

SUMMARY OF ENVIRONMENTAL RECORDS



Camden Laboratories, 1667 Davis Street, Camden, NJ 08103 (Block 1392, Lot 33)
February 24, 2017

Executive Summary

This memo provides a summary of environmental case file documents reviewed for the Camden Laboratories site, located at 1667 Davis Street, Camden, NJ 08103 (Block 1392, Lot 33). The findings presented herein are based solely on the information on file at the New Jersey Department of Environmental Protection (NJDEP) during a file review conducted on May 9, 2014. CRA and BRS, Inc. make no representation as to the accuracy or completeness of the information or the actual environmental conditions of the sites.

The findings of this review include the following:

- The site is an active case with the NJDEP Site Remediation Program (SRP). Outstanding environmental issues must be addressed in accordance with state law.
- There have been prior environmental assessments and limited environmental remediation activities conducted at the site between 1989 and 2009. Many significant environmental issues at the site still exist.
- An area of mercury contamination in soil has been confirmed at the site and groundwater is contaminated with chlorinated solvents.
- Recommendations for next steps include: retaining a New Jersey Licensed Site Remediation Professional to oversee environmental assessment and remediation; developing a work plan for the next phase of assessment; conducting the next phase of assessment and a pre-demolition survey; and development of a remedial action workplan for soil and groundwater contamination.
- Redevelopment plans for the site will likely need to include engineering and institutional controls to mitigate potential for exposure to any residual contamination at the site.

Introduction

This memo provides a summary of environmental case file documents reviewed for the Camden Laboratories site, located at 1667 Davis Street, Camden, NJ 08103 (Block 1392, Lot 33). The site is currently an active case with the New Jersey Department of Environmental Protection (NJDEP) Site Remediation Program (SRP) with Program Interest (PI) No. 016718. The current owner of the site is Camden Laboratories, LP, a non-public entity. Camden Laboratories, LP formerly had a Memorandum of Agreement (MOA) with the NJDEP regarding remediation of site contamination; however, the MOA was cancelled as of May 7, 2012 with the full implementation of the Site Remediation Reform Act of 2009, N.J.S.A. 58:10C-1 et seq. (SRRA). The site currently has no Licensed Site Remediation Professional (LSRP) of record.

BRS, Inc. completed a review and made electronic copies of all available NJDEP case files for the site at the NJDEP Office of Record Access in Trenton, NJ on May 9, 2014. A list of files accessed by this review is attached to this memorandum. This memo provides a summary of information gathered from review of these files.

Site Description and Background

The site is located in the Whitman Park neighborhood of South Camden, NJ on an irregularly-shaped parcel approximately 3.56 acres in area. The surrounding area is predominantly residential with areas of industrial and commercial development to the east. The Whitman Park, including a recreational playground and ball field, adjoins the site directly to the south and east.

Approximately two-thirds of the parcel is covered by asphalt-paved parking areas and a vacant compound of institutional buildings with a building footprint of approximately 50,000 square feet. The compound of buildings consists of contiguous one and two story structures with a partial basement. The structures are in extremely poor condition and subject to vandalism and illegal dumping. The remaining portions of the site consist of unpaved areas.

The site was originally developed for use by the City of Camden in the early 1920's as the Camden Municipal Hospital for Contagious Diseases. In the 1950's the facility was transformed into the South Jersey Medical Research Foundation Laboratory as the home for the Coriell Institute for Medical Research (CIMR). The original hospital buildings were subsequently demolished and the laboratory buildings currently located on site were built in various phases between the 1950's to 1980's. The site was purchased by its current owner, Camden Laboratories, LP, in 1989 and then operated as a series of medical laboratories including "Viro-Med Biosafety" and "Quality Bio-tech" until at least 2007. The site was vacant after 2008.

