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SITE INVESTIGATION REPORT
FOR
THE CITY OF CAMDEN

AABCO STEEL DRUM, INC.
BLOCK 62, LOTS 38 & 45; BLOCK 65, LOT 103
CAMDEN CITY, CAMDEN COUNTY
OUR FILE #0408V075
CASE #95-9-14-1206-53

Prepared by:
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April 20, 1999

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1.0 INTRODUCTION

Remington & Vernick Engineers, on behalf of the City of Camden, has conducted a Preliminary Assessment and a Site Investigation for AABCO Steel Drum, Inc., a former drum refinishing facility. Funding for both phases of this project was provided through the New Jersey Hazardous Discharge Site Remediation fund, Municipal Grant Program. The following Site Investigation Report is presented in accordance with the Technical Requirements for Site Remediation, NJAC 7:26E-3.3 through 7:26E-3.12.

2.0 GENERAL SITE INFORMATION

Current Site Name:	Container Recyclers		
Address:	308-322 North Front Street		
Municipality:	Camden City		
County:	Camden		
Block:62	**Lot(s):**	38 & 45	
Block:65	**Lot(s):**	103	
EPA ID No:	NJD980764310 (listed under Container Recyclers)		
EPA ID No:	NJD 000691725 (listed under Martin Aaron, Inc.)		
Latitude:	39°56'56"	**Longitude:**	75°07'29"
Acreage:	1.2 Acres		

The current facility consists of two (2) separate parcels, Block 65, Lot 103 and Block 62, Lots 38 and 45. Block 65, Lot 103 is located at 320 North Second Street. It has been the site of a residential dwelling(s) or a vacant lot since 1885. Block 62, Lots 38 & 45 are contiguous lots located at 308-322 North Front Street. The facility consists of two (2) structures and a yard area. This parcel has been the site of manufacturing/industrial activities since (at least) 1885.

3.0 HISTORICAL INFORMATION

Block 65, Lot 103 has historically been the site of a residential dwelling or a vacant lot. It does not appear that any industrial or manufacturing activities have taken place on this parcel.

Block 62, Lots 38 & 45 have historically been utilized for industrial/manufacturing purposes. The Sanborn Maps provided the best historical information on the past use of the parcel. The maps show that the parcel has been the site of industrial/manufacturing facilities since (at least) 1885.

Most of the information availabe for this site was obtained through NJDEP files and Camden County Health Department files and most of the information pertains to AABCO Steel Drum Inc.

AABCO Steel Drum, Inc. was a facility which reconditioned steel drums. The reconditioning process consisted of cleaning and painting open ended drums. A 3% to 4% caustic soda wash, rinse, and steam dry was used to clean the drums. Exterior rust, labels and markings were removed using a wire brush. Dents were banged out, if possible. Once the drums were clean, they were painted using a black water base fast air dry painting hood. All reconditioning processes were performed indoors.

According to available records, the facility only accepted drums which could be cleaned using a caustic soda process. These drums contained substances such as hydraulic oil, food, juices, soap and low viscosity fluids. Drums which required cleaning by other methods such as thermal processes or chemical or solvent treatments were set aside and then sent to other drum reconditioning facilities.

Hazardous wastes were generated at the facility. They consisted of residual oil wastes from the drums and rinse water associated with the drum washing process. As oil drums were delivered to the facility, any residual material was drained into a collection drum. Later, a waste oil tank allegedly replaced the collection drum. The accumulated material was removed within 90 days by a licensed hazardous waste hauler.

The caustic soda rinse water associated with the drum washing process discharged into the sanitary sewer system. Prior to reaching the sanitary system, the effluent passed through a concrete, subsurface oil and water separator. Sludges settled to the bottom and oils floated to the top. The liquid in the center was released to the sanitary sewer. A pretreatment tank was allegedly installed to treat the effluent (by raising the pH) prior to the effluent's discharge into the oil and water separator. According to CCMUA personnel, the facility consistently exceeded its discharge permit, regardless of any pretreatment processes which were installed.

Wastes which may have been associated with the paint booth (paint and solvent wastes) were not discussed in any of the available documentation. The paint booth is described as being a "black water base fast air dry painting hood." Documentation sent to the NJDEP by AABCO states that the paint filters were water soluble and destroyed in water at the end of each day. It is assumed that the paint used was water base and any waste generated was disposed of within the sanitary sewer

system. However, It is unclear as to the type of paint used in the painting process and the method of disposal for paint waste.

4.0 PHYSICAL SETTING/PHYSICAL CONDITIONS

A. General

Block 62, Lots 38 & 45 are located along North Front Street (between Penn Street and Linden Street) in the north western section of the City. The site is located just south of the Ben Franklin Bridge. The operations portion of the facility was located on these two (2) parcels. Two (2) separate buildings and an associated courtyard area are located on the parcels.

Block 65, Lot 103 is located along North Second Street (between Penn Street and Linden Street) in the north western section of the City. The site is located just south of the Ben Franklin Bridge. The lot is currently vacant. On numerous occasions, cars have been observed parked on the lot.

B. Soils

The USDA-Soil Conservation Service, Camden County Soil Survey does not map the City of Camden due to the urban nature of the area. It should be noted, the analytical results of the soil sampling performed at the site indicate the presence of chemical constituents commonly found in historic fill.

C. Geology

The subject site falls within the New Jersey inner coastal plain physiographic province. The coastal plain consists of a southeastward-dipping, seaward-thickening wedge of unconsolidated to loosely consolidated sediments. According to the USGS New Jersey Coastal Plain Mapping, the subject site is mainly underlain by the Magothy Formation. This formation makes up the upper aquifer unit of the Potomac-Raritan-Magothy Aquifer System.

D. Hydrology

Based on the surface water in the area and the site topography, the shallow groundwater below the site travels west towards the Delaware River. The groundwater varied between 3.5 to 15 feet below grade. The groundwater depth and flow direction likely fluctuate due to seasonal influences and precipitation.

E. Topography

All three (3) parcels are relatively flat. According the the USGS Camden and Philadelphia Quadrangles the site is located between elevations 10 and 20, NGVD 1929. The surrounding area consists of a mix of residential, commercial and industrial uses.

5.0 TECHNICAL OVERVIEW

A. Overview

1. Preliminary Assessment

Remington & Vernick previously submitted a Preliminary Assessment (PA) report for the subject site including, but not limited to Block 62 Lot 38 & 45 and Block 65 lot 103. The Preliminary Assessment report was submitted to the NJDEP on December 18, 1996. The NJDEP responded to the PA with a letter dated February 11, 1997. The following areas of concern were identified on-site:

-Aboveground waste oil tank
-Above ground water treatment tank
-Underground storage tank (1,000 gal.)
-Pits
-Loading/Off loading areas
-Drum storage area/yard area
-Chemical storage cabinets/closets
-Floor drains/trenches/piping
-Roof leaders
-Underground piping
-Discolored area/spill areas
-Loading/transfer areas
-Boiler room
-Hazardous Material storage or handling areas
-Paint booth
-Oil/water separator
-Elevator
-Lead based paint
-Asbestos containing material
-Non-contact cooling water discharges

In order to fulfill the State's requirements, Remington & Vernick further investigated areas of concern which required additional investigation as part of a site investigation.

2. Site Investigation -- Block 62 Lots 38 & 45 and Block 65 Lot 103

In accordance with the NJDEP preliminary assessment correspondence dated February 11,1997, Remington & Vernick performed a site investigation for the site in accordance with NJAC 7:26E.

