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October 7, 2002

RmT

New Jersey Department
of Environmental Protection
Division of Responsible Party
Site Remediation
Bureau of Field Operations
Southern Field Office
CN 407
Trenton, NJ 08625

OCT 2002

Attention: Mike Tompkins

Re: Remedial Investigation Report
AABCO Steel Drum, Inc.
City of Camden, Camden County
Case #95-9-14-12-6-53
Our File #0408V123

Dear Mr. Tompkins:

Remington & Vernick Engineers, on behalf of the City of Camden, is forwarding the enclosed Remedial Investigation Report and analytical data (including electronic data diskette) for the above-referenced site.

If you have any questions, please contact Mark Muraczewski at (856) 216-1890.

Sincerely,

REMINGTON & VERNICK ENGINEERS, INC.

By

Terence Vogt, P.E., P.P., C.M.E.

TV/MM/gar
enclosure
cc: Edward Stankiewicz, NJDEP
Gwendolyn Faison, Mayor; Edward Williams, Supervising Planner (w/encl.)
Alison Devine (w/encl.); Fred Martin (w/encl.)
Edward Vernick, P.E., C.M.E., President
Michael G. Meyer, P.E., C.M.E.
Frederick E. Hunter; Mark Muraczewski
Bradley A. Blubaugh, Director of Operations

REMEDIAL INVESTIGATION REPORT
AABCO STEEL DRUM, INC.
308 – 322 NORTH FRONT STREET
AND
320 NORTH 2ND STREET

CITY OF CAMDEN
BLOCK 62, LOTS 38 & 45; BLOCK 65, LOT 103
CASE #95-9-14-7260-53

Edward Vernick, P.E. – Lic. No. 25691

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I. INTRODUCTION

Remington & Vernick Engineers, on behalf of the City of Camden, has completed a Preliminary Assessment/Site Investigation (PA/SI) on a property known as the ABBCO STEEL DRUM, INC. (Case #95-09-14-1206-53) located along 308-322 North Front Street in the City of Camden, Camden County, NJ. The PA/SI was generated by funding provided through the New Jersey Hazardous Discharge Site Remediation Fund, Municipal Grant Program (HDSRF).

On December 18, 1996, the PA was submitted to the NJDEP, Division of Responsible Party Site Remediation for review. The PA report identified several areas of environmental concern (AOC's) at the site as defined by NJAC 7:26E. Based upon a review of the PA by the NJDEP-Site Remediation Program, the SI was performed to investigate the AOC's identified in the PA report.

On June 3, 1999, the SI was submitted to the NJDEP-Site Remediation Program for review. Based on review of the SI, additional information was requested. A revised SI dated June 25, 1999 was submitted for review to the NJDEP-Site Remediation Program. The revised SI identified several AOC's with contaminant concentrations above NJDEP Soil Clean-up Criteria and Groundwater Quality Criteria.

II. HISTORICAL BACKGROUND

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 available 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 that 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 that 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 that 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.

III. PHYSICAL SETTING/SITE CHARACTERISTICS

A. General

Block 62, Lots 38 & 45 are located along North Front Street (between Penn Street and Linden Street) in the northwestern 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 northwestern 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. (A site location map and tax map can be found in Appendix A).

Historical aerial photos reveal that Block 65, Lot 103 contained a building until approximately 1975, when the structure disappeared from the photos. Currently, there are no structures on the site.

The photos also reveal that Block 62, Lots 38 & 45 have always contained buildings in various configurations. The structures, which occupied the central portion of the site, appears to have had processing piping and vents on the roof along with an associated water tank. The building disappeared from the photos in 1985. Sometime between 1965 and 1975, two (2) new flat roofed buildings were constructed on site.

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. However, 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.

Furthermore, the USEPA has removed approximately 1.5' to 2.0' of soil from the site, and replaced with certified backfill. Areas of soil removal can be found in Appendix H.

C. 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 8.5 to 15 feet below grade. The groundwater depth and flow direction likely fluctuate due to seasonal influences and precipitation. (A groundwater contour map can be found in Appendix C).

D. 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.

E. Soil Borings

Stratigraphic logs, including but not limited to soil/rock physical descriptions and field measurement readings detected during test pit and monitoring well installations are located in Appendix E.

F. Land Use Within a 1,000' Radius of the Site

The surrounding area consists of a mix of residential, commercial and industrial uses. Currently, the site is unoccupied.

G. Ecological Assessment

Remington & Vernick did not identify any sensitive areas within the site boundaries, and any properties immediately adjacent to the site. The site and surrounding areas can be classified as a highly urbanized community. The Delaware River is approximately one-quarter (1/4) mile west of the site.

Based on our ecological review/assessment of the site, Remington & Vernick has confirmed the following:

1. Soil and groundwater contamination are present on-site, and no eco-systems were observed on-site.

2. No environmentally sensitive areas currently exist on-site or adjacent to the site.

3. There are currently no potential contamination pathways to any environmentally sensitive areas.

H. Wetlands Inventory

Based on our site investigation and the NJDEP Philadelphia N.E. Freshwater Wetlands Map, no wetland areas were identified on-site.

I. Well Search

On June 18, 2001, Remington & Vernick performed a well search at the NJDEP Water Allocation Division, and retrieved data for domestic wells within ½ mile of the site, plus irrigation and public wells within a 1-mile radius of the site. A total of five (5) domestic wells (non-potable wells), and six (6) public wells were identified. A copy of the well search data can be found in Appendix G.

IV. TECHNICAL OVERVIEW

A. General

1. Preliminary Assessment

Remington & Vernick previously submitted a Preliminary Assessment (PA) report for the subject site, Block 62, Lots 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 that required additional investigation were identified on-site.

- Above Ground Waste Oil Tank
- Above Ground Water Treatment Tank
- Underground Storage tank (1,000 gallons)
- 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

- Caustic wash area
- Drum rinse area

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

2. Site Investigation

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

During the SI, the UST (believed to have a capacity of 1,000 gallon) was determined to be a 10,000 gallon tank.

Furthermore, two (2) additional UST's (1,000 gallon capacity each) were identified and investigated during the SI.

In addition, it was determined that a groundwater investigation was warranted (in accordance with NJAC 7:26E).

Based on the results of the Site Investigation, the subsurface soil and groundwater were deemed to have contamination. Based on our Site Investigation, the following areas of concern require additional investigation:

a. 10,000 Gallon UST
b. 1,000 Gallon UST
c. Building #1 Drum Rinsing Area
d. Building #2 Pit Location
e. Loading Area #1
f. Loading Area #2
g. Drum Storage/Yard Area
h. Floor Drain/Piping/Trench Areas
i. Elevator Shaft
j. Oil/Water Separator
k. Groundwater

Please note that only one (1) 1,000 gallon UST required additional investigation. No additional investigation was warranted for the UST that was found adjacent to the 10,000 gallon.

3. Remedial Investigation

In accordance with the NJDEP site investigation correspondence dated July 27, 1999 and the Remedial Investigation Workplan correspondence dated May 11, 2001, Remington & Vernick performed a Remedial Investigation for the site in accordance with NJAC 7:26E.

The results of the Remedial Investigation delineated the limits of soil contamination and delineated the limits of groundwater contamination.

B. Laboratory QA/QC

Based on a review of the analytical data packages (enclosed with report), the holding times, achievement of method detection limits and precision and accuracy of the analytical methods were in accordance with NJAC 7:26E and the NJDEP Field Sampling Manual. The chemical test results are attached herewith:

C. Significant Events

During July of 2000, the Environmental Protection Agency (EPA) performed limited remedial activities at the site, which included but was not limited to off-site disposal of secured waste (soil, drums).

Approximately 750 tons of lead-contaminated soil was excavated from the site. Certified clean fill was used to bring the property back up to grade.

Monitoring well MW-1 was damaged or destroyed during regrading operations. A new monitoring well MW-1 was installed to replace the damaged/destroyed monitoring well. The EPA remedial activity data at the subject site can be found in Appendix H.

D. Sampling Quality Assurance/Quality Control

Remington & Vernick Engineers performed the Remedial Investigation 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 & Vernick used the following equipment for sampling:

1. Soil

    a. Stainless steel trowels for sampling 0 to 6 inches below grade when in unconsolidated formations.
    b. Stainless steel split spoon samples for samples deeper than 4' in unconsolidated formations.
    c. Backhoe bucket to investigate subsurface soil. Samples were collected from the backhoe bucket with a stainless steel trowel.

2. Groundwater

    a. Bottom-fill bailers.
    b. Peristaltic pump.

Remington & Vernick performed the work in the following manner:

1. Soil

    a. Soil sampling location selection was based on the Site Investigation data.
    b. Selection of proper sampling equipment, methods and health and safety precautions. (Level "C" personal protection).
    c. Sample soil on a continuous basis.
    d. Screen all recovered samples for volatile organic compounds utilizing PID/FID, CGI and any other applicable field screening monitor based on suspected contaminants.
    e. Log soil by accepted soil classification system.
    f. Collect soil samples for laboratory analysis.
    g. Obtain a permit from the NJDEP for soil borings deeper than 25'.

2. 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:

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

3. General Sampling Procedures

Soil and groundwater sampling equipment, (i.e., 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 procedures:

a. Laboratory grade glassware, detergent and tap water scrub to remove visual contamination.
b. Generous tap water rinse.
c. 10% nitric acid rinse.
d. 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 Val Associates Laboratory, Inc. in Cherry Hill, NJ. Val Associates is a NJDEP-certified laboratory (Certification #04174). The chemical test results are attached herewith. A summary of chemical testing results are located in Appendix D.

On August 17, 2001, Lippincott & Jacobs Engineering, under the supervision of Remington & Vernick Engineers, performed a total of four (4) soil borings radiating out 5 – 15 feet from SI soil sample A2 to establish the horizontal limit of soil contamination.

Soil samples (AR1, AR2, AR3, and AR4) were collected from a depth of 5.5 – 6.0 feet below grade and analyzed for TPHC, VOC's, BN's, cadmium, zinc, phenols, beryllium and nickel.

Soil samples AR2 and AR3 contained compounds above the applicable NJDEP limits. Based on the testing results of AR2 and AR3, Remington & Vernick collected additional soil samples (AR5, AR6, AR7 & AR8).

Sampling continued in the same manner as described above to define the horizontal limit of the soil contamination. The testing results detected high TPHC concentrations at location AR7. With an elevated level of TPHC at location AR7, Remington & Vernick performed a soil boring radiating out 0 – 10 feet from soil sample AR7. A soil sample (A9) was collected at a depth of 5.5 to 6.0 feet below grade and analyzed for TPHC. Soil sample locations can be found on the RI Soil Sample Location Plan in Appendix B.

3. Findings

The horizontal and vertical limits of soil contamination associated with the oil/water separator area have been fully delineated.

The area of soil contamination encompasses a 1,175 S.F. (approximately) area and extends from 0 to 6 feet below grade.

Approximately 261 CY of soil has been impacted. The soil contamination must be addressed prior to site redevelopment.

B. 1,000 Gallon UST – Locations F2 and F4 (SI locations)

1. Background Information

During our site investigation of the oil water separator area, a deteriorated 1,000 gallon UST was identified adjacent and parallel to building #1. The UST was believed to contain liquid waste from the drum rinse/wash operations that occurred inside the building.

During the SI, soil contamination was detected in this area. Lead (sample F2) and TPHC, cadmium, VOC's and BN's(sample F4) were detected above the applicable NJDEP limits.

Remington & Vernick recommended to delineate the vertical and horizontal limit extent of soil contamination of this AOC (As per RIW).

2. Remedial Investigation Performed

a. Location F4

On June 21, 2001, Lippincott & Jacobs Engineering, under the supervision of Remington & Vernick, performed soil borings to determine the vertical extent of soil contamination. A split spoon auger was used to advance the soil borings. Five (5) soil samples (F4R8, F4R10, F4R12, F4R14 and F4R15) were collected directly below SI soil sample F4. The soil samples were collected at 2' intervals (from 8 to 15 feet below grade) and analyzed for VOC's, BN's, TPHC and phenol.

Based on the soil samples results and field screening, soil sample F4R8 (7.5 to 8.0 feet below grade) was deemed to be the lower limit of contamination. The soil above soil sample location F4R8 (0 to 8 feet below grade) contained historic fill, high HNU readings, staining and odor. It is apparent that the upper limit of soil contamination is at grade, sampling to determine the upper limit of contamination was not conducted.

On August 24, 2001, Lippincott & Jacobs Engineering, under the supervision of Remington & Vernick, performed one (1) soil boring radiating out 5 to 10 feet from SI soil sample F4 to establish the horizontal limit of soil contamination.

Soil sample FR2 was collected from a depth of 7.5 to 8.0 feet below grade, and analyzed for VOC's, BN's, TPHC, and phenol. No compounds were detected above the applicable NJDEP limits. Soil sample locations can be found on the RI Soil Sample Location Plan in Appendix B.

b. Location F2

On June 21, 2001, Lippincott & Jacobs Engineering, under the supervision of Remington & Vernick Engineers performed soil borings to determine the vertical extent of soil contamination. A split spoon auger was used to advance the soil borings. Three (3) soil samples (F2R8, F2R10 and F2R12) were collected directly below SI soil sample location F2. The soil samples were collected at 2' intervals (from 8 to 12 feet below grade) and analyzed for lead.

Based on the soil sample results, soil sample F2R8 (7.5 to 8.0 feet below grade) was determined to be the lower limit of contamination. The soil above soil sample F2R8 (0 to 8 feet below grade) contained historic fill, high HNU readings, staining and odor. Because it is apparent that the upper limit of soil contamination is at surface grade, sampling to determine the upper limit of contamination was not conducted.

On August 24, 2001, Lippincott & Jacobs Engineering, under the supervision of Remington & Vernick, performed one (1) soil boring radiating out 5 to 10 feet from SI soil sample F2 to establish the horizontal limit of soil contamination.

Soil sample FR1 was collected from a depth of 7.5 to 8.0 feet below grade, and analyzed for lead. Lead was not detected above NJDEP limits. Soil sample locations can be found on the RI Soil Sample Location Plan in Appendix B.

3. Findings

The horizontal and vertical limits of soil contamination associated with the 1,000 gallon UST have been fully delineated. The area of soil contamination encompasses a 136 S.F. area and extends from 0 to 8 feet below grade. Approximately 41 C.Y. of soil has been impacted. The soil contamination must be addressed prior to site redevelopment.

C. Drum Rinsing Area – Location CR (SI locations C1- C5)

1. Background Information

As previously stated in our Site Investigation report, building #1 supported drum restoration and cleaning operations. A 3% to 5% caustic soda wash, rinse and steam dry was used to clean the drums.

During our site investigation, a total of five (5) concrete pits were identified within the concrete floor slab. Two (2) pipe runs were also identified, and extended out into the oil/water separator. Site investigation soil samples were collected from each pit and pipe location. Analytical data indicate the presence of cadmium, lead, zinc, TPHC, VOC's and BN's above the applicable NJDEP limits.

The highest concentration of soil contamination was present at SI sampling location C4. Remington & Vernick recommended to delineate the vertical and horizontal extent of soil contamination along the perimeter of the concrete floor slab.

2. Remedial Investigation Performed

On June 19, 2001, Lippincott & Jacobs Engineering, under the supervision of Remington & Vernick, performed a soil boring to confirm the vertical extent of soil contamination. A split spoon auger was used to advance the soil boring. A total of seven (7) soil samples (C4R-4, C4R-6, C4R-8, C4R-10, C4R-12, C4R-14 and C4R-15) were collected directly below SI soil sample C4. A strong odor was present at this soil boring location.

The soil samples were collected at 2' intervals (4 feet to 15 feet below grade), and analyzed for TPHC, VOC's, BN's, lead, cadmium and zinc. Based on the soil sample results, soil sample C4R-6 (6 feet below grade and below the bottom of the pit) was found to be the lower limit of soil contamination. It is apparent that the concrete floor slab (bottom of pit) is the upper limit of contamination.

On August 17, 2001, Lippincott & Jacobs, under the supervision of Remington & Vernick, performed a total of eight (8) soil borings radiating out 5 to 15 feet from SI soil sample C4 and along the perimeter of the concrete slab.

Soil samples (CR1 through CR8) were collected from a depth of 5.5 to 6.0 feet below grade, and analyzed for TPHC, VOC's, BN's, lead, cadmium, and zinc.

No compounds were detected above the applicable NJDEP limits. Soil sample locations can be found on the RI Soil Sample Location Plan in Appendix B.

3. Findings

The horizontal and vertical limits of soil contamination associated with the drum rinsing area have been fully delineated.

The area of soil contamination encompasses a 683 S.F. (approximately) area and extends from 0 to 6 feet below grade. Approximately 151 C.Y. of soil has been impacted. The soil contamination must be addressed prior to site redevelopment.

D. RI Area of Concern – 10,000 Gallon UST – Location ER (SI locations E1-E7)

1. Background Information

During our site investigation, a 10,000 gallon UST was identified adjacent to the south section of building #2. A total of five (5) one-inch lines connected to the oil/water separator were observed alongside the northwest side of the UST.

TPHC and Nitroso-DI-N-Propylamine were detected above the applicable NJDEP limits in the area of the one-inch piping.

TPHC was detected above the applicable NJDEP limits beneath the UST piping.

Remington & Vernick recommended to delineate the vertical and horizontal extent of soil contamination at locations E2 and E7 (As per RIW).

2. Remedial Investigation Performed – E2R

To investigate the one-inch piping area, Lippincott & Jacobs Engineering, under the supervision of Remington & Vernick, performed a soil boring to determine the vertical extent of soil contamination on June 21, 2001.

A split spoon auger was used to advance the soil boring. A total of three (3) vertical soil samples (E2R8, E2R10 and E2R12) were collected directly below SI soil sample E2. The soil samples were collected at 2-foot intervals (8 to 12 feet below grade), and analyzed for TPHC and VOC's.

Based on the soil sample results, soil sample E2R10 (9.5 to 10.0 feet below grade) was found to be the lower limit of contamination. The soil above sample E2R10 (from 0 to 10 feet below grade) contained high HNU readings and historic fill.

Because it was apparent that the upper limit of contamination is at grade, sampling to determine the upper vertical limit of contamination was not conducted.

On August 24, 2001, Lippincott & Jacobs Engineering, under the supervision of Remington & Vernick, performed a soil boring radiating out 5 – 15 feet from SI soil sample E2.

A soil sample (E2R1) was collected at a depth of 9.5 to 10.0 feet below grade, and analyzed for VOC's and TPHC. No compounds were detected above the applicable NJDEP limits.

Soil contamination at SI soil sample E7 location was observed underneath the piping and above the underground storage tank. With present access issues (building foundation wall) with SI soil sample E7, the soil delineation will be performed upon removal of the 10,000 gallon underground storage tank.

The NJDEP Case Manager, Mike Tompkins, concurred with our office to address this area in conjunction with the removal of the 10,000 gallon UST. Soil sample locations can be found on the RI Soil Sample Location Plan in Appendix B.

3. Findings

The horizontal and vertical limits of soil contamination in the area of the one-inch piping have been fully delineated. The area of soil contamination encompasses approximately 537 S.F. and extends From 0 to 10 feet below grade. Approximately 154 C.Y. of soil has been impacted. The soil contamination must be addressed prior to site redevelopment. As previously mentioned, soil contamination in the area of SI location E7 will be delineated upon removal of the 10,000 gallon underground storage tank.

E. Building #2 Pit - Location CCR (SI location CC)

1. Background Information

During our site investigation a 4'x2'x2' concrete pit was present inside the northwest corner of Building #2. The bottom of the pit was filled with solid waste. Lead and base neutrals are present above the applicable NJDEP limits at this AOC.

Remington & Vernick recommended to delineate the vertical and horizontal extent of soil contamination at SI soil sample CC (As per RIW).

2. Remedial Investigation Performed

On June 21, 2001, Lippincott & Jacobs Engineering, under the supervision of Remington & Vernick, performed a soil boring to determine the vertical extent of soil contamination.

A split spoon auger was used to advance the soil boring. A total of three (3) soil samples (CCR4, CCR6 and CCR8) were collected directly below SI soil sample CC. The soil samples were collected at 2-foot intervals (4 to 8 feet below grade), and analyzed for base neutrals and lead. Based on the soil sample results, soil sample CCR8 (7.5 to 8 feet below grade) contained the lowest concentration of lead and was found to be the lower limit of soil contamination.

With a concrete floor slab at the surface, the upper limit of contamination will be established at surface grade.