Prior to 1989, the site used three (3) underground storage tanks (UST) to provide fuel for generators and boilers located within the Camden Laboratories buildings. The tanks included two (2) 6,000-gallon No. 2 fuel oil USTs and one (1) 2,000-gallon No. 2 fuel oil UST. The USTs were closed and removed from the site in 1989. The facility then converted to a natural gas heating system. A 275-gallon above ground storage tank (AST) was located on site in 2007 to service an outdoor emergency generator.

Although all drainage systems, including a network of floor drains at the buildings are reportedly connected to the Camden County Municipal Utilities Authority (CCMUA) sewer system, development at the site includes an out-of-service on-site septic system at the north portion of the site on Davis Street. A geophysical survey of the septic system identified an anomaly assumed to be the system's 10,000-gallon septic tank. Other subsurface utilities identified at the site include stormwater and/or sewer lines, natural gas lines and electrical conduit.

Other former systems at the site associated with prior operations of the laboratories include an electrical substation with two on-site dry non-PCB transformers powered by overhead lines; an incinerator for the disposal of animal carcasses (no longer present at the site); a hydraulic lift located at a loading dock at the center of the site; and a dry well located beneath former boiler rooms.

The site formerly housed a New Jersey Ambient Air Monitoring station as part of a network operated by NJDEP to monitor air quality throughout the state of New Jersey. The "Camden Lab" air monitoring station operated between 1968 and 2008.

History of Environmental Remediation

The site has been subject to environmental investigation and remediation under the oversight of the NJDEP since 1989. The various phases of investigation and remediation include the closure of the three (3) fuel oil USTs in 1989; a Preliminary Assessment in 2007 by Environmental Resolutions Inc.; a Preliminary Assessment, Site Investigation, and Remedial Action Workplan in 2008 by CMX, LLC; and a Supplemental Site Investigation by CMX in 2009. No additional environmental investigation or remediation has been completed at the site since completion of the 2009 Supplemental Site Investigation. Per the documentation reviewed from the NJDEP files, a total of sixteen (16) environmental areas of concern (AOC) have been identified at the site in the environmental reporting.

Following the submittal of the PA/SI/RAW in August 2008 and following a subsequent on-site meeting conducted in November 2008 with the NJDEP case management team, a representative of the site ownership, and the environmental consultant (CMX), NJDEP issued a Notice of Deficiency (NOD) in December 2008 to Camden Laboratories, LP. The NOD provided findings of “No Further Investigation Required” for ten (10) AOC including the on-site septic system, former incinerator, former hydraulic lift and former dry well, and required additional investigation and/or remediation at the following six (6) AOC:

AOC 1: 275-Gallon Fuel Oil Aboveground Storage Tank

Although previous investigation of the immediate area around the exterior AST that supplied fuel for the emergency generator located at the southern portion of the property had indicated no signs of contamination, evidence of a possible surface soil spill from the AST as a result of vandalism was identified during the November 2008 site visit.

AOC 2: Former No. 2 Fuel Oil Underground Storage Tanks

NJDEP required post-remediation soil samples to be collected from each of the three (3) former 1989 UST excavation areas and submitted for appropriate laboratory analysis. Two of the UST excavations, including one of the 6,000-gallon USTs (Tank A) and the 2,000-gallon UST (Tank C) were located on the north portion of the site. The third excavation from the other former 6,000-gallon UST (Tank B) was located on the south portion of the site.

AOC 3: Storage Containers

Storage containers, including four (4) empty 55-gallon muriatic acid drums and five (5) empty 55-gallon caustic soda drums that were previously identified on-site were ordered to be removed and disposed off-site with disposal receipts of all storage containers submitted to NJDEP.

AOC-13: Liquid Nitrogen Spill

In November 1998, the Camden County Department of Health and Human Services (CCDHHS) responded to a release of liquid nitrogen and evaporative gasses at the site (NJ Spills Database Listing NJDEP Case No. 98-11-20-1919-54). A subsequent September 1999 “File Completion Memo” from CCDHHS indicated that the conditions of the release had been adequately mitigated. NJDEP required that the CCDHHS documentation be provided for review.