Remington & Vernick investigated those areas of concern with potential for impact to the environment. The deciding factors for requiring additional investigation included the following:

1. Stained soil or asphalt
2. Stressed vegetation
3. Petroleum or unusual odors
4. Former use of the area, e.g. drum storage area, etc.
5. Historical record review
6. Aerial photograph review
7. Interviews with NJDEP staff and current lessors
8. Previous studies
9. NJAC 7:26E requirements
10. Elevated field measurements
11. Professional judgement

A list of the areas of concern requiring additional investigation are include in Section 6. Remington & Vernick completed the site investigation through a series of observations, test pits, soil borings,soil samples, groundwater sampling and field screening.

Based on the results of the site investigation, the subsurface soil and groundwater were deemed to have contamination.

The locations of all sampling points/testpit excavations and monitoring wells are shown on the Sample Location Plan in Appendix B. All test pit/soil logs and monitoring well permits are included in Appendix D.

B. Soil Conditions

In accordance with the February 11, 1997 NJDEP correspondence, Remington & Vernick performed a site investigation for the subject site. Remington & Vernick performed test pit excavations and soil borings throughout the site to investigate the subsurface soil conditions. The test pits and soil borings were excavated/advanced from surface grade to nine (9) feet below grade. Groundwater was encountered at 8.5 feet below grade.

Based on test pit/soil boring data, subsurface contamination was confirmed throughout the site. Soil contamination was detected inside building #1 and building #2. Remington & Vernick believes the interior subsurface soil contamination was a result of the past drum rinse/washing operations.

The exterior subsurface soil contamination was a result of the rinse/wash operations that occurred inside building #1. The effluent from the rinse/wash operations passed through the oil/water separator (AOC O). Five (5) one-inch (1") lines were identified within the vicinity of the oil water separator. The lines ran from building #1 to building #2. Subsurface soil and ground water contamination was detected above NJDEP limits at the above mentioned locations.

A total of seventy-five (75) soil samples were collected from the site. Based on the chemical test results, volatiles, semi-volatiles, metals, phenols, pcb's and total petroleum hydrocarbons were detected above the most stringent NJDEP Soil Clean-up Guidance Limits.

C. Groundwater Conditions

Based on the results of the soil investigation and in accordance with NJAC 7:26E, Remington & Vernick conducted a groundwater investigation of the site.

On May 22, 1998, Lippincott, Jacobs & Gouda, with the supervision of Remington & Vernick Engineers, installed a monitoring well (MW-1) within the area of the former oil water separator (AOC O). The monitoring well was constructed in accordance with NJAC 7:26E, and the 1992 NJDEP Field Sampling Manual. A continuous split spoon soil boring was performed. Groundwater was encountered at ten feet (10') below ground at the time of the well installation. A four inch (4") PVC well was screened from 18 to 8 feet below grade. The well was sampled on July 9, 1998 and February 19, 1999 by 21st Century Environmental, and the samples were analyzed for a full priority pollutant scan. The samples were designated by the laboratory as MW-1 (F2300 and G0898). The results were compared to the NJDEP Groundwater Quality Class II-A Standards. Based on the chemical test results, metals and volatiles were detected above the NJDEP Groundwater Quality Class II-A standards.

Based on the groundwater data, Remington & Vernick installed two (2) additional wells downgradient from AOC O (oil water separator).

On February 19, 1999, Lippincott, Jacobs & Gouda, with the supervision of Remington & Vernick, installed two (2) additional wells (MW-2 and MW-3). Both wells were installed downgradient AOC 0. A continuous split spoon soil boring was performed. Groundwater was encountered at 15 feet below grade

at the time of the well installation. A four inch (4") PBV well was screened from 25 feet to 10 feet below grade. The wells were sampled on March 15, 1999 by 21st Century Environmental, and the samples were analyzed form a full priority pollutant scan. The samples were designated by the laboratory MW-2 (G 0899), and MW-3 (G 0900). The results were compared to the NJDEP Groundwater Quality Class II-A Standards. Based on the chemical test results, lead was detected above the NJDEP Groundwater Quality Class IIA Standards.

With the above groundwater data, Remington & Vernick confirmed the groundwater contamination from MW-1 did not migrate downgradient.

On April 1, 1999, Remington & Vernick measured the groundwater depths in the wells. The groundwater flows north towards the Delaware River at a flow gradient of .022 feet/feet. (See Groundwater Contour Map in Appendix D).

D. Sampling Quality/Assurance/Quality Control

Remington & Vernick performed the site investigation and sampling in accordance with the applicable sections of NJAC 7:26E and the May 1992, edition of the NJDEP Field Sampling Procedures Manual. All sampling was performed by fully-trained and qualified sampling personnel. Field monitoring equipment was properly calibrated prior to use.

Remington and Vernick used the following equipment for sampling:

Soil

1. Stainless steel trowels for sampling 0 to 6 inches below grade when in unconsolidated formations.

2. Stainless steel augers for sampling depths between 6 inches and four feet when in unconsolidated formations.

3. Stainless Steel split spoon samples for samples deeper then four feet in unconsolidated formations.

4. Backhoe bucket to investigate sub-surface soil. Soil samples were collected from the backhoe bucket with a stainless steel trowel.

Groundwater

1. Bottom-fill bailers.

2. Peristaltic pump.

Remington and Vernick performed the work in the following manner:

Soil

1. Soil sampling location selection was based on geophysical survey data.

2. Selection of proper sampling equipment, methods and health and safety precautions. (Level "B" and Level "C" personal protection).

3. Access of the sampling location.

4. Sample soil on a continuous basis.

5. Screen all recovered samples for volatile organic compounds utilizing PID/FID, CGI and any other applicable field screening monitor based on suspected contaminants.

6. Log soil by accepted soil classification system.

7. Collect soil samples for laboratory analysis.

8. Obtain a permit from the NJDEP for soil borings deeper than 25 feet.

9. Obtain a permit from the NJDEP for disturbing wetland designated areas.

Groundwater

Remington & Vernick shall retain a qualified NJDEP-certified laboratory to sample the groundwater in accordance with the applicable NJDEP sampling requirements. Please refer to the laboratory data packages for the groundwater chemical testing for the details regarding the groundwater sampling techniques. Remington & Vernick performed the groundwater monitoring well installation in accordance with the following requirements:

1. Obtain well permits from the NJDEP.
2. Well driller shall be licensed with the NJDEP.
3. Well permit number will be affixed to the top of the well casing.
4. Wells shall be developed to a turbid-free discharge.
5. If the groundwater is suspected to be contaminated, the development liquid and drill cuttings shall be containerized awaiting groundwater testing.

General Sampling Procedures

Soil and groundwater sampling equipment, including but not limited to trowels, split spoon samplers and groundwater sampling equipment were properly decontaminated prior to sampling. Sample technicians used dedicated groundwater sampling equipment. Equipment for soil sampling was field decontaminated by the following procedure:

1. Laboratory grade glassware, detergent and tap water scrub to remove visual contamination.
2. Generous tap water rinse
3. 10% Nitric Acid rinse
4. Distilled and Deionized water rinse.

Sample technicians collected proper field and trip blanks for chemical testing. The backhoe bucket was steam cleaned prior to use and between each sampling location. Each sample was placed in laboratory cleaned and prepared sampling jars and labeled with project number, sample designation, date, time and analysis required. Chain of custody documents were prepared and accompanied each sample.