On August 9 and 17 of 2001, Lippincott & Jacobs Engineering, under the supervision of Remington & Vernick, performed soil borings radiating out from SI sample CC. A total of four (4) soil samples (CCR1, CCR2, CCR3 and CCR4) were collected and analyzed for lead and base neutrals. Soil sample locations can be found on the RI sample location plan in Appendix B.

Soil boring/sample locations CCR2, CCR3, and CCR4 were advanced and collected on top of an elevated concrete floor slab. The floor slab is elevated approximately four feet from surface grade.

Based on a four-foot difference of grade, soil sample CCR1 was collected from surface grade at a depth of 3.5 to 4.0 feet below grade. This area contains historic fill, as defined in NJAC 7:26E-4.6.

With the exception of soil sample location CCR1, no compounds were detected above the applicable NJDEP limits. Soil sample CCR1 detected lead at 522 ppm.

3. Recommendations

Based on the analytical results for soil samples CCR2, CCR3 and CCR4, the concrete pit area has been partially delineated. Historic fill material is present at sample location CCR1.

F. RI Area of Concern GR – Floor Drain/Piping/Trench Area – Location GR (SI location G1, GA,G1B,G2,G4)

1. Background Information

During our site investigation, a 4"pipe line and a floor drain were observed and located along side the southeast side of building #1. The above pipe and drain were connected to an abandoned 4" pipe line, which ran along building #1 to the sidewalk area of Front Street. This pipe run was believed to be an old abandoned sanitary sewer line. TPHC, BN's, VOC's, Zinc, Antimony, and Lead are present above the applicable NJDEP limits at this AOC.

Remington & Vernick recommended to delineate the vertical and horizontal extent of soil contamination along the perimeter of all previously collected SI soil sample locations.

2. Remedial Investigation Performed

On June 19, 2001, Lippincott & Jacobs Engineering, under the supervision of Remington & Vernick, performed soil borings to determine the vertical extent of soil contamination.

A split spoon auger was used to advance the soil borings. A total of seven (7) soil samples (G4R-4, G4R-6, G4R-8, G4R-10, G4R-12, G4R-14, and G4R-15) were collected directly below SI soil sample location G1B.

The soil samples were collected at 2' intervals (4 to 15 feet below grade), and analyzed for TPHC, VOC's, BN's, Lead, Phenols, Zinc and Antimony. Based on the soil sample results, soil sample G4R-6 (6 feet below grade) was found to be the lower limit of soil contamination.

Because the soil above G4R-6 (0 to 6 feet below grade) had high HNU readings and historic fill was present, no sampling to determine the upper limit of contamination was performed.

On August 9, 2001, Lippincott & Jacobs Engineering, under the supervision of Remington & Vernick, performed a total of seven (7) soil borings radiating 5 to 15 feet from SI soil sample G4, and along the perimeter of the old abandoned sanitary sewer line.

Soil samples (GR1 through GR7) were collected from a depth of 5.5 to 6.0 feet below grade, and analyzed for TPHC, VOC's, BN's, lead, phenols, zinc and antimony. Soil sample locations can be found in RI Sample Location Plan in Appendix B.

With the exception of soil sample location GR4, no compounds were detected above the applicable NJDEP limits. Soil sample GR4 had lead (415 ppm) above the applicable NJDEP limits.

Because this area will be addressed with historic fill present on-site (See section below on historic fill), no further delineation of lead was performed.

3. Findings

Based on the analytical results for soil samples GR1 through GR7, this AOC has been partially delineated. Historic fill material is present at sample location GR4.

G. RI Area of Concern B1 through B4 – Historic Fill – Location B1 – B4 (SI locations D, I, J, P)

1. Background Information

Based on our site investigation observations, it appears that historic fill is present throughout the subject site. Specifically, while performing sampling in the elevator shaft area, loading areas and drum storage/yard area, non-indigenous material, including construction/demolition debris were observed. A demolished basement area (50'x30') was observed within the yard area (adjacent to Front Street).

Furthermore, the compounds detected above the applicable NJDEP Limits in the above AOC's consisted of (but were not limited to) benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, Indo (1,2,3 cd pyrene), dibenz(a,h) anthracene, lead, cadmium, arsenic and zinc, which are typical of contaminants of historic fill material.

Remington & Vernick recommended to investigate historic fill in accordance with NJAC 7:26E-4.6 (b).

2. Remedial Investigation Performed

On July 16, 2001, Lippincott & Jacobs Engineering, under the supervision of Remington & Vernick, performed a soil boring at each corner of the property (two located along Front Street, and two located along Second Street). Each soil boring was advanced with a split spoon auger to a depth of eighteen (18) feet below grade.

Our observations indicated historic fill in average was present from grade to approximately twelve (12) feet below grade. Native material was present from 12 feet to approximately 18 feet below grade. Groundwater was encountered at approximately 13 feet below grade.

3. Findings

Based on our observations of the subsurface soil at the subject site, it appears that historic fill is present throughout the site from grade to approximately 12 feet below grade. The presence of historic fill and associated contamination must be addressed prior to site redevelopment.

H. Groundwater

1. Background Information

Three (3) monitoring wells (MW-1, MW-2 and MW-3) were installed on-site. Monitoring wells MW-2 and MW-3 were installed within the vicinity of the drum storage/yard, and analyzed for PP + 40. Lead was detected above the applicable NJDEP limits in both wells.

Monitoring well MW-1 was installed within the vicinity of the former oil/water separator, and analyzed for PP+40. The chemical testing results detected volatile compounds were detected above the applicable NJDEP limits in MW-1.

Remington & Vernick proposed two (2) confirmation rounds of groundwater sampling at each monitoring well location. Due to elevated levels of lead in MW-2 and MW-3, the "Low Flow Purging and Sampling Procedure for the Collection of Groundwater Samples" would be used to collect the above mentioned well samples.

Monitoring well MW-1 was damaged during the EPA Remedial Action, which was performed on-site. A new monitoring well MW-1 was installed next to the previous monitoring well MW-1 location.

2. Remedial Investigation Performed

On August 15, 2001, Val Associates sampled monitoring wells MW-1, MW-2 and MW-3. The wells were analyzed for VOC's and lead. The EPA "Low Flow Methodology for Groundwater" was utilized to collect the samples. No compounds were detected above the MDL in any of the samples.

The wells were re-sampled on August 15, 2001 and September 17, 2001 in the same manner as described above. No compounds were detected above the applicable NJDEP limits.

3. Groundwater Flow Direction

On August 13, 2001, Remington & Vernick measured the groundwater levels for each of the above wells. The groundwater flow direction is eastward at a flow gradient of .0029 per feet.

4. Findings

During the SI, Remington & Vernick sampled monitoring wells MW-1 through MW-3. The results detected high concentrations of VOC's and Metals above the applicable NJDEP Groundwater Quality Standards. The RI groundwater sampling events of August 15, 2001 and 9/17/01 detected all compounds well below the NJDEP Groundwater Quality Standards. Based on the two (2) RI

sampling events, Remington & Vernick believes the SI groundwater sampling event was not indicative of groundwater conditions at the above referenced site Therefore, Remington and Vernick Recommend no further action for groundwater at the subject site.

VI. CONCLUSIONS/RECOMMENDATIONS

Areas of soil contamination have been fully delineated (with the exception of the area beneath the 10,000 gallon UST piping, Building #2 Pit and Floor Drain/Piping/Trench area. A summary of the results of the soil delineation is as follows:

- Oil/Water Separator – 1,175 S.F. (0' to 6' below grade) for a total of 261 C.Y. of soil contaminated with TPHC, VOC's BN's, phenols, beryllium, cadmium and zinc.
- 1,000 Gallon UST – 136 S.F. (0' to 8" below grade) for a total of 41 C.Y. of soil contaminated with lead, TPHC, cadmium, VOC's and BN's.
- Drum Rinsing Area – 683 S.F. (0' to 6' below grade) for a total of 151 C.Y. of soil contaminated with cadmium, lead, zinc, TPHC, VOC's and BN's.
- 10,000 Gallon UST (1" piping area) – 537 S.F. (0" to 10' below grade) for a total of 154 C.Y. of soil contaminated with TPHC and VOC's.
- Historic Fill – throughout the site to the property line (0' to 12' below grade).

The area of UST piping associated with the 10,000 gallon UST was not sampled due to the present building foundation wall. This AOC will be investigated in the future, subsequent to UST removal.

As previously stated in this report, a 1,000 gallon and a 10,000 gallon UST still remains on-site. Because this investigation is funded through the H.D.S.R.F. Municipal Grant Program (which formerly did not fund UST removals), the UST's were not removed. However, the H.D.S.R.F. guidelines have recently been amended to include providing funding for closure of the UST's. Therefore, a proposal for removal of the two (2) on-site UST's will be forthcoming.

Regarding the Building #2 Pit and Floor Drain/Piping/Trench Area, the delineation is partially complete as follows:

- Building #2 Pit – 324 S.F. (0' to 8' below grade) for a total of 96 C.Y. of soil contaminated with BN's.
- Floor Drain/Piping/Trench Area – 1125 S.F. (0' to 6" below grade) for a total of 250 C.Y. of soil contaminated with TPHC, VOC's BN's phenols, zinc and antimony.

However, lead contamination in the areas of the above two (2) AOC's were not fully delineated. Because the lead contamination is likely the result of historical fill (located throughout the site), no additional investigation regarding lead was conducted.

By re-sampling the groundwater on two (2) occasions, it has been determined that contaminant concentrations are below the applicable NJDEP limits. Therefore, no additional investigation/remediation of groundwater is necessary.

As previously stated, soil contamination must be addressed prior to the site redevelopment. Areas of soil contamination from a specific AOC has been delineated and the vertical limit of historical fill (extending horizontally to the property boundaries) has been determined. Furthermore, groundwater has not been adversely impacted by soil contamination.

To address soil contamination, we will assume that all fill areas contain compounds above the applicable NJDEP limits. To simplify remediation, we propose to label the entire site as contaminated to the property boundaries. The vertical limits of contamination will extend from grade to 12' below grade (where native soil was observed). Please note that no individual AOC's have soil contamination extending below the 12 feet below grade limit of historic fill.

To remediate the site, we propose to implement a restricted use remedial action plan, which includes engineering and institutional controls, in accordance with current NJDEP policies and Senate Bill S-1070.

The engineering controls will consist of capping the contaminated soil with an NJDEP approved material/thickness. The engineering control is a physical mechanism to isolate human contact with the contaminated soil.

To limit human activity at or near the site and to ensure the effectiveness of the remedial action over time, institutional controls will be implemented. The institutional control shall be identical in wording to NJAC 7:26E, and will provide notice of the following:

1. That contamination exists on the property at a level above the NJDEP's "unrestricted use" soil remediation criteria;

2. The restrictions applicable to the property due to contamination; and

3. The engineering controls and institutional controls applicable to the property.

Specifically, the institutional controls will include amending the deed of the property to include an environmental use restriction (declaration of Environmental Restriction, or DER) for the entire property. The DER will include

tables and plans that identify the following: horizontal and vertical extend of contamination, compounds above the applicable NJDEP limits and concentrations of those compounds.

Final site plans for the redevelopment of the subject site are currently not available. Therefore, the building footprint and amount of impervious cover varies. To address this situation, Remington & Vernick formerly requests a generic environmental use restriction (not a specific environmental use restriction) be granted by the NJDEP. The generic environmental use restriction would specify the amount of cover (engineering controls) necessary to cap the contaminated soil existing under impervious (bituminous paving, concrete, etc.) or pervious (grass, stone, etc.) cover. By issuing a generic environmental use restriction, the builder/contractor who would ultimately redevelop the site would be informed of engineering controls and DER conditions prior to finalizing site plans.

Please note that two (2) AOC's (oil/water separator and drum rinsing area) had a strong odor associated with the soil contamination. Depending on the type of redevelopment proposed, soil in these areas may need to be excavated and properly disposed.

In addition to the above, a 1,000 gal. UST was found adjacent to the 10,000 gal UST (previously discussed). This UST was sampled during the SI. A total of four (4) soil samples were collected along each side and end of tank. The samples were analyzed for TPHC. Based on the analytical results, all soil samples were detected well below the applicable NJDEP Clean-up Criteria. Please note this is not the same 1,000 gal. UST that was investigated as part of the RI. The UST must be addressed prior to receiving a NFA for the site.

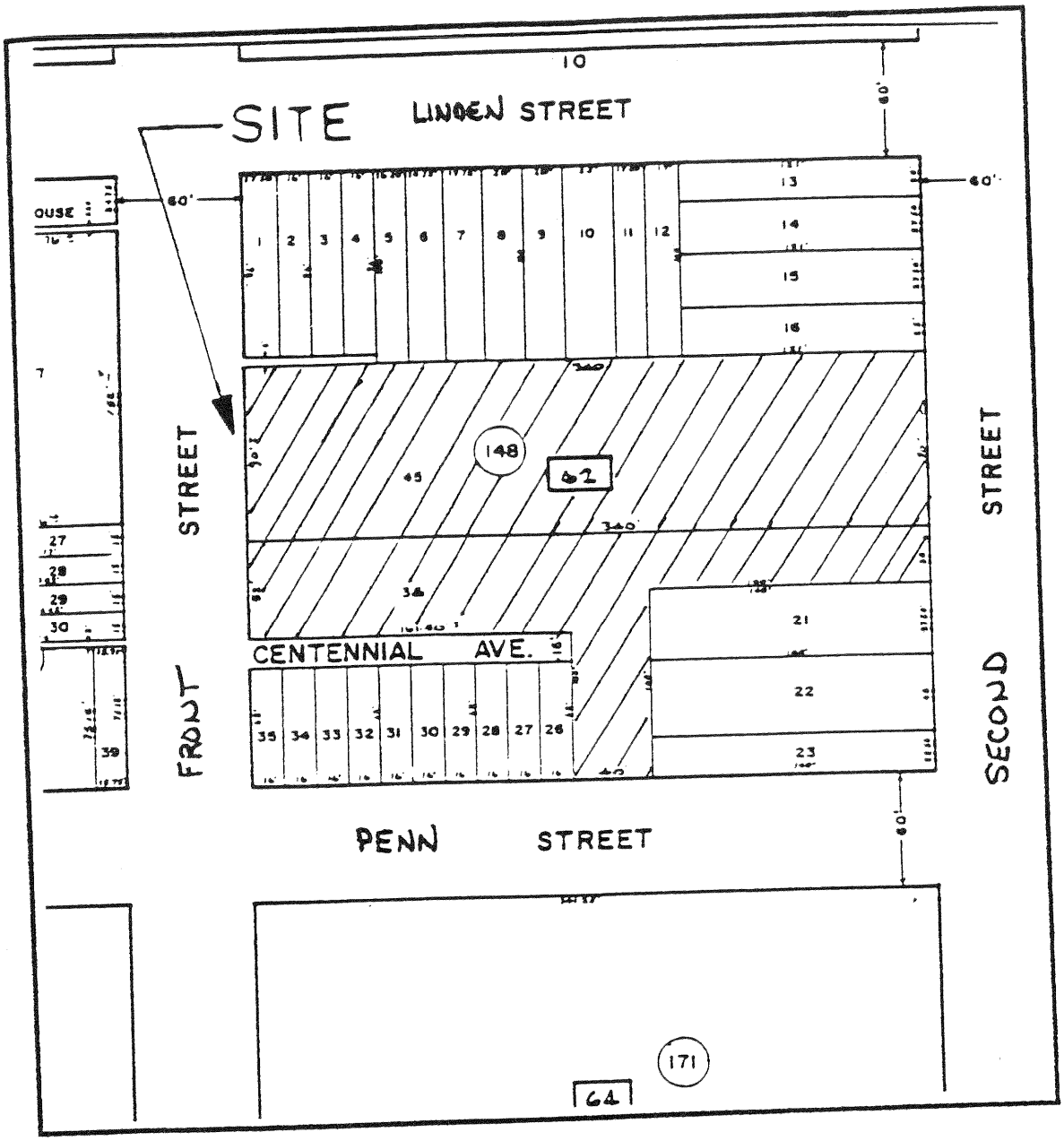
VII. LIMITATIONS

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 give no assurance regarding those areas that were not investigated. If further information indicates conditions differ from what is stated herein, Remington & Vernick reserves the right to amend our report accordingly.

APPENDIX A
REMEDIAL INVESTIGATION
USGS AND TAX MAP

ABBCO STEEL DRUM, INC.
CAMDEN, NEW JERSEY
CAMDEN COUNTY

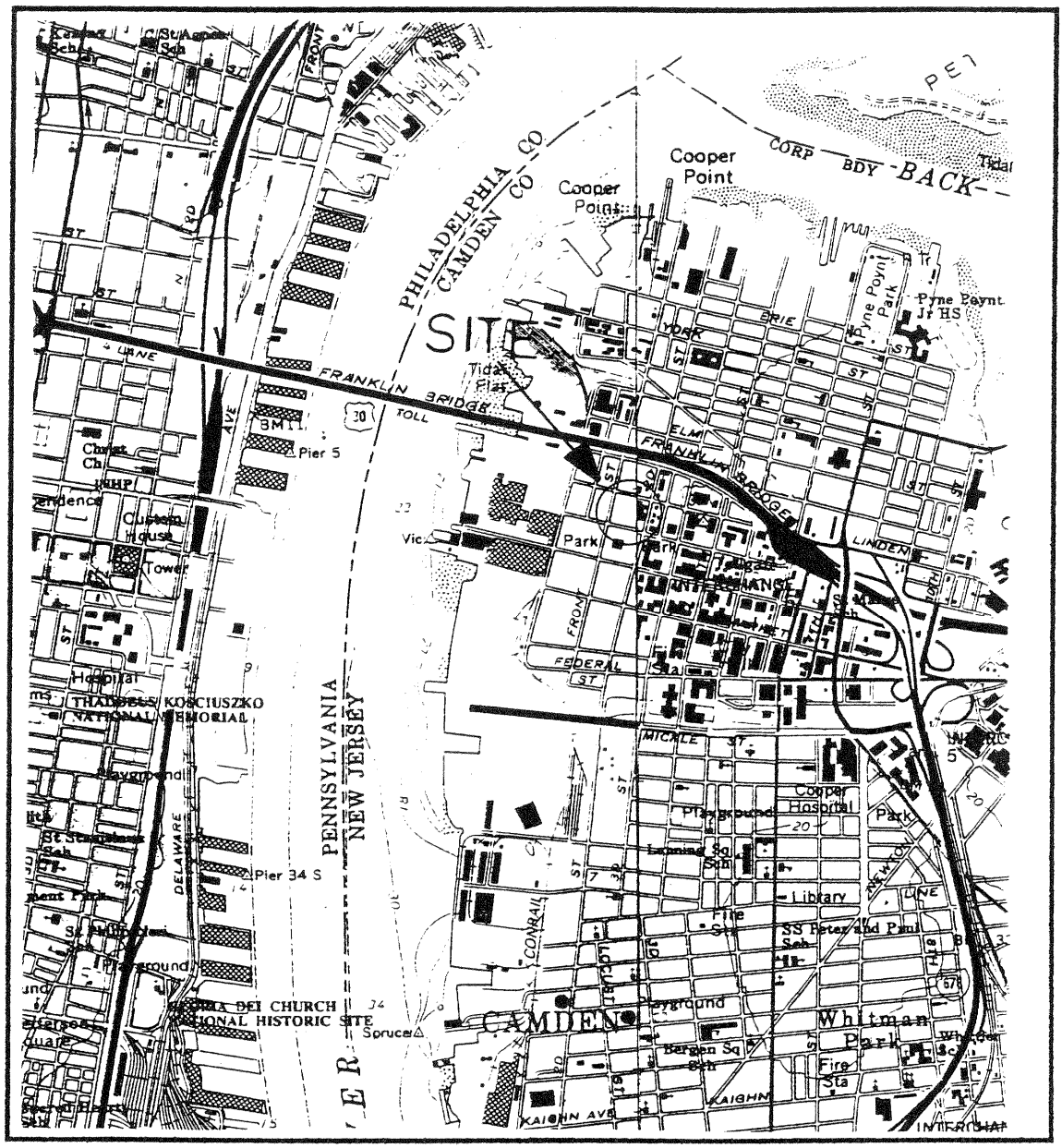


TAX
SHEET #12
(NOT TO SCALE)

TAX MAP

ABC BARREL COMPANY
BLOCK 62, LOT 45/BLOCK 148, LOT 45
CITY OF CAMDEN
CAMDEN COUNTY

N



LOCATION MAP

USGS
CAMDEN &
PHILADELPHIA
QUADRANGLES
SCALE: 1"=2000'

