

## **FIELD REPORT, FORT TOTTEN CONTENT SAMPLING ON 9 MAY 2006**

### **Introduction**

A one day exploratory investigation at Building 615, Fort Totten, Bayside, Queens was completed on 8 May 2006. Present during the site visit were: James Gatherer and Kim Shutty (EA), Debra Ford and Vernon Griffin (US ACE), and Bob Terry, an operator and laborer (Terry Contracting). The purpose of the exploratory investigation was to determine the discharge point of the floor drain, and complete soil sampling to determine the presence/absence of mercury-impacted soils at the discharge point. The following activities were completed at the site:

- Exploratory excavation of the parking area south of Bldg 615.
- Soil Sampling of possible discharge points of floor drain
- Interviews with and NYPD personnel, and second-hand anecdotal evidence from the electrician (Pete ?), and mechanic (Mike ?).

### **Findings**

A septic tank was unearthed where the 20 April 2006 geophysical survey had located it. The septic tank was constructed of two courses of brick. It appeared to have once had a brick lid which may have been breached when Pete the Plumber retrieved his plumbing snake; brick debris was found inside the tank's interior. The location of the septic tank is approximately 3-feet south of an existing AST and 2-ft east of the seawall. It is 4-ft by 3-ft, and approximately 4-ft deep. The top lip of the tank is 6-in below the base of the concrete pad. Two 4-in cast iron pipes were inside the septic tank. One seems to be connected to the outfall pipe extruding from the seawall. The other pipe enters the tank from the north side of the tank. The limits of the excavation prohibited determining the origin of this pipe. It is possible that this pipe is connected to a second septic tank underlying the existing AST; Pete the Plumber reported encountering two side-by-side tanks when retrieving his plumbing snake. There is a clean-out ~4-ft south of the septic tank. A 4-in cast iron pipe lies across the top of the septic tank and is connected to this clean-out. This is apparently where the sewer was connected to the municipal sewer line instead of to the septic tank(s) where it had originally discharged. All toilets in Bldg 615 are apparently hooked up to this sewer line as evidenced by fluid observed in the clean-out when toilets were flushed.

However, a connection between the floor drain and this sewer line could not be established. Three methods were used to determine if there was a connection between the floor drain and sewer line.

- Running water down the floor drain to determine discharge point  
Result: no fluid was observed or heard flowing past clean-out, and no excessively wet area was encountered in any other area of the excavation
- Tapping on the pipe at floor drain end and listening for an echo at the clean-out  
Result: no echo was heard

- Dye released into the floor drain and observation of fluid color in clean-out  
Result: no dye-coloring of fluid was observed in clean-out

Unable to confirm the discovered septic tank as the original discharge point for the floor drain, an attempt was made to locate the drain pipe and/or second septic tank closer the foot-print of Bldg 615 and further east of the discovered septic tank. Care was taken to excavate around a powerline encased in concrete about 2.5ft bgs. A 4-ft deep trench parallel to and ~6-ft from the building edge was excavated. However, no evidence of a drain pipe or septic tank was observed in this excavation.

At this point a decision was made to halt the excavation since further extending the trenching to the west and east of the existing trench would require the removal of the AST, and specialized reinforced-concrete cutting tools.

In the absence of a confirmed or observed floor drain discharge area, and in consultation with Debra Ford (USACE), three soil samples were collected in areas that may historically have been discharge areas:

- One composite soil sample was collected from the base of the septic tank for TCL VOC, SVOC, Pest/PCB, TAL metals and cyanide analysis.
- One grab soil sample was collected from an area of dark-colored soil adjacent to the septic tank for TCLP analysis.
- One composite soil sample was collected from an excavated trench for mercury analysis only.

### **Recommendations**

It is recommended that exploratory excavations continue to determine the discharge area for the floor drain drain-line. However, prior to further intrusive activities, there are a few items that need to be addressed:

- Proximity to Building 615 excavation issues – We will need to determine how close we can excavate to the building without compromising its structural integrity during the content sampling, the soil boring program, and excavation phases of work. May involve contracting with a structural engineer during the content sampling, soil boring program, and excavation.
- Above Ground Storage Tank – The AST is possibly located above the second septic tank and floor drain drain-line leading from Bldg 615. Prior to continuing the excavation, it is recommended that the AST and associated containment structure be removed temporarily. This may involve work by special permit.

### **Decisions from 10May 2006 Conference Call**

A conference call took place on 10 May 2006 between EA and ACE to discuss the results previous day's exploratory investigation, and where to proceed from there. It was concluded that further investigation is necessary to determine to discharge location of the floor drain drain-line. The following decisions were made:

- Acquisition of Sanborn Maps of the area if available. Sanborn Maps may shed light on location of drain-lines, septic tanks and other underground structures present at Bldg 615.
- Consultation with a plumber to aid in locating floor drain drain-line, and discharge areas.
- To continue exploratory excavations in the vicinity of Bldg 615. Specifically, it was agreed that excavating a continuous trench from the southwest corner to the southeast corner of Bldg 615, and parallel to the south face of Bldg 615 would be the best way to determine the location of the floor drain drain-line. The proposed excavation will be limited by a power-line encased in concrete that exits Bldg 615.