waste water conveyance system by the end of 2010 for the Amphenol facility that would be completely independent of all existing sanitary laterals except those constructed as part of the June 2006 flood
2. Working with the Village, repair or replace the village owned sanitary sewers that traverse the Amphenol property (Figure 1) including:
  - a. The west trunk from the first manhole north of Delaware Avenue to the manhole at Railroad Avenue and Camp Street, north of the railroad tracks, by the end of 2010
  - b. The east trunk from the first manhole west of Union Street to MH-11 where it connects with the west trunk (Figure 1)

NYSDEC provided comments on the 150 day report in correspondence dated January 12, 2010 (letter from J. Strang, PE to J. Mickam) which was followed by a response to the Department's comments (letter from J. Mickam to J. Strang dated February 23, 2010). NYSDEC approved the submittal on February 25, 2010 (letter from J. Strang to J. Mickam) and directed Amphenol to

implement the proposed PCB Mitigation Plan. As a condition of the approval of the PCB Mitigation Plan, NYSDEC directed that quarterly updates of the status of various project activities be submitted.

### ***Work at the Amphenol facility***

#### Inspection and sampling of sediments in Village sewers (Articles B-1 and B-2)

The SRP require the video inspection of the Village sanitary sewers that are present on the Amphenol property. Four video inspection events of the on-site sanitary sewers were completed. Multiple events were necessary to accommodate plant operations and the availability of more robust equipment that was needed to inspect areas of debris accumulation (sediments) that were identified during the initial inspection.

Samples of sewer water were collected from several manholes across the Site and at selected off-site adjacent locations. If accumulated sediments in a given manhole were present, these materials were also sampled. Water samples were also collected from selected manholes subsequent to cleaning the sewer line from MH 8 to the C & RR manhole. Samples were analyzed for total PCBs using USEPA method 608.

#### 90 Day Report (Articles B-3 and B-4)

Upon completion of the sewer inspection and sediment sampling, the SRP required that a report be submitted describing the results of investigations and offering recommendations to address residual PCB impacted solids in the Village sewers such that PCBs in the Village WWTP effluent would be mitigated.

O'Brien & Gere Engineers, Inc. was retained to evaluate various alternatives to mitigate the discharge of PCBs from the POTW by either eliminating PCBs leaving the Amphenol facility or removing PCBs from the POTW effluent. The alternatives considered included treatment technologies that could be implemented at either the Amphenol plant or the POTW. Various modifications to the existing sewer conveyance both for the Amphenol plant and the Village's trunk lines were also considered. The primary objective of the alternative evaluation was to identify feasible technologies and order of magnitude implementation costs. The specific alternatives evaluated included:

1. On-site (Amphenol plant) treatment using a membrane biological reactor (MBR) and granular activated carbon (GAC) with direct discharge to the Susquehanna River
2. On-site treatment using conventional clarification (inclined plate) and an ultraviolet oxidation system with a titanium dioxide catalyst with direct discharge to the Susquehanna River
3. On-site treatment using ultra-filtration technology with discharge to the Village POTW
4. On-site treatment using ultra-filtration and an ultraviolet oxidation system with discharge to the Village POTW
5. Improved treatment at the POTW using mixed media filtration and GAC
6. Improved treatment at the POTW using an ultraviolet oxidation system
7. Construct an independent sanitary wastewater conveyance system for the Amphenol plant contribution and isolate the existing sanitary trunk lines from potential sources of PCBs by lining or re-routing the existing lines or a combination there of

Options 1 through 4 also include the re-routing of the Village's sanitary sewer around the Amphenol plant.

The results of the alternatives evaluation were summarized in the 90-day report. Technical complexity and utility requirements (electrical power and process chemicals) varied widely. Capital costs, including the by-pass of the existing sanitary sewer for options 1 through 4, range from \$3.3 million (option 5) to \$5.9 million (option 1). Annual operating cost range from approximately \$41,000 for option 7 to nearly \$500,000 for options 5 and 6. The evaluation concluded that option 7, while not the lowest capital cost, is preferred because of its simplicity of implementation and minimal operation and maintenance requirements. The completion of the basis of design for this solution was recommended. At the time, it was anticipated that this solution could be implemented in approximately two years.

In response to results of the sediment sampling, Amphenol initiated quarterly monitoring of the Village sewer manholes. The periodic cleaning of manholes where concentrations of PCBs above 50 parts per million (ppm) were identified was also completed.

NYSDEC provided comments on the 90 day report in correspondence dated January 12, 2010 (letter from J. Strang, PE to J. Mickam) which was followed by a response to the Department's comments (letter from J. Mickam to J. Strang dated February 23, 2010). NYSDEC approved the submittal on February 25, 2010 (letter from J. Strang to J. Mickam) and directed Amphenol to implement the proposed PCB Mitigation Plan.