ABC BARREL COMPANY
BLOCK 62, LOT 45/BLOCK 148, LOT 45
CITY OF CAMDEN
CAMDEN COUNTY

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APPENDIX B
REMEDIAL INVESTIGATION
SOIL SAMPLE LOCATION PLAN

ABBCO STEEL DRUM, INC.
CAMDEN, NEW JERSEY
CAMDEN COUNTY

APPENDIX C
REMEDIAL INVESTIGATION
GROUNDWATER CONTOUR PLAN

ABBCO STEEL DRUM, INC.
CAMDEN, NEW JERSEY
CAMDEN COUNTY

APPENDIX D
REMEDIAL INVESTIGATION SOIL AND GROUNDWATER SAMPLE SUMMARY TABLES

ABBCO STEEL DRUM, INC.
CAMDEN, NEW JERSEY
CAMDEN COUNTY

GROUNDWATER

GROUNDWATER SAMPLE SUMMARY TABLE - ABBCO STEEL DRUM SITE, CAMDEN, NJ (ROUND #1)								
AREA OF CONCERN	SAMPLE DATE	COMPOUNDS ANALYZED	FIELD ID (LAB ID)	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
Groundwater	8/15/01	VOLATILES LEAD	MW-1 (8100-003A)	13.96	None Detected			
Groundwater	8/15/01	VOLATILES LEAD	MW-2 (8100-004A)	12.44	None Detected			
Groundwater	8/15/01	VOLATILES LEAD	MW-3 (8100-005A)	12.94	None Detected			

GROUNDWATER

GROUNDWATER SAMPLE SUMMARY TABLE - ABBCO STEEL DRUM SITE, CAMDEN, NJ (ROUND #2)								
AREA OF CONCERN	SAMPLE DATE	COMPOUNDS ANALYZED	FIELD ID (LAB ID)	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
Groundwater	9/17/01	VOLATILES LEAD	MW-1 (9099-003A)	13.92	1, 2-Dichlorobenzene	8.84	600	
					Ethylbenzene	3.43	700	
					Total Xylenes	4.2	1000	
Groundwater	9/17/01	VOLATILES LEAD	MW-2 (9099-004A)	12.9	None Detected			
Groundwater	9/17/01	VOLATILES LEAD	MW-3 (9099-005A)	12.94	Lead	10	10	

OIL / WATER SEPARATOR

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION A2R (VERTICAL)								
SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
A2R6	6/19/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	148-008A	5.5-6.0	TPHC	5411	10000	
					Cadmium	17.8	39	
					Zinc	571	1500	
					Phenols	5.16	50	
					Beryllium	0.286	2	
					Di-n-butyl phthalate	0.501	100	
					Bis(2-ethylhexyl phthalate)	0.12	49	
					1,2,4-Trimethylbenzene	7.6	NS	
					1,3,5-Trimethylbenzene	3.38	NS	
					1,4-Dichlorobenzene	1.05	100	
					Chlorobenzene	0.916	1	
					Ethylbenzene	2.2	100	
					Isopropylbenzene	0.46	NS	
					Total Xylenes	8.71	67	
					n-Butylbenzene	0.51	NS	
					sec-butylbenzene	0.31	NS	
					Toluene	7.2	500	
					n-propylbenzene	0.66	NS	
A2R8	6/19/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	148-009A	7.5-8.0	TPHC	5195	10000	
					Cadmium	1.87	39	
					Zinc	59.9	1500	
					Beryllium	0.22	2	
					1,2-Dichlorobenzene	0.88	50	
					Di-n-butyl phthalate	3.6	100	
					Bis(2-ethylhexyl phthalate)	5.3	49	
					Phenanthrene	0.89	NS	
					1,2,4-Trimethylbenzene	6.6	NS	
					1,3,5-Trimethylbenzene	2.07	NS	
					1,2-Dichlorobenzene	7.7	50	
					Ethylbenzene	2	100	
					Total Xylenes	5.2	67	
					Toluene	8.1	500	
A2R10	6/19/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	148-010A	9.5-10.0	TPHC	5192	10000	
					Cadmium	2.8	39	
					Zinc	74	1500	
					Anthracene	0.471	100	
					Di-n-butyl phthalate	3.2	100	
					Bis(2-ethylhexyl phthalate)	4.8	49	
					Phenanthrene	1.3	NS	
					1,2,4-Trimethylbenzene	0.55	NS	
A2R12	6/19/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	148-011A	11.5-12.0	TPHC	309.1	10000	
					Cadmium	0.897	39	
					Zinc	60.6	1500	
					Beryllium	0.448	2	
					Di-n-butyl phthalate	0.66	100	
					Bis(2-ethylhexyl phthalate)	0.406	49	
A2R14	6/19/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	148-012A	13.5-14.0	TPHC	214.8	10000	
					Zinc	26.7	1500	
					Di-n-butyl phthalate	0.527	100	
A2R15	6/19/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	148-013A	14.5-15.0	TPHC	246.3	10000	
					Cadmium	0.779	39	
					Zinc	56.9	1500	
					Beryllium	0.36	2	
					Di-n-butyl phthalate	0.704	100	

Note: Soil Samples A2R are noted as AZR in analytical lab report.

1,000 GALLON UST

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION F4R (VERTICAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
F4R8	6/21/01	TPHC,VO+10 BN+15,PHENOLS	162-001A	7.5-8.0	TPHC	73.01	10000	
					Di-n-butyl phthalate	1.7	100	
F4R10	6/21/01	TPHC,VO+10 BN+15,PHENOLS	162-002A	9.5-10.0	TPHC	231.4	10000	
					Azobenzene	0.096	NS	
					Bis(2-ethylhexyl) phthalate	0.125	49	
					Di-n-butyl phthalate	0.806	100	
F4R12	6/21/01	TPHC,VO+10 BN+15,PHENOLS	162-003A	11.5-12.0	TPHC	546.7	10000	
					Bis(2-ethylhexyl) phthalate	0.489	49	
					Di-n-butyl phthalate	0.933	100	
					Fluoranthene	0.116	100	
					Pyrene	0.171	100	
F4R14	6/21/01	TPHC,VO+10 BN+15,PHENOLS	162-004A	13.5-14.0	TPHC	339.5	10000	
					Di-n-butyl phthalate	0.699	100	
F4R15	6/21/01	TPHC,VO+10 BN+15,PHENOLS	162-005A	14.5-15.0	TPHC	141.4	10000	
					Di-n-butyl phthalate	0.671	100	

1,000 GALLON UST

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION F2R (VERTICAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
F2R8	6/21/01	LEAD	162-006A	7.5-8.0	no compounds detected			
F2R10	6/21/01	LEAD	162-007A	9.5-10.0				
F2R12	6/21/01	LEAD	162-008A	11.5-12.0				

10,000 GALLON UST

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION E2R (VERTICAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
E2R8	6/21/01	TPHC VOLATILES	162-009A	7.5-8.0	TPHC	6934	10000	
E2R10	6/21/01	TPHC VOLATILES	162-010A	9.5-10.0	TPHC	202	10000	
E2R12	6/21/01	TPHC VOLATILES	162-011A	11.5-12.0	TPHC	6424	10000	

BUILDING #2 PIT

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION CCR (VERTICAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
CCR4	6/21/01	BN+15, LEAD	162-012A	3.5-4.0	Lead	29.4	400	
					Di-n-butyl phthalate	0.768	100	
CCR6	6/21/01	BN+15, LEAD	162-013A	5.5-6.0	Di-n-butyl phthalate	0.657	100	
CCR8	6/21/01	BN+15, LEAD	162-014A	7.5-8.0	Di-n-butyl phthalate	0.78	100	

OIL / WATER SEPARATOR

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION A2R (HORIZONTAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
AR1	8/17/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	123-013A	5.5-6.0	TPHC	39.47	10000	
					Cadmium	0.867	39	
					Zinc	26.1	1500	
					Beryllium	0.217	2	
					Di-n-butyl phthalate	0.514	100	
AR2	8/17/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	123-014A	5.5-6.0	TPHC	769.6	10000	
					Cadmium	39.5	39	X
					Zinc	771	1500	
					1,2-Dichloorobenzene	4.9	50	
					Di-n-butyl phthalate	0.621	100	
					Bis(2-ethylhexyl phthalate	6.8	49	
					Phenanthrene	0.426	NS	
					1,4-Dichlorobenzene	1.2	100	
					2-methylnapthalene	1	NS	
					Chrysene	0.259	9	
					Fluoranthene	0.318	100	
					Napthalene	1	100	
					Pyrene	0.35	100	
					1,1,1-Trichloroethene	0.57	50	
					1,1 Dichloroethane	5.4	10	
					1,2,4-Trimethylbenzene	14.6	NS	
					1,3,5-Trimethylbenzene	6	NS	
					1,2-Dichlorobenzene	20.2	50	
					2-Chlorotoluene	1.5	NS	
					Chlorobenzene	0.921	1	
					cis-dichloroethene	35.6	1	X
					Isopropylbenzene	0.76	NS	
					Methylene chloride	14.9	1	X
					n-butylbenzene	0.79	NS	
					n-propylbenzene	2.8	NS	
					Napthalene	4.6	100	
					Tetrachloroethene	6.3	1	X
					Trichloroethene	13.3	1	X
					Vinyl chloride	6.2	2	X
					Ethylbenzene	8.2	100	
					Total Xylenes	30.4	67	
					Toluene	70.3	500	

OIL / WATER SEPARATOR

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION A2R (HORIZONTAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
AR3	8/17/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	123-015A	5.5-6.0	TPHC	39.69	10000	
					Zinc	17.3	1500	
					Beryllium	0.164	2	
					1,2-Dichlorobenzene	3.1	50	
					Di-n-butyl phthalate	0.372	100	
					1,2,4-Trimethylbenzene	1.6	NS	
					1,3,5-Trimethylbenzene	1.5	NS	
					cis-1,2-Dichloroethene	4.2		X
					Methylene chloride	2.2	1	X
					n-propylbenzene	0.729	NS	
					Napthalene	2.3	100	
					Trichloroethene	0.794	1	
					Ethylbenzene	0.673	100	
					Total Xylenes	2.5	67	
AR4	8/17/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	123-012A	5.5-6.0	TPHC	11.1	10000	
					Cadmium	0.681	39	
					Zinc	15.1	1500	
					Beryllium	0.157	2	
					Di-n-butyl phthalate	0.477	100	
AR5	8/24/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	166-004A	5.5-6.0	TPHC	72.19	10000	
					Zinc	16.5	1500	
					Di-n-butyl phthalate	0.276	100	
AR6	8/24/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	166-005A	5.5-6.0	TPHC	120.6	10000	
					Cadmium	1.26	39	
					Zinc	17.3	1500	
					Di-n-butyl phthalate	0.397	100	
AR7	8/24/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	166-006A	5.5-6.0	TPHC	22,000	10000	X
					Cadmium	1.15	39	
					Zinc	35.9	1500	
AR8	8/24/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	166-007A	5.5-6.0	TPHC	310	10000	
					Cadmium	1.14	39	
					Zinc	66.9	1500	
					Di-n-butyl phthalate	0.378	100	
AR9	8/24/01	TPHC	1047-001A	5.5-6.0	TPHC	58	10000	

1,000 GALLON UST

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION E2R (HORIZONTAL)								
SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
E2R1	8/24/01	TPHC, VO+10	166-001A	9.5-10.0	TPHC	101.9	10000	

1,000 GALLON UST

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION FR 1 (HORIZONTAL)								
SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
FR1	8/24/01	LEAD	166-002A	7.5-8.0	Lead	14.4	400	

1,000 GALLON UST

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION F2R (HORIZONTAL)								
SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
FR2	8/24/01	TPHC,VO+10	166-003A	7.5-8.0	TPHC	404.1	10000	
		BN+15, PHENOLS			Di-n-butyl phthalate	0.307	100	

BUILDING #2 PIT

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION CCR (HORIZONTAL)								
SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
CCR1	8/9/01	BN+15, LEAD	071-001A	7.5-8.0	Lead	522	400	X
					Benzo(a)anthracene	0.193	0.9	
					Chrysene	0.275	9	
					Di-n-butyl phthalate	0.452	100	
					Fluoranthene	0.401	100	
					Phenanthrene	0.196	NS	
					Pyrene	0.3896	100	
CCR2	8/9/01	BN+15, LEAD	123-001A	7.5-8.0	Di-n-butyl phthalate	0.256	100	
CCR3	8/9/01	BN+15, LEAD	123-002A	7.5-8.0	Lead	10.7	400	
					Di-n-butyl phthalate	0.26	100	
CCR4	8/9/01	BN+15, LEAD	123-003A	7.5-8.0	Di-n-butyl phthalate	0.297	100	

DRUM RINSING AREA

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION CR-4 (VERTICAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
C4R-4	6/19/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	148-001A	3.5-4.0	TPHC	5,823	10,000	
					Cadmium	16.9	39	
					Lead	336	400	
					Zinc	413	1500	
					Di-n-butyl phthalate	0.556	100	
C4R-6	6/19/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	148-002A	5.5-6.0	TPHC	1019	10000	
					Cadmium	1.22	39	
					Zinc	36.1	1500	
					Di-n-butyl phthalate	0.552	100	
C4R-8	6/19/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	148-003A	7.5-8.0	TPHC	914.6	10000	
					Cadmium	1.12	39	
					Zinc	28.6	1500	
					Di-n-butyl phthalate	0.492	100	
					Bis(2-ethylhexyl)phthalate	0.219	49	
C4R-10	6/19/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	148-004A	9.5-10.-0	TPHC	266.5	10000	
					Cadmium	0.648	39	
					Zinc	15.4	1500	
					Di-n-butyl phthalate	0.732	100	
C4R-12	6/19/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	148-005A	11.5-12.0	TPHC	319.6	10000	
					Cadmium	0.68	39	
					Zinc	32.7	1500	
					Di-n-butyl phthalate	0.498	100	
					Bis(2-ethylhexyl)phthalate	0.128	49	
C4R-14	6/19/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	148-006A	13.5-14.0	TPHC	257.6	10000	
					Cadmium	0.726	39	
					Zinc	31.6	1500	
					Di-n-butyl phthalate	0.701	100	
C4R-15	6/19/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	148-007A	14.5-15.0	TPHC	75.58	10000	
					Zinc	31.1	1500	
					Di-n-butyl phthalate	0.807	100	

DRUM RINSING OPERATIONS

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION CR (HORIZONTAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
CR1	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-011A	5.5-6.0	TPHC	11	10,000	
					Cadmium	0.837	39	
					Lead	10.3	400	
					Zinc	114	1500	
					Di-n-butyl phthalate	0.239	100	
CR2	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-010A	5.5-6.0	TPHC	11.76	10000	
					Cadmium	0.777	39	
					Lead	13.1	400	
					Zinc	39.1	1500	
					Di-n-butyl phthalate	0.318	100	
CR3	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-009A	5.5-6.0	TPHC	11.68	10000	
					Zinc	23.3	1500	
					Di-n-butyl phthalate	0.47	100	
CR4	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-006A	5.5-6.0	TPHC	129.5	10000	
					Cadmium	0.719	39	
					Lead	12.5	400	
					Zinc	30.4	1500	
					Di-n-butyl phthalate	0.436	100	
CR5	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-005A	5.5-6.0	TPHC	656.4	10000	
					Cadmium	0.876	39	
					Lead	11.1	400	
					Zinc	24.6	1500	
					Di-n-butyl phthalate	0.388	100	
					Napthalene	1.19	100	
CR6	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-004A	5.5-6.0	TPHC	260.4	10000	
					Zinc	20.9	1500	
					Di-n-butyl phthalate	0.609	100	
					Napthalene	1.096	100	
					1,2,4-Trimethylbenzene	3.3	NS	
					1,3,5-Trimethylbenzene	1.04	NS	
					Ethylbenzene	1.1	100	
					Isopropylbenzene	0.56	NS	
					Total xylenes	1.2	67	
					n-butylbenzene	1.18	NS	
					n-propylbenzene	1.2	NS	
					Napthalene	4.3	100	
					sec-butylbenzene	1.8	NS	
CR7	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-007A	5.5-6.0	Cadmium	0.967	39	
					Zinc	22.1	1500	
					Di-n-butyl phthalate	0.413	100	
CR8	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-008A	5.5-6.0	Cadmium	0.866	39	
					Zinc	15	1500	
					Di-n-butyl phthalate	0.461	100	

FLOOR DRAIN / PIPING / TRENCH

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION GR (VERTICAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
G4R-4	6/19/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	148-014A	3.5-4.0	Antimony	1.06	14	
					Lead	16.4	400	
					Zinc	42.1	1500	
					TPHC	181.4	10000	
					Di-n-butyl phthalate	0.539	100	
					Toluene	0.767	500	
G4R-6	6/19/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	148-015A	5.5-6.0	Antimony	0.66	14	
					Zinc	23.5	1500	
					TPHC	194.4	10000	
					Di-n-butyl phthalate	0.448	100	
G4R-8	6/19/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	148-016A	7.5-8.0	Zinc	24.3	1500	
					TPHC	139.4	10000	
					Di-n-butyl phthalate	0.83	100	
G4R-10	6/19/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	148-017A	9.5-10.0	Zinc	77.6	1500	
					TPHC	391.5	10000	
					Di-n-butyl phthalate	0.418	100	
G4R-12	6/19/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	148-018A	11.5-12.0	Zinc	40.5	1500	
					TPHC	82.38	10000	
					Di-n-butyl phthalate	0.452	100	
G4R-14	6/19/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	148-019A	13.5-14.0	Antimony	0.352	14	
					Zinc	24.8	1500	
					TPHC	77.16	10000	
					Di-n-butyl phthalate	0.478	100	
					1,2,4-Trimethylbenzene	3.9	NS	
					1,3,5-Trimethylbenzene	1.2	NS	
					Total Xylenes	2	67	
					sec-butylbenzene	0.047	NS	
G4R-15	6/19/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	148-020A	14.5-15.0	Antimony	0.371	14	
					Zinc	46.1	1500	
					TPHC	61.59	10000	
					Di-n-butyl phthalate	0.421	100	

Note: Soil Sample G4R-4 is designated as GR4 in analytical lab report.

