



February 20, 2013

Mr. Ed Jones
Washington State Department of Ecology
3190 160th Avenue Southeast
Bellevue, Washington 98008

**RE: REVISED 2013 GROUNDWATER MONITORING PLAN ADDENDUM
REMEDIAL INVESTIGATION
CAPITAL INDUSTRIES, INC.
5801 THIRD AVENUE SOUTH, SEATTLE, WASHINGTON
FARALLON PN: 457-007
AGREED ORDER NO. DE 5348**

Dear Mr. Jones:

Farallon Consulting, L.L.C. (Farallon) has prepared this Revised 2013 Groundwater Monitoring Plan Addendum to the *Groundwater Monitoring Plan, Capital Industries, Inc., 5801 3rd Avenue South, Seattle, Washington* dated May 19, 2010 prepared by Farallon (Groundwater Monitoring Plan) on behalf of Capital Industries, Inc. (Capital) for groundwater monitoring to be conducted in 2013 for the Remedial Investigation of the Capital Area of Investigation in Seattle, Washington (Figure 1). The purpose of the 2013 Groundwater Monitoring Plan Addendum is to provide the locations, schedule, and monitoring parameters for the groundwater monitoring that will be conducted in 2013 as a continuation of the Remedial Investigation. The groundwater monitoring is being conducted to meet the requirements of Agreed Order No. DE 5348 (Agreed Order).

Groundwater monitoring in 2013 will be conducted in accordance with the Standard Operating Procedures and technical scope of work provided in the Groundwater Monitoring Plan. Table 1 (attached) summarizes the monitoring schedule, monitoring objectives, and monitoring wells for the 2013 groundwater monitoring. Table 1 identifies the monitoring wells to be accessed for measurement of depth to groundwater, collection of groundwater samples for analysis for constituents of concern (COCs), and collection of groundwater samples for analysis for groundwater geochemistry. The monitoring well locations are shown on Figure 1.

Semiannual groundwater monitoring will be conducted in the first and third quarters of 2013. Water-level-measurement events will be coordinated with Art Brass Plating (ABP) and Blaser Die Casting (BDC) to confirm that measurements are taken on approximately the same day so that regional groundwater flow conditions may continue to be assessed. Groundwater sampling will be conducted following collection of the water-level measurements. Farallon will perform the groundwater monitoring and sampling events in March and September 2013 based on the current understanding of ABP and BDC sampling plans for 2013.

The monitoring wells to be sampled, the analytical parameters, and the monitoring frequency will continue to meet the purpose of the Remedial Investigation groundwater monitoring. The



monitoring wells, analytical parameters, and monitoring frequency were selected in coordination with the 2013 groundwater monitoring programs for ABP and BDC. The collective data will be used to support Capital 2013 groundwater monitoring, eliminating potential data gaps in the Capital data set.

The 2013 groundwater monitoring program will provide ongoing monitoring of the plume centerline and down-gradient migration potential as well as potential lateral dispersion of the COCs. The monitoring wells selected are sufficient for evaluation of plume stability and whether interim actions may be necessary to protect human health and the environment while cleanup alternatives are evaluated. The sampling parameters for monitored natural attenuation at the selected monitoring wells are sufficient to support the Remedial Investigation groundwater monitoring for evaluation of plume stability, and to provide geochemical data that will facilitate development of a scope of work for a Feasibility Study.

Purge water removed from monitoring wells will be collected and returned to the Capital Property, stored in sealed and labeled 55-gallon drums, and secured pending receipt of waste profiling results. The purge water will be consolidated for disposal. Disposable sampling and health and safety equipment will be discarded in appropriate waste dumpsters.

Farallon trusts that this Revised Addendum to the Groundwater Monitoring Plan meets Ecology's needs. Please contact the undersigned at (425) 295-0800 if you have questions regarding this Revised Addendum.

Sincerely,

Farallon Consulting, L.L.C.

