

October 9, 2014

Dave Cozzi  
SET Environmental  
450 Sumac Road  
Wheeling, Illinois 60090

RE: 650 N. St Clair St. – City of Chicago Department of Water Management Thorium Monitoring

Dear Mr. Cozzi:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation and repair of a storm sewer drain at 650 N. St Clair St. in Chicago, Illinois. The monitoring was performed on October 7, 2014. All activities were conducted under the guidance of document *SET General Procedure for Thorium Monitoring*.

#### Instrumentation

Surface gamma scans were performed by Glenn Huber using a Ludlum Model 2221 Scaled / Ratemeter (serial no. 134542) with attached 2"x2" NaI probe. The instrument was calibrated on October 18, 2013. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 17,574 counts per minute (cpm).

The average background count rate for this location was found to be between 5,800 and 6,600 cpm.

#### Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Data was collected by entering the excavation after each 18 inch lift and recording the highest count rate for the floors and walls to an excavation depth of 3 feet. The only soil removed below 3 feet in depth was debris from the inside of the damaged storm drain. No soil was stockpiled during the project and all excavated soils were loaded directly into the truck after screening.

The maximum gamma count rate for each 1.5 foot lift was recorded on the attached Radiation Survey Form. The count rates in the excavation ranged from 6800 cpm to 7100 cpm. No count rates were found at any time that exceeded the threshold limit of 17,574 cpm.

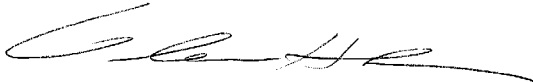
Additional Monitoring

Since no count rates were identified above the 7.1 pCi/gram threshold limit, no additional soil sampling, air monitoring, or personnel monitoring were performed.

You will need to forward a copy of this report to the City of Chicago Department of Public Health (Attn: Rahmatunsia Begum) with the CDOT Permit Number in the subject line. I will be providing a copy of this report to USEPA, as required.

Thank you for your assistance with this project. If you have any questions or need additional information please call me at (815) 485-6161.

Sincerely,  
Stan A. Huber Consultants, Inc.

A handwritten signature in black ink, appearing to read 'G. Huber', with a long horizontal flourish extending to the right.

Glenn Huber, CHP  
President

# Radiation Survey Form

**Location/ Project ID:** SET Environmental / City of Chicago Dept. of Water Mgmt. 650 N. St Clair St.

**Date:** 10/7/14

**Technician:** Glean Huber

**Inst Model:** Ludlum 2221

**Serial No. :** 134542

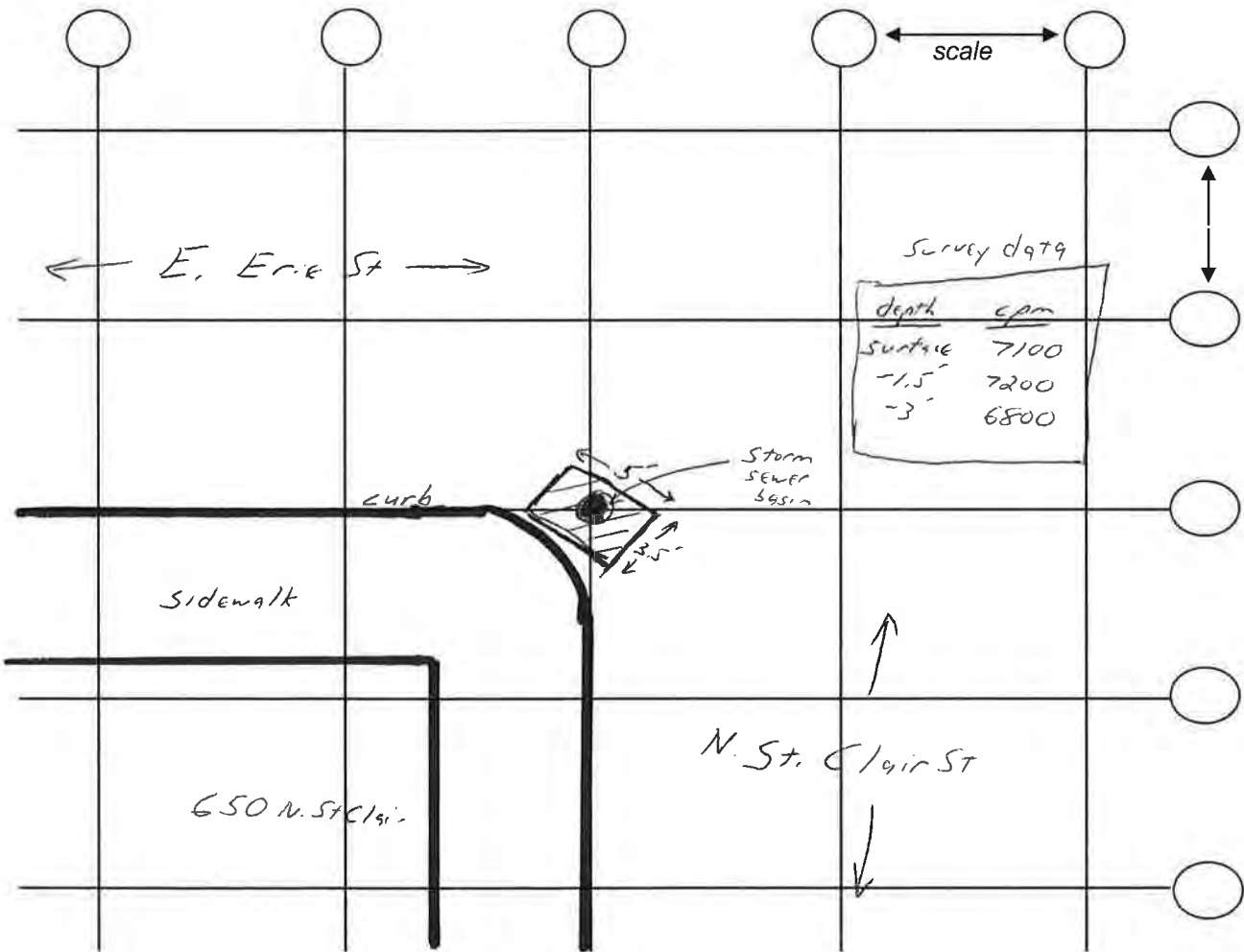
**Probe Type:** 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded


**Lift Elevation:** surface - 3'

**Background** 5.8k-6.6k cpm

**Action Level:** 17,574 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



 = Excavated area