All of the soil samples were transported in coolers at 4° Celsius. The samples were transported to 21st Century Environmental, in Bridgeport, NJ. is a NJDEP-certified laboratory (Certification 08031). Please refer to the chemical test results for compliance with holding times, achievement of method detection limits, and precision and
accuracy of the analytical methods. The chemical test results are attached herewith. A summary of chemical compounds are located in Appendix C.

E. Laboratory QA/QC

Based on a review of the analytical data packages, the holding times, achievement of method detection limits, and precision and accuracey of the analytical methods were in accordance with the following methods:

Testing Methods

Purgeables - Method 624 (water)

Antimony - Method 7041 (soil/water)
Arsenic - Method 7060A (soil/water)
Selenium - Method 7740 (soil/water)
Thallium - Method 7841 (soil/water)
Mercury - Method 7471(soil); Method 7470 (water)

The determination of metals and trace elements were extracted by Inductively Coupled Plasma-Atomic Emission Spectrometry. Semi-volatiles - Method 625 (water); Method 827OC (soil). Organochlorine Pesticides and PCBs - Method 8081A/8082 (water). Total Petroleum Hydrocarbons - Method 418.1 (water); Method 418.1M (soil). pH – Electrode Method 4041A (water), 40438 (soil).

Sample Preservation

VOA (soil) - (MEOH) preservation
BN,AE (soil) - Cool, 4 deg. C.
Pesticides/PCB's (soil) - Cool, 4 deg. C.
Metals (soil) - Cool 4 deg. C.
TPHC (soil) - Cool 4 deg. C.
Cyanide (soil) - Cool 4 deg. C.
Phenols (soil) - Cool, 4 deg. C.

Sample Container & Volume

VOA (aqueous) - glass vial, Teflon-lined septum cap, 40 ml
VOA (soil) glass wide-mouth jar, Teflon-lined lid, 4 oz.
TPHC (soil) - glass, 4 oz.
BN/AE (soil) - glass, wide mouth with Teflon cap, 8 oz.
Metals (soil) - glass 4 oz.

Pesticides/PCB's (soil) - glass, wide mouth with Teflon cap, 8 oz.
Phenols (soil) - glass, 4 oz.
Cyanide (soil) - glass, 4 oz.

NOTE: See Analytical Methods/Quality Assurance Summary Table in Appendix C.

F. Summary of Contamination

The sampling results for AABCO Steel Drum, Inc. have revealed that the majority of the areas of concern are contaminated above the NJDEP's most stringent clean-up criteria. Only three (3) areas of concern have been eliminated through this investigation.

Area of Concern B2 is an underground storage tank which was discovered during the site investigation. It is located adjacent to and perpendicular to UST B1. The tank stored heating oil and the soil samples were analyzed for TPHC. TPHC was not detected in any of the samples.

any product in tank?

Area of Concern A2 was the former location of an above ground water treatment tank. It was reportedly located outside of Building #1 and adjacent to the oil and water separator. The tank contents were used to lower the pH of the caustic wash water generated during the drum cleaning processes prio to the wash water entering the sanitary sewer system. The samples were analyzed for PP+40, TPHC, pH and total sodium. No contaminants were detected above the NJDEP's most stringent clean-up criteria.

Block 65 Lot 3 as previously mentioned in our preliminary assessment was vacant or housed a residential building. Remington & Vernick performed a magnetic survey for the above mentioned location. Based on the survey data and no detected anomalies, Remington & Vernick recommends no further action for this area of concern.

6.0 SITE INVESTIGATION FINDINGS/RECOMMENDATIONS

Based on the results of the Preliminary Assessment, the following areas of concern required additional investigation:

Area of Concern	Description
A2	Above Ground Water Treatment Tank (Locations C1/C2)
B1	Underground Storage Tank (10,000 gal.) (Locations E1,E2,E3,E4,E5 and E7)
B2	Underground Storage Tank (1,000 gal.) (Locations H1,H2,H3and E5)
B3	Underground Storage Tank (1,000 gal) (Locations F1,F2,F3,F4)
C1	Drum washing area and associated piping (Locations C1A and C1B)
C2	Drum washing area and associated piping (Locations C2A, C3A and C2B)
C3	Drum washing area and associated piping (Location C3B)
C4	Pit with metal frame;Drum washing area (Locations C4A and C4B)
C5	Pit with metal frame;Drum rinsing area (Locations C5A and C5B)
CC	Pit; Building #2 - Location CC
D1	Loading Area - Locations J1-J3
D2	Loading ramp – Locations I1- I3
D3	Raised loading area – Location B1
E,J	Drum storage area/Yard area (Locations D1-D22)

Area of Concern	Description
G	Floor drain/piping/trench – Locations G1,G1A/G1B, G2,G4,G5
0	Oil/water separator – Locations A1-A6
P1	Elevator shafts - Locations P1A - P1D
P2	Elevator shafts – Locations P2A/P2B
Q	Asbestos Containing Material – Location Q
R	Lead Based Paint – Location R

The following is a discussion of each area of concern investigated during the Site Investigation including a general description of the area of concern, a description of the site investigation activities including results and implications of field measurements or area specific changes in sampling due to field conditions and recommendations for either additional remediation or no further action for each area.

Note: See Appendix A for Site Map/Tax Map
See Apendix B for Sampling Location Plan
See Appendix C for Analytical/Soil Sampling Summary Table/Soil and Groundwater Testing Results.
See Appendix D for Soil Boring Logs
See Appendix E for Certifications

Area of Concern A2 - Above Ground Water Treatment Tank Locations C1/C2

A. General

According to available records, a pretreatment tank was installed at the facility around January of 1987. It was used to lower the pH of the caustic soda wash water prior to the wash water entering the oil and water separator. The facility owners have stated that the tank was an above ground tank and located in the yard area, adjacent to Building #1.

B. Site Investigation

In order to investigate the area of the pretreatment tank, Remington & Vernick collected one (1) surface sample and one (1) subsurface .sample in the reported, former tank location. Both samples were analyzed for PP+40. TPHC, pH and total sodium. During sample collection, the area was screened utilizing a PID. No readings registered on the instrument. Sample C1, the subsurface sample, was collected at 8' below existing grade, 0-6" above the water table. Sample C2 is the surface sample. The sample was collected at 0 to 6 inches below existing grade. The portion of the sample analyzed for volatiles was collected at 24" below existing grade.

The results of the soil sampling indicate that various compounds were detected in both samples; however, the compounds were detected below the the NJDEP's most stringent clean-up criteria.

C. Recommendations

Due to the results of the soil sampling for this area of concern, Remington & Vernick recommends No Further Action for this area of the site. OK

Area of Concern B1-Underground Storage Tank
Locations E1, E2, E3, E4, E5 and E7

A. General

According to NJDEP records, a 1,000 gallon medium diesel fuel UST is registered at AABCO, UST #0065946. The tank is located within the yard area and adjacent to the northeast corner of Building #2. During the site inspection for the PA phase of the project, it was noted that the tank appeared to be larger than 1,000 gallons.

B. Site Investigation

During the site investigation, it was determined that the tank capacity is not 1,000 gallons but rather 10,000 gallons. In addition, it was discovered that five (5) 1" lines exit building #1 and connect to the oil and water separator. The five (5) 1" lines were observed alongside the northwest side of the UST.

