CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

CLEANUP AND ABATEMENT ORDER NO. R9-2009-0073

ENVIRONMENTAL MONITORING PROGRAM

FORMER KETEMA FACILITY
790 GREENFIELD DRIVE, EL CAJON, CA
SAN DIEGO COUNTY

1. ***Authority*** - Ametek is directed to submit the technical reports required in this Environmental Monitoring Program (EMP) pursuant to California Water Code sections 13267 and 13304.

2. ***Purpose*** - The purpose of the EMP is to produce environmental monitoring data capable of demonstrating compliance with Order No. R9-2009-0073 and answering the following questions.

   a. Are interim remedial actions warranted?

   b. What is the lateral and vertical extent of each waste constituent in soil, groundwater, and soil vapor?

   c. Is the size of the plume of each waste constituent decreasing in size, and or mass?

   d. Has the source of each waste constituent been effectively cleaned up?

   e. Is the selected remedial action alternative effectively removing waste constituents from soil, groundwater, and soil vapor, and is the alternative capable of achieving the cleanup levels in the RIFS Report?

   f. Have the beneficial uses of the groundwater been restored, and are human health and the environment protected?

3. ***Vapor Monitoring*** - Ametek shall sample sub-slab monitoring points in Buildings 2, 3, 7, 9, and 10 at the Property for collection of semiannual sub-slab soil gas/vapor samples and indoor air sampling to validate the estimated indoor air levels. At a minimum two sampling rounds per year of sub-slab and indoor air sampling should be conducted, consistent with the Department of Toxic Substances Control's (DTSC) Vapor Intrusion Guidance. Vapor monitoring data shall be included in the appropriate Groundwater Monitoring Report.

4. ***Groundwater Monitoring*** - Ametek shall measure groundwater elevations quarterly in all monitor wells. Groundwater samples shall be collected from all current groundwater monitor wells and analyzed in accordance with the revised Groundwater Monitoring Plan dated 28 April 2004 using U.S. Environmental

Protection Agency methods 8260B for volatile organic compounds (VOCs). Ametek shall sample any new groundwater monitor or extraction wells quarterly and analyze groundwater samples for VOC related constituents. Ametek may provide a written proposal to change the sampling requirements in this Order. Any proposed changes are subject to Regional Board approval.

5. ***Groundwater Monitoring Reports*** - Ametek shall submit groundwater monitoring reports to the Regional Board as provided below. Subsequent reports shall be submitted no later than 30 days following the end of the monitoring period according to the following schedule:

Monitoring Period	Due Date for Report
First Quarter (Jan-Mar)	Due no later than April 30
Second Quarter (Apr-Jun) & Semiannual	Due no later than July 30
Third Quarter (Jul-Sep)	Due no later than October 30
Fourth Quarter (Oct-Dec) & Semiannual	Due no later than January 30

Groundwater monitoring reports must include:

a. ***Transmittal Letter with Penalty of Perjury Statement*** - The transmittal letter must discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter must be signed by Ametek's principal executive officer or its duly authorized representative, and must include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.

b. ***Groundwater Elevations*** - Groundwater elevation data must be presented in tabular format with: depth to groundwater (in feet below ground surface), top of casing elevations, depths to the top of well screens, length of well screens and total depth for each well included in the monitoring program. For all wells containing floating "free product" (a.k.a. light non-aqueous phase liquid or LNAPL) include the measured thickness of LNAPL in a tabular format. A groundwater elevation map must be prepared for each monitored water-bearing zone with the groundwater flow direction and calculated hydraulic gradients(s) clearly indicated in the figures(s). A complete tabulation of historical groundwater elevations must be included in the fourth quarterly report each year.

c. ***Reporting Groundwater Results*** - All monitoring reports shall:

   I. Present all groundwater sampling data in tabular format. Isoconcentration map(s) and cross sections must be prepared for

constituents of concern (COCs) for each monitored water-bearing zone, as appropriate. Time versus concentration plots and distance versus concentration plots that also show groundwater elevations must be prepared for COCs for appropriate wells.

II. Include a plot plan which clearly illustrates the locations of all monitor wells (on Property and off Property), other waste storage or disposal areas (at the Property), and buildings located on the Property and immediately adjacent to the Property.

III. Include a Site plot plan with the most recent concentrations of the primary groundwater constituents of concern including but not limited to:1,1,1, Trichloroethane (1,1,1 TCA); Trichloroethene (TCE); 1,1 Dichloroethene (1,1 DCE); 1,1-Dichloroethane (DCA); Tetrachloroethylene (PCE); 1,4-Dioxane.

IV. Provide technical interpretations of the groundwater data, and describe any significant increases in pollutant concentrations since the last report, any measures proposed to address the increases, any changes to the site conceptual model, and any conclusions and recommendations for future action.

V. Describe analytical methods used, detection limits obtained for each reported constituent, and a summary of QA/QC data.