FLOOR DRAIN / PIPING / TRENCH

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION GR (HORIZONTAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
GR1	8/9/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	71-006A	5.5-6.0	Zinc	26.5	1500	
					TPHC	84.58	10000	
					Di-n-butyl phthalate	0.579	100	
GR2	8/9/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	71-005A	5.5-6.0	Lead	19.4	400	
					Zinc	52.8	1500	
					TPHC	39.47	10000	
					Di-n-butyl phthalate	0.527	100	
GR3	8/9/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	71-004A	5.5-6.0	Antimony	0.272	14	
					Lead	60.2	400	
					Zinc	106	1500	
					TPHC	56.96	10000	
					Di-n-butyl phthalate	0.487	100	
					Pyrene	0.111	100	
GR4	8/9/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	71-003A	5.5-6.0	Antimony	2.04	14	
					Lead	415	400	X
					Zinc	36.3	1500	
					TPHC	84.42	10000	
					Di-n-butyl phthalate	0.532	100	
GR5	8/9/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	71-002A	5.5-6.0	Zinc	48.8	1500	
					Phenols	3.57	50	
					TPHC	168.9	10000	
					Di-n-butyl phthalate	0.487	100	
GR6	8/9/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	71-008A	5.5-6.0	Lead	9.38	400	
					Zinc	31.3	1500	
					TPHC	46.16	10000	
					Di-n-butyl phthalate	0.476	100	
GR7	8/9/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	71-007A	5.5-6.0	Zinc	33.8	1500	
					TPHC	59.45	10000	
					Di-n-butyl phthalate	0.58	100	

GROUNDWATER

GROUNDWATER SAMPLE SUMMARY TABLE - ABBCO STEEL DRUM SITE, CAMDEN, NJ (ROUND #1)								
AREA OF CONCERN	SAMPLE DATE	COMPOUNDS ANALYZED	FIELD ID (LAB ID)	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
Groundwater	8/15/01	VOLATILES LEAD	MW-1 (8100-003A)	13.96	None Detected			
Groundwater	8/15/01	VOLATILES LEAD	MW-2 (8100-004A)	12.44	None Detected			
Groundwater	8/15/01	VOLATILES LEAD	MW-3 (8100-005A)	12.94	None Detected			

GROUNDWATER

GROUNDWATER SAMPLE SUMMARY TABLE - ABBCO STEEL DRUM SITE, CAMDEN, NJ (ROUND #2)								
AREA OF CONCERN	SAMPLE DATE	COMPOUNDS ANALYZED	FIELD ID (LAB ID)	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
Groundwater	9/17/01	VOLATILES LEAD	MW-1 (9099-003A)	13.92	1, 2-Dichlorobenzene	8.84	600	
					Ethylbenzene	3.43	700	
					Total Xylenes	4.2	1000	
Groundwater	9/17/01	VOLATILES LEAD	MW-2 (9099-004A)	12.9	None Detected			
Groundwater	9/17/01	VOLATILES LEAD	MW-3 (9099-005A)	12.94	Lead	10	10	

OIL / WATER SEPARATOR

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION A2R (VERTICAL)								
SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
A2R6	6/19/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	148-008A	5.5-6.0	TPHC	5411	10000	
					Cadmium	17.8	39	
					Zinc	571	1500	
					Phenols	5.16	50	
					Beryllium	0.286	2	
					Di-n-butyl phthalate	0.501	100	
					Bis(2-ethylhexyl phthalate)	0.12	49	
					1,2,4-Trimethylbenzene	7.6	NS	
					1,3,5-Trimethylbenzene	3.38	NS	
					1,4-Dichlorobenzene	1.05	100	
					Chlorobenzene	0.916	1	
					Ethylbenzene	2.2	100	
					Isopropylbenzene	0.46	NS	
					Total Xylenes	8.71	67	
					n-Butylbenzene	0.51	NS	
					sec-butylbenzene	0.31	NS	
					Toluene	7.2	500	
					n-propylbenzene	0.66	NS	
A2R8	6/19/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	148-009A	7.5-8.0	TPHC	5195	10000	
					Cadmium	1.87	39	
					Zinc	59.9	1500	
					Beryllium	0.22	2	
					1,2-Dichlorobenzene	0.88	50	
					Di-n-butyl phthalate	3.6	100	
					Bis(2-ethylhexyl phthalate)	5.3	49	
					Phenanthrene	0.89	NS	
					1,2,4-Trimethylbenzene	6.6	NS	
					1,3,5-Trimethylbenzene	2.07	NS	
					1,2-Dichlorobenzene	7.7	50	
					Ethylbenzene	2	100	
					Total Xylenes	5.2	67	
					Toluene	8.1	500	
A2R10	6/19/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	148-010A	9.5-10.0	TPHC	5192	10000	
					Cadmium	2.8	39	
					Zinc	74	1500	
					Anthracene	0.471	100	
					Di-n-butyl phthalate	3.2	100	
					Bis(2-ethylhexyl phthalate)	4.8	49	
					Phenanthrene	1.3	NS	
					1,2,4-Trimethylbenzene	0.55	NS	
A2R12	6/19/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	148-011A	11.5-12.0	TPHC	309.1	10000	
					Cadmium	0.897	39	
					Zinc	60.6	1500	
					Beryllium	0.448	2	
					Di-n-butyl phthalate	0.66	100	
					Bis(2-ethylhexyl phthalate)	0.406	49	
A2R14	6/19/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	148-012A	13.5-14.0	TPHC	214.8	10000	
					Zinc	26.7	1500	
					Di-n-butyl phthalate	0.527	100	
A2R15	6/19/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	148-013A	14.5-15.0	TPHC	246.3	10000	
					Cadmium	0.779	39	
					Zinc	56.9	1500	
					Beryllium	0.36	2	
					Di-n-butyl phthalate	0.704	100	

Note: Soil Samples A2R are noted as AZR in analytical lab report.

OIL / WATER SEPARATOR

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION A2R (HORIZONTAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
AR1	8/17/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	123-013A	5.5-6.0	TPHC	39.47	10000	
					Cadmium	0.867	39	
					Zinc	26.1	1500	
					Beryllium	0.217	2	
					Di-n-butyl phthalate	0.514	100	
AR2	8/17/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	123-014A	5.5-6.0	TPHC	769.6	10000	
					Cadmium	39.5	39	X
					Zinc	771	1500	
					1,2-Dichloorobenzene	4.9	50	
					Di-n-butyl phthalate	0.621	100	
					Bis(2-ethylhexyl phthalate	6.8	49	
					Phenanthrene	0.426	NS	
					1,4-Dichlorobenzene	1.2	100	
					2-methylnapthalene	1	NS	
					Chrysene	0.259	9	
					Fluoranthene	0.318	100	
					Napthalene	1	100	
					Pyrene	0.35	100	
					1,1,1-Trichloroethene	0.57	50	
					1,1 Dichloroethane	5.4	10	
					1,2,4-Trimethylbenzene	14.6	NS	
					1,3,5-Trimethylbenzene	6	NS	
					1,2-Dichlorobenzene	20.2	50	
					2-Chlorotoluene	1.5	NS	
					Chlorobenzene	0.921	1	
					cis-dichloroethene	35.6	1	X
					Isopropylbenzene	0.76	NS	
					Methylene chloride	14.9	1	X
					n-butylbenzene	0.79	NS	
					n-propylbenzene	2.8	NS	
					Napthalene	4.6	100	
					Tetrachloroethene	6.3	1	X
					Trichloroethene	13.3	1	X
					Vinyl chloride	6.2	2	X
					Ethylbenzene	8.2	100	
					Total Xylenes	30.4	67	
					Toluene	70.3	500	

OIL / WATER SEPARATOR

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION A2R (HORIZONTAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
AR3	8/17/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	123-015A	5.5-6.0	TPHC	39.69	10000	
					Zinc	17.3	1500	
					Beryllium	0.164	2	
					1,2-Dichlorobenzene	3.1	50	
					Di-n-butyl phthalate	0.372	100	
					1,2,4-Trimethylbenzene	1.6	NS	
					1,3,5-Trimethylbenzene	1.5	NS	
					cis-1,2-Dichloroethene	4.2		X
					Methylene chloride	2.2	1	X
					n-propylbenzene	0.729	NS	
					Napthalene	2.3	100	
					Trichloroethene	0.794	1	
					Ethylbenzene	0.673	100	
					Total Xylenes	2.5	67	
AR4	8/17/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	123-012A	5.5-6.0	TPHC	11.1	10000	
					Cadmium	0.681	39	
					Zinc	15.1	1500	
					Beryllium	0.157	2	
					Di-n-butyl phthalate	0.477	100	
AR5	8/24/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	166-004A	5.5-6.0	TPHC	72.19	10000	
					Zinc	16.5	1500	
					Di-n-butyl phthalate	0.276	100	
AR6	8/24/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	166-005A	5.5-6.0	TPHC	120.6	10000	
					Cadmium	1.26	39	
					Zinc	17.3	1500	
					Di-n-butyl phthalate	0.397	100	
AR7	8/24/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	166-006A	5.5-6.0	TPHC	22,000	10000	X
					Cadmium	1.15	39	
					Zinc	35.9	1500	
AR8	8/24/01	TPHC,VO+10 BN+15,CADMIUM ZINC, PHENOLS BERYLLIUM NICKEL	166-007A	5.5-6.0	TPHC	310	10000	
					Cadmium	1.14	39	
					Zinc	66.9	1500	
					Di-n-butyl phthalate	0.378	100	
AR9	8/24/01	TPHC	1047-001A	5.5-6.0	TPHC	58	10000	

1,000 GALLON UST

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION F4R (VERTICAL)								
SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
F4R8	6/21/01	TPHC,VO+10 BN+15,PHENOLS	162-001A	7.5-8.0	TPHC	73.01	10000	
					Di-n-butyl phthalate	1.7	100	
F4R10	6/21/01	TPHC,VO+10 BN+15,PHENOLS	162-002A	9.5-10.0	TPHC	231.4	10000	
					Azobenzene	0.096	NS	
					Bis(2-ethylhexyl) phthalate	0.125	49	
					Di-n-butyl phthalate	0.806	100	
F4R12	6/21/01	TPHC,VO+10 BN+15,PHENOLS	162-003A	11.5-12.0	TPHC	546.7	10000	
					Bis(2-ethylhexyl) phthalate	0.489	49	
					Di-n-butyl phthalate	0.933	100	
					Fluoranthene	0.116	100	
					Pyrene	0.171	100	
F4R14	6/21/01	TPHC,VO+10 BN+15,PHENOLS	162-004A	13.5-14.0	TPHC	339.5	10000	
					Di-n-butyl phthalate	0.699	100	
F4R15	6/21/01	TPHC,VO+10 BN+15,PHENOLS	162-005A	14.5-15.0	TPHC	141.4	10000	
					Di-n-butyl phthalate	0.671	100	

1,000 GALLON UST

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION F2R (VERTICAL)								
SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
F2R8	6/21/01	LEAD	162-006A	7.5-8.0	no compounds detected			
F2R10	6/21/01	LEAD	162-007A	9.5-10.0				
F2R12	6/21/01	LEAD	162-008A	11.5-12.0				

10,000 GALLON UST

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION E2R (VERTICAL)								
SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
E2R8	6/21/01	TPHC VOLATILES	162-009A	7.5-8.0	TPHC	6934	10000	
E2R10	6/21/01	TPHC VOLATILES	162-010A	9.5-10.0	TPHC	202	10000	
E2R12	6/21/01	TPHC VOLATILES	162-011A	11.5-12.0	TPHC	6424	10000	

BUILDING #2 PIT

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION CCR (VERTICAL)								
SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
CCR4	6/21/01	BN+15, LEAD	162-012A	3.5-4.0	Lead	29.4	400	
					Di-n-butyl phthalate	0.768	100	
CCR6	6/21/01	BN+15, LEAD	162-013A	5.5-6.0	Di-n-butyl phthalate	0.657	100	
CCR8	6/21/01	BN+15, LEAD	162-014A	7.5-8.0	Di-n-butyl phthalate	0.78	100	

1,000 GALLON UST

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION E2R (HORIZONTAL)								
SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
E2R1	8/24/01	TPHC, VO+10	166-001A	9.5-10.0	TPHC	101.9	10000	

1,000 GALLON UST

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION FR 1 (HORIZONTAL)								
SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
FR1	8/24/01	LEAD	166-002A	7.5-8.0	Lead	14.4	400	

1,000 GALLON UST

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION F2R (HORIZONTAL)								
SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
FR2	8/24/01	TPHC,VO+10	166-003A	7.5-8.0	TPHC	404.1	10000	
		BN+15, PHENOLS			Di-n-butyl phthalate	0.307	100	

BUILDING #2 PIT

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION CCR (HORIZONTAL)								
SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
CCR1	8/9/01	BN+15, LEAD	071-001A	7.5-8.0	Lead	522	400	X
					Benzo(a)anthracene	0.193	0.9	
					Chrysene	0.275	9	
					Di-n-butyl phthalate	0.452	100	
					Fluoranthene	0.401	100	
					Phenanthrene	0.196	NS	
					Pyrene	0.3896	100	
CCR2	8/9/01	BN+15, LEAD	123-001A	7.5-8.0	Di-n-butyl phthalate	0.256	100	
CCR3	8/9/01	BN+15, LEAD	123-002A	7.5-8.0	Lead	10.7	400	
					Di-n-butyl phthalate	0.26	100	
CCR4	8/9/01	BN+15, LEAD	123-003A	7.5-8.0	Di-n-butyl phthalate	0.297	100	

DRUM RINSING AREA

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION CR-4 (VERTICAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
C4R-4	6/19/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	148-001A	3.5-4.0	TPHC	5,823	10,000	
					Cadmium	16.9	39	
					Lead	336	400	
					Zinc	413	1500	
					Di-n-butyl phthalate	0.556	100	
C4R-6	6/19/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	148-002A	5.5-6.0	TPHC	1019	10000	
					Cadmium	1.22	39	
					Zinc	36.1	1500	
					Di-n-butyl phthalate	0.552	100	
C4R-8	6/19/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	148-003A	7.5-8.0	TPHC	914.6	10000	
					Cadmium	1.12	39	
					Zinc	28.6	1500	
					Di-n-butyl phthalate	0.492	100	
					Bis(2-ethylhexyl)phthalate	0.219	49	
C4R-10	6/19/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	148-004A	9.5-10.-0	TPHC	266.5	10000	
					Cadmium	0.648	39	
					Zinc	15.4	1500	
					Di-n-butyl phthalate	0.732	100	
C4R-12	6/19/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	148-005A	11.5-12.0	TPHC	319.6	10000	
					Cadmium	0.68	39	
					Zinc	32.7	1500	
					Di-n-butyl phthalate	0.498	100	
					Bis(2-ethylhexyl)phthalate	0.128	49	
C4R-14	6/19/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	148-006A	13.5-14.0	TPHC	257.6	10000	
					Cadmium	0.726	39	
					Zinc	31.6	1500	
					Di-n-butyl phthalate	0.701	100	
C4R-15	6/19/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	148-007A	14.5-15.0	TPHC	75.58	10000	
					Zinc	31.1	1500	
					Di-n-butyl phthalate	0.807	100	

APPENDIX E
REMEDIAL INVESTIGATION
SOIL LOGS

ABBCO STEEL DRUM, INC.
CAMDEN, NEW JERSEY
CAMDEN COUNTY

Remington & Vernick Engineers

232 King's Highway East Haddonfield, New Jersey 08033

TEST BORING LOG

Sheet 1 of 1

Project No. 0408V123

Project: AABCO Steel Drum

Location: 308 - 322 North Front Street, Camden, New Jersey

Date: June 19, 2001

Client: City of Camden

Log of Boring No. A 2R

BORING DEPTH (FEET)	SAMPLE NUMBER	SAMPLE DEPTH (FEET)	CLASSIFICATION OF MATERIALS (based on samples recovered plus observation of material returned between samples)
0 - 5			Drilled Down through surface rubble of concrete, rebar, brick; PID = 8.0
6 - 8	A2 - R6	6'	Olive Black coarse medium to fine sand, trace silt; PID = 2.0
8 - 10	A2 - R10	10'	Brown/black coarse medium to fine sand, trace silt; PID = 2.0
10 - 12	A2 - R12	12'	Brown/black coarse medium to fine sand, trace silt; PID = 1.0
12 - 14	A2 - R14	14'	Brown/black/gray/red coarse to fine sand, trace silt, trace gravel; PID = 1.0
14 - 15	A2 - R15	15'	Brown/black/gray/red coarse to fine sand, trace silt, trace gravel; PID = 1.0
			EOB @ 15'

**Odor Detected

**PID = 1 - 10

GROUNDWATER INFORMATION	
DATE:	6/19/01
TIME:	During Drilling
DEPTH:	11'

CONTRACTOR: Lipincott

DRILLER: Jim Maier

EQUIPMENT Drill Rig

INSPECTOR: Mark Muraczewski

Remington & Vernick Engineers

232 King's Highway East Haddonfield, New Jersey 08033

TEST BORING LOG

Project No. 0408V123 .
Project: AABCO Steel Drum
Location: 308 - 322 North Front Street, Camden, New Jersey

Date: June 21, 2001 .
Client: City of Camden
Log of Boring No. F - 2 .

BORING DEPTH (FEET)	SAMPLE NUMBER	SAMPLE DEPTH (FEET)	CLASSIFICATION OF MATERIALS (based on samples recovered plus observation of material returned between samples)
0 - 6			Drilled Down through surface rubble of concrete, rebar, brick; PID = 8.0
6 - 8	F2 - R8	8'	Dark brownish gray coarse medium to fine sand, trace gravel; PID = 1.0
8 - 10	F2 - R10	10'	Brownish gray fine sand, trace silt; PID = 2.0
10 - 12	F2 - R12	12'	Brown/black/reddish brown coarse medium to fine sand, trace silt, trace brick; PID = 1.0
			EOB @ 12'
			**Odor Detected
			**PID = 1 - 8

GROUNDWATER INFORMATION	
DATE:	6/21/01
TIME:	During Drilling
DEPTH:	11'

CONTRACTOR: Lipincott
DRILLER: Jim Maier
EQUIPMENT Drill Rig
INSPECTOR: Mark Muraczewski

Remington & Vernick Engineers

232 King's Highway East Haddonfield, New Jersey 08033

TEST BORING LOG

Sheet 1 of 1

Project No. 0408V123

Project: AABCO Steel Drum

Location: 308 - 322 North Front Street, Camden, New Jersey

Date: June 21, 2001

Client: City of Camden

Log of Boring No. F4

BORING DEPTH (FEET)	SAMPLE NUMBER	SAMPLE DEPTH (FEET)	CLASSIFICATION OF MATERIALS (based on samples recovered plus observation of material returned between samples)
0 - 3			Drilled Down through surface rubble of concrete, rebar, brick; pid = 5.0
3 - 6			Brown medium to fine sand, trace silt, trace gravel with reddish brown mottles; PID = 4.0
6 - 8	F4 - R8	8'	Grayish brown medium to fine sand with brown mottles, trace silt, trace gravel; PID = 2.0
8 - 10	F4 - R10	10'	Grayish brown/dark red medium to fine sand, trace silt, trace gravel; PID = 1.0
10 - 12	F4 - R12	12'	Dark grayish brown medium to fine sand, trace silt, trace gravel; PID = 2.0
12 - 14	F4 - R14	14'	Dark brownish gray coarse to medium sand, trace silt, little gravel; PID = 2.0
			EOB @ 15'
			****Odor Detected**
			****PID = 1 - 5**

GROUNDWATER INFORMATION	
DATE:	6/21/01
TIME:	During Drilling
DEPTH:	11'

CONTRACTOR: Lipincott

DRILLER: Jim Maier

EQUIPMENT Drill Rig

INSPECTOR: Mark Muraczewski

Remington & Vernick Engineers

232 King's Highway East Haddonfield, New Jersey 08033

TEST BORING LOG

Sheet 1 of 1

Project No. 0408V123
Project: AABCO Steel Drum
Location: 308 - 322 North Front Street, Camden, New Jersey

Date: June 21, 2001
Client: City of Camden
Log of Boring No. C4R

BORING DEPTH (FEET)	SAMPLE NUMBER	SAMPLE DEPTH (FEET)	CLASSIFICATION OF MATERIALS (based on samples recovered plus observation of material returned between samples)
0 - 2.5			Black brown coarse to medium sand, trace silt, fill, concrete; PID = 2.0
2.5 - 6		4'	Yellowish brown fine sand, trace silt; PID = 5.0
6 - 8	C4 - R6/R8	6' & 8'	Dark brown medium to fine sand, trace silt; PID = 2.0
8 - 10	C4 - R10	10'	Reddish brown medium to fine sand; PID = 2.0
10 - 12	C4 - R12	12'	Very dark gray medium to fine sand, trace gravel; PID = 1.0
			Groundwater @ 11.0'
12 - 14	C4 - R14	14'	Very dark gray coarse to medium sand, trace gravel; PID = 1.0
14 - 16	C4 - R16	16'	Weak red medium to fine sand, little silt; PID = 1.0
			EOB @ 16'
			**Odor Detected
			**PID = 1 - 10

GROUNDWATER INFORMATION	
DATE:	6/19/01
TIME:	During Drilling
DEPTH:	11'

CONTRACTOR: Lipincott
DRILLER: Jim Maier
EQUIPMENT Drill Rig
INSPECTOR: Mark Muraczewski

Remington & Vernick Engineers

232 King's Highway East Haddonfield, New Jersey 08033

TEST BORING LOG

Sheet 1 of 1 .

Project No. 0408V123 .
Project: AABCO Steel Drum
Location: 308 - 322 North Front Street, Camden, New Jersey

Date: June 21, 2001 .
Client: City of Camden
Log of Boring No. E - 2 .