Five (5) soil samples were collected from around the tank, two (2) samples from each elongated side and one at the north eastern end of the tank. A sixth sample could not be collected at the south western end of the tank due to it's proximity to the building. Samples E1 and E2 are within the vicinity of the five (5) 1" lines. The samples were collected at 8 feet below existing grade and just beneath an area of stained soil which had an odor. The soil was field screened with a PID. High PID readings were detected at these locations . Due to the unknown nature of the five (5) 1" lines, samples E1 and E2 were analyzed for PP+40, TPHC, pH and total sodium. Samples E3, E4 and E5 were collected at 8' below existing grade, 0-6" above the water table. They were analyzed for TPHC and volatile organics. Sample E7 was collected at 0-6" beneath the UST piping (3 feet below grade). The soil at this location was black/stained with a strong typical petroleum odor.
High PID readings were encountered at this location.

The results of the soil sampling indicate that various compounds were detected in samples E1 and E3; however, the compounds were detected below the the NJDEP's most stringent clean-up criteria. No contaminants were detected in samples E4 and E5. Sample E2 contained TPHC and N-

Nitroso-Di-N-Propylamine above the most stringent NJDEP limits. Sample E7 contained TPHC above the most stringent NJDEP limits.

Based on the soil chemical testing results for area of concern AOC O - oil/water separator and sample locations E2 and E7, Remington and Verni installed a monitoring well (MW-1) within the vacinity of the UST and oil/wa separator. Groundwater data for this area of concern will be provided in th narrative for AOC O (Oil/water separator).

C. Recommendations - Soil

Based on the analytical results of the soil sampling, the soil contamination associated with the five (5) 1" lines running parallel to the UST should be delineated and remediated to the applicable NJDEP standard.

D. Recommendations – Groundwater

Based on the ground water testing results for MW-1 (See narrative for oil/water separator - AOC-O), semi-volatile and volatile compounds were detected above the NJDEP's Groundwater Class II-A Standards. Remington & Vernick recommends to delineate the vertical and horizontal extent of groundwater contamination.

Area of Concern B2 - Underground Storage Tank

A. General

During the site investigation, a second underground storage tank was discovered on-site. The UST is located adjacent to and perpendicular to B1. The capacity of the tank is 1,000 gallons and contained approximately six inches of heating fuel oil.

B. Site Investigation

Four (4) soil samples were collected from around the perimeter of the tank. Sample E5 is shared between tank B1 and tank B2 and is located at the western end of tank B2. The remaining three (3) samples, H1, H2 and H3, were collected from each elongated side of the tank and the eastern end of the tank. The subsurface soil was field screened with a PID. No PID readings were detected. All three (3) samples were analyzed for TPHC and collected from a depth of 7.5' below grade.

The results of the soil sampling (including E5) indicate that no contaminants were detected in any of the soil samples.

C. Recommendations

Based on the soil sampling results, Remington & Vernick recommends No Further Action for this area of the site.

Area of Concern B3 - Underground Storage Tank

A. General

During the investigation of Area of Concern O-Oil & Water Separator, a third underground storage tank was discovered on-site. It is located adjacent to and parallel to building #1. The capacity of the tank is 1,000 gallons and it is thought to have contained liquid waste from the drum rinse/wash operations that occurred inside the building.

B. Site Investigation

Four (4) soil samples were collected from around the perimeter of the tank. Samples, F1, F2, F3 and F4 were collected from each elongated side of the tank and each end of the tank. The subsurface soil was field screened with a PID. High PID readings were detected. All four (4) samples were analyzed for PP+40, TPHC, pH and total sodium. The soil samples were collected from a depth of 8' below grade.

The results of the soil sampling indicate that various compounds were detected in samples F1 and F3; however, the compounds were detected below the NJDEP's most stringent clean-up criteria. Sample F2 contained lead at a concentration above the most stringent NJDEP limits. Sample F4 contained Phenol, TPHC, Cadmium, Methylene Chloride, Trichloroethene, 4-Methyl-2-Pentanone, Tetrachloroethene, total Xylenes and Bis(2-Ethylhexyl)Phthalate at concentrations above the most stringent NJDEP limits. Based on the soil sampling results for AOC- B1, AOC-0 and the above-mentioned location, Remington & Vernick installed a monitoring well MW-1. Groundwater data for this well can be found in the narrative for AOC-O.

C. Recommendations - Soil

Based on the analytical results of the soil sampling, the soil contamination associated with soil samples F2 and F4 should be delineated and remediated to the applicable NJDEP standard.

D. Recommendations – Groundwater

Based on the ground water testing results for MW-1 (See narrative for oil/water separator - AOC-O), semi-volatile and volatile compounds were detected above the NJDEP's Groundwater Class II-A Standards. Remington

& Vernick recommends to delineate the vertical and horizontal extent of groundwater contamination.

Area of Concern C – Pits
AOC-C1 Drum Washing Area and Associated Piping
Location C1

A. General

As previously mentioned in our preliminary assessment report, a small 3'x2'x1' pit was present inside building #1. The pit was used for a caustic wash process and is located within a raised section of the floor. During our preliminary assessment site visit, liquid was found inside the pit.

B. Site Investigation

During the investigation, no liquid or sediment was present inside the concrete pit. Therefore, a liquid or sludge sample was not collected. A four-inch (4") polyurethane pipe was observed inside the pit. The pipe ran out of building #1 and terminated into an underground storage tank (AOC B3). To address the piping, Remington & Vernick collected a soil sample (C1B) at the midpoint of the pipe run. The soil sample (C1B) was collected beneath the piping (1 foot below grade). The subsurface soil was field screened. Minimal PID readings were detected. The sample was analyzed for TPHC, PP+40 and total sodium.

To address the concrete pit, Oxford Engineering with the supervision of Remington & Vernick, core drilled a boring through the bottom of the concrete pit. Remington & Vernick performed a soil boring (C1) with the use of a hand auger. The subsurface soil was field screened with a PID. Minimal PID readings were detected. A soil sample was collected six inches below the concrete pit bottom (2 feet below surface grade). The soil sample was analyzed for TPHC and PP+40.

C. Recommendations

The results of the soil sampling indicate that various compounds were detected in soil samples C1 and C1B. However, both soil samples contained Tetrachloroethene and Trichloroethene above the most stringent NJDEP soil clean-up criteria.

Remington & Vernick recommends to delineate the vertical and horizontal extent of soil contamination.

AOC-C2 -- Drum Washing Area and Associated Piping
Locations C2A, C2B and C3A

A. General

As previously mentioned in our preliminary assessment report, a small 3'x2'x1' pit was present inside building #1. The pit was used for drum rinsing operations and is located within a raised section of the floor. Liquid was found inside the pit.

How long are the piping runs?

B. Site Investigation

During the investigation, no liquid was present inside the concrete pit. However, sediment was present inside the pit. Remington and Vernick collected a sediment sample (C2A) from inside the pit in accordance with NJAC 7:26E. The sediment sample was analyzed for TPHC and PP+40.

A four-inch (4") polyutothane pipe was observed inside the pit. The pipe ran to a concrete pit/floor drain (AOC C3) and terminated into an oil/water separator (AOC O). To address the piping, Remington & Vernick collected a soil sample (C3A) at the midpoint of the pipe run. The subsurface soil was field screened with a PID. Minimal PID readings were detected. The soil sample (C3A) was collected beneath the piping (1 foot below grade). The sample was analyzed for TPHC and PP+40.

To address the concrete pit, Oxford Engineering with the supervision of Remington & Vernick core drilled a boring through the bottom of the concrete pit. Remington & Vernick performed a soil boring with the use of a hand auger. A soil sample (O2B) was collected six inches below the concrete pit bottom (2 feet below surface grade). The subsurface soil was field screened with a PID. Minimal PID readings were detected. The soil sample was analyzed for TPHC and PP+40.

