

Los Angeles Regional Water Quality Control Board

August 24, 2012

Mr. Eric Longenecker, PE
Site Assessment Project Manager
Contract Professional
Los Angeles Unified School District
Office of Environment Health & Safety
333 S. Beaudry Avenue, 28th Floor
Los Angeles, California 90017

REVISED MONITORING AND REPORTING PROGRAM NO. CI-9543 – LOS ANGELES UNIFIED SCHOOL DISTRICT PROPOSED SOUTH REGION HIGH SCHOOL NO. 12, 8800 SOUTH SAN PEDRO STREET, LOS ANGELES, CA 90003 (FILE NO. 09-134, WASTE DISCHARGE REQUIREMENTS ORDER NO. R4-2007-0019, SERIES NO. 103, CI-9543, GLOBAL ID WDR 100001088, DTSC SITE CODE 304545)

Dear Mr. Longenecker:

The Los Angeles Regional Water Quality Control Board (Regional Board) issued General Waste Discharge Requirements (WDR) on October 13, 2009 for pilot testing *in situ* chemical oxidation (ISCO) using sodium permanganate (NaMnO_4) at the proposed South Region High School No. 12, 8800 South San Pedro Street, Los Angeles, California (Site), per a *Remedial Action Plan* (RAP), dated October 22, 2008, which was approved by the Department of Toxic Substances Control (DTSC) on February 11, 2009.

The pilot NaMnO_4 injection was performed in November 2009 and followed by groundwater monitoring and reporting per the subject Monitoring and Reporting Program (MRP) No. CI-9543. Regional Board staff issued a revised MRP for second pilot injection on November 8, 2010. In December 2010, a second NaMnO_4 injection was performed at ten injection wells and followed by groundwater monitoring and reporting per the revised MRP. In December 2011, a full-scale NaMnO_4 injection was performed at all 22 injection wells and Regional Board staff issued a revised MRP for the full-scale remediation at the Site (enclosed). The three injections of NaMnO_4 into groundwater performed between November 2009 and December 2011 delivered a total of 122,806 pounds of 40% NaMnO_4 in 399,665 gallons of solution. The analytical data were reported in the quarterly groundwater monitoring reports and submitted to the Regional Board and to the DTSC.

Based on the analytical data from 2009 to 2012, the extent of the groundwater contaminant plumes, specifically trichloroethene (TCE) and cis-1,2-dichloroethene (c-1,2-DCE), has substantially decreased as a result of the ISCO remediation, and most significantly following the

MARIA MEHRANIAN, CHAIR | SAMUEL UNGER, EXECUTIVE OFFICER

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full-scale injection performed in December 2011. As a result of this progress, and discussion among Regional Board and DTSC staff, the Los Angeles Unified School District (LAUSD) requested that the current MRP be modified to reduce the scope and frequency of Site monitoring to reflect the post full-scale implementation phase of the Site. The request made by LAUSD included a reduction in sampling, analyses, and reporting frequency from quarterly to semi-annually.


Based on Regional Board staff's review of the groundwater monitoring results from 2009 to 2012, the extent of the chlorinated volatile organic compounds (VOCs) in groundwater, specifically TCE and c-1,2-DCE, have been reduced substantially by ISCO. Therefore, MRP No. CI-9543 is modified as requested. The revised MRP has incorporated all changes, and shall be implemented for the Site.

The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the MRP, including groundwater monitoring data, discharge location data, and pdf monitoring reports to the State Water Resources Control Board GeoTracker database under Global ID WDR 100001088. ESI training video is available at: <https://waterboards.webex.com/waterboards/ldr.php?AT=pb&SP=MC&rID=44145287&rKey=7dad4352c990334b>

Please see Paperless Office Notice for GeoTracker Users, dated December 12, 2011 at: <http://www.waterboards.ca.gov/losangeles/resources/Paperless/Paperless%20Office%20for%20OGT%20Users.pdf>

If you have any additional questions, please contact the Project Manager, Mr. David Koo at (213) 620-6155 (dkoo@waterboards.ca.gov) or the Unit Chief, Dr. Eric Wu at (213) 576-6683 (ewu@waterboards.ca.gov) regarding this matter.

Sincerely,


Samuel Unger, P.E.
Executive Officer

Enclosure: Revised Monitoring and Reporting Program No. CI-9543

cc: Mr. Amit Pathak, P.E., DTSC
Mr. Assaf A. Rees, P.E., AECOM Technical Services, Inc.

