



Stan A. Huber Consultants, Inc.
Health Physics and Radiation Safety Services

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5/31/12

200 North Cedar Road – New Lenox, Illinois 60451-1751 – (800) 383-0468 or (815) 485-6161 – FAX (815) 485-4433 – Email sahci@sahci.com – Home Page www.sahci.com

May 31, 2012

Greg Preisch
Hydro-Exc. Inc.
8248 Wright St.
Merrillville, IN 46410



RE: 301 N. Water Street, Chicago, IL. Thorium Monitoring May 2012

Dear Mr. Preisch:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during excavation of a utility vault at 301 N. Water St. in Chicago, Illinois. The monitoring was performed on May 30, 2012.

Instrumentation

Surface gamma scans were performed by Glenn Huber using a Ludlum Model 2221 Scaler / Ratemeter with attached 2"x2" NaI probe. The instrument was calibrated on November 8, 2011. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 19,110 counts per minute (cpm). A six inch collimated shield was used for additional surveys with an action level of 6,591 cpm.

The average background count rate for this location was found to be between 5000 cpm and 6000 cpm over the concrete sidewalk.

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 excavated area was 5 feet x 10 feet, 6 inches. An existing utility vault was present in the area of excavation that was 3 feet x 5 feet. No soil was stockpiled during the project and all excavated soils were loaded directly into the truck after screening.

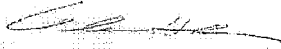
The maximum gamma count rate for each 1.5 foot lift was recorded on the attached Radiation Survey Form. The count rates in the excavation ranged from 5600 cpm to 15,100 cpm. No count rates were found at any time that exceeded the threshold limit of 19,110 cpm. A location where a count rate of 15,100 cpm was identified was resurveyed using a 6" collimated lead shield to verify that no contamination was present. The maximum count rate using the lead shield was 4800 cpm (6591 cpm 7.1 pCi/g action level).

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.

Thank you for your assistance with this project. If you have any questions or need additional information please call me at (815) 485-6161. This report should be forwarded to the Chicago Department of Environment (CDOE) as detailed on your permit.

Sincerely,
Stan A. Huber Consultants, Inc.



Glenn Huber, CHP
President

Radiation Survey Form

Location/ Project ID: 301 N. Water Street Hydro-Exc. Inc.

Date: 5/30/12

Technician: Glenn Huber

Inst Model: Ludlum 2221

Serial No.: 134542

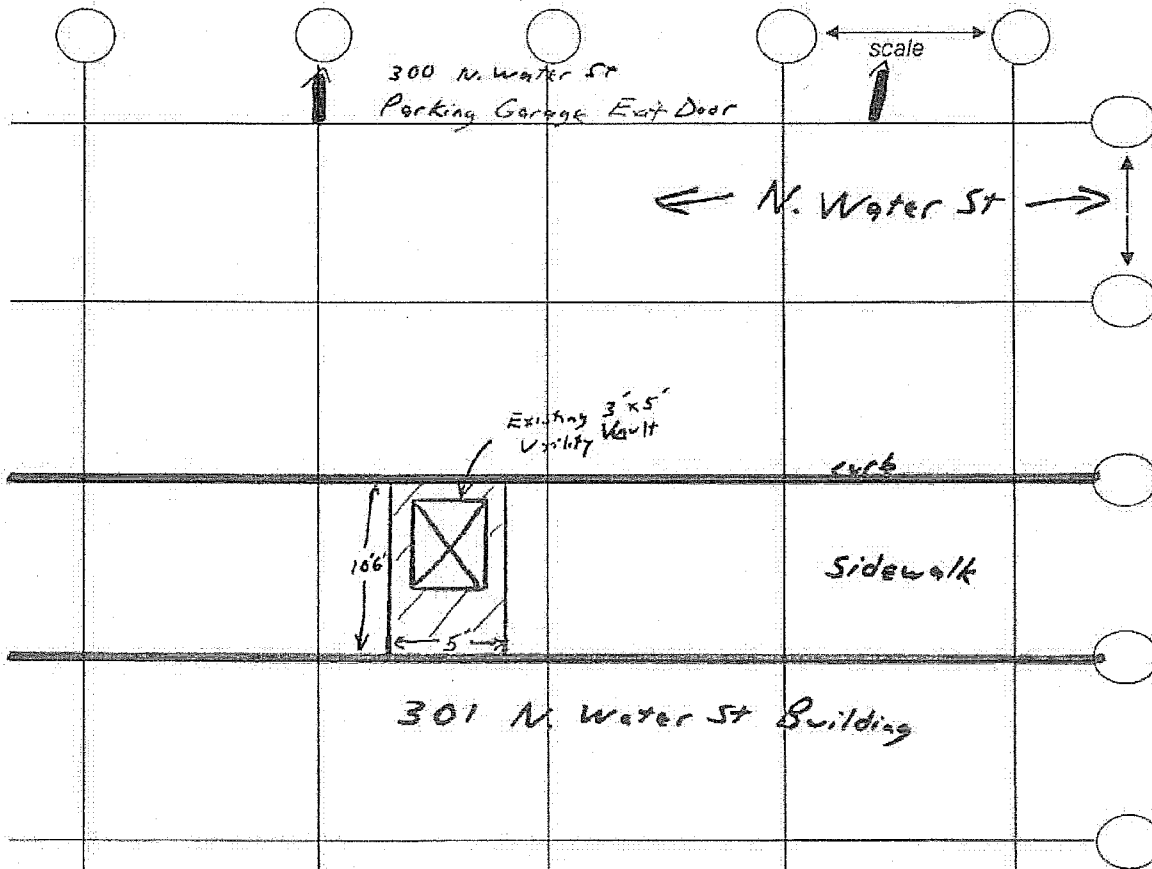
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation: surface → -3'

Background 5k - 6k cpm

Action Level: 19,110 cpm ^{unshielded}
6,591 cpm - 16" lead shield

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.



	Unshielded cpm	6" shield cpm	
surface	5600	1600	= excavated area
-1.5'	13600	4200	
-3'	15100	4900	