AOC-14: Groundwater

In the 2008 Site Investigation Report, CMX stated that chlorinated solvent ground water contamination had been identified on the Camden Laboratories property and has been attributed to migration of contaminants originating from the RF Products site (NJDEP PI # 015474), an industrial facility located north and east of the Camden Laboratories.

According to CMX's reporting, the NJDEP Site Remediation and Waste Management Program, Division of Remediation Support, Bureau of Environmental Measurement and Site Assessment conducted ground water investigations to evaluate the RF Products site as a potential source of contamination identified in the nearby Camden Parkside Well Field, a source of municipal drinking water. The NJDEP findings were summarized in an Expanded Site Investigation Report dated September 2007. According to the report, TCE was identified at concentrations exceeding the NJDEP Groundwater Quality Standards in ground water beneath the RF Products site and the Camden Laboratories property. The NJDEP concluded that the RF Products site was the source of the TCE ground water contamination and that the TCE ground water contamination has migrated to the Camden Laboratories property from the RF Products site. Depth to ground water at the time of the NJDEP ground water investigation was identified between thirty-two (32) to forty-one (41) feet below grade.

CMX collected one groundwater sample during the 2008 Site Investigation at the Camden Laboratories property. The sample was analyzed for volatile organic compounds (VOC) and base neutral (BN) compounds and found not to contain any levels of contamination above NJDEP groundwater cleanup standards. No other groundwater samples collected at the site or information about groundwater quality at the site has been identified.

In the December 2008 NOD, NJDEP indicated that a NJDEP geologist would review file information for the RF Products site as well as other adjoining sites to determine if the source of the reported contamination on the Camden Laboratories property had its source at one or more of the adjoining sites. NJDEP also required that construction details of the on-site septic system, dry well, and hydraulic lift be provided to assist in determining an on-site source for groundwater contamination. NJDEP also indicated that a vapor intrusion investigation would be required for future site improvements.

AOC 16: Mercury

Prior to the November 2008 site meeting, NJDEP informed the consultant (CMX) for Camden Laboratories, LP of an event in April 2004 when elevated levels of mercury vapor were measured at the site by an NJDEP team installing equipment associated with the "Camden Lab" New Jersey Ambient Air Monitoring Station formerly located on the site. The Bureau of Environmental Evaluation & Risk Assessment (BEERA) reviewed the mercury vapor data and did not identify any potential mercury sources on the NJDEP SRP Known Contaminated Sites List (KCSL) in the area. BEERA therefore concluded that the mercury air readings identified along the western perimeter of the NJDEP air monitoring station may be the result of a mercury surface spill on the Camden Laboratories property. NJDEP required additional investigation of soils in this area to identify the mercury source.

2009 Supplemental Site Investigation

To further investigate the six (6) AOC as required by NJDEP in the December 2008 NOD, the consultant (CMX) for Camden Laboratories, LP conducted a Supplemental Site Investigation between December

2008 - January 2009, which included additional site reconnaissance, records research and the collection and analysis of soil samples. According to the 2009 Supplemental Site Investigation Report, sufficient evidence was developed by the investigation for CMX to request a finding of “No Further Action” from NJDEP for AOC 1 (275-Gallon Fuel Oil Aboveground Storage Tank), AOC 2 (Former No. 2 Fuel Oil Underground Storage Tanks), AOC 3 (Storage Containers), AOC 13 (Liquid Nitrogen Spill), and AOC 14 (Groundwater).

To investigate the area of the suspected mercury soil spill, CMX installed sixteen (16) soil borings to depths ranging between four (4) feet to twenty-five (25) feet below grade (fbg). Field screening indicated that mercury vapor was present at a majority of the soil borings advanced. Soil samples analyzed for mercury reported levels as high as 3,700 mg/kg, exceeding the residential direct contact NJDEP Residential Direct Contact Soil Remediation Standard (RDCSRS) of 23 mg/kg, by more than two orders of magnitude. It should be noted that samples were biased away from areas of high levels of mercury vapor in an attempt to delineate the contaminated area within the soil profile; therefore the highest levels of soil contamination by mercury were not sampled or analyzed.