BORING DEPTH (FEET)	SAMPLE NUMBER	SAMPLE DEPTH (FEET)	CLASSIFICATION OF MATERIALS (based on samples recovered plus observation of material returned between samples)
0 - 8			Drilled Down through surface rubble of concrete, rebar, brick; PID = 10.0
8 - 10	E2 - R8	8'	Brown coarse medium to fine sand, trace gravel, trace slit; PID = 1.0
10 - 12	E2 - R10	10'	Historic fill over redish brown/light gray coarse medium to fine sand, trace silt, trace gravel; PID = 1.0
12 - 14	E2 - R12	12'	Light reddish brown coarse medium to fine sand, trace silt, trace gravel; PID = 1.0
			EOB @ 14'
			****Odor Detected**
			****PID = 1 - 10**

GROUNDWATER INFORMATION	
DATE:	6/21/01
TIME:	During Drilling
DEPTH:	12'

CONTRACTOR: Lipincott
DRILLER: Jim Maier
EQUIPMENT Drill Rig
INSPECTOR: Mark Muraczewski

Remington & Vernick Engineers

232 King's Highway East Haddonfield, New Jersey 08033

TEST BORING LOG

Sheet 1 of 1

Project No. 0408V123

Project: AABCO Steel Drum

Location: 308 - 322 North Front Street, Camden, New Jersey

Date: June 21, 2001

Client: City of Camden

Log of Boring No. C - C

BORING DEPTH (FEET)	SAMPLE NUMBER	SAMPLE DEPTH (FEET)	CLASSIFICATION OF MATERIALS (based on samples recovered plus observation of material returned between samples)
0 - 4			Drilled Down through surface rubble of concrete, rebar, brick; PID = 1.0
4 - 6	CC - R4	4'	Brownish yellow medium to fine sand, trace silt, trace fill; PID = 3.0
6 - 8	CC - R6	6'	Yellowish brown medium to fine sand, trace silt with reddish brown and yellowish mottles; PID = 3.0
8 - 10	CC - R8	8'	Orange brown medium to fine sand, little silt, trace gravel; PID = 1.0
			EOB @ 10'

GROUNDWATER INFORMATION	
DATE:	6/21/01
TIME:	None Encountered
DEPTH:	N/A

CONTRACTOR: Lipincott

DRILLER: Jim Maier

EQUIPMENT Drill Rig

INSPECTOR: Mark Muraczewski

Remington & Vernick Engineers

232 King's Highway East Haddonfield, New Jersey 08033

TEST BORING LOG

Sheet 1 of 1 .

Project No. 0408V123 .
Project: AABCO Steel Drum
Location: 308 - 322 North Front Street, Camden, New Jersey

Date: July 16, 2001 .
Client: City of Camden
Log of Boring No. B - 1 .

BORING DEPTH (FEET)	BLOW COUNT	SAMPLE DEPTH (FEET)	CLASSIFICATION OF MATERIALS (based on samples recovered plus observation of material returned between samples)
0	11-13-10	0 - 1	Reddish yellow coarse to medium to fine sand, trace silt, trace gravel
		1 - 2	Brownish yellow fine sand, trace silt
	7-6-7-5	2 - 4	same
	8-13-16-37	4 - 6	Yellowish brown coarse to fine sand, trace fill, trace silt
5			
	47-100/5.5	6 - 8	same
	17-39-41-33	8 - 9	Light brownish gray medium to fine sand; little fill; little silt with reddish yellow and yellowish brown mottles
		9-10	Light brownish gray coarse to medium to fine sand, trace silt, trace gravel, with redish yellow mottles, little fill
10	41-43-45-52	10-11	Yellowish brown coarse to medium to fine sand, littlefill, trace silt, trace gravel
		11-12	Strong brown coarse medium to fine sand;trace fill; trace silt
	16-25-24-24	12 - 14	Yellowish brown medium to coarse to fine sand, little gravel, trace silt; (wet)
	7-12-18-20	14 - 16	Yellowish brown medium to coarse to fine sand, little silt, trace gravel
15			
	12-16-18-20	16 - 18	Reddish brown medium coarse sand; little silt and trace gravel

GROUNDWATER INFORMATION	
DATE:	7/16/01
TIME:	During Drilling
DEPTH:	11.5'

CONTRACTOR: Lipincott
DRILLER: Jim Maier
EQUIPMENT Diedrich D-10 Drill Rig
INSPECTOR: Mark Muraczewski

Remington & Vernick Engineers

232 King's Highway East Haddonfield, New Jersey 08033

TEST BORING LOG

Project No. 0408V123
Project: AABCO Steel Drum
Location: 308 - 322 North Front Street, Camden, New Jersey

Date: July 16, 2001
Client: City of Camden
Log of Boring No. B - 2

BORING DEPTH (FEET)	BLOW COUNT	SAMPLE DEPTH (FEET)	CLASSIFICATION OF MATERIALS (based on samples recovered plus observation of material returned between samples)
0	25/0	0 - 2	Concrete and wood
		2 - 4	same
	8-6-9-15	4 - 6	Yellowish brown medium to fine sand, trace fill, trace gravel, trace silt
5			
	22-36-38-51	6 - 8	Yellowish brown medium to fine sand, little fill, little gravel
	22-43-43-48	8 - 10	Yellowish brown coarse to medium to fine sand, little fill, little gravel
			same, with dark red mottles @ 9'
10	48-52-53-47	10 - 12	same as above (wet)
	16-26-36-41	12 - 14	Yellowish brown coarse to medium to fine sand, trace silt, little gravel
	13-15-13-26	14 - 16	Dark yellowish brown medium to fine sand, little silt, little gravel
15			
	17-36-42-40	16 - 18	same, with trace clay

GROUNDWATER INFORMATION	
DATE:	7/16/01
TIME:	During Drilling
DEPTH:	12'

CONTRACTOR: Lipincott
DRILLER: Jim Maier
EQUIPMENT Diedrich D-10 Drill Rig
INSPECTOR: Mark Muraczewski

Remington & Vernick Engineers

232 King's Highway East Haddonfield, New Jersey 08033

TEST BORING LOG

Sheet 1 of 1

Project No. 0408V123
Project: AABCO Steel Drum
Location: 308 - 322 North Front Street, Camden, New Jersey

Date: July 16, 2001
Client: City of Camden
Log of Boring No. B - 3

BORING DEPTH (FEET)	BLOW COUNT	SAMPLE DEPTH (FEET)	CLASSIFICATION OF MATERIALS (based on samples recovered plus observation of material returned between samples)
0	2-4-6-3	0 - 2	Reddish yellow medium to fine sand with crushed brick fill, trace gravel
	3-3-2-3	2 - 3	refusal (crushed red brick)
		3 - 4	Crushed red brick
	4-4-16-26	4 - 6	Strong brown medium to fine sand, little fill, trace silt, little gravel
5			
	23-27-38-53	6 - 8	Yellowish brown coarse to medium to fine sand, little fill, trace silt;trace gravel
	23-46-95-92	8 - 10	Strong brown/yellowish medium to fine sand, little fill, little gravel, trace silt, with red mottles
10	50-65-60-50	10 - 12	same as above
	16-18-16-30	12 - 14	Dark yellowish brown fine sand, little silt, trace gravel, trace fil
	12-38-40-12	14 - 16	Orange brown coarse to medium to fine sand, little silt, trace gavel, trace reddish brown clay
15			
	12-15-20-13	16 - 17.5	same as above
		17.5 - 18	Light olive/gray/red fine sand, trace silt

GROUNDWATER INFORMATION	
DATE:	7/16/01
TIME:	During Drilling
DEPTH:	11'

CONTRACTOR: Lipincott
DRILLER: Jim Maier
EQUIPMENT Diedrich D-10 Drill Rig
INSPECTOR: Mark Muraczewski

Remington & Vernick Engineers

232 King's Highway East Haddonfield, New Jersey 08033

TEST BORING LOG

Sheet 1 of 1

Project No. 0408V123
Project: AABCO Steel Drum
Location: 308 - 322 North Front Street, Camden, New Jersey

Date: July 16, 2001
Client: City of Camden
Log of Boring No. B - 4

BORING DEPTH (FEET)	BLOW COUNT	SAMPLE DEPTH (FEET)	CLASSIFICATION OF MATERIALS (based on samples recovered plus observation of material returned between samples)
0	6-6-5-8	0 - 2	Crushed brick and concrete over yellowish brown medium to fine sand
	33	2 - 4	refusal
	2-18-22-38	4 - 6	Dark yellowish brown medium to fine sand, trace gravel, little fill, trace silt, concrete
5			
	22-39-45-50	6 - 8	Yellowish brown fine sand, fill material
	18-25-29-48	8 - 9	fill
		9 - 10	Strong brown coarse to medium to fine sand, little silt, trace gravel
10	29-29-19-21	10 - 11	Strong brown coarse to medium to fine sand, with grayish brown clay pockets
		11 - 12	Brown medium to fine sand, little silt, trace gravel
	11-19-13-26	12 - 13	Strong brown coarse to medium to fine sand, trace silt, trace gravel
		13 - 14	Strong brown fine sand, trace gravel, little silt
	9-18-19-24	14 - 16	same as above
15			
	16-21-31-34	16 - 17	same as above
		17 - 18	Strong brown fine sand, little silt

GROUNDWATER INFORMATION	
DATE:	7/16/01
TIME:	During Drilling
DEPTH:	10.5'

CONTRACTOR: Lipincott
DRILLER: Jim Maier
EQUIPMENT Diedrich D-10 Drill Rig
INSPECTOR: Mark Muraczewski

Remington & Vernick Engineers

232 King's Highway East Haddonfield, New Jersey 08033

TEST BORING LOG

Sheet 1 of 1

Project No. 0408V123

Project: AABCO Steel Drum

Location: 308 - 322 North Front Street, Camden, New Jersey

Date: June 19, 2001

Client: City of Camden

Log of Boring No. GR

BORING DEPTH (FEET)	SAMPLE NUMBER	SAMPLE DEPTH (FEET)	CLASSIFICATION OF MATERIALS (based on samples recovered plus observation of material returned between samples)
0 - 3			Drilled Down through surface rubble of concrete, rebar, brick
			PID = 5.0
3 - 6	GR-6	6'	Brownish yellow medium to fine sand, trace gravel, trace silt;PID = 5.0
6 - 8	GR - 8	8'	Brown/olive green fine to medium sand, trace gravel, trace silt; PID = 2.0
8 - 10	GR - 10	10'	Brown/black/dark red medium to fine sand, trace silt; PID = 1.0
10 - 12	GR - 12	12'	Brown/dark gray medium to fine sand, trace silt; PID = 1.0
12 - 14	GR - 14	14'	Brown/dark gray medium to fine sand, trace silt; PID = 1.0
14 - 15	GR - 15	15'	Brown coarse to fine sand; PID = 1.0
			EOB @ 15'
			****Odor Detected**
			****PID = 1 - 5**

GROUNDWATER INFORMATION	
DATE:	6/19/01
TIME:	During Drilling
DEPTH:	11'

CONTRACTOR: Lipincott

DRILLER: Jim Maier

EQUIPMENT Drill Rig

INSPECTOR: Mark Muraczewski

APPENDIX F
REMEDIAL INVESTIGATION
MONITORING WELL INSTALLATION LOGS
WELL PERMITS

ABBCO STEEL DRUM, INC.
CAMDEN, NEW JERSEY
CAMDEN COUNTY

Remington & Vernick Engineers

232 King's Highway East Haddonfield, New Jersey 08033

MONITORING WELL LOG

Sheet 1 of 1 .

Project No. 0408V123 .
Project: AABCO Steel Drum
Location: 308 - 322 North Front Street, Camden, New Jersey

Date: July 20, 2001 .
Client: City of Camden
Log of Boring No. MW-1 .

BORING DEPTH (FEET)	BLOW COUNT	SAMPLE DEPTH (FEET)	CLASSIFICATION OF MATERIALS (based on samples recovered plus observation of material returned between samples)
1		0 - 1	Brown medium to fine sand; some silt; trace gravel; no odor; No PID readings
2		1-2	Brown medium to fine sand; some silt; trace gravel; stained; odor; PID = 12.0
6		2-6	Greenish black; medium to fine sand; some silt; stained; odor; PID reading = 8.0
14		6-14	Dark greenish black; medium to fine sand; some silt; stained; odor; PID readings were detected from 4.0 to 10.0
23		14-23	Dark gray medium to fine sand; little silt; stained ; odor PID readings ranged from 3.0 to 8.0
			EOB @ 23 feet below grade

GROUNDWATER INFORMATION	
DATE:	7/20/01
TIME:	During Drilling
DEPTH:	13.0'

CONTRACTOR: Lipincott
DRILLER: Jim Maier
EQUIPMENT Diedrich D-10 Drill Rig
INSPECTOR: Mark Muraczewski

SERIAL # 009617

DWR-133M (10/96)

Mail to

NJDEP
Bureau Water Allocation
CN 426
Trenton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

1021.89

MONITORING WELL PERMIT

CF

VALID ONLY AFTER APPROVAL BY THE D.E.P.

Permit No. 31611

COORD #: 31-21-645

Owner: CITY OF CAMDEN
Address: CITY HALL (PO BOX 95120)
CAMDEN NJ 08101

Name of Facility: ABBCO STEEL DRUM INC.
Address: 308-322 N. FRONT STREET
CAMDEN NJ

Driller: ERIC BLEMINGS
Address: c/o LIPPINCOTT & JACOBS CONSULTING ENG
1 PAVILION AVE RIVERSIDE NJ 08075

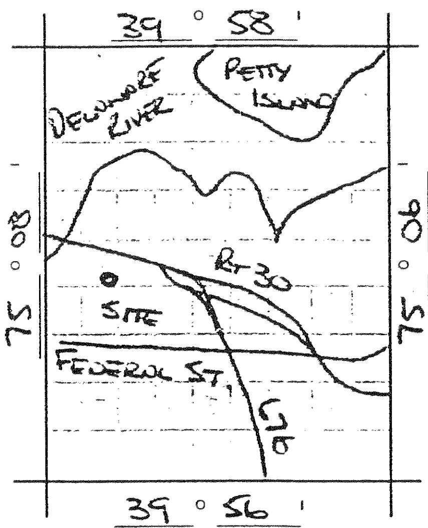
Diameter of Well(s): 4" Inches	Proposed Depth of Well(s): 25 Feet
# of Wells Applied for (max. 10): 1	Will pumping equipment be installed? YES ☐ NO ☒
Type of Well (see reverse): MONITORING WELL	If Yes, give pump capacity: cumulative GPM

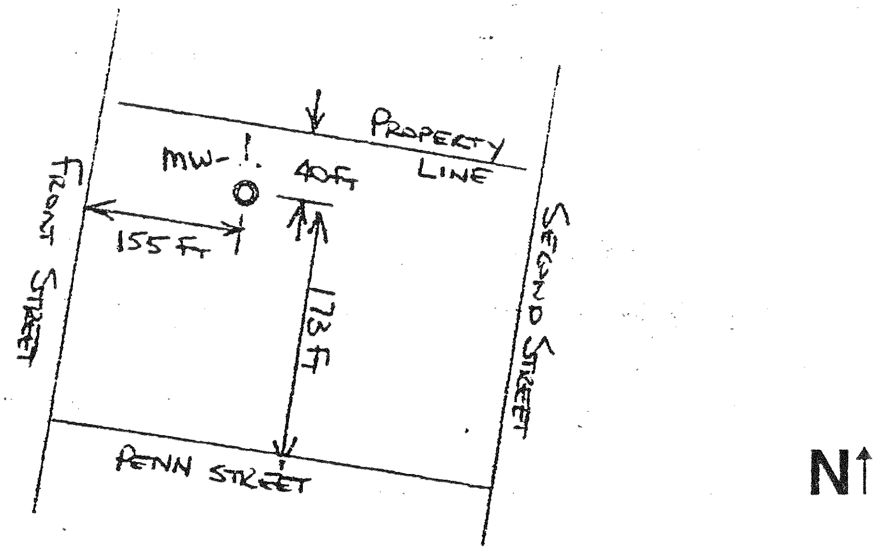
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
38 & 45	62	CITY OF CAMDEN	CAMDEN

State Atlas Map No. 31

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.





FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) REMEDIAL INVESTIGATION

CASE I.D. Number: 95-9-14-1206-53

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
JUN 29 2001
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE	
☐ Issuance of this permit is subject to the conditions attached. (see next page)	☐ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.
☐ For monitoring purposes only	
☐	

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date: JUNE 13, 2001 Signature of Driller: ________ Registration No. ________

Signature of Owner: [signature] FOR THE OWNER

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 31 - 61136

Atlas Sheet Coordinates 31 : 01 : 645

OWNER IDENTIFICATION - Owner CAMDEN, CITY
Address PO BOX 95120
City CAMDEN State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County CAMDEN Municipality CAMDEN CITY Lot No. 38 & 45 Block No. 60
Address 308-322 N FRONT STREET

DATE WELL STARTED 7/20/01
DATE WELL COMPLETED 7/20/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well — Case I.D.# —

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) — Tele. # —

WELL CONSTRUCTION

Total depth drilled 23 ft.
Well finished to 23 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☑ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Was steel protective casing installed? ☐ Yes ☑ No

Static water level after drilling 12 ft.

Water level was measured using M Scope

Well was developed for 1 hours at 2 gpm

Method of development Submersible pump

Was permanent pumping equipment installed? ☐ Yes ☑ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig D-50

Health and Safety Plan submitted? ☐ Yes ☑ No

Level of Protection used on site (circle one) (None) D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 0.10T)	13'	23'	4	PVC	40
Blank Casings (No. Used)	+3'	13'	4	PVC	40
Tail Piece					
Gravel Pack	11'	23'		#2	
Grout	11'	+6"		Neat Cement Bentonite	280 lbs. 15 lbs.

Grouting Method pressure grout
Drilling Method Hollow Stem Augers

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0'-23' Brown & lt. brown fine sand, some gravel & silt

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company [illegible] ENGINEERING
Well Driller (Print) James P Moore
Driller's Signature [signature]
Registration No. NJD022658 Date 8/23/01

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Permit # 3161136

LIPPINCOTT JACOBS & GOUDA atlat # 3101645

One Pavilion Avenue Riverside, New Jersey 08075

PROJECT NO. 9027
DATE 7/20/01

SHEET 1 OF 1
SURFACE ELEV

PROJECT Camden CLIENT

LOCATION 2nd Street & Front Street LOG OF BORING NO. MW-1

DEPTH	SAMPLE NUMBER	TYPE *	SAMPLE DEPTH	NUMBER OF BLOWS PER 6"	CLASSIFICATION OF MATERIALS BASED ON SAMPLES RECOVERED PLUS OBSERVATION OF MATERIAL RETURNED BETWEEN SAMPLES	MOISTURE CONTENT
5					drilled to 23' installed well	
10					no sampling needed	
15					used 1 10' 10 slot screen 1 5' riser	
20					1 10' riser 1 J plug	
25					1 lock 1 protective well protector 7 bags of #2 sand	
30					5 bags portland	
35					notes 12'	
40						

R-106 Rev.2/77

REVERSE SIDE OF THIS LOG MUST BE COMPLETED AND SIGNED

* A. STANDARD PENETRATION TEST (ASTM-D 1586)
B. STANDARD THIN-WALLED 3" TUBE (ASTM-D 1587)
C. CORE DRILLING

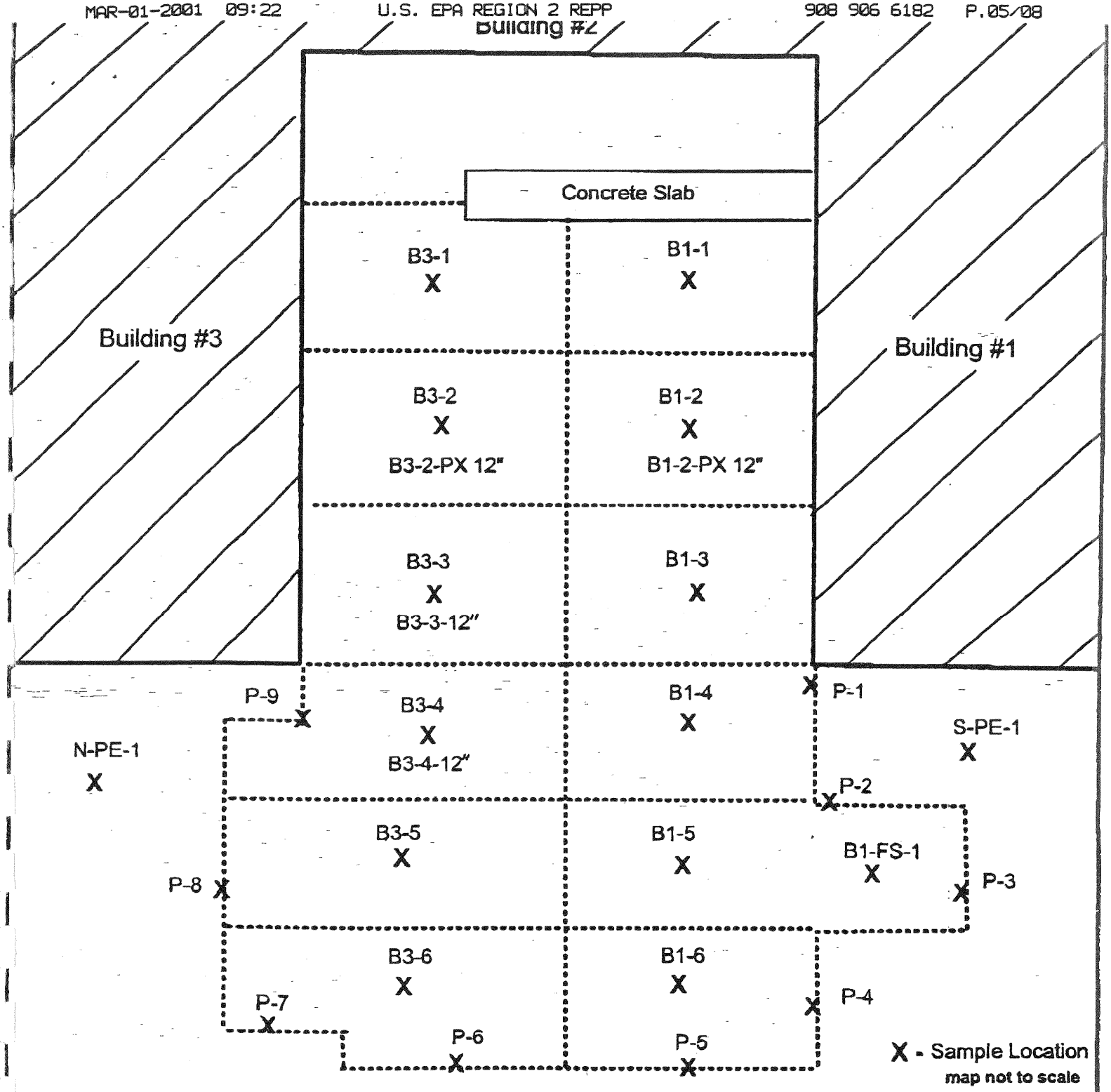
DRILLER [signature] HELPER Mike Moffitt EQUIPMENT D-50-1