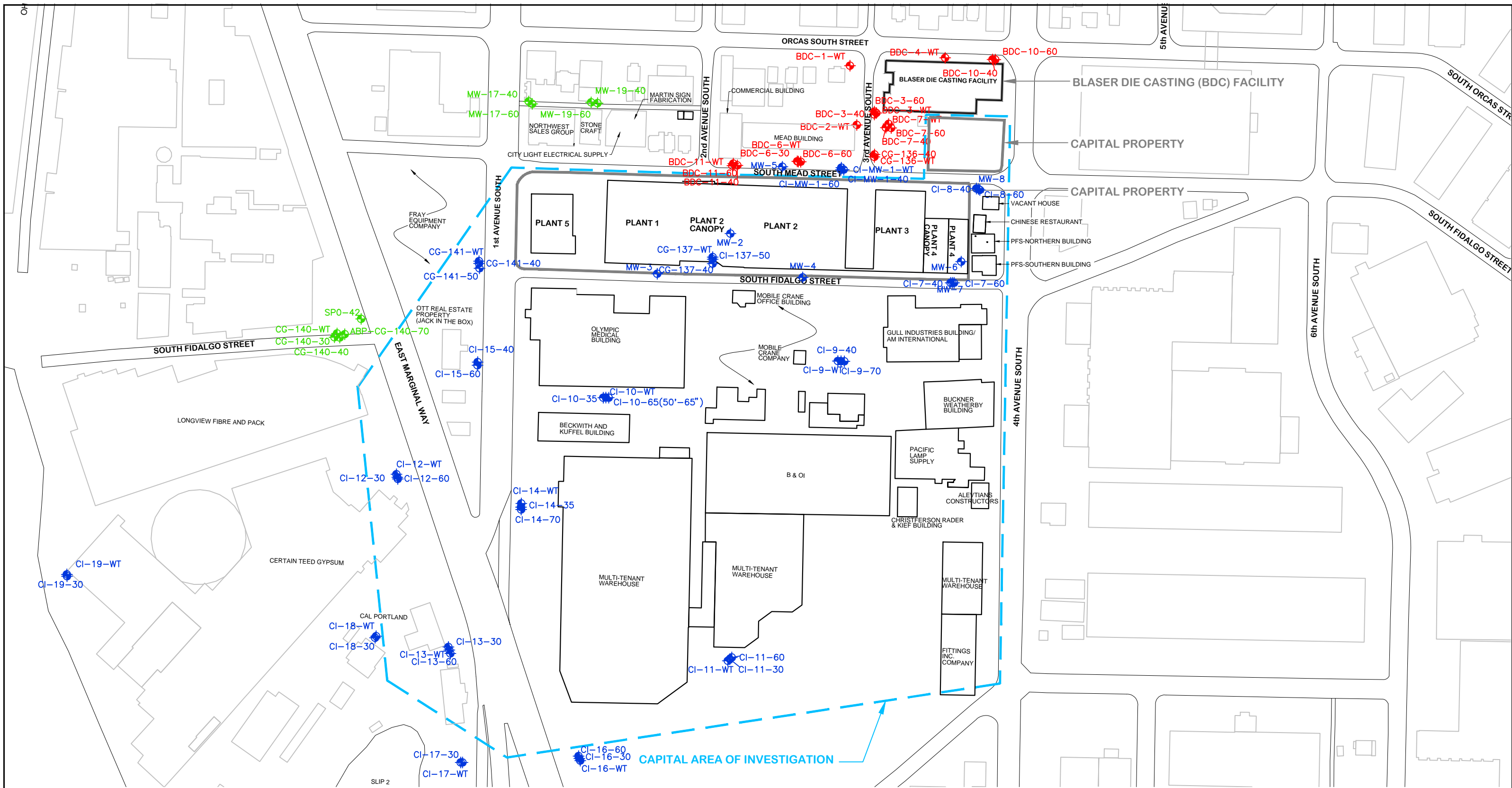
Peter Jewett, L.G., L.E.G.

Principal Engineering Geologist

Attachments: Figure 1, *Groundwater Monitoring and Sampling Plan Addendum for 2013*
Table 1, *Summary of 2013 Groundwater Monitoring Activities and Objectives*

cc: Mr. Ronald Taylor; Capital Industries, Inc.
Mr. Donald Verfurth; Gordon and Rees L.L.P.

PJ:bjj



| LEGEND | | | |
|-------------------------------|---|--|--|
| | CAPITAL INDUSTRIES MONITORING WELL | | PSC MONITORING WELL |
| | BLASER DIE CASTING BORING MONITORING WELL | | ART BRASS PLATING BORING MONITORING WELL |
| ALL LOCATIONS ARE APPROXIMATE | | | |

| | | | |
|--|---|---------------|-------------------------|
| FARALLON CONSULTING 975 5th Avenue Northwest Issaquah, WA 98027 | FIGURE 1 GROUNDWATER MONITORING AND SAMPLING PLAN ADDENDUM FOR 2013 CAPITAL INDUSTRIES, INC. SEATTLE, WASHINGTON | | |
| | FARALLON PN: 457-007 | | |
| Drawn By: DEW | Checked By: JK/PJ | Date: 1/21/13 | Disk Reference: 457007a |