According to CMX, the area of mercury contamination was horizontally and vertically delineated to the NJDEP RDCSRS. The estimated area of mercury contaminated soil measures twenty-four (24) feet in length by thirty-four (34) feet in width and extends to a maximum depth of twenty-three (23) fbg. The volume of mercury contaminated soils is estimated to be 500 - 700 cubic yards or approximately 750 – 1000 tons.

There is no indication that the Supplemental Site Investigation Report was ever reviewed or approved by a NJDEP Case Manager.

Conclusions and Recommendations for Further Actions

As per the requirements of the Site Remediation Reform Act of 2009, N.J.S.A. 58:10C-1 et seq. (SRRA) and the NJDEP Technical Requirements for Site Remediation, N.J.A.C 7:26E, the person responsible for remediating the Camden Laboratories site is obligated to hire a Licensed Site Remediation Professional (LSRP) to continue and complete the remediation. According to information provided by NJDEP on its website, no LSRP of record is currently listed for the Camden Laboratories site.

As the CRA’s re-use strategy for this site includes recreation, continued environmental investigation and remediation to achieve a Response Action Outcome (RAO) for either the entire site or specific areas of concern will be required; based on the information reviewed for this assessment, additional environmental investigation is warranted. Such activities may include investigation of soil and groundwater including the installation of soil borings and temporary and/or permanent monitoring wells. Demolition or partial demolition of existing structures may be expedient to complete investigation and remediation and prepare for site re-use.

The confirmed presence of mercury at elevated levels exceeding NJDEP cleanup standards should be considered a significant environmental condition for this site, particularly for site re-use considerations as recreational if that use includes playgrounds. Mercury is highly toxic to human health, posing a particular threat to the development of the child in utero and early in life.

The potential presence of chlorinated solvent contamination in site groundwater may also pose elevated risks to potential users of the site, though the reported depth to groundwater mitigates threats of migration

of organic vapors into current or future structures at the site. A vapor intrusion study will be required should elevated levels of organic constituents be identified in groundwater beneath the site.

It should also be noted that there is no record in the NJDEP case file reviewed for this assessment of any environmental investigation including environmental risks typically associated with former or active biological and medical laboratories. This facility is known to have processed, stored and disposed of wide ranges of animal and human tissue and blood samples. Further, these types of facilities may use and store broad categories of chemical and radioactive materials. No inventory of hazardous materials or Material Safety Data Sheets (MSDS) associated with the former laboratories has been accessed for this assessment. Future environmental investigation of this facility may require evaluation of these environmental hazards.

The protection of childcare centers and schools from exposure to environmental contamination, such as those identified by this assessment, has been established as a priority policy of the State of New Jersey and the NJDEP. Contaminated sites to be used for educational purposes, such as private schools, public schools, or charter schools, are subject to the “Madden Law”, N.J.S.A. 52:27D-130.4. In addition to completing the NJDEP investigation and remediation requirements as per the Technical Requirements for Site Remediation, N.J.A.C 7:26E, additional requirements of other state agencies including the New Jersey Department of Children & Families, Department of Health, and the Department of Community Affairs may apply. In most cases a full-site RAO must be issued prior to obtaining Certificates of Occupancy and/or construction permits for the educational facility.

To complete the investigation and remediation with a goal to receive an RAO for either the entire site or specific areas of concern, an LSRP must be engaged to review the existing environmental record, including the Supplemental Site Investigation Report to determine what additional remedial actions are required. A scope of work to complete this final phase of investigation and remediation would include the following:

1. LSRP Retention and SRRA compliance including submission to NJDEP of Annual Remediation Fee Form, Initial Receptor Evaluation and Public Notification requirements.
2. Review of environmental case files pertaining to the site, including NJDEP, USEPA and local governing agencies to include review of case files associated with the RF Products site.
3. Completion of a Remedial Investigation Workplan (RIW) for soil and groundwater including Case Inventory Document (CID), site-specific Quality Assurance Project Plan (QAPP) and Health and Safety Program. The RIW should also include requirements for a vapor study if required by groundwater findings and a pre-demolition survey to identify and quantify the various hazardous waste streams that would be generated by demolition of the existing buildings and subsurface structures.
4. Following the completion of the Remedial Investigation and Pre-Demolition Survey, a Remedial Action Workplan (RAW) may be developed to implement the final phase of remedial action required at the site in conformance with expected site re-use goals. If final remediation includes the use of engineering or institutional controls such as capping or a Groundwater Classification Exception Area (CEA), remedial permits, long-term biennial inspections and certifications, and deed restrictions may be required.
5. Engineering controls may need to be incorporated into subsequent design elements for new construction at the site, such as vapor barriers and mercury ambient air monitoring systems.

**Camden Laboratories, 1667 Davis Street, Camden
NJDEP Case File Document Inventory**

Date	Document Type	Prepared By	Prepared For	Comments
10/1988 - 10/ 1989	UST Registration and Removal Documents	Coriell Institute for Medical Research/ Camden Laboratories, LP	NJDEP	Various standard reporting forms and reporting documents regarding the registration and closure of the three (3) fuel oil underground storage tanks (USTs).
11/20/1998	Emergency Response Incident Report	Camden County Dept. of Health and Human Services (DHSS)	File Document	Standard file document regarding a release of liquid nitrogen at the facility.
09/15/1999	File Completion Memo	Camden County Dept. of Health and Human Services (DHSS)	File Document	Standard file document regarding a release of liquid nitrogen at the facility.
12/13/2005	Regulatory Correspondence	NJDEP	Camden Laboratories, LP	A request for access to the facility by NJDEP to conduct groundwater sampling in connection with a region-wide investigation of groundwater quality.
10/25/2007	File Completion Memo	Camden County Dept. of Health and Human Services (DHSS)	File Document	Standard file document regarding a release of diesel fuel at the facility.
08/01/2008	Site Investigation Report	CMX (Environmental Consultant to Camden Laboratories, LP)	Camden Laboratories, LP	Standard report per NJDEP requirements to document results of a site investigation conducted at the facility between 2007 and 2008.

**Camden Laboratories, 1667 Davis Street, Camden
NJDEP Case File Document Inventory**

Date	Document Type	Prepared By	Prepared For	Comments
09/05/2008	Application for Memorandum of Agreement	CMX (Environmental Consultant to Camden Laboratories, LP)	NJDEP	Standard application form for a Memorandum of Agreement between NJDEP and Camden Laboratories, LP.
09/23/2008	Area of Concerns Tracking Sheet	NJDEP	File Document	Internal tracking document used by NJDEP Case Managers
11/19/2008	Site Inspection Report	NJDEP	File Document	Standard file document used by NJDEP case managers and technical staff to report site inspections and on-site meetings.
12/03/2008	Regulatory Correspondence	NJDEP	Camden Laboratories, LP	Notice of Deficiency regarding the August 2008 Site Investigation Report and other related documents.
02/25/2009	Supplemental Site Investigation Report	CMX (Environmental Consultant to Camden Laboratories, LP)	Camden Laboratories, LP	Standard report per NJDEP requirements to document results of a site investigation conducted at the facility between 2008 and 2009.
12/21/2011	Regulatory Correspondence	NJDEP	Camden Laboratories, LP	Standard form letter sent by NJDEP to inform responsible parties of their obligations under the SRRA to hire an LSRP to complete investigation and remediation of their facility.

**Camden Laboratories, 1667 Davis Street, Camden
NJDEP Case File Document Inventory**

Date	Document Type	Prepared By	Prepared For	Comments
01/05/2012	Correspondence	Taenzer, Ettenson, Stockton & Aberant	NJDEP	Letter from former counsel for Camden Laboratories, LP informing NJDEP that they are no longer associated with the site.