APPENDIX G
REMEDIAL INVESTIGATION
NJDEP WATER ALLOCATION WELL DATA

ABBCO STEEL DRUM, INC.
CAMDEN, NEW JERSEY
CAMDEN COUNTY

APPENDIX H
REMEDIAL INVESTIGATION
USEPA SOIL REMEDIAL ACTIVITIES
DATA

ABBCO STEEL DRUM, INC.
CAMDEN, NEW JERSEY
CAMDEN COUNTY



Front Street

WESTON MANAGERS DESIGNERS/CONSULTANTS Roy F. Weston, Inc. FEDERAL PROGRAMS DIVISION IN ASSOCIATION WITH INLAND POLLUTION P.R., INC, RESOURCE APPLICATIONS, INC., AND GRB ENVIRONMENTAL SERVICES, INC.	EPA OSC D. Graham RST Site PM M. Garibaldi	**Figure 1** **Container Recyclers** **Camden, N.J.** Sample Location Map Excavation Grid for Lead Screening

Project: Container Recyclers Site

Sampling Date: July 18, 2000

SAMPLE #/CONCENTRATION (MG/KG)

Total Metals	Matrix: / Client ID: / Lab ID:	SOIL B1-2 ADO11610	SOIL B3-1 ADO11611	SOIL B3-3-12 ADO11615	SOIL B3-4 ADO11612	SOIL B3-5 ADO11613
Percent Solids		99.7	99.1	99.2	99.3	99.6
Dilution Factor	IDL	1.0	1.0	1.0	10.0	1.0
Lead	0.6	2880 J	11.4 J	7.4 J	14800 J	2240 J

Total Metals	Matrix: / Client ID: / Lab ID:	SOIL B3-6 ADO11614	SOIL N-PE-1 ADO11616	SOIL P6 ADO11617		
Percent Solids		94.7	99.1	98.3		
Dilution Factor	IDL	1.0	1.0	1.0		
Lead	0.6	1120 J	257 J	1030 J		

Inorganic Qualifiers

IDL - Instrument Detection Limit
U - non-detected compound
J - estimated value
B - between the instrument detection limit (IDL) and the contract required detection limit (CRDL)
R - rejected compound
NA - not applicable

CONTAINER RECYCLERS
CAMDEN, NEW JERSEY
TABLE 1. SAMPLE DESCRIPTIONS

Sample Number	TIME/DATE	Description
B1-2	1050 7/18/00	Post-excavation grab floor soil sample @ 2' depth/ see grid B1-2
B3-1	1100 7/18/00	Post-excavation grab floor soil sample @ 2' depth/ see grid B3-1
B3-4	1110 7/18/00	Post-excavation grab floor soil sample @ 2' depth/ see grid B3-4
B3-4 MS/MSD	1110 7/18/00	Post-excavation grab floor soil sample @ 2' depth Matrix Spike/ see grid B3-4
B3-5	1115 7/18/00	Post-excavation grab floor soil sample @ 2' depth/ see grid B3-5
B3-6	1120 7/18/00	Post-excavation grab floor soil sample @ 2' depth/ see grid B3-6
B3-3-12	1310 7/18/00	Post-excavation grab floor soil sample @ 2' depth + 12 inches/ see grid B3-12
N-PE-1	1330 7/18/00	Post-excavation grab floor soil sample @ 2' depth/ see grid N-PE-1
P6	1400 7/18/00	Post-excavation grab wall soil sample @ 2' depth/ see wall location P6

CONTAINER RECYCLER
CAMDEN, NEW JERSEY
XRF SCREENING RESULTS

30/15/15	Lead-Pb (ppm)	30/15/15	Lead- Pb (ppm)
B3-5 X	408	B3-5REP	443
B3-4 X	2850	B3-5DUP	419
B3-3	212	B3-6 X	373
B1-3	212	B3-1 X	-14
B1-6	686	B1-2 X	1402
B3-2	2720	B1-FS-1	345
P-6 X	772	P-5	859
B1-4	783	B1-1	662
P-1	1268	P-2	784
P-3	243	P-4	350
P-4 REP	345	P-7	536
P-9	325	B1-5	515
B1-5 REP	532	B3-3-12" X	-3.4
B3-3-12" DUP	-2.4	B3-4-12"	23
B3-4-12" DUP	0.9	S-PE-1	439
S-PE-1 REP	517	N-PE-1 X	172
N-PE-1	168	B3-4-PX	3.0
B1-2-PX	404	B3-2-PX	-13

Field Screening performed using a Spectrace 9000 XRF detector for lead using cadmium, iron, and americium @ 30,15,15 sec.intervals.
X - Laboratory Analysis for lead

B. Planned Removal Actions

All removal activities within the scope of the Action Memorandum have been completed. No other removal actions are anticipated at this time.

C. Key Issues

None at this time.

V Cost Information

ERRS Costs to Date	$	68,000
START Costs to Date	$	6,000
EPA Costs to Date	$	6,000
Total	$	80,000
Project Ceiling	$	300,000
Remaining Project Ceiling		73.3 %

The above accounting of expenditures is an estimate based on figures known to the On-Scene Coordinator at the time this report was written. The cost accounting provided in this report does not necessarily represent an exact monetary figure, which the government may include in any cost recovery claim.

VI Disposition of Waste

Wastestream	Volume	Disposal	Facility
Non-Haz Soil (Pb)	750 tons	09/20/00	Gross Landfill (CWM)
Non-Haz Debris (empty drums)	20 cubic yards	07/17/00	BFI Landfill (CycleChem)
Drummed Haz-Waste (D001,D002)	60 gallons	08/22/00	Chemtron Avon, OH
Drummed Non-Haz Waste	75 gallons	08/22/00	Chemtron Avon, OH

B. Site Description

The Container Recyclers Site is located at 308-322 North Front Street in the City of Camden, Camden County, New Jersey. The Site includes a large multilevel structure at the rear of the Site with an unpaved courtyard/parking area in the front of the Site bordering North Front Street. Although fenced, the Site is frequented by vagrants and other trespassers.

The Site was operated as a toilet manufacturing facility until 1975 at which time ownership of the property was transferred to Martin Aaron and Morris Silverman who utilized the facility for the recycling of drums. In 1983 ownership of the property was transferred to North Front Associates who also utilized the property for the recycling of drums. The Site was foreclosed upon by the City of Camden in1996.

The Site was referred for CERCLA Removal Action consideration through EPA's Brownfields Program. The referral was based upon the presence of numerous drums within the building, and soil contamination in the courtyard/parking area. EPA's Removal Site Evaluation confirmed the Site's eligibility for CERCLA removal action funding based upon the potential release of hazardous substances from the drums, and the elevated concentrations of lead present in the courtyard surface soils.

IV Response Information

A. Situation

1. Current Situation

Upon completing all removal activities within the scope of the Action Memorandum, the Emergency and Rapid Response Services (ERRS) contractor was demobilized from the Site on September 22, 2000.

2. Removal Actions to Date

Upon completing the initial phase of Site operations, ERRS demobilized on July 19, 2000 to coordinate the off-site disposal of all secured waste (ie. soil, drums).

ERRS remobilized on August 22, 2000 to complete the off-site shipment of all drummed waste.

ERRS was remobilized on September 19, 2000 to complete the shipment of contaminated soils, and Site restoration activities. Upon completion of these activities, ERRS was demobilized on September 22, 2000.

U.S. Environmental Protection Agency
Pollution Report

I Heading

Date: November 29, 2000
Subject: Container Recyclers Site,
City of Camden, Camden County, New Jersey
From: Donald R. Graham,
On-Scene Coordinator
To: R. Salkie, EPA
J. Rotola, EPA
G. Zachos, EPA
D. Karlen, EPA
B. Bellow, EPA
T. Johnson, EPA
A. Devine, EPA
B. Dease, EPA
R. Byrnes, 2OIG
J. Smolenski, DEP
A. Raddant, DOI
START
Polrep No.: Two (2) and Final

II Background

Site No.: MW
Contract No.: 68-S2-99-07
Delivery Order No.: 0017
NPL Status: Non-NPL
Action Memo: 04/14/00
06/29/00 (Change in Scope)
Start Date: 06/29/00
Completion Date: 09/22/00

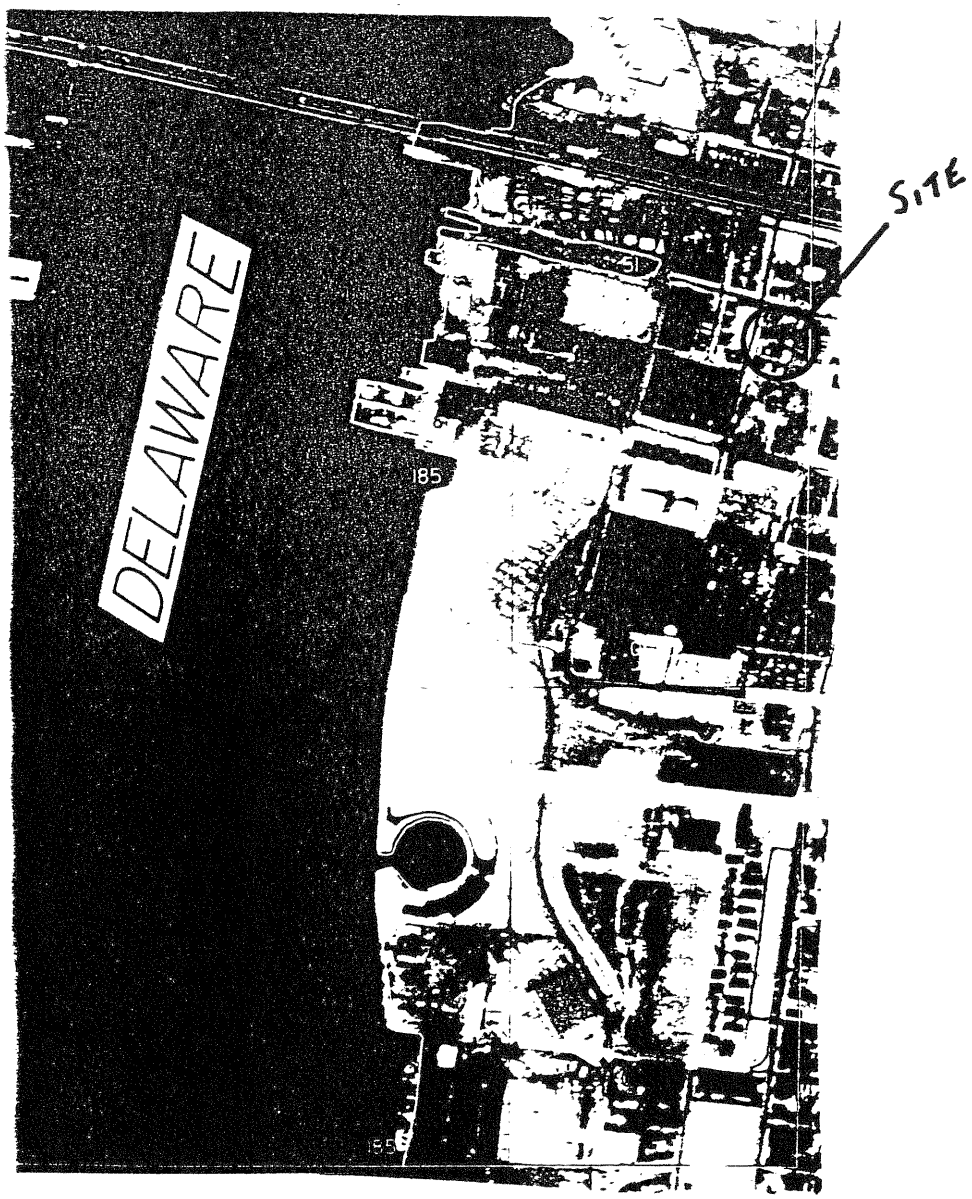
III Site Information

A. Incident Description

Abandoned Drum Recycler

APPENDIX I
REMEDIAL INVESTIGATION
PHILADELPHIA N.E. WETLAND MAP

ABBCO STEEL DRUM, INC.
CAMDEN, NEW JERSEY
CAMDEN COUNTY



WETLAND MAP

FRESHWATER
WETLAND MAP
PHILEDELPHIA, N.E.

ABC BARREL COMPANY
BLOCK 62, LOT 45 BLOCK 148, LOT 45
CITY OF CAMDEN
CAMDEN COUNTY

APPENDIX J
REMEDIAL INVESTIGATION CERTIFICATIONS

ABBCO STEEL DRUM, INC.
CAMDEN, NEW JERSEY
CAMDEN COUNTY

0'	to	12'	sand and loam
12'	to	21'	sand and gravel
21'	to	25'	sandy clay
25'	to	32'	dirty brown sand
32'	to	64'	gray clay
64'	to	80'	sandy clay and gravel
80'	to	103'	gravel and clay
103'	to	114'	sandy clay
114'	to	126'	white sand

31.01.651
31-801

31.1.6.65 [9]

Form 87-54

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

Permit No. 31-905
Application No. 757
County _____
31-01-665

WELL SEALED 12/27/73

WELL RECORD

LAYNE WELL NO. 14

1. OWNER CITY OF CAMDEN ADDRESS CAMDEN, NEW JERSEY
   Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION HARRISON AVE. & 17TH ST., EDGE OF MORRO PHILLIPS TRACT, CAMDEN, N. J.
3. DATE COMPLETED 6-1-53 DRILLER LAYNE NEW YORK CO., INC.
4. DIAMETER: Top 18 Inches Bottom 18 Inches TOTAL DEPTH 150 Feet
5. CASING: Type STEEL Diameter 30,24&18 Inches Length 36,100&105 Feet
6. SCREEN: Type LAYNE Size of Opening SHUTTER Diameter 18 Inches Length 40 Feet
   Range in Depth { Top 105 Feet / Bottom 145 Feet } Geologic Formation SAND, BOULDERS & STREAKS OF CLAY
   Tail piece. Diameter 18 Inches Length 5 Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 6-1-53 Yield 1,000 Gallons per minute
   Static water level before pumping 35 Feet below surface
   Pumping level 87 feet below surface after 8 hours pumping
   Drawdown 52 Feet Specific Capacity 1000/52 G.P.M. per min. per ft. of drawdown
   How Pumped ELEC How measured ORIFICE
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type TURBINE Capacity 1000 Gallons per minute
   How Driven ELEC. Horse Power 75 R.P.M. 1800
   Depth of pump in well 105 Feet Depth of Foot piece in well 115 Feet
   Depth of Air Line in well 115 Feet Type of Meter on Pump _____
10. USED FOR PUBLIC SUPPLY AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No. _____
    Taste _____ Odor _____ Color _____ Temperature _____ °F
12. LOG SEE REVERSE SIDE (Give details on back of sheet or on separate sheet) Are samples available? _____
13. SOURCE OF DATA LAYNE NEW YORK CO., INC.
    DATA OBTAINED BY LAYNE NEW YORK CO., INC. DATE SEPTEMBER 9, 1954

Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

31-905
31-01-665

EACH STRATUM	DEPTH OF STRATA	FORMATION
9'	9'	Fill
12'	21'	River Mud
30'	51'	Gravel, Sand, Streaks of Clay
15'	66'	Clay with Streaks of Sand
20'	86'	Red and White Clay
10'	96'	Soft Clay
22'	118'	Sand and Streaks of Clay
2'	120'	Clay
10'	130'	Coarse Sand
5'	135'	Clay
10'	145'	Sand and Boulders
19'	164'	Clay and Mica Rock

31-905
31-01-665

31.1.6.6.4 [ ]

Form 67-5M

Permit No. 31-940

Application No. 253

County _____

DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply
WELL RECORD
LAYNE WELL #1-A

31.01.664

1. OWNER Camden Water Department ADDRESS Camden, New Jersey
   Owner's Well No. City Well #1-A SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Camden, New Jersey
3. DATE COMPLETED 12/17/53 DRILLER Layne-New York Co., Inc.
4. DIAMETER: Top 18 Inches Bottom 18 Inches TOTAL DEPTH 175 Feet
5. CASING: Type Steel Diameter 30 - 24 & 18" Inches Length 90, 130 & 135 Feet
6. SCREEN: Type Layne Size of Opening Shutter Diameter 18 Inches Length 35 Feet
   Range in Depth { Top 135 Feet Bottom 170 Feet Geologic Formation Sand, Gravel & Boulders
   Tail piece. Diameter 18 Inches Length 5 Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 12/17/53 Yield 1,000 Gallons per minute
   Static water level before pumping 42' Feet below surface
   Pumping level 96 feet below surface after 8 hours pumping
   Drawdown 54 Feet Specific Capacity 1000/54 Gals. per min. per ft. of drawdown
   How Pumped Elec. How measured Orifice
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type Turbine Capacity 1,000 Gallons per minute
   How Driven Electric Horse Power 75 R.P.M. 1,800
   Depth of pump in well 125 Feet Depth of Foot piece in well 135 Feet
   Depth of Air Line in well 135 Feet Type of Meter on Pump _____
10. USED FOR Public Supply AMOUNT { Average _____ Gallons Daily; Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes _____ No. _____
    Taste _____ Odor _____ Color _____ Temperature _____ °F
12. LOG See Reverse Side Are samples available? _____
    (Give details on back of sheet or on separate sheet)
13. SOURCE OF DATA Layne-New York Company, Inc.
14. DATA OBTAINED BY Layne-New York Co., Inc. DATE September 22, 1954

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

EACH STRATUM	DEPTH OF STRATA	FORMATION
10'	10'	Cinders
30'	40'	Muddy Sand
6'	46'	Clay
18'	64'	Coarse Sand
18'	82'	Yellow Clay
4'	86'	Fine Sand
30'	116'	Red Clay
12'	128'	Blue Clay
48'	176'	Coarse Sand, Gravel & Boulders
4'	180'	Blue Clay, Mica Rock

31.01.644
31-940

Form 67-5M

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

WELL RECORD

Permit No. 31-948
Application No. _____
County 31.165.1 [7]

1. OWNER U. S. Gasket Company ADDRESS 602 N. 10th St. - Camden, N. J.
Owner's Well No. 1 SURFACE ELEVATION _____ Feet (Above mean sea level)

2. LOCATION 602 N. 10th St. - Camden, New Jersey

3. DATE COMPLETED 8/28/53 DRILLER A. C. Schultes & Sons

4. DIAMETER: Top 6" Inches Bottom 4½" Inches TOTAL DEPTH 141 Feet

5. CASING: Type Steel Diameter 6 Inches Length 131' 4" Feet

6. SCREEN: Type Cook Size of Opening .040 Diameter 4½" Inches Length 11' 1" Feet
Range in Depth { Top 129' 11" Feet Bottom 141 Feet Geologic Formation Gravel & Stones
Tail piece. Diameter _____ Inches Length _____ Feet

