

## **MEMORANDUM**

**DATE:** February 16, 2011 **Project No:** 53319.003

TO: Hiralkumar Patel, NYSDEC cc: David Hillcoat

**FROM:** Vincent Frisina, P.E.

**RE:** Cooper Tank and Welding Corporation-Spill Case #0312904

215 Moore Street, Brooklyn, NY 11206

February 4, 2011 Groundwater Level Gauging Event

On February 4, 2011, Gannett Fleming (GF) conducted a groundwater level gauging event at Cooper Tank and Welding Corporation (the Site). The purpose of the February 4, 2011 gauging event was to supplement groundwater level data collected from the two previous groundwater sampling events on November 17, 2010 and January 19, 2011, as reported in the *February 2011 Field Investigation Report*, and develop a conceptual site model (CSM) for the characterization of site-specific groundwater flow patterns on the Site.

As observed during the November 17, 2010 groundwater sampling event, the predominant groundwater flow direction on Site was determined to be north-northeast (Attachment 1). A north-northeast groundwater flow component is supported by regional groundwater maps produced by the U.S. Geological Survey (USGS) and the likely effect on local groundwater flow by the closest water body (Newtown Creek) located approximately 0.39 miles to the north-northeast.

The January 19, 2011 groundwater level gauging event was conducted under a temporary condition influenced by a saturated period of rain and heavy snow melting. Large piles of melting snow were observed on and in close proximity to the northwestern and northeastern site wells (MW-NW8 and MW-NE7). Data collected during the snow melting conditions on January 19, 2011 indicated a significant rise in groundwater elevations in the area of MW-NW8 and MW-NE7 in comparison to the four wells located towards the southern boundary of the Site, and resulted in an approximate 90 degree shift in contoured groundwater flow direction towards the east-southeast (Attachment 2). Evaluation of the January 19, 2011 groundwater level gauging data indicates that localized groundwater flow may be temporarily influenced on the Site by saturated periods of heavy rainfall or heavy snow melt, and the heterogeneity of groundwater infiltration around the Site. To support this evaluation, a third groundwater level gauging event was conducted on February 4, 2011.

## **Observations and Conclusions**

Data collected by GF on February 4, 2011 resulted in a contoured groundwater flow direction towards the northeast, as presented on the February 2011 Groundwater Contour Map (Attachment 3). The February 4, 2011 gauging data indicates that the groundwater flow patterns were returning to the suspected normalized conditions on Site observed during the November 17, 2010 gauging event. Based on these data, we conclude that the predominant on-site groundwater flow pattern is north-northeast.



Please contact me if you have any questions, or if you would like to discuss this matter in further detail.

Very truly yours,

GANNETT FLEMING ENGINEERS, P.C.

VINCENT FRISINA, P.E.

Director of Environmental Services

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GROUNDWATER ELEVATION

GROUNDWATER FLOW DIRECTION

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SOIL BORING/GROUNDWATER MONITORING WELL LOCATIONS

SB-UST-1 WAS NOT USED GROUNDWATER CONTOURS.