### ***Implementation of the PCB Mitigation Plan***

The approved PCB Mitigation Program included actions to address both the Amphenol facility sanitary sewers and the Village owned sanitary sewers that traverse the Amphenol property as follows:

1. Design and construct a new sanitary waste water conveyance system to service the Amphenol facility. This would be completely independent of any and all existing sanitary laterals excepting those constructed since 2006 as part of the restoration following the June 2006 flood. This work was anticipated to be completed by the end of 2010.
2. Working in conjunction with the Village of Sidney, design and construct, as appropriate, repairs and replacement of the Village's sanitary sewers that pass beneath Amphenol property in a manner that isolates the conveyance from the sub-surface. This effort required completion in 2 phases.
  - a. Phase 1 - West side trunk section along the west side of plant from Delaware Avenue to Camp and Railroad Streets. Anticipated completion date: end of 2010.
  - b. Phase 2 - East side trunk section through plant from Union Street to west end trunk connection. Anticipate completion data: end of 2011.

#### Amphenol facility sanitary sewer

Following the approval of the PCB Mitigation Program, Amphenol engaged CDM Constructors and began a design / build project in May 2010. The project included:

1. Installation of over 4,000 feet of new, above ground sanitary waste water conveyance lines
2. Renovation and remodeling of six rest rooms
3. Construction of six new pump stations and reconfiguration of two existing pump stations
4. Establishment of two new connections to the Village sewers
5. Abandonment of the previous, gravity sewer at the facility

Construction of the system was completed in December 2010 at a cost of approximately \$2 million.

#### Village owned sanitary sewers

Figure 1 illustrates the location of the Village of Sidney owned sanitary sewers that traverse the Amphenol facility. These include the West Trunk and the East Trunk.

##### *Phase 1 – West Trunk*

The Village retained Clough, Harbour and Associates (CHA) to design an 18-inch, PVC pipe, replacement gravity sanitary sewer. The design was completed in September 2010 and called for the installation of three new manholes and the conveyance to be placed directly adjacent to the existing line. The construction of the new west trunk was publically bid in October 2010 and was awarded to Vacri Construction from Binghamton, NY. Construction was completed and the new sewer brought on line in early December 2010 at a cost of approximately \$600,000. In April 2011, a diversion valve was installed near manhole 12. This valve was installed, as specified by the Village of Sidney, such that in the event of a flood of a magnitude experienced in June of 2006, sanitary sewer backup into the Amphenol facility could be prevented. Also, the western trunk paving restoration on the Amphenol plant was completed.

##### *Phase 2 – East Trunk*

The Village retained CHA to complete a feasibility study to evaluate various existing sewer replacement and repair options. Complications associated with re-routing the sewer either to the north or south of the facility led the Village to decide that the best approach was to repair the existing sewer using a slip-lined, cured in-place concrete pipe (CIPP).

CHA completed the design for the east trunk sewer repair in July 2011. The design specified that the existing sewer be lined with CIPP. Two new manholes would be constructed to facilitate the CIPP, slip lining installation. Existing manholes would be lined with an epoxy embedded fabric called the Multi-Triplex™ system. The project was publically bid in August 2011 and awarded to Arold Construction and mobilization of the contractor schedule for mid-September. However, due to the flooding of the Village of Sidney and the Amphenol facility from Tropical Storm Lee on September 6, 2011, the construction was postponed until spring 2012.

The Arold construction team mobilized April 2, 2012 and began their inspection to confirm the Village's design which called for the complete length of the east trunk through the Amphenol facility from Union Street to the west trunk to be lined with cured

in-place concrete pipe (CIPP). As a result of Arold's inspection and with the concurrence of the Village of Sidney and their engineer, CHA, it was been determined that the sewer from MH-7 to MH-9 (Figure 1) is constructed of iron pipe unlike the upstream portion back to Union Street which is clay tile. The section between MH-7 and MH-9 is intact with competent, non-leaking joints. Based on this condition, this section of the sewer was not recommended for rehabilitation. Video inspection also confirmed that the materials of construction from MH-9 to MH-11 is PVC that is in sound condition with non-leaking joints. Therefore, CIPP was not installed through this section either. The remaining portion of the east trunk from MH-1 to MH-7, approximately 1,400 feet or about 80% of the east trunk length through the Amphenol site, was slip lined.