7. WELL FLOWS NATURALLY No Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface

8. RECORD OF TEST: Date 8/11/53 Yield 100 Gallons per minute
Static water level before pumping 48 Feet below surface
Pumping level Approx. 75 feet below surface after 6 hours pumping
Drawdown Approx. 27 Feet Specific Capacity Approx. Gals. per min. per ft. of drawdown
How Pumped Air Compressor How measured 55 gal. drum
Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:
Type Vertical Turbine Pump Capacity 50 Gallons per minute
How Driven Electric Motor Horse Power 10 R.P.M. 1800
Depth of pump in well 80 Feet Depth of Foot piece in well None Feet
Depth of Air Line in well None Feet Type of Meter on Pump None

10. USED FOR Process AMOUNT { Average 50,000 Gallons Daily; Maximum 60,000 Gallons Daily

11. QUALITY OF WATER 52.8 p/m of iron Sample: Yes ✓ No. _____
Taste Irony Odor None Color Clear Temperature 57 °F

12. LOG _____ Are samples available? Picked Up
(Give details on back of sheet or on separate sheet)

13. SOURCE OF DATA Drillers Log

14. DATA OBTAINED BY A.C. Schultes & Sons DATE 10/1/53

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

WELL LOG

0'	- 4'	Fill
4'	- 16'	Yellow clay and sand
16'	- 19'	Reddish sand and stones
19'	- 27'	Sand and stones
	Water at 19'	
27'	- 32'	White and yellow clay - stones
32'	- 54'	River mud
54'	- 57'	White clay and sand
57'	- 68'	Brown clay
68'	- 73'	Gray clay and sand
73'	- 76'	Sand, gravel and stones
76'	- 87'	White gravel, stones
87'	- 93'	Yellow gravel, stones
93'	- 98'	Red clay and gravel
98'	- 107'	Gravel and sand
107'	- 112'	Stones
112'	- 116'	White clay and stones
116'	- 119'	White gravel, sand and stones
119'	- 123'	Yellow sand, gravel and stones
123'	- 125'	White gravel and stones
125'	- 127'	White clay
127'	- 133'	Yellow sand, gravel and stones
133'	- 138'	Yellow gravel and stones
138'	- 141'	White gravel and stones
141'	- 141½'	Iron rock
141½'		Weather rock

Raritan

31.01.651
31-948

Form 7-5M

31.1.6.55 ☐

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

WELL RECORD

Permit No. 31-1696
File
~~Application~~ No. A31-42
County
31.01.655

1. OWNER H. Kohnstamm & Co, Inc., ADDRESS Camden, N. J.
   Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Lemuel & Lois Ave, Camden, N. J.
3. DATE COMPLETED Dec. 15, 1954 DRILLER J. Henry Robbins
4. DIAMETER: Top 6 Inches Bottom 6 Inches TOTAL DEPTH ~~136~~ 136 Feet
5. CASING: Type Blk. Steel Diameter _____ Inches Length ~~116~~ 116 Feet
6. SCREEN: Type Cook Size of Opening #40 Diameter 5½ Inches Length 20 Feet
   Range in Depth { Top 116 Feet / Bottom 136 Feet } Geologic Formation Sand
   Tail piece. Diameter None Inches Length _____ Feet
7. WELL FLOWS NATURALLY No Gallons per Minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date Dec. 15, 1954 Yield 150 Gallons per minute
   Static water level before pumping 50 Feet below surface
   Pumping level 50 feet below surface after 6 hours pumping
   Drawdown None Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How Pumped Air How measured Barrel
   Observed effect on nearby wells None
9. PERMANENT PUMPING EQUIPMENT:
   Type I installed pipes in well Capacity _____ Gallons per minute
   How Driven _____ Horse Power _____ R.P.M. _____
   Depth of pump in well _____ Feet Depth of Foot piece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____
10. USED FOR Factory Use AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER Good Sample: Yes _____ No. _____
    Taste Good Odor None Color ~~Clear~~ Temperature _____ °F
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet)
13. SOURCE OF DATA J. Henry Robbins
14. DATA OBTAINED BY Same DATE Jan. 19, 1955

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

31-1696
31-61-655

0	ft.	to	6	ft. Filled Dirt-Cinders, Sand & Stone
6	ft.	to	30	ft. Yellow Clay - Mixed with Sand
30	ft.	to	90	ft. Black Clay
90	ft.	to	105	ft. Red Clay
105	ft.	to	116	ft. White Clay & Sand
116	ft.	to	136	ft. White Sand

31-1696 A31-42

A. C. SCHULTES & SONS *Contractors* TEST HOLES - WATER FOR ALL PURPOSES

ESTABLISHED 1921 ARTESIAN WELLS

501 MANTUA AVENUE - WOODBURY, NEW JERSEY

Phone: Tilden 8-5656

Deep Well Pump Repairs

Distributors of Worthington Pumps Vertical Turbine Pumps

31-1-655

31-1696

June 10th, 1960

DEPT. CONS. & ECON. DEV. DIVISION OF WATER POLICY AND SUPPLY JUN 13 1960 RECEIVED

Department of Conservation
And Economic Development
Div. of Water Policy & Sup.
State Street
Trenton, New Jersey

Attention: Mr. Hardman

Subject: Kohnstamm Co., Inc.
Camden, New Jersey
Well No. 3
Sealing Abandoned Well

Gentlemen:

This is to notify you we recently sealed and capped subject well.

This well was drilled by J. H. Robbins Company in 1954. Well is 134'-2" deep, 6" in diameter, with approximately 25' of screen.

This is all the technical data available from our office. If you desire further information, we suggest you contact Robbins Company, Gibbsboro, N. J.

Well was sealed according to regulations of the State.

Very truly yours,

A. C. SCHULTES & SONS

John O. Ennis

John O. Ennis

JOE/jo

FORM 87

31 01 652

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY & SUPPLY

Permit No. 31 4649
Application No. 297
County _____

WELL RECORD

31.01.652

1. OWNER CITY OF CAMDEN ADDRESS CAMDEN, N.J
Owner's Well No. #5 N LAYNE 5A SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION CAMDEN, CAMDEN COUNTY, N.J.
3. DATE COMPLETED 10/24/63 DRILLER LAYNE NEW YORK CO. INC
4. DIAMETER: top 18 Inches Bottom 18 Inches TOTAL DEPTH 171 Feet
5. CASING: Type STEEL Diameter 18 Inches Length 134 Feet
6. SCREEN: Type STAINLESS STEEL Size of Opening SHUTTLE Diameter 16 Inches Length 35 Feet
Range in Depth { Top 134 Feet, Bottom 169 Feet } Geologic Formation FINE TO COARSE SAND & GRAVEL STKS OF CLAY
Tail piece: Diameter 18 Inches Length 2 Feet
7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date 10/29/63 Yield 1000 Gallons per minute
Static water level before pumping 58 Feet below surface
Pumping level 90 feet below surface after 8 hours pumping
Drawdown 32 Feet Specific Capacity 31.3 Gals. per min. per ft. of drawdown
How Pumped TURBINE How measured CRITICK
Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
Type TURBINE Mfrs. Name LAYNE & BOWLER INC MEMPHIS TENN
Capacity 1000 G.P.M. How Driven ELEC. MOTOR H.P. 60 R.P.M. 1800
Depth of Pump in well 124 Feet Depth of Footpiece in well 10 Feet
Depth of Air Line in well 134 Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR PUBLIC SUPPLY AMOUNT { Average _____ Gallons Daily, Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No. _____
Taste _____ Odor _____ Color _____ Temp. _____ °F
12. LOG SEE REVERSE SIDE Are samples available? _____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy)
13. SOURCE OF DATA LAYNE NEW YORK CO. INC
14. DATA OBTAINED BY LAYNE NEW YORK CO. INC Date 4/27/64

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

0'-1'	TOP SOIL
1'-4'	FILL
4'-12'	SANDY YELLOW CLAY
12'-18'	TOUGH RED & WHITE CLAY
18'-40'	SANDY RED WHITE & YELLOW CLAY
40'-54'	FINE TO MEDIUM SAND & GRAVEL
54'-77'	SANDY YELLOW & WHITE CLAY STREAKS OF SAND & GRAVEL
77'-132'	SANDY RED WHITE YELLOW CLAY STREAKS OF SAND & GRAVEL
132'-142'	FINE TO MEDIUM SAND & GRAVEL STREAKS OF CLAY
142'-175'	FINE TO COARSE SAND & GRAVEL STREAKS OF CLAY

31.01.652
31-4649

DWR-138
5/95

New Jersey Department of Environmental Protection
Bureau of Water Allocation

WELL RECORD

Well Permit Number
~~31~~ ~~55502~~

Atlas Sheet Coordinates
~~31~~ ~~01~~ ~~647~~

OWNER EXLEY, ROBERT

Address 1525 TANYARD RD.

City SEWELL State NJ Zip Code

WELL LOCATION ADDRESS SALINA RD. Owner's Well No. 2

County GLOUCESTER Municipality DEPTFORD TWP Lot No. 2 Block No. 422

WELL USE IRRIGATION

DATE WELL STARTED 4 / 2 / 99
DATE WELL COMPLETED 4 / 2 / 99

WELL CONSTRUCTION

Total Depth Drilled 320 ft.

Finished Well Depth 315 ft.

Borehole Diameter:
Top 8 in.
Bottom 8 in.

Well Casing Begins:
1 ft. above grade or
_____ ft. below grade

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+1	295	4	PVC	40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	295	315	4	PVC 020	40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	285	315		#1	
Grout	0	285		Neat Cement Bentonite	_____ lbs 200 lbs

RECORD OF TEST

Test Date 4 / 12 / 99
Static Water Level 101 ft. below land surface
Water Level Measured Using M-Scope
Pumping Water Level 120 ft. below land surface
Well Was Pumped Using Sub
Well Yield 50 gpm
If Pump Tested: Discharge Rate 50 gpm
Duration of Test 15 hours

Grouting Method Tremie
Drilling Method Mud Rotary

PERMANENT PUMPING EQUIPMENT

Installed by Charles Kramer Reg. No. 1060
Pump Type Sub
Depth of Pump below land surface 189 ft.
Capacity 50 gpm Horsepower 5

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company EASTERN DRLG. - CHARLES KRAMER
Well Driller (Print) JAMES KRAMER
Driller's Signature James Kramer
Registration No. 1060 Date 4 / 13 / 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

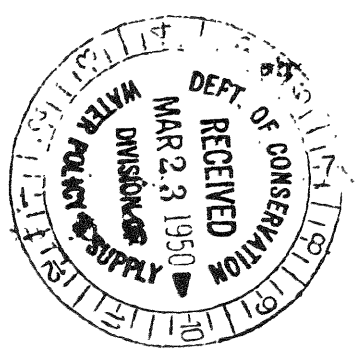
0-1 Top Soil
1-17 Fine Sand
17-77 Sandy silt + clay
77-90 Blue silt
90-95 Hard Layer
95-140 Sandy Sand
140-250 Clay Sand
250-270 silty Sand + clay
270-320 Med White Sand

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

0 - 12	Sand	) Cape May	
12 - 21	Gravel & Stones		
21 - 48	Gray Clay		
48 - 74	Brown Clay	} Raritan	
74 - 81	Stones & Sand		
81 - 82	Green Marl		
82 - 90	Stones & Sand		
90 - 94	Yellow Clay		
94 - 100	Fine Sand		
100 - 103	Clay & Sand		
103 - 107	Clayey Sand		
107 - 113	Large Stones & Gravel		

31.01.657

31-89



31-1-681

Form 87-5M-4-49

RECEIVED
APR 18 1950
Department of Conservation & Economic Development

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

WELL RECORD

Permit No. 31-90
Application No.
County Camden
31.01.681

1. OWNER Delaware Investment Corp. ADDRESS
Owner's Well No. Discharge Well #2 SURFACE ELEVATION 20' Feet (Above mean sea level)
Broadway Theatre
2. LOCATION Broadway and Carmen Sts., Camden, N.J.
3. DATE COMPLETED 4/7/50 DRILLER A. C. SCHULTES AND SONS
4. DIAMETER: Top 10" Inches Bottom 10" Inches TOTAL DEPTH 130 Feet
5. CASING: Type Black Steel Diameter 10" Inches Length 110' Feet
6. SCREEN: Type Cook Size of Opening .040 Diameter 10" Inches Length 21' Feet
Range in Depth {Top 110 Feet Bottom 130 Feet Geologic Formation Raritan
Tail piece: Diameter None Inches Length None Feet
7. WELL FLOWS NATURALLY No Gallons per Minute at X Feet above surface
Water rises to X Feet above surface
8. RECORD OF TEST: Date 4/7/50 Yield 500 Gallons per minute
Static water level before pumping 55' Feet below surface
Pumping level 90' feet below surface after 8 Hrs. hours pumping
Drawdown 35 Feet Specific Capacity 14 Gals. per min. per ft. of drawdown
How Pumped Turbine How measured Orifice
Observed effect on nearby wells None
9. PERMANENT PUMPING EQUIPMENT:
Type None Capacity Gallons per minute
How Driven Horse Power R.P.M.
Depth of pump in well Feet Depth of foot piece in well Feet
10. USED FOR Returning water to ground AMOUNT {Average Gallons Daily Maximum Gallons Daily
11. QUALITY OF WATER Fair Sample: Yes No
Taste None Odor None Color Clear Temperature 59 °F
12. LOG (Give details on back of sheet or on separate sheet) Are samples available?
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY August C. Schultes, Jr. DATE 4/13/50

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

0	-	8	Fill
8	-	24	Large Stones
24	-	46	Gray Clay
46	-	70	Brown Clay
70	-	72	Green Marl
72	-	74	Brown Sand
74	-	76	Gravel
76	-	80	Yellow Clay
80	-	86	Gravel
86	-	90	Fine Sand
90	-	95	White Clay
95	-	98	Gravel & Clay
98	-	105	Gravel
105	-	130	Sand & Gravel

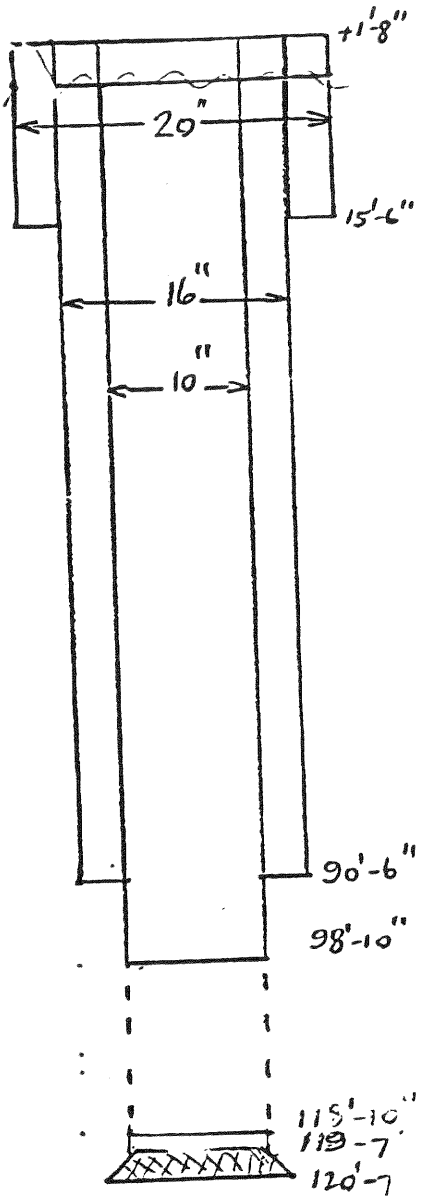
31-01-681
31-90

31-L-681

31-90

31-01-681

Clay	+14'-3"
Concrete Floor	+ 13'-5"
Boiler Room Floor 13"C	.0
Sandy Clay 4'-9	
Boulders 10'-9	
Sd. & Gr. 15-9	
Tough Blue Clay 30'-9	
Tough Brown Clay 48'-9	
Tough Red Cl. 56	
Sandy Clay 61	
Sand & Gr. 64	
Boulders & Gravel 84	
Boulders & Gravel with Clay Balls 101	
Bldrs & Gr. 109	
Bldrs & Gr. (Clay Balls) 118	



17' of 20" Pipe Welded.
92'-0" of 16" " "
100-4" of 10" Pipe T&C
20'-0" of 10" Everdur Screen
1-10" x 6" long Nipple.
1-10" x 14¾" x 12" long Cone

Plug ~~18'~~ Concrete

Issued

LAYNE-NEW YORK CO., INC.
P. O. BOX 212
MOORESTOWN, N. J. 08057

Camden Trust Co.
Camden N.J

Well 1.

Form 87-5M-4-49

31-2-449

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

Permit No. 31-92
Application No.
County Camden
31.02.449

WELL RECORD

1. OWNER Savar Amusement Corp. ADDRESS

Owner's Well No. Victoria Theatre SURFACE ELEVATION 25' (Above mean sea level) Feet

2. LOCATION 26th & Federal Sts., Camden, NJ

3. DATE COMPLETED 11/1/49 DRILLER A. C. SCHULTES AND SONS

4. DIAMETER: Top 10" Inches Bottom 10" Inches TOTAL DEPTH 189 Feet

5. CASING: Type BLACK STEEL Diameter 10" Inches Length 169 Feet

6. SCREEN: Type COOK Size of Opening .040 Diameter 10" Inches Length 22 Feet

Range in Depth { Top 169 Feet / Bottom 189 Feet } Geologic Formation Raritan

Tail piece: Diameter None Inches Length Feet

7. WELL FLOWS NATURALLY No Gallons per Minute at X Feet above surface

Water rises to X Feet above surface

8. RECORD OF TEST: Date 10/24/49 Yield 450 Gallons per minute

Static water level before pumping 40' Feet below surface

Pumping level 90ft. feet below surface after 8 hrs. hours pumping

Drawdown 50 Feet Specific Capacity 9 Gals. per min. per ft. of drawdown

How Pumped Deep Turbine How measured Orifice

Observed effect on nearby wells None

RECEIVED NOV 3 1949 Department of Conservation & Economic Development Geologic & Topographic Survey

9. PERMANENT PUMPING EQUIPMENT:

Type None Capacity Gallons per minute

How Driven Horse Power R.P.M.