C. Recommendations

The results of the soil sampling indicate that various compounds were detected in soil samples C2A, C2B and C3A. The sediment sample C2A detected metals and base neutrals above the most stringent NJDEP soil clean-up criteria. Soil sample C2B detected Trichloroethene and Tetrachloroethene above the most stringent NJDEP soil clean-up criteria. Soil sample C3A detected Trichloroethene above the most stringent NJDEP soil clean-up criteria.

Remington & Vernick recommend to delineate the vertical and horizontal extent of soil contamination.

1 of 2

AOC-C3 -- Drum washing area and associated piping Location C3B

A. General

As previously mentioned in our preliminary assessment report, a small 2'x2'x1' pit was present inside building #1. The pit was used for drum rinsing operations and is located within a section of the floor.

B. Site Investigation

During the investigation, a floor drain was observed inside the concrete pit. No sediment or liquid was present inside the pit. The floor drain terminates into the oil/water separator (AOC-O). To address the floor drain and pit , Oxford Engineering with the supervision of Remington & Vernick core drilled a boring through the bottom of the concrete pit. Remington & Vernick performed a soil boring with the use of a hand auger. A soil sample (O3B) was collected six inches below the concrete pit bottom (2 feet below surface grade). The subsurface soil was field screened with a PID. No PID readings were detected. The soil sample was analyzed for TPHC and PP+40.

C. Recommendations

The results of the soil sampling indicate that various compounds were detected in soil sample C3B. Soil sample C3B detected metals and base neutrals above the most stringent NJDEP soil clean-up criteria. Remington & Vernick recommends to delineate the vertical and horizontal extent of soil contamination.

AOC-C4 -- Pit With Metal Frame - Drum Washing Area Locations C4A and C4B

A. General

As previously mentioned in our preliminary assessment report, a lift/pit was identified inside building #1 and adjacent to the caustic wash pit (AOC C1). The use is unknown. The pit was approximately 4'x2'x1'. No liquid was present inside the pit;however, a small amount of sediment was observed along the pit's bottom.

B. Site Investigation

To address this area of concern, Remington and Vernick collected a sediment sample (C4A) from inside the pit in accordance with NJAC 7:26E. The sediment sample was analyzed for TPHC and PP+40.

Oxford Engineering with the supervision of Remington & Vernick core drilled a boring through the bottom of the concrete pit. Remington & Vernick performed a soil boring with the use of a hand auger. A soil sample (C4B) was collected six inches below the concrete pit bottom (2 feet below surface grade). The subsurface soil was field screened with a PID. No PID readings were detected. The soil sample was analyzed for TPHC and PP+40.

C. Recommendations

The results of the soil sampling indicate that various compounds were detected in soil samples C4A and C4B. Sediment sample C4A detected metals, total petroleum hydrocarbons, volatiles and base neutrals above the most stringent NJDEP soil clean-up criteria. Soil sample C4B detected metals, total petroleum hydrocarbons and volatiles above the most stringent NJDEP soil clean-up criteria.

Remington & Vernick recommends to delineate the vertical and horizontal extent of soil contamination.

AOC-C5 -- Pit with Metal Frame; Drum Rinsing Area
Locations C5A and C5B

A. General

As previously mentioned in our preliminary assessment report, a lift/pit was identified inside building #1 and adjacent to the drum rinsing area (AOC C2). The use of the lift/pit is unknown. The pit was approximately 4'x2'x1'. No liquid was present inside the pit; however, a small amount of sediment was observed along the pit's bottom.

B. Site Investigation

To address this area, Remington and Vernick collected a sediment sample (C5A) from inside the pit in accordance with NJAC 7:26E. The sediment sample was analyzed for TPHC and PP+40.

Oxford Engineering with the supervision of Remington & Vernick core drilled a boring through the bottom of the concrete pit. Remington & Vernick performed a soil boring with the use of a hand auger. A soil sample (C5B) was collected six inches below the concrete pit bottom (2 feet below surface grade). The subsurface soil was field screened with a PID. Minimal PID readings were detected. The soil sample was analyzed for TPHC and PP+40.

C. Recommendations

The results of the soil sampling indicate that various compounds were detected in soil samples C4A and C4B. The sediment sample C4A detected metals and base neutrals above the most stringent NJDEP soil clean-up criteria. Soil sample C4B detected compounds below the most stringent NJDEP soil clean-up criteria.

Remington & Vernick recommends to remove and properly dispose of the sediment material from inside the pit. Remington & Vernick requests no further action for the soil at this location. — OK (no discharge pipe)

AOC-Cc -- Pit (Building #2) with Metal Frame - Drum Rinsing Area
Location Cc

A. General

As previously mentioned in our preliminary assessment report, a small pit (4'x2'x2') was located within the northwest corner of building #2. The bottom of the pit appeared to be filled with soil. The use of the pit is not known. No liquid or sediment was observed inside the pit bottom.

B. Site Investigation

During our inspection a small amount of soil was removed from the pit's bottom. The soil was field screened with a PID. No background readings were detected.

Oxford Engineering with the supervision of Remington & Vernick core drilled a boring through the bottom of the concrete pit. Remington & Vernick performed a soil boring with the use of a hand auger. A soil sample (Cc) was collected six inches below the concrete pit bottom (2.5 feet below surface grade). The subsurface soil was field screened with a PID. Minimal PID readings were detected. The soil sample was analyzed for TPHC and PP+40.

C. Recommendations

The results of the soil sampling indicate that various compounds were detected in soil sample Cc. Soil sample Cc detected lead and base neutrals above the most stringent NJDEP soil clean-up criteria.
Remington & Vernick recommends to delineate the horizontal and vertical extent of soil contamination. OK

AOC -- D1-Loading/Off Loading Area, Building #1 Adjacent to Second Street
Locations J1 through J3

A. General

Based on our preliminary assessment, loading docks were located at the northeast corner of Building #1 and adjacent to Second Street. Loading and unloading operations reportedly occurred at this location.

B. Site Investigation

Three (3) soil samples, J1, J2 and J3, were collected within this loading/unloading area. The samples were biased towards low points and cracked/deteriorated pavement. The subsurface soil was field screened with a PID. Minimal PID readings were detected. The soil samples were collected 0-6 inches below the pavement and analyzed for PP+40 and TPHC. The volatile portion of the PP+40 scan was collected 1.5 to 2 inches below the pavement.

The results of the soil sampling indicate that various compounds were detected above the NJDEP's most stringent clean-up criteria. Sample F1 contained Benzo[A]anthracene, Chrysene, Benzo[B]Fluoranthene, Benzo[K]Fluoranthene, Benzo[A]Pyrene, Ideno[1,2,3-CD]Pyrene and Dibenz[A,H]Anthracene. F2 contained Benzo[A]Anthracene and Benzo[A]Pyrene. F3 contained Benzo[A]Pyrene.

C. Recommendations

Based on the soil chemical testing results, Remington & Vernick recommends to delineate the horizontal and vertical extent of soil contamination.

AOC – D2 -- Loading/Unloading Area, Building #1, Southwestern Corner
Locations I1 through I3

A. General

A raised loading ramp is located along the southwestern most corner of the building #1. Loading and unloading operations reportedly occurred at this location.

B. Site Investigation

Three (3) soil samples, I1, I2 and I3, were collected within this loading/unloading area. The samples were collected at the soil/pavement interface. The subsurface soil was field screened with a PID. Minimal PID

readings were detected. The soil samples were collected 0-6 inches below the pavement and analyzed for PP+40 and TPHC. The volatile portion of the PP+40 scan was collected 1.5 to 2 inches below the pavement.