Existing manholes were lined with an epoxy embedded fabric called the Multi-Triplex<sup>TM</sup> system. Due to space limitations, MH-7 was rehabilitated by improving the masonry and sealing with conventional masonry sealants. Additionally, the inspection revealed that manhole MH-8, which lies at a significant depth (greater than 4 feet) below the facility's floor in a critical process area, was structurally intact. Given the inspection indicates that this manhole is not compromised, no repairs were required at this location.

Rehabilitation construction activities were completed June 15, 2012. Site restoration and equipment demobilization was completed June 22, 2012. Characterization of the waste materials collected during the rehabilitation (wash water and solids collected from the line cleaning process) were characterized and managed during July and August 2012. Total cost of the east trunk rehabilitation was approximately \$1.1 million.

With the completion of the east trunk rehabilitation, all requirements of the PCB Mitigation Program have been met. Monitoring of the Village WWPT influent, effluent and sludge for PCBs will continue until further notice as defined in Article A-1 of the Supplemental Remedial Program attached to the modified consent order.

Should you have any questions regarding this PCB mitigation program close-out report or the program in general, please do not hesitate to contact our offices.

Regards,  
JTM Associates, LLC



James T. Mickam, PG  
President

cc: J. Bianchi – Amphenol Corporation  
S. Waldo – Amphenol Corporation  
R. Galloway – Honeywell International

**Table 1**  
**Summary of Supplemental Remedial Program**  
**Amphenol Corporation**  
**Sidney, New York**

**Work at the Village Waste Water Treatment Plant**

<b>SRP Task</b>	<b>Task Description</b>	<b>Summary of Actions</b>	<b>Completion Date</b>
A-1	Weekly composite sampling and analysis of Village WWTP influent and effluent	Weekly composite sampling and analysis of the WWTP began December 31, 2009. Data are submitted quarterly to NYSDEC in program activity summary letter reports.	Ongoing
A-2	Accelerating the removal of solids from the WWTP	Contractors were engaged to remove available solids from each of two activated sludge, sanitary waste water treatment trains (termed the Accelerated Solids Removal Program).	June 29, 2009
A-3	Evaluate the distribution PCBs in the WWTP	Various sampling efforts completed during the Accelerated Solids Removal Program	June 29, 2009
A-4	Within 150 days of the effective date of the order modification, submit a report (referred to as the 150 day report) summarizing the results of the Accelerated Solids Removal Program and proposing actions to be taken to minimize future impacts to the WWTP from PCBs	150 day report prepared and submitted defining the proposed additional activities to minimize future impact to the Village WWTP (named the PCB Mitigation Program) and an implementation schedule. Plan calls for: <ol style="list-style-type: none"> <li>1. Construction of a new sanitary wastewater conveyance system to the Amphenol facility</li> <li>2. Work with the Village to design and construct, as appropriate, repairs and replacements of the sanitary sewers that pass beneath the Amphenol property</li> </ol>	September 9, 2009
A-5	Requires NYSDEC review and approval of the 150 day report and the PCB Mitigation Program	NYSDEC approves the 150 day report, PCB Mitigation Plan and the implementation schedule	February 25, 2010

**Table 1**  
**Summary of Supplemental Remedial Program**  
**Amphenol Corporation**  
**Sidney, New York**

**Work at the Amphenol Facility**

<b>SRP Task</b>	<b>Task Description</b>	<b>Summary of Actions</b>	<b>Completion Date</b>
B-1	Perform video inspection of the Village sanitary sewers on the Amphenol property	Multiple inspection events completed between February 24, 2009 and June 8, 2009	June 8, 2009
B-2	Following inspection of the sewers, collect samples of sediment at three select locations for analysis of PCBs	Sewer sediment samples were collected from several locations the results of which were summarized in the report required by SRP task B-3	February 26, 2009 through July 8, 2009
B-3	Within 90 days of the effective date of the order modification, submit a report (referred to as the 90 day report) summarizing the results of the investigation work and proposing actions to be taken to address residual PCB impacted solids in the Village's sanitary sewer lines	90 day report prepared and submitted. The report concludes the most feasible approach to mitigate PCB impacts to the Village's sanitary sewers is to construct a new independent sewer to service the plant's sanitary sources and repair or replace the trunks of the Village sewers that pass through the Amphenol plant property	August 7, 2009
B-4	Requires NYSDEC review and approval of the 90 day report, its recommendations and any other remedial actions that may be proposed as the program proceeds	NYSDEC approves the 90 day report, its conclusions and recommendations	February 25, 2010