Depth of pump in well Feet Depth of foot piece in well Feet

10. USED FOR Discharge of Air Conditioning Water AMOUNT { Average Gallons Daily / Maximum Gallons Daily }

11. QUALITY OF WATER Good Sample: Yes No ✓

Taste None Odor None Color Clear Temperature °F

12. LOG (Give details on back of sheet or on separate sheet) Are samples available? No

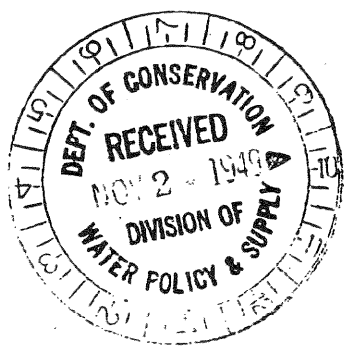
13. SOURCE OF DATA Drillers Log

14. DATA OBTAINED BY A. C. Schultes, Jr. DATE 11/1/49

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

0 -	17	Fine Sand
17 -	24	Fine Sand
24 -	26	Med. Sand & Gravel
26 -	28	Yellow Clay
28 -	30	Coarse Sand
30 -	32	Coarse Sand & Fine Sand
32 -	38	Gray Clay
38 -	48	Brown Clay
48 -	52	Gray Clay
52 -	65	Red Clay
65 -	83	Sand Coarse Gravel
83 -	88	Gravel
88 -	96	Red & White Clay
96 -	105	Red Clay
105 -	120	Brown Clay
120 -	125	Brown Sand
125 -	129	Coarse Sand & Gravel
129 -	147	Red Clay
147 -	150	Fine Sand
150 -	153	White Clay
153 -	158	Coarse Sand
158 -	168	White Clay
168 -	173	Coarse Sand
173 -	179	Gravel
179 -	189	Coarse Sand

31.02.449
31-92



RECHARGE WELL 31.1.673

Form 87-5M-4-49

RECEIVED
FEB 20 1951
Department of Conservation & Economic Development Division of Water Supply

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

Permit No. 31-84
Application No.
County

WELL RECORD

31.01.673

1. OWNER Listonia Pure Food Shop ADDRESS 800-10 Federal St., Camden
Owner's Well No. Listonia Pure Food Shop SURFACE ELEVATION 15± Feet (Above mean sea level)

2. LOCATION Rear of 800 Federal St.

3. DATE COMPLETED Aug. 1950. DRILLER Paul Skiffens

4. DIAMETER: Top 10 Inches Bottom 8 Inches TOTAL DEPTH ~~100~~ 128 Feet

5. CASING: Type Steel Diameter 10 Inches Length 100 Feet

6. SCREEN: Type Wormer Size of Opening # 40 Diameter 10 Inches Length 27 Feet
Range in Depth {Top 100'6" Feet Bottom 127'6" Feet} Geologic Formation
Tail piece: Diameter 8 Inches Length 4' 6" Feet

7. WELL FLOWS NATURALLY 20 Gallons per Minute at Feet above surface
Water rises to Feet above surface

8. RECORD OF TEST: Date Aug. 1st, 1950. Yield 312 Gallons per minute
Static water level before pumping 39 Feet below surface
Pumping level 51 feet below surface after hours pumping
Drawdown 12 Feet Specific Capacity Gals. per min. per ft. of drawdown
How Pumped Air Compressors How measured Weir
Observed effect on nearby wells

9. PERMANENT PUMPING EQUIPMENT:
Type Capacity Gallons per minute
How Driven Horse Power R.P.M.
Depth of pump in well Feet Depth of foot piece in well Feet

10. USED FOR Return Well AMOUNT {Average Gallons Daily; Maximum Gallons Daily}

11. QUALITY OF WATER Sample: Yes No.
Taste Odor Color Temperature °F

12. LOG (Give details on back of sheet or on separate sheet) Are samples available?

13. SOURCE OF DATA Charles E. Tamplin

14. DATA OBTAINED BY Thomas G. Ingee Jr. DATE 2/2/51.

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

31.01.6 51

Form 87-5M

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply
WELL RECORD

Permit No. 31-801
Application No. _____
County _____
31.01.651

1. OWNER C. Howard Hunt Pen Co. ADDRESS 7th & State Sts. Camden, N. J.
Owner's Well No. 1 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION 7th & State Streets, Camden, N. J.
3. DATE COMPLETED Feb. 1953 DRILLER Artesian Well Drilling Co.
4. DIAMETER: Top 8 Inches Bottom 4-1/2 Inches TOTAL DEPTH 126 Feet
5. CASING: Type steel Diameter 8 Inches Length ### 115 Feet
6. SCREEN: Type W.W. Size of Opening # 50 Diameter 6 Inches Length 8 Feet
Range in Depth { Top 125'6" Feet Bottom 123'6" Feet Geologic Formation Sand and gravel
Tail piece. Diameter 4-1/2 Inches Length 2'6" Feet
7. WELL FLOWS NATURALLY no Gallons per Minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date Feb. 1953 Yield 20 Gallons per minute
Static water level before pumping 43 Feet below surface
Pumping level 103 feet below surface after _____ hours pumping
Drawdown 60 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How Pumped Deep well plunger How measured barrell
Observed effect on nearby wells none
9. PERMANENT PUMPING EQUIPMENT:
Type _____ Capacity _____ Gallons per minute
How Driven _____ Horse Power _____ R.P.M. _____
Depth of pump in well _____ Feet Depth of Foot piece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes _____ No. _____
Taste _____ Odor _____ Color _____ Temperature _____ °F
12. LOG see reverse side Are samples available? _____
(Give details on back of sheet or on separate sheet)
13. SOURCE OF DATA Artesian well drilling co.
14. DATA OBTAINED BY Thomas C. Magee, Jr. DATE Aug. 11th, 1953.

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DIVISION OF PLANNING AND DEVELOPMENT
KENNETH H. CREVELING, Director
KEMBLE WIDMER, State Geologist

Map 31

Domestic

31.1.681

Form 87—5M-1-48

DEPARTMENT OF CONSERVATION
Division of Water Policy and Supply

Permit No. 31-74
Application No.
County Camden
31.01.681

WELL RECORD

1. OWNER Camden Trust Company ADDRESS Camden, New Jersey
Owner's Well No. Diffusion Well SURFACE ELEVATION +25 ± Feet (Above mean sea level)
2. LOCATION Broadway & Federal Streets
3. DATE COMPLETED 7-22-49 DRILLER Layne-New York Co., Inc.
4. DIAMETER: Top 10 Inches Bottom 10 Inches TOTAL DEPTH 127 Feet
5. CASING: Type Outer 16" Diameter 16 Inches Length 90 Feet
6. SCREEN: Type Layne Shutter Size of Opening 5 Diameter 10 Inches Length 30 Feet
Range in Depth {Top 93 Feet {Bottom 123 Feet Geologic Formation Sand, Gravel & Few Boulders
Tail piece: Diameter 10 x 12 Swedge Inches Length 3' - 3" Feet
7. WELL FLOWS NATURALLY — Gallons per Minute at Feet above surface
Water rises to — Feet above surface
8. RECORD OF TEST: Date 7-22-49 Yield 430 Gallons per minute
Static water level before pumping 52 Feet below surface
Pumping level 73 feet below surface after 4 hours pumping
Drawdown 21 Feet Specific Capacity 20.5 Gals. per min. per ft. of drawdown
How Pumped Turbine Pump How measured Orifice
Observed effect on nearby wells —
9. PERMANENT PUMPING EQUIPMENT:
Type None - Diffusion Well Capacity Gallons per minute
How Driven Horse Power R.P.M.
Depth of pump in well Feet Depth of foot piece in well Feet
10. USED FOR Diffusion Well AMOUNT {Average Gallons Daily {Maximum Gallons Daily
11. QUALITY OF WATER Sample: Yes No.
Taste Odor Color Temperature °F
12. LOG (Over) (Give details on back of sheet or on separate sheet) Are samples available?
13. SOURCE OF DATA Layne-New York Co., Inc.
14. DATA OBTAINED BY Layne-New York Co., Inc. DATE 7-29-49

Note:—Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

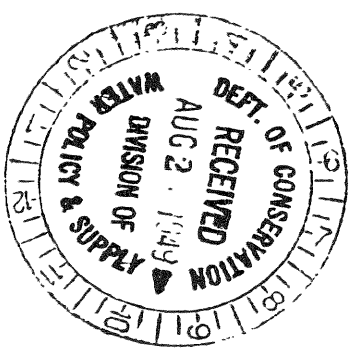
RECEIVED AUG 4 1949 Department of Conservation & Economic Development Geologic & Topographic Survey

LOG OF FORMATION

ALL MEASUREMENTS FROM SIDEWALK

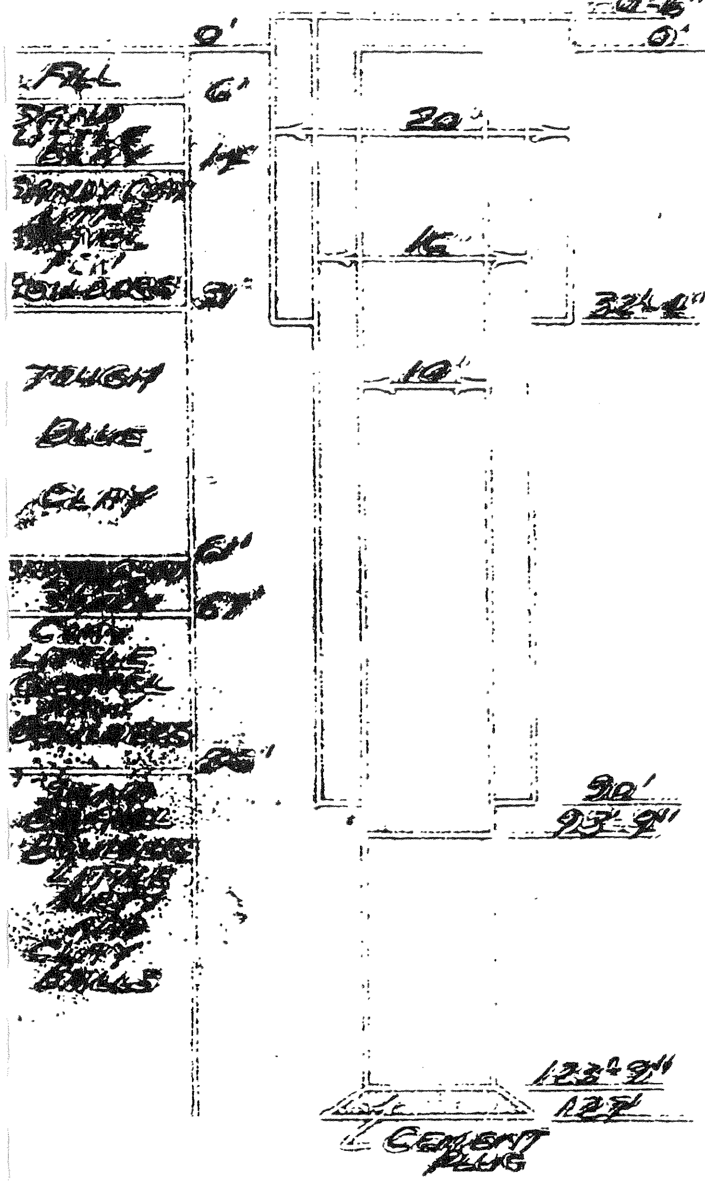
6'	6'	- Fill
8'	14'	- Sand & Some Clay
17'	31'	- Sandy Clay - Some Gravel - Few Boulders
30'	61'	- Tough Blue Clay
6'	67'	- Brown Clay - Sandy
19'	86'	- Clay - Some Gravel - Few Small Boulders
40'-6"	126'-6"	- Sand, Gravel, Few Boulders

31-01-681
31-74



31-L-681 □ 31-74

Material: 32'-10" OF 20" STEEL PIPE WELDED
90'-6" " 16"
93'-9" " 10"



Screen 30' OF 10" EVERDUR

Cone: 3'-3" OF CONE PLUG FILLED WITH CEMENT

Pump

Type	Shop No.
Setting	Size
Suction	Stages
Basket	Impellers
Discharge	Head
Tubing	Press. to E.
Shafting	Air Line

Motor

Make	Type
Volts	Cycle
Phase	Amp.
H. P.	R. P. M.
Frame	Form
Model	Serial

Well

Started 6-22-49	Static Level 52'
First Test 7-22-49	Production 450
Final Test	Pumping Level 73'
Accepted	Guarantee
Test Depth	Press.

Driller: E. WILLOUGHBY

CAMDEN TRUST CO.
CAMDEN, N.J.

31-74
31.01.681

CAMDEN TRUST COMPANY

MEMBER FEDERAL RESERVE SYSTEM

CAMDEN, N.J.

31-74
31-01-681

Division of Water Policy & Supply

From	To	Remarks
C	VCH	file

June 27, 1949

State of New Jersey
Department of Conservation
Division of Water Policy and Supply
28 West State Street
Trenton 8, New Jersey

Gentlemen Attention of Mr. H. T. Critchlow

In accordance with your request, Mr. Lewis of Layne-New York Company has asked us to sign and return to you the application for permit to drill a well at Broadway and Market Street, Camden, New Jersey.

Very truly yours

Merril Hallowell
Purchasing Agent

MH:W
Application No. 31-74
County: Camden
Location:31.1.6.8.1

"World's Largest Water Developers"

31-74
31.01.681

LAYNE-NEW YORK COMPANY, INC.

GROUND WATER SUPPLY CONTRACTORS

WATER SYSTEMS AND PUMP EQUIPMENT FOR MUNICIPALITIES INDUSTRIES IRRIGATION RAILROADS MINES

92 LIBERTY STREET
NEW YORK 6, N.Y.
TELEPHONE CORTLAND 7-2137

ADDRESS REPLY TO:—
431 MARKET STREET
CAMDEN, NEW JERSEY
TELEPHONE: CAMDEN 4-1071

AFFILIATED WITH
LAYNE & BOWLER, INC.
MEMPHIS, TENNESSEE
AND
ASSOCIATED LAYNE COMPANIES
THROUGHOUT U.S.A.

June 22, 1949

Division of Water Policy & Supply

From	To	Remarks
C	DAF	(per note)

DEPT. OF CONSERVATION RECEIVED JUN 23 1949 DIVISION OF WATER POLICY & SUPPLY

Mr. H. T. Critchlow,
Director & Chief Engineer,
Division Water Policy and Supply,
28 W. State St.
Trenton, N.J.

Dear Sir:

Re: Permit for Return Well
Camden Trust Co.

The return well for the above is for the purpose of returning the flow from their present Layne Supply well for the air conditioning system which has been in operation since 1939.

The water goes through a closed cooling system and has no contact with air or with the outside nor is there any danger of contamination.

Trusting that this information will clear the way for the issuance of this permit,

Yours very truly

LAYNE NEW YORK CO. INC.

W. M. Lewis
President

WML/L

6/23/49
By phone Harry Croft said that in a closed system, this Dept. would not be interested.
F.

Also suggests that this Dept. on future cases get O.K. from local Health Dept. & Local Water Purveyor.
F.

31-1-657 ☐

RECEIVED

DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
Division of Water Policy & Supply

Permit No. 31-89
Application No.
County Camden
31-01-657

WELL RECORD

1. OWNER SAVAR AMUSEMENT CORP. ADDRESS 8605 WESTFIELD AVE., PENNSAUKEN
Owner's Well No. SAVAR THEATRE SURFACE ELEVATION 20 Feet (Above mean sea level)
2. LOCATION Broadway & Market Sts., Camden, NJ
3. DATE COMPLETED 3/14/50 DRILLER A. C. SCHULTES AND SONS
4. DIAMETER: Top 10" Inches Bottom 10" Inches TOTAL DEPTH 113 Feet
5. CASING: Type Black Steel Diameter 10" Inches Length 82 Feet
6. SCREEN: Type Book Size of Opening .030 Diameter 10" Inches Length 34' 3" Feet
Range in Depth {Top 82 Feet, Bottom 113 Feet} Geologic Formation Raritan
Tail piece: Diameter None Inches Length Feet
7. WELL FLOWS NATURALLY No Gallons per Minute at Feet above surface
Water rises to Feet above surface
8. RECORD OF TEST: Date 3/13/50 Yield 500 Gallons per minute
Static water level before pumping 50 ft. Feet below surface
Pumping level 80 ft. feet below surface after 8 hours pumping
Drawdown 30 Feet Specific Capacity 16.7 Gals. per min. per ft. of drawdown
How Pumped Turbine Test Pump How measured Orifice
Observed effect on nearby wells None
9. PERMANENT PUMPING EQUIPMENT:
Type None Discharge Well Capacity Gallons per minute
How Driven Horse Power R.P.M.
Depth of pump in well Feet Depth of foot piece in well Feet
10. USED FOR AMOUNT {Average Gallons Daily, Maximum Gallons Daily}
11. QUALITY OF WATER Fair Sample: Yes No X
Taste None Odor None Color Clear Temperature 59 °F
12. LOG (Give details on back of sheet or on separate sheet) Are samples available?
13. SOURCE OF DATA Drillers Log
14. DATA OBTAINED BY A. C. Schultes Jr. DATE 3/18/50

(Note: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

DRUM RINSING OPERATIONS

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION CR (HORIZONTAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
CR1	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-011A	5.5-6.0	TPHC	11	10,000	
					Cadmium	0.837	39	
					Lead	10.3	400	
					Zinc	114	1500	
					Di-n-butyl phthalate	0.239	100	
CR2	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-010A	5.5-6.0	TPHC	11.76	10000	
					Cadmium	0.777	39	
					Lead	13.1	400	
					Zinc	39.1	1500	
					Di-n-butyl phthalate	0.318	100	
CR3	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-009A	5.5-6.0	TPHC	11.68	10000	
					Zinc	23.3	1500	
					Di-n-butyl phthalate	0.47	100	
CR4	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-006A	5.5-6.0	TPHC	129.5	10000	
					Cadmium	0.719	39	
					Lead	12.5	400	
					Zinc	30.4	1500	
					Di-n-butyl phthalate	0.436	100	
CR5	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-005A	5.5-6.0	TPHC	656.4	10000	
					Cadmium	0.876	39	
					Lead	11.1	400	
					Zinc	24.6	1500	
					Di-n-butyl phthalate	0.388	100	
					Napthalene	1.19	100	
CR6	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-004A	5.5-6.0	TPHC	260.4	10000	
					Zinc	20.9	1500	
					Di-n-butyl phthalate	0.609	100	
					Napthalene	1.096	100	
					1,2,4-Trimethylbenzene	3.3	NS	
					1,3,5-Trimethylbenzene	1.04	NS	
					Ethylbenzene	1.1	100	
					Isopropylbenzene	0.56	NS	
					Total xylenes	1.2	67	
					n-butylbenzene	1.18	NS	
					n-propylbenzene	1.2	NS	
					Napthalene	4.3	100	
					sec-butylbenzene	1.8	NS	
CR7	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-007A	5.5-6.0	Cadmium	0.967	39	
					Zinc	22.1	1500	
					Di-n-butyl phthalate	0.413	100	
CR8	8/17/01	TPHC,VO+10, BN+15, LEAD, CADMIUM, ZINC	123-008A	5.5-6.0	Cadmium	0.866	39	
					Zinc	15	1500	
					Di-n-butyl phthalate	0.461	100	

FLOOR DRAIN / PIPING / TRENCH

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION GR (VERTICAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
G4R-4	6/19/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	148-014A	3.5-4.0	Antimony	1.06	14	
					Lead	16.4	400	
					Zinc	42.1	1500	
					TPHC	181.4	10000	
					Di-n-butyl phthalate	0.539	100	
					Toluene	0.767	500	
G4R-6	6/19/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	148-015A	5.5-6.0	Antimony	0.66	14	
					Zinc	23.5	1500	
					TPHC	194.4	10000	
					Di-n-butyl phthalate	0.448	100	
G4R-8	6/19/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	148-016A	7.5-8.0	Zinc	24.3	1500	
					TPHC	139.4	10000	
					Di-n-butyl phthalate	0.83	100	
G4R-10	6/19/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	148-017A	9.5-10.0	Zinc	77.6	1500	
					TPHC	391.5	10000	
					Di-n-butyl phthalate	0.418	100	
G4R-12	6/19/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	148-018A	11.5-12.0	Zinc	40.5	1500	
					TPHC	82.38	10000	
					Di-n-butyl phthalate	0.452	100	
G4R-14	6/19/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	148-019A	13.5-14.0	Antimony	0.352	14	
					Zinc	24.8	1500	
					TPHC	77.16	10000	
					Di-n-butyl phthalate	0.478	100	
					1,2,4-Trimethylbenzene	3.9	NS	
					1,3,5-Trimethylbenzene	1.2	NS	
					Total Xylenes	2	67	
					sec-butylbenzene	0.047	NS	
G4R-15	6/19/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	148-020A	14.5-15.0	Antimony	0.371	14	
					Zinc	46.1	1500	
					TPHC	61.59	10000	
					Di-n-butyl phthalate	0.421	100	

Note: Soil Sample G4R-4 is designated as GR4 in analytical lab report.

FLOOR DRAIN / PIPING / TRENCH

SOIL SAMPLE ANALYTICAL RESULTS SUMMARY TABLE - LOCATION GR (HORIZONTAL)

SAMPLE ID#	SAMPLE DATE	COMPOUNDS ANALYZED	LAB ID#	DEPTH (feet)	COMPOUNDS DETECTED	CONCENTRATION (PPM)	NJDEP LIMIT	EXCEEDS LIMIT
GR1	8/9/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	71-006A	5.5-6.0	Zinc	26.5	1500	
					TPHC	84.58	10000	
					Di-n-butyl phthalate	0.579	100	
GR2	8/9/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	71-005A	5.5-6.0	Lead	19.4	400	
					Zinc	52.8	1500	
					TPHC	39.47	10000	
					Di-n-butyl phthalate	0.527	100	
GR3	8/9/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	71-004A	5.5-6.0	Antimony	0.272	14	
					Lead	60.2	400	
					Zinc	106	1500	
					TPHC	56.96	10000	
					Di-n-butyl phthalate	0.487	100	
					Pyrene	0.111	100	
GR4	8/9/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	71-003A	5.5-6.0	Antimony	2.04	14	
					Lead	415	400	X
					Zinc	36.3	1500	
					TPHC	84.42	10000	
					Di-n-butyl phthalate	0.532	100	
GR5	8/9/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	71-002A	5.5-6.0	Zinc	48.8	1500	
					Phenols	3.57	50	
					TPHC	168.9	10000	
					Di-n-butyl phthalate	0.487	100	
GR6	8/9/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	71-008A	5.5-6.0	Lead	9.38	400	
					Zinc	31.3	1500	
					TPHC	46.16	10000	
					Di-n-butyl phthalate	0.476	100	
GR7	8/9/01	TPHC,VO+10, BN+15, LEAD, PHENOLS, ZINC ANTIMONY	71-007A	5.5-6.0	Zinc	33.8	1500	
					TPHC	59.45	10000	
					Di-n-butyl phthalate	0.58	100	