The results of the soil sampling indicate that various compounds were detected in sample I2; however, the compounds were detected below the the NJDEP's most stringent clean-up criteria. Samples I1 and I3 contain various compounds which were detected above the NJDEP's most stringent clean-up criteria. Benzo[A]anthracene, Benzo[B]Fluoranthene, Benzo[K]Fluoranthene and Benzo[A]Pyrene were detected in sample I1. Lead, Benzo[A]anthracene, Benzo[B]Fluoranthene, Benzo[K]Fluoranthene, Benzo[A]Pyrene, Ideno[1,2,3-CD]Pyrene and Dibenz[A,H]Anthracene were detected in sample I3.

C. Recommendations

Based on the soil chemical testing results, Remington & Vernick recommends to delineate the horizontal and vertical extent of soil contamination.

Area of Concern - D3-Loading/Unloading Area, Building #2

A. General

A raised, concrete loading dock is located perpendicular to Building #2. Loading and unloading operations reportedly occurred at this location.

B. Site Investigation

Remington & Vernick did not specifically investigate this area of concern. The area adjacent to the loading dock was investigated through the investigation performed for the yard area, the underground storage tank (B1) and the oil and water separator. Therefore, Remington & Vernick did not see the necessity to perform additional soil sampling around the loading dock.

C. Recommendation

Based on soil testing results for the underground storage tank (AOC B1) and the oil/water (AOC O), metals, volatiles, total petroleum hydrocarbons and base neutrals were detected above the most stringent NJDEP Soil Clean-up Criteria. Remington & Vernick recommends additional investigation for this area of concern. The investigation shall include, but not limited to vertical and horizontal soil delineation and the installation of monitoring wells (If and where applicable).

Area of Concern E/J - Drum Storage Area/Yard Area (Locations D1-D22 and MW-2/MW-3)

A. General

Historically, the site has been a manufacturing facility. The Sanborn Maps and the aerial photos show that buildings covered the entire site at one time or another. Between 1977 and 1982, the building which occupied the central portion of the site was demolished. That area is now the yard area of the site. The former building had a basement associated with it.

Throughout the past 16 years, drums are reported to have been stored in various locations throughout the yard area. In addition, two spills have occurred there. The yard is pervious, consisting of soil and gravel.

B. Site Investigation - Soil

In order to investigate this area of concern, the yard was divided into a grid pattern of 22 sections, approximately 30'x30' each (some grids are smaller due to the location of buildings/structures). Each soil sample was analyzed for PP+40, TPHC and pH. The samples were collected at 0-6" below grade except for the volatile portion of the sample which was collected at 24" below grade. The subsurface soil was field screened with a PID. Minimal PID readings were detected.

The sampling results indicate that the majority of the yard area is contaminated above the NJDEP's most stringent clean-up criteria. Please see Appendix C for the Sampling Summary and Analytical Result Tables for this area of the site. Only four (4) samples (D17, D19, D20 and D21) contained compounds which were detected below the the NJDEP's most stringent clean-up criteria.

Based on the soil sampling results and confirmed soil contamination throughout the site, Remington & Vernick installed additional monitoring wells (MW-2 and MW-3).

C. Site Investigation - Groundwater

Based on the soil sampling results and other on-site locations that are deemed to contain soil contamination, Remington & Vernick installed two (2) monitoring wells (MW-2 and MW-3) to evaluate the groundwater conditions. The monitoring wells were installed on February 19, 1999 by Lippincott, Jacobs and Gouda and was constructed in accordance with NJAC 7:26E and the 1992 Field Sampling Manual. A continuous spilt spoon boring was performed at the well location.

Groundwater was encountered at 15 feet below grade at the time of the well installation. A four (4) inch PVC well was screened from 25 to 15 feet below grade. The well was sampled on March 15, 1999 by Twenty First Century Environmental and the sample (laboratory designation 72335) was analyzed for PP+40. The results were compared to the NJDEP Class II-A Groundwater Quality Criteria.

D. Recommendations – Soil

Based on the soil chemical testing results, Remington & Vernick recommends to delineate the vertical and horizontal extent of soil contamination.

vertical - ok
horizontal - off-site?

E. Recommendations - Groundwater

Based on the groundwater testing results, lead was detected above the NJDEP Groundwater Quality Class II-A Standards in both monitoring wells (MW-2 and MW-3). Remington & Vernick recommends to resample the wells with the EPA's Low Flow Method. Additional monitoring wells may be required in lieu of the groundwater testing results for monitoring wells MW-2 and MW-3.

ok

Area of Concern G - Floor Drains/Trench/Piping

A. General

As previously mentioned in our PA, floor drains and/or piping possibly are associated with the three (3) concrete pits (AOC's C1, C2, C3), the UST (solvent waste tank locations F1-F4) and oil/water separator (AOC O). See AOC B3, C1, C2, C3, and C4 narratives for drains/piping associated with these structures.

However, local interviews indicated a trench with matting material was present alongside the building. The trench was reportedly located alongside the southeast portion of building #1 (See sampling plan for locations in Appendix B. Local interviews also indicated that the solvent waste from the drum rinsing/wash operations was disposed of outside into the trench.

Piping
Locations G2, G4 and G5

A. Site Investigation

During our investigation, a 4" pipeline was identified below the suspected trench area (3 feet below grade). The pipe run was approximately 150 feet and terminated in front of Front street (sidewalk area). The pipe originated

from the on-site oil/water separator and discharged into the public sewer system.

To address the piping, Remington & Vernick collected a soil sample from beneath the piping at various locations. The sample locations were spaced 30 feet apart from a floor drain (location G1A). Based on 30 foot increments, a total of three (3) soil samples (G2, G4 and G5) were collected in accordance with NJAC 7:26E. The subsurface soil was field screened with a PID. Minimal PID readings were detected. The soil samples were collected at a depth of three (3) feet below grade and analyzed for TPHC, PP+40, pH and sodium.

B. Recommendations – Piping

Based on the chemical testing results, priority pollutant metals were detected above the most stringent NJDEP Soil Clean-up Criteria.
Remington & Vernick recommends to delineate the vertical and horizontal extent of soil contamination.

<u>Floor Drain</u>
<u>Location G1A</u>

A. Site Investigation

During our investigation of the 4" piping, a floor drain was identified within the suspected trench area. The floor drain was located west of AOC B3.

To address the floor drain, Remington & Vernick collected a soil sample (G1A) from beneath the floor drain elbow joint and a sample (G1B) from inside the piping. Soil sample G1A was collected three (3) feet below surface grade and analyzed for PP+40, TPHC, pH and total sodium. The subsurface soil was field screened with a PID. Minimal PID readings were detected.

Soil sample G1B was collected from inside the pipe and analyzed for PP+40, TPHC, pH and total sodium. High PID readings were detected at this location.

B. Recommendations – Floor drain

Based on the chemical testing results for soil samples G1A and G1B, compounds were detected above the most stringent NJDEP Soil Clean-up Criteria.

Soil sample G1A detected priority pollutant metals above the most stringent NJDEP Soil Clean-up Criteria.

Soil sample G1B detected TPHC, phenols,volatiles and semi-volatiles above the most stringent NJDEP Soil Clean-up Criteria.

Remington & Vernick recommends to delineate the vertical and horizontal extent of soil contamination at location G1A. Remington & Vernick recommends the removal and disposal of the floor drain and associated piping and the delineation of soils within the floor drain/piping area.