Table 1
Summary of 2013 Groundwater Monitoring Activities and Objectives
Capital Industries, Inc.
Seattle, Washington
Farallon PN: 457-007

| Well Identification ^{1,2} | Well Details | | | Monitoring and Sampling Details ³ | | | | | | Monitoring Objectives | | | | |
|------------------------------------|------------------------|----------------------------|----------------------|--|--------------------|------------------|--------------------------|--------------------|------------------|--------------------------|-----------------|------------------------------------|---|-----------------------------|
| | | | | Quarter 1 2013 | | | Quarter 3 2013 | | | | | | | |
| | Total Depth (feet bgs) | Screen Interval (feet bgs) | Screen Length (feet) | Water Level ⁴ | HVOCs ⁵ | MNA ⁶ | Water Level ⁴ | HVOCs ⁵ | MNA ⁶ | Water Level ⁴ | Vapor Intrusion | HVOC Plume Centerline ⁷ | HVOC Select Plume Boundary ⁷ | MNA Evaluation ⁸ |
| Water Table Zone | | | | | | | | | | | | | | |
| CI-MW-1-WT | 20 | 10 to 20 | 10 | X | | | X | | | X | X | X | | |
| MW-2 | 20 | 10 to 20 | 10 | X | | | X | | | X | X | X | | |
| MW-3 | 20 | 10 to 20 | 10 | X | | | X | | | X | X | | X | |
| MW-4 | 20 | 10 to 20 | 10 | X | X | X | X | X | X | X | X | | X | |
| MW-5 | 20 | 10 to 20 | 10 | X | | | X | | | X | X | X | | |
| MW-6 | 20 | 10 to 20 | 10 | X | | | X | | | X | X | X | | |
| MW-7 | 20 | 10 to 20 | 10 | X | X | X | X | X | X | X | X | X | | X |
| MW-8 | 20 | 10 to 20 | 10 | X | | X | X | | X | X | X | | | X |
| CI-9-WT | 20 | 10 to 20 | 10 | X | X | X | X | X | X | X | X | X | | X |
| CI-10-WT | 20 | 10 to 20 | 10 | X | X | X | X | X | X | X | X | X | | X |
| CI-11-WT | 20 | 10 to 20 | 10 | X | X | | X | | | X | X | | X | |
| CI-12-WT | 20 | 10 to 20 | 10 | X | X | X | X | | | X | X | | X | |
| CI-13-WT | 20 | 10 to 20 | 10 | X | | | X | X | X | X | X | | X | X |
| CI-14-WT | 20 | 10 to 20 | 10 | X | X | X | X | X | X | X | X | X | | X |
| CI-16-WT | 20 | 10 to 20 | 10 | X | X | | X | | | X | X | | X | |
| CI-17-WT | 20 | 10 to 20 | 10 | X | X | X | X | X | X | X | X | | X | X |
| CI-18-WT | 20 | 10 to 20 | 10 | X | X | | X | | | X | X | | X | |
| CI-19-WT | 20 | 10 to 20 | 10 | X | X | | X | | | X | X | | X | |
| CG-137-WT | 20 | 10 to 20 | 10 | X | X | X | X | X | X | X | X | X | | X |
| CG-141-WT | 20 | 10 to 20 | 10 | X | | | X | | | X | X | | X | |

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| | Total Depth (feet bgs) | Screen Interval (feet bgs) | Screen Length (feet) | Water Level ⁴ | HVOCs ⁵ | MNA ⁶ | Water Level ⁴ | HVOCs ⁵ | MNA ⁶ | Water Level ⁴ | Vapor Intrusion | HVOC Plume Centerline ⁷ | HVOC Select Plume Boundary ⁷ | MNA Evaluation ⁸ |
| Shallow Zone | | | | | | | | | | | | | | |
| <i>CI-MW-1-40</i> | 40 | 30 to 40 | 10 | X | | | X | | | X | | | X | |
| CI-7-40 | 40 | 30 to 40 | 10 | X | X | | X | X | | X | | | X | |
| CI-8-40 | 40 | 30 to 40 | 10 | X | X | X | X | | X | X | | | X | X |
| CI-9-40 | 40 | 30 to 40 | 10 | X | X | X | X | | X | X | | | X | X |
| CI-10-35 | 35 | 25 to 35 | 10 | X | X | | X | X | | X | | X | | |
| CI-11-30 | 30 | 20 to 30 | 10 | X | X | X | X | | X | X | | | X | X |
| CI-12-30 | 30 | 20 to 30 | 10 | X | X | | X | X | | X | | X | | |
| CI-13-30 | 30 | 20 to 30 | 10 | X | X | | X | | | X | | | X | |
| CI-14-35 | 35 | 25 to 35 | 10 | X | X | X | X | X | X | X | | X | | X |
| CI-15-40 | 40 | 40 to 50 | 10 | X | X | | X | X | | X | | X | | |
| CI-16-30 | 30 | 20 to 30 | 10 | X | X | | X | | | X | | | X | |
| CI-17-30 | 30 | 20 to 30 | 10 | X | X | | X | | | X | | | X | |
| CI-18-30 | 30 | 20 to 30 | 10 | X | X | X | X | | X | X | | | X | X |
| CI-19-30 | 30 | 20 to 30 | 10 | X | X | X | X | X | X | X | | | X | X |
| CG-137-40 | 40 | 30 to 40 | 10 | X | X | X | X | X | X | X | | X | | X |
| CG-141-40 | 40 | 30 to 40 | 10 | X | X | X | X | X | X | X | | X | | X |