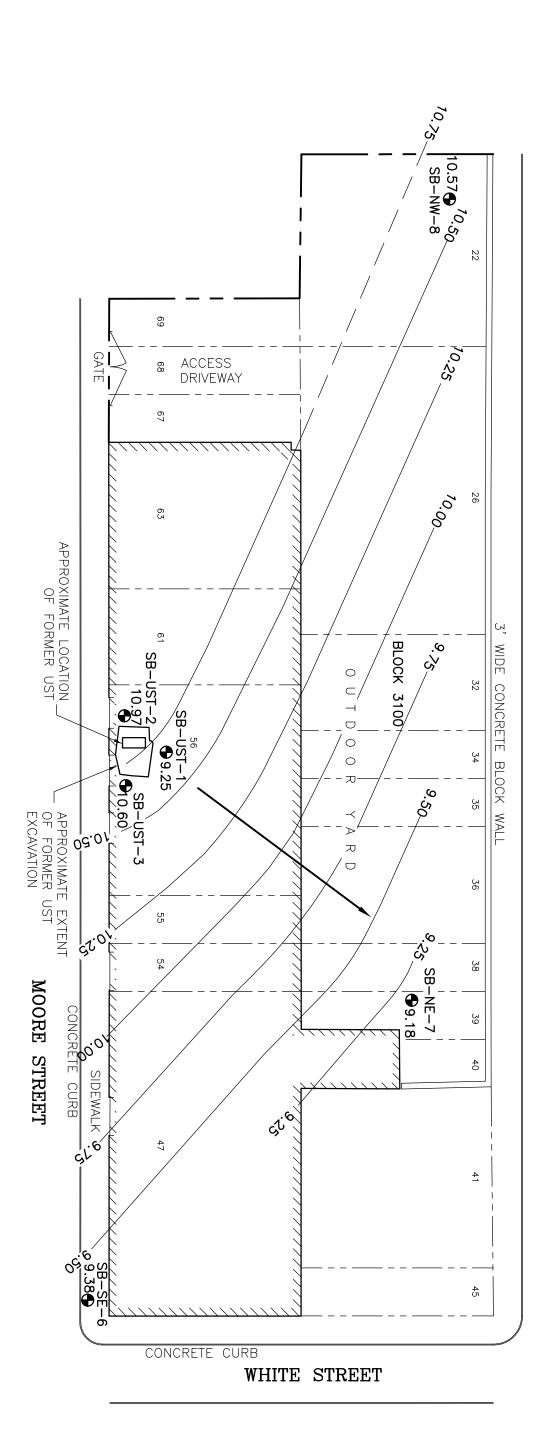
TO PRODUCE

NOTES:

