
FIELD MEMORANDUM - TRIP REPORT

TO: FILE

FROM: CHRISTINE ALBA, 77TH RRC ARIM, ENVIRONMENTAL DIVISION

SUBJECT: NIAGARA FALLS USARC (NY046) SITE VISIT

SITE VISIT DATE: 06/23, 6/24, & 6/25 2008

DATE AUTHORED: 06/27/2008

PURPOSE OF VISIT: Christine Alba, of the 77th ARIM Environmental Division, visited the Niagara Falls USARC to oversee the investigation of the 24" corrugated pipe that leads to outfall 5, and the 6" pipe that flows into the 24" line about midway. The 6" line was formerly used as a drain for the former 500,000 gallon water reservoir, however, an oily substance has been discovered flowing from the line. Initial sample results taken on 1 May 2008 from the outfall area showed 2.81 ug/L Aroclor 1254.

UNITS & POINTS OF CONTACT:

Area Facility Manager:

Mr. Tim Cerow

Fort Drum DPW Off Post Engineers:

Mr. Jon Pashong

Mr. Pat Patterson

Mr. Bruce Aikman

RECAP OF FINDINGS/ EVENTS:



Pat, Jon, & Bruce used an excavator and shovels to excavate the 24" pipe where it is met by the 6" line.

Eastern Fence Line of Property, bordering the NFTA

24" corrugated pipe that drains to Outfall 5

6" pipe that formerly drained the reservoir. It now has oily substance flowing out of it and into the 24" pipe.



24" pipe heading south towards outfall 5

Pat then used an acetylene & oxygen torch to open the 24" pipe over the spot where the 6" pipe comes into it.

Test America came on 6/23 and sampled the sediment at the base of the 6" pipe, since at the time, there was no fluid coming out of the 6" pipe. They are going to sample for haz-waste characteristics.

Path followed by effluent from the 6" pipe as it heads towards outfall 5.

Black substance is from the burning of the corrugated pipe. Mr. Patterson had to use an acetylene torch to open it.

Location of 6" pipe, entering the 24" pipe from the west side.

JA Brundage was hired to come and send a camera up the 6" line to try to find the source of the oily substance. Prior to sending the camera, they used a hose to clean out the pipe. When Mr. Brundage saw the oil with black flecks, he said he suspected it was PCB oil.

Hose used to clean out the 6" pipe.

Oily substance coming out of the 6" pipe once the hose was inserted.



Southern Fence line, along Porter Road

Location of Outfall 5, along Porter Road

Brundage got the hose about 15'-20' into the 6" line when he hit a blockage. They used a sensor to detect where the blockage was and marked it with orange marking paint.

"X" marks the spot where the blockage was sensed.



Valve discovered while excavating.

Jon used the excavator to excavate where the "X" had been marked. They wanted to verify that this was the location where the valve on the 6" pipe had been. At about 2' – 3' below grade, we found the top of the valve, dislodged from the pipe.



They moved the valve out of the way and used the shovel to start to dig to where the pipe was, but the hole where the valve was began to fill with an oily substance. It had a strong odor, similar to motor oil.



Due to the amount of oil found in the ground, and the oil coming out of the pipe, Brundage did not want to send their camera up the 6" line.

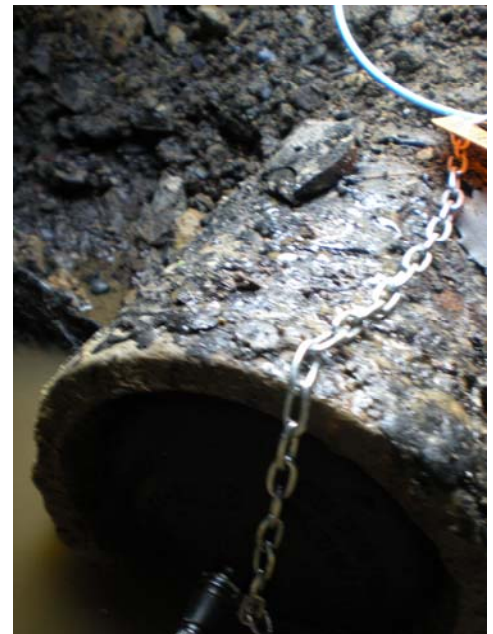
I called Test America and told them that we would need to take additional samples. Jon & I went to their office and picked up the vials needed to collect the sample.

Jon made the hole slightly larger in order to fit the 4oz jar, and it filled with more oil.



Since Brundage wouldn't send the camera up the line, there was no need to leave the line open.

Jon purchased this plug that he inserted into the end of the 6" line where the fluid had been entering the 24" line. He expanded it using an air compressor until it completely sealed the 6" pipe. This should prevent any further oil from ending up in Outfall 5.



The lab asked that we perform a phase test to confirm that the substance was not water soluble.

We took a pipette and sucked some of the substance from the hole in the ground, and put it into this vial that contained distilled water.

As you can see, the substance was an almost clear oil, with areas of red & brown. There were many black flecks floating in it.



Hole with oil, over 6" pipe.

Hole with only water



Jon used the excavator to dig another hole about 8' north of the one where we'd found the oil to see if we could determine the extent of the plume. As you can see by the picture on the right, there was water in the clay layer, but no visible oil.



Outfall 5: You can see that the yellow substance which prompted the investigation extends from the pipe out into the ditch along Porter Road, and has started to extend westward along the ditch, towards Cayuga Creek. The area affected is approximately 25 square feet and needs to be excavated, as per NYSDEC.



Various photos showing the consistency of the substance, ranging from granular to large flakes. This is the substance that was tested that came back positive for 2.8ug/L Aroclor 1254 (a type of PCB).