Suspected Trench Area/Matting Material
Location G1

A. Site Investigation

During our investigation of the suspected trench area, matting material was identified alongside the southeast portion of building #1. The matting material was approximately two feet (2') wide and fifty feet (50') in length. The matting material was observed 4 inches below surface grade. Parts of fifty five (55) gallon drums were observed at this location.

To address the trench area/matting material, Remington & Vernick collected a soil sample (G1) beneath the matting material. The subsurface soil was field screened with a PID. Minimal PID readings were detected. The soil sample was collected six inches (6") below grade and analyzed for PP+40, TPHC, pH and total sodium. The volatile portion of the PP+40 scan was collected at 1.5 to 2.0 feet below grade.

B. Recommendations – Trench Area/Matting Material

The chemical testing results detected several compounds. However, Phenol, Total Petroleum Hydrocarbons, Semi-volatiles and Priority Pollutant Metals were detected above the most stringent NJDEP Soil Clean-up Criteria. Remington & Vernick recommends the vertical and horizontal extent of soil contamination.

Area of Concern O-Oil & Water Separator
Locations A1 through A6 and MW-1

A. General

An oil and water separator exists on-site. It is located in the yard area adjacent to Building #1 and across from the raised, concrete loading dock associated with building #2. Caustic wash water from the drum rinsing processes was discharged into the oil and water separator and then into the sanitary sewer system. The pipe which connects the oil and water separator to the sanitary sewer system exits the separator and runs parallel to Building #1. The pipe discharges into the sewer system at Front Street.

B. Site Investigation - Soil

Six (6) soil samples, A1, A2, A3, A4, A5 and A6, were collected within the area of the separator. The samples were analyzed for PP+40, TPHC, pH and total sodium. Sample A1 was collected 5' below grade, on the western side of the separator. Sample A2 was collected from the bottom of the inside of the separator, 6' below grade. The subsurface soil was field screened with a PID. High PID readings were encountered at this location. Sample A3 was collected 4' below grade, on the eastern side of the separator. Sample A4 was collected 2.5' to 3' below the piping coming from the building. High PID readings were encountered at this location. Sample A5 was collected 6' below grade, on the southeastern side of the separator. Sample A6 was collected from inside the pipe that connects into building #1. Very high PID readings were detected at the above mentioned locations.

All six (6) of the soil samples contain various contaminants above the NJDEP's most stringent clean-up criteria; however, all of the samples exceeded the NJDEP's criteria of 10,000 ppm for TPHC. Please see Appendix C for the Sampling Summary and Analytical Result Tables for this area of the site.

See Area of Concern G narrative for piping associated with the oil/water separator. Four (4) soil samples, G1A, G2, G4 and G5 were collected along the piping run from the separator to the sanitary sewer located within Front Street.

C. Recommendations – Soil

Based on the chemical testing results, Remington & Vernick recommends delineation of the vertical and horizontal extent of soil contamination.

D. Site Investigation - Groundwater

Based on the soil sampling results and the past reported use of the oil/water separator, Remington & Vernick installed a monitoring well (MW-1) at this location to evaluate the groundwater conditions. The monitoring well was installed on May 22, 1998 by Lippincott, Jacobs and Gouda and was constructed in accordance with NJAC 7:26E and the 1992 Field Sampling Manual. A continuous spilt spoon boring was performed at the well location.

Groundwater was encountered at 8.5 feet below grade at the time of the well installation. A four (4) inch PVC well was screened from 18 to 8 feet below grade. The well was sampled on July 9, 1998 by Twenty First Century

Environmental and the sample (laboratory designation 72335) was analyzed for PP+40. The results were compared to the NJDEP Class II-A Groundwater Quality Criteria.

E. Recommendations – Groundwater

Based on the chemical test results, volatile compounds and phenols were detected above the NJDEP Groundwater Quality Class II-A Standards (See analytical summary table in Appendix C).

Remington & Vernick recommends to delineate the vertical and horizontal extent of groundwater contamination and the installation of additional wells (where applicable).

1 of

Area of Concern P1 - Elevator, Building #1, southwest corner
Locations – P1A through P1D

A. General

As previously mentioned in our preliminary assessment, an elevator shaft was identified at the southwest corner of building #1. Local interviews indicated that solvents possibly were discharged into the shaft.

B. Site Investigation

To address this area of concern, Remington & Vernick performed test pits along each side of the elevator. The bottom of the shaft was approximately 4.5 feet below grade. The test pits were performed to a depth of 5 feet below grade. Four (4) soil samples were collected and analyzed for TPHC and PP+40. The soil samples were collected from a depth of 5 feet below grade. The subsurface soil was field screened with a PID. No PID readings, liquid or odor were encountered beneath the shaft.

C. Recommendations

Based on the chemical testing results, all soil samples with the exception of soil samples P1D and P1B detected compounds below the most stringent NJDEP Soil Cleanup Criteria. Soil samples P1D and P1B detected lead above the most stringent NJDEP Soil Cleanup Criteria.

Remington & Vernick recommends to delineate the vertical and horizontal extent of soil contamination at this location.

1 of

Area of Concern P2 - Elevator, Building #1, northeast side
Locations – P2A and P2B

A. General

As previously mentioned in our preliminary assessment, an elevator shaft was identified at the northeast side of building #1. Local interviews indicated that solvents possibly were discharged into the shaft.

B. Site Investigation

During our investigation liquid was observed at the bottom of the shaft. Based on this observation, Remington & Vernick collected an aqueous sample and analyzed for PP+40. There are no standards for standing liquid. However, the results were well below NJDEP Groundwater Standards.

To address the elevator shaft, Remington & Vernick performed test pits along two (2) sides of the elevator. Only two sides of the elevator was accessible. The bottom of the shaft was approximately 4.5 feet below grade. The test pits were performed to a depth of 5 feet below grade. Two (2) soil samples were collected and analyzed for TPHC and PP+40. The soil samples were collected from a depth of 5 feet below grade. The subsurface soil was field screened with a PID. Minimal PID readings were detected.

C. Recommendations

Based on the chemical testing results, all compounds were detected below the most stringent NJDEP Soil Cleanup Criteria.

Remington & Vernick recommends no further action for this area of concern.

Area of Concern Q – Asbestos Containing Material

A. Introduction

Remington & Vernick, in accordance with the New Jersey Administrative Code (NJAC) 7:26E 3.5 (a)-5 Site Investigation - Building Interior, proposed that an asbestos survey be performed by a United States Environmental Protection Agency (USEPA) certified building inspector. The building survey was conducted in accordance with 40 CFR 763 Subpart E. The survey was performed in order to determine the presence and extent of asbestos containing material (ACM) within the subject building.

B. Site Investigation

A USEPA-certified building inspector from Remington & Vernick (R&V) performed a limited, non-destructive survey to identify potential ACMs within the subject building. R&V's survey revealed evidence of potential ACMs within the subject building. A total of two (2) bulk samples of suspected ACM were collected from within the subject building.

All samples collected were submitted under chain-of-custody to 21st Century Environmental Labs (21st Century), located in Bridgeport, New Jersey. 21st Century sent the samples to International Asbestos Testing Laboratories (IATL), located in Mt. Laurel, New Jersey for Polarized Light Microscopy (PLM) analysis. IATL is an American Industrial Hygiene Association (AIHA) certified laboratory. According to the USEPA definition of an asbestos containing material, an asbestos containing material contains greater than one percent (1%) asbestos.