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| | | | | Quarter 1 2013 | | | Quarter 3 2013 | | | | | | | |
| | Total Depth (feet bgs) | Screen Interval (feet bgs) | Screen Length (feet) | Water Level ⁴ | HVOCs ⁵ | MNA ⁶ | Water Level ⁴ | HVOCs ⁵ | MNA ⁶ | Water Level ⁴ | Vapor Intrusion | HVOC Plume Centerline ⁷ | HVOC Select Plume Boundary ⁷ | MNA Evaluation ⁸ |
| Intermediate Zone | | | | | | | | | | | | | | |
| <i>CI-MW-1-60</i> | 60 | 50 to 60 | 10 | X | | | X | | | X | | | X | |
| CI-7-60 | 60 | 50 to 60 | 10 | X | X | X | X | | | X | | | X | X |
| CI-8-60 | 60 | 50 to 60 | 10 | X | | | X | | | X | | | X | |
| CI-9-70 | 70 | 60 to 70 | 10 | X | X | | X | | | X | | | X | |
| CI-10-65 | 65 | 50 to 65 | 15 | X | X | | X | | | X | | | X | |
| CI-11-60 | 60 | 50 to 60 | 10 | X | X | X | X | | | X | | | X | X |
| CI-12-60 | 60 | 50 to 60 | 10 | X | X | X | X | | | X | | | X | X |
| CI-13-60 | 60 | 50 to 60 | 10 | X | X | | X | | | X | | | X | |
| CI-14-70 | 70 | 60 to 70 | 10 | X | | | X | | | X | | | X | |
| CI-15-60 | 60 | 50 to 60 | 10 | X | X | X | X | X | X | X | | X | | X |
| CI-16-60 | 60 | 50 to 60 | 10 | X | X | | X | | | X | | | X | |
| CI-137-50 | 50 | 40 to 50 | 10 | X | X | X | X | X | X | X | | X | | X |
| CG-141-50 | 50 | 40 to 50 | 10 | X | X | X | X | X | X | X | | X | | X |

NOTES:

- ¹Monitoring wells in **bold** denote the monitoring wells that Capital Industries, Inc. will use for the 2013 groundwater sampling activities
- ²Monitoring wells in *italics* denote monitoring wells that will be sampled by other potentially liable parties (PLPs). Capital Industries, Inc. will use the data from the other PLP sampling events.
- ³Groundwater sampling will be conducted semiannually in March and September in conjunction with Blaser Die Casting (BDC) where practicable
- ⁴Water level measurements will be collected in all wells noted above in coordination with the West of 4th PLPs semiannually. Groundwater level measurements will not be collected in Art Brass Plating (ABP) and BDC monitoring wells.
- ⁵HVOCs include tetrachloroethene, trichloroethene, cis-1,2 dichloroethene, trans-1,2 dichloroethene, 1,1 dichloroethene, and vinyl chloride analyzed using U.S. Environmental Protection Agency Method 8260B.
- ⁶MNA parameters include electron receptors, geochemical parameters, and metabolic byproducts to evaluate potential for biodegradation of HVOCs present. MNA parameters will include dissolved oxygen, nitrate, ferric/ferrous iron, manganese (IV)/manganese (II), sulfate, methane, ethane, ethene, pH, temperature, oxidation reduction potential, and total organic carbon.
- ⁷HVOC plume centerline and boundary monitoring wells were selected based on the approximate extent of HVOCs, where detected. Commingled HVOC plumes from other sources exist and difference between the plume centerline and boundaries are not discernible in some areas.
- ⁸MNA evaluation will assist in evaluating biodegradation potential and whether MNA or enhanced MNA alternatives should be considered during the Feasibility Study.

bgs = below ground surface
 CI = Capital Industries, Inc.
 HVOCs = halogenated volatile organic compounds
 MNA = monitored natural attenuation