VI. Indicate sample collection protocol(s), describe how investigation derived wastes are managed at the Site, and include documentation of proper disposal of contaminated well purge water and/or soil cuttings removed from the Site.

VII. Include historical groundwater sampling results listed in tabular form in the fourth quarterly report each year.

VIII. Include Lab Data sheets and QA/QC results.

d. ***Electronic Reporting Requirements*** - The Electronic Reporting Regulations (Chapter 30, Division 3 of Title 23 & and Division 3 of Title 27, CCR) require electronic submission of any report or data required by a regulatory agency from a cleanup site after July 1, 2005. All information submitted to the Regional Board in compliance with this Order is required to be submitted electronically via the Internet into the Geotracker database http://geotracker.waterboards.ca.gov/ (Geotracker Site ID. **SL209234198**). The electronic data shall be uploaded on or prior to the regulatory due dates set forth in the Order or addenda thereto. To comply with these requirements, Ametek shall upload to the Geotracker database the following minimum information.

I. Laboratory Analytical Data - Analytical data (including geochemical data) for all soil, vapor, and water samples in Electronic Data File (EDF) format. Water, soil, and vapor data include analytical results of samples collected from: monitoring wells, boreholes, gas and vapor wells or other collection devices, surface water, groundwater, piezometers, stockpiles, and drinking water wells.

II. Locational Data - The latitude and longitude of any permanent monitoring well for which data is reported in EDF format, accurate to within 1 meter and referenced to a minimum of two reference points from the California Spatial Reference System (CSRS-H), if available.

III. Monitoring Well Elevation Data - Elevation measurements to the top of groundwater well casings for all groundwater monitoring wells. Drinking water wells included in the report, do not need to have the elevation reported unless they are identified as permanent sampling points.[1]

IV. Depth-to-Water Data - Monitoring wells need to have the depth-to-water information reported whenever water data is collected, even if water samples are not actually collected during the sampling event. Drinking water wells do not need to have the depth-to-water reported unless the wells are surveyed as permanent sampling points and the measurements can be feasibly made in the well.

V. Site Map - Site map or maps which displays discharge locations,[2] streets bordering the Property, and sampling locations for all soil, water, and vapor samples. The Site map is a stand-alone document that may be submitted in various electronic formats.[3] A Site map must also be uploaded to show the maximum extent of any groundwater pollution. An updated Site map may be submitted at any time.

VI. Monitoring Well Screen Intervals - The depth to the top of the screened interval and the length of the screened interval for any permanent monitoring well.

VII. Boring Logs - Boring logs (in searchable PDF format) prepared by an appropriately licensed professional.

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[1] A permanent sampling point is defined as a point that is sampled for more than a 30-day period.

[2] Former tank(s), product and vapor piping, dispenser locations, or sump locations, and unauthorized discharge or spill areas.

[3] Formats include .gif, .jpeg, .jpg, tiff, .tif, .pdf

VIII. Electronic Report Submittal Requirements - A complete copy (in searchable PDF format) of all assessment, cleanup, and monitoring reports including the signed transmittal letters, professional certifications, and all data presented in the reports.

The GeoTracker website address is http://geotracker.waterboards.ca.gov. Deadlines for electronic submittals coincide with deadlines for paper copy submittals. The Geotracker Global ID for this Site is: **SL209234198**.

e. ***Remediation*** - If applicable, the report must include soil vapor or groundwater extraction results in tabular form, for each extraction well and for the Site as a whole. The report must also include contaminant removal results from all extraction wells and from other cleanup and abatement systems (*e.g.* skimmers), expressed in units of chemical mass per day and mass for the quarter. Historical total annual mass removal results must be tabulated in the fourth quarterly report each year.

f. ***Status Report*** - The quarterly report must describe relevant work completed during the reporting period (*e.g.* Site investigation, interim remedial measures) and work planned for the following quarter.

6. ***Violation Reports*** - If Ametek violates any requirement of this Order, then Ametek must notify the Regional Board office by telephone as soon as practicable once Ametek has knowledge of the violation. Regional Board staff may, depending on violation severity, require Ametek to submit a separate technical report on the violation within five working days of telephone notification.

7. ***Other Reports*** - Ametek must notify the Regional Board in writing prior to any Site activities, such as construction or removal of underground structures, which have the potential to cause further migration of contaminants or which would provide new opportunities for Site investigation.

8. ***Record Keeping*** - Ametek or its agent must retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and must make them available to the Regional Board upon request.

9. ***Environmental Monitoring Program (EMP) Revisions*** - Revisions to the EMP may be ordered by the Regional Board, or at the request of Ametek. Prior to making EMP revisions, the Regional Board will consider the burden, including costs, of the monitoring reports relative to the benefits to be obtained from these reports.

MICHAEL P. McCANN
Assistant Executive Officer

8/19/09
Date