**LEGEND:** 



SIEGEL STREET



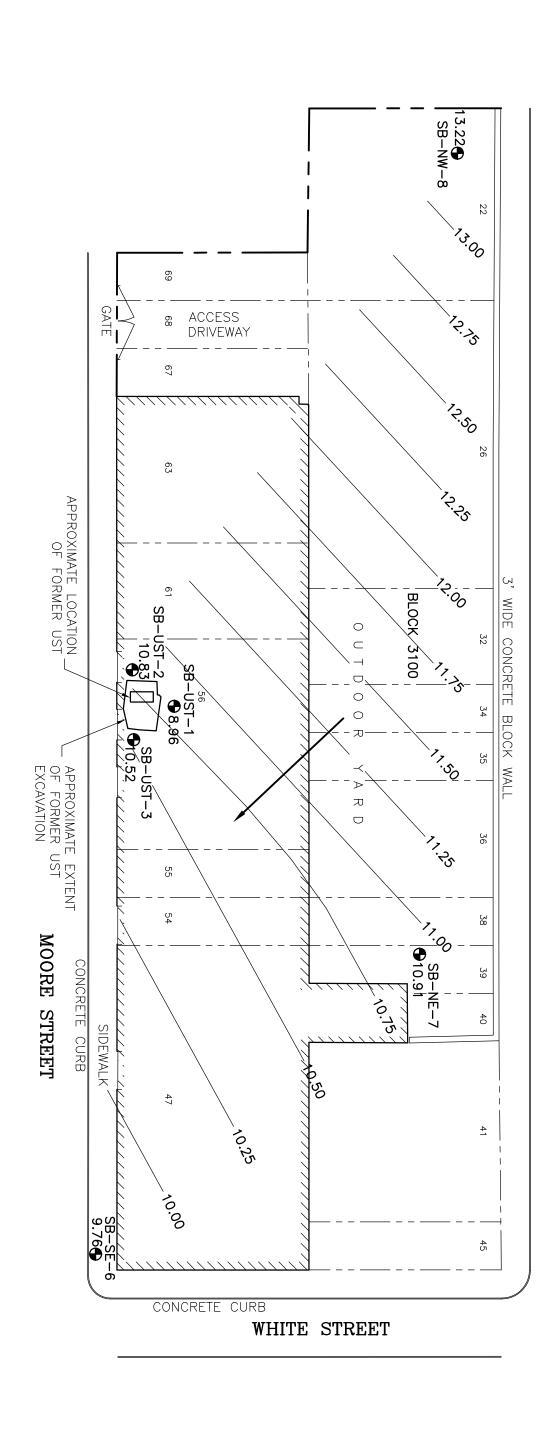
COOPER TANK RECYCLING 215 MOORE STREET, BROOKLYN, NY 2010

Scale In Feet

-50



## SIEGEL STREET



LEGEND:

SOIL BORING/GROUNDWATER MONITORING WELL LOCATIONS

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GROUNDWATER ELEVATION

GROUNDWATER FLOW DIRECTION

NOTES:

SB-UST-1 WAS NOT USED TO PRODUCE GROUNDWATER CONTOURS.

Scale In Feet -5

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GROUNDWATER ELEVATION

SOIL BORING/GROUNDWATER MONITORING WELL LOCATIONS

GROUNDWATER FLOW DIRECTION

LEGEND:

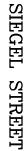
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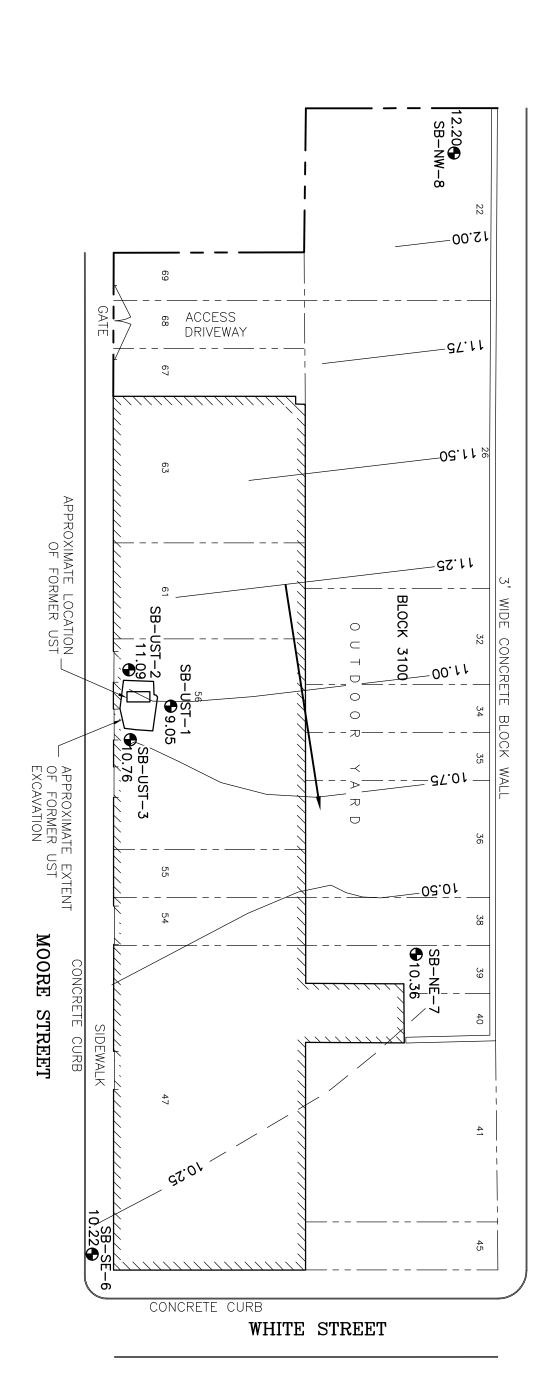
SB-UST-1 WAS NOT USED GROUNDWATER CONTOURS.

TO PRODUCE









COOPER TANK RECYCLING 215 MOORE STREET, BROOKLYN, NY FEBR 2011

Scale In Feet

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**Gannett Fleming**