C. Analytical Results Summary

The following table lists the sampled materials, the corresponding asbestos content, and the approximate quantities and conditions of the confirmed ACMs present:

ASBESTOS CONTAINING MATERIAL ANALYTICAL RESULTS				
Sample Number	**Material**	**Location**	**% Asbestos Content**	**Approximate Amount & Condition**
ACM-001	Pipe Insulation	At ceiling (approx. 20' above ground floor level)**	50 Chrys	2,000 LF/ undamaged; friable
ACM-002	Ceiling Board	Northern building – ground floor room at south east corner of building (in drum storage area)	ND	NA
	Thermal System Elbow Insulation	At ceiling (approx. 20' above ground floor level)***	NS	80 fittings/ undamaged
	Wall Board	On steel truss by ceiling in southern most building	NS	500 SF/ damaged

Chrys: **Chrysotile Asbestos**
ND: Non-detectable levels of Asbestos per Polarized Light Microscopy (PLM) analysis by the analytical laboratory
NS: Not Sampled (inaccessible at the time of the survey)
NA: Not Applicable (amounts/conditions provided for confirmed ACM only)
LF: Linear Feet
SF: Square Feet

** Please note that the pipe insulation was observed by the ceiling on the ground floor in both buildings located on the subject property.

*** This material is assumed to be asbestos containing since the elbows are associated with the asbestos containing pipe insulation.

The ground floor of each building was surveyed, however, the second and third floors of the northern most building, and the roofs of both buildings were inaccessible at the time of the survey. Suspect asbestos containing materials encountered in these areas at the time of demolition should be properly sampled prior to demolition to ensure that no asbestos will be impacted.

D. Conclusions

As indicated in the above table, the thermal system pipe insulation does meet the USEPA definition of an asbestos containing material (greater than 1% asbestos). Therefore, it is recommended that the pipe insulation on the ceiling mounted thermal system pipes within the subject buildings be handled as an asbestos containing material. R&V recommends the proper removal and disposal of the above referenced material in accordance with applicable Federal, State and local regulations.

Currently there are no regulations requiring the removal of ACM unless it will be disturbed and rendered friable during renovation or demolition. Friable means "any material applied to ceilings, walls, piping, ductwork, etc., which when dry may be crumbled, pulverized, or reduced to a powder by hand pressure" (NJAC 5:23-8.2).

E. Recommendations

Since the subject buildings are scheduled to be completely demolished, all confirmed asbestos containing materials (pipe insulation) as well as the associated pipe elbow insulation should be properly removed and disposed of in accordance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations (40 CFR Part 61, Subparts A and M) prior to demolition. As a good management practice, R&V recommends that prior to the performance of any demolition activity, verification sampling of suspect ACM should be performed to assure that no asbestos materials will be impacted.

Disposal of the removed ACM and asbestos contaminated waste from the project site shall be in accordance with New Jersey Department of Environmental Protection (NJDEP) requirements specified in NJAC 7:26 and 40 CFR Part 61, Subpart M. The cost to properly remove the confirmed ACM from the subject buildings (see above table) is approximately $25,000.00.

Area of Concern R – Lead Based Paint

A. Introduction

Remington & Vernick (R&V) performed a limited, non-destructive survey to identify lead-based paint within the subject building. Lead-based paint (LBP) is defined by the USEPA, and Housing and Urban Development (HUD) as "paint, varnish, stain or other applied coating that has one (1) milligram per square centimeter (mg/cm^2), or 5,000 parts per million (ppm) [micrograms per gram (ug/g) or milligrams per kilogram (mg/kg)] by dry weight (a.k.a. 0.5% by Mass) or more of lead."

B. Site Investigation

R&V's survey revealed evidence of potential LBP within the vacant buildings. A total of two (2) samples of suspect LBP were collected from within the subject property. All samples collected were submitted under chain-of-custody to 21st Century. 21st Century sent the samples to IATL for lead-based paint analysis. IATL is an American Industrial Hygiene Association (AIHA) and National Lead Laboratory Accreditation Program (NLLAP) certified laboratory.

C. Analytical Results Summary

The following table lists the sampled materials and corresponding lead content:

LEAD-BASED PAINT ANALYTICAL RESULTS				
Sample Number	**Material**	**Location**	**Lead Content (mg/Kg)**	**Approximate Amount & Condition**
LBP-01	White wall paint on brick substrate	Former paint spray area at northwestern most wall in Northern building	343	NA
LBP-02	White ceiling paint on concrete substrate	Northern building – ground floor room at south east corner of building (in drum storage area)	ND	NA

NA: Not Applicable (amounts/conditions provided for confirmed LBP only).
ND: Non-detectable levels of Lead per Atomic Absorption Spectroscopy analysis by the analytical laboratory

D. Conclusions

None of the ten (10) samples of paint collected from the subject property were found to be above the USEPA definition of a lead containing paint (5,000 mg/Kg).

E. Recommendations

Based on the results of the LBP survey, non of the sampled surfaces were determined to be painted with lead-based paint. Therefore, R&V requests no further action concerning this issue.

As a good management practice, however, R&V recommends that prior to disposal of demolition debris, a sample of the total waste stream be collected and submitted to a certified laboratory for Toxic Characteristic Leachate Procedure (TCLP) analysis. A TCLP analysis if the demolition waste should be performed to determine if the waste material is hazardous when in the landfill (to determine if lead will leach out). The TCLP analysis is an acid caustic solution that simulates a 20-year landfill deposition period. If the TCLP results are above 5 parts per million (5 ppm) of lead, then the waste material is considered hazardous and shall be disposed in a New Jersey-licensed landfill that will accept it as hazardous waste.

7.0 SUMMARY

Remington & Vernick performed a Site Investigation of the former AABCO Steel Drum, Inc. site at Block 62, Lots 38 & 45 and Block 65, Lot 103 located at 308 – 322 North Front Street, Camden, NJ. Based on the results, we have the following comments:

A. Remington & Vernick recommends that the underground storage tanks at AOC B1, B2 and B3 be removed and disposed of properly. In addition to the removal of the tanks, Remington & Vernick recommends to remove and dispose of any associated UST piping (where applicable). OK

B. Remington & Vernick recommends the removal and disposal of five (5) 1" lines that run from building #1 to building #2. The lines ran through the oil/water separator (AOC O). OK

C. Remington & Vernick recommends the removal and disposal of sediment/liquid from the concrete pits (drum rinsing area) located in building #1. OK

D. Remington & Vernick recommends the removal and disposal of all piping associated with the concrete pits (drum rinsing area). OK

E. Remington & Vernick recommends to remove and dispose of the soil/sediment from concrete pit Cc. The pit is located inside building #2. OK

F. Remington & Vernick recommends to delineate the vertical and horizontal extent of contamination at all areas of concern, with the exception of areas of concern A2, P1 and P2.

talk about this

G. Remington & Vernick recommends to delineate the vertical and horizontal extent of groundwater contamination.

H. Remington & Vernick recommends to remove and dispose of empty 55 gallon drums that are located in building #1 and building #2.

I. Remington & Vernick recommends to remove and dispose of the oil/water separator (AOC O) and associated piping.

J. Asbestos and lead based paint must be managed properly during any further renovations of the property.

8.0 LIMITATIONS

Please note that the investigation described herein was limited in scope. The results of the investigation are indicative of the specific sampling locations at a specific time and may not be indicative of the surrounding conditions. Remington & Vernick performed the investigation with due diligence in accordance with NJAC 7:26E. Remington & Vernick gives no assurance regarding those areas which were not investigated. If further information indicates conditions different from what is stated herein, Remington & Vernick reserves the right to amend our report accordingly.