DWG PATH: G:\JTM-Associates\Ampheno\Allied-Scans\Base 11x17 ANNOTATIVE.dwg

PLOT DATE: 9/27/12

FIGURE 1  
AMPHENOL CORPORATION  
SIDNEY, NEW YORK

ON-SITE VILLAGE  
OWNED SANITARY SEWER MAP

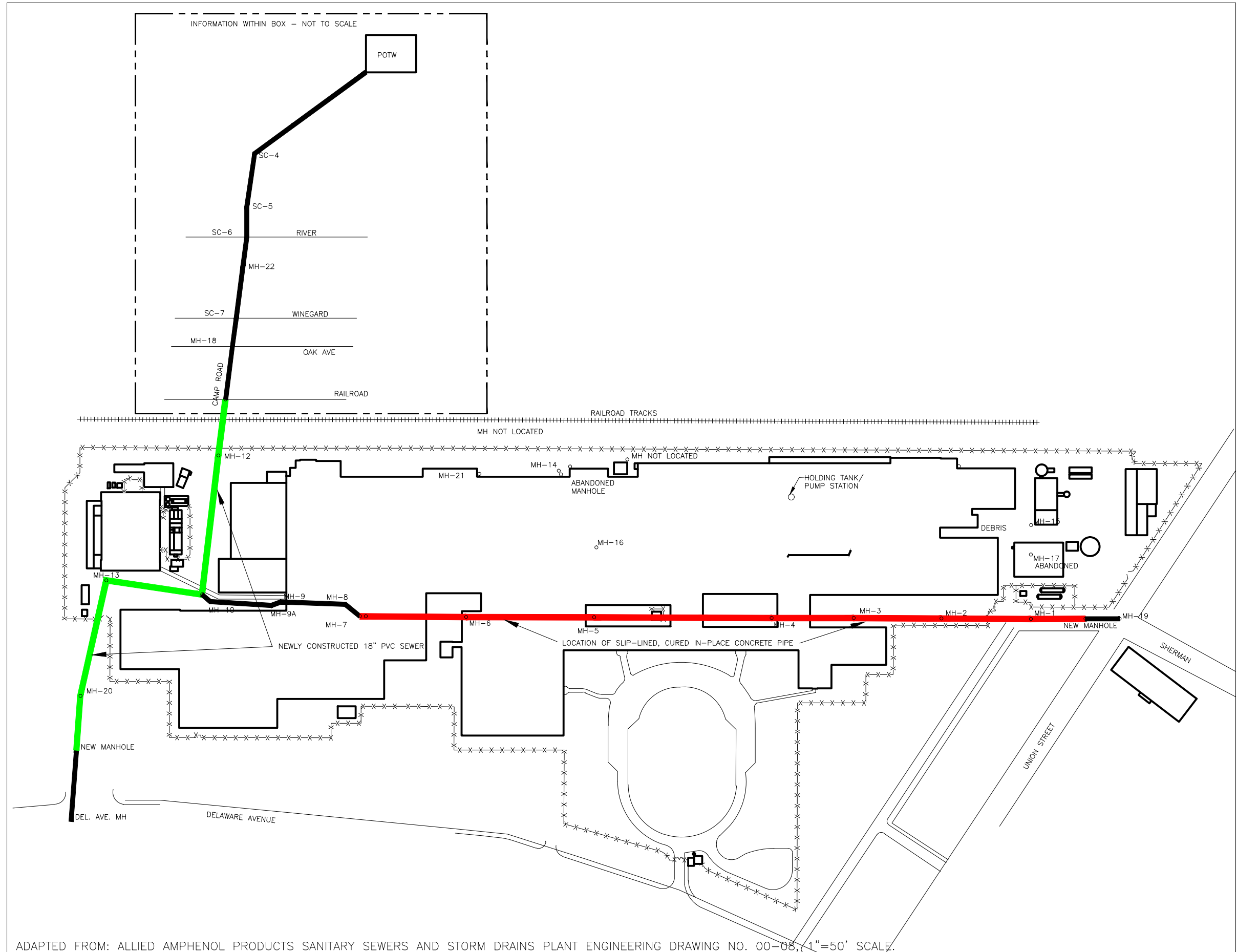


LEGEND

- x-x-x-x-x-x-x- FENCE
- == EDGE OF PAVEMENT AND SIDEWALK
- SANITARY SEWER LINE
- CIPP SLIPPED-LINED
- NEW (2010) PVC 18" SANITARY SEWER
- MH-8 MANHOLE LOCATION



DATE: MAY 6, 2010  
FILE NO.XX2 11X17



ADAPTED FROM: ALLIED AMPHENOL PRODUCTS SANITARY SEWERS AND STORM DRAINS PLANT ENGINEERING DRAWING NO. 00-08, 1"=50' SCALE.

REV DATE: 9/27/12