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

REVISED MONITORING AND REPORTING PROGRAM NO. CI-9543
FOR
LOS ANGELES UNIFIED SCHOOL DISTRICT
PROPOSED SOUTH REGION HIGH SCHOOL NO. 12
8800 SOUTH SAN PEDRO STREET, LOS ANGELES

ORDER NO. R4-2007-0019 (SERIES NO. 103)
FILE NO. 09-134

I. REPORTING REQUIREMENTS

- A. The Los Angeles Unified School District (hereinafter Discharger) shall implement this revised Monitoring and Reporting Program (MRP) at 8800 South San Pedro Street, Los Angeles, California (see Figure 1 attached), under Regional Board Order No. R4-2007-0019. Monitoring reports shall be received by the dates in the following schedule:

<u>Monitoring Period</u>	<u>Report Due</u>
January – June	July 15
July – December	January 15

- B. If there is no discharge or injection during any reporting period, the report shall so state.
- C. By January 30th of each year, beginning January 30, 2013, the Discharger shall submit an annual summary report to the Regional Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous calendar year. In addition, the Discharger shall discuss the compliance record and the corrective actions taken, or planned, which may be needed to bring the discharge into full compliance with the waste discharge requirements (WDRs).
- D. Laboratory analyses – all chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Public Health Environmental Laboratory Accreditation Program (ELAP). The one exception is for the Dissolved Gasses (ethene, ethane, methane) that will be analyzed by Microseeps, Inc. of Pittsburgh, Pennsylvania which is certified by the National Environmental Laboratory Accreditation Program (NELAP). A copy of the laboratory certifications shall be provided each time a new and/or renewal is obtained from ELAP and/or NELAP.

- E. The method limits (MLs) employed for effluent analyses shall be lower than the permit limits established for a given parameter, unless the Discharger can demonstrate that a particular ML is not attainable and obtains approval for a higher ML from the Executive Officer. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test and the associated laboratory quality assurance/quality control (QA/QC) procedures.
- F. All QA/QC samples must be run on the same dates when samples were actually analyzed. The Discharger shall make available for inspection and/or submit the QA/QC documentation upon request by Regional Board staff. Proper chain of custody procedures must be followed and a copy of the chain of custody documentation shall be submitted with the report.
- G. Each monitoring report must affirm in writing that "All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health, and in accordance with current United States Environmental Protection Agency (USEPA) guideline procedures or as specified in this Monitoring Program." Proper chain of custody procedures must be followed and a copy of the completed chain of custody form shall be submitted with the report.
- H. For every item where the requirements are not met, the Discharger shall submit a statement of the cause(s), and actions undertaken or proposed which will bring the discharge into full compliance with waste discharge requirements at the earliest possible time, including a timetable for implementation of those actions.
- I. The Discharger shall maintain all sampling and analytical results, including strip charts, date, exact place, and time of sampling, dates analyses were performed, analyst's name, analytical techniques used, and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
- J. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized to demonstrate compliance with the requirements and, where applicable, shall include results of receiving water observations.
- K. Any mitigation/remedial activity including any pre-discharge treatment conducted at the site must be reported in the quarterly monitoring report.
- L. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with WDRs. This section shall be located at the front of the report and shall clearly list all non-compliance with discharge requirements, as well as all excursions of effluent limitations.

- M. The Discharger shall comply with requirements contained in Section G of Order No. R4-2007-0019 "Monitoring and Reporting Requirements" in addition to the aforementioned requirements.

II. GROUNDWATER MONITORING PROGRAM

The Discharger shall conduct groundwater monitoring at the site. Groundwater samples shall be collected from groundwater monitoring wells MW-1, MW-2, MW-3, MW-5D, MW-6D, MW-11D, MW-12D, MW-13D, MW-14DR, MW-15D, and MW-21 through MW-24. Groundwater samples shall also be collected from the ISCO performance monitoring wells MW-16 through MW-20R, (see Figure 2 attached for well locations). Groundwater shall be monitored for the duration of the remediation in accordance with the following discharge monitoring program:

Constituent	Analytical Method	Units ¹	Frequency	Well IDs
Oxidation-Reduction Potential (ORP) ²	field data	millivolts	bi-annual	All 19 wells
Dissolved Oxygen (DO) concentrations ²	field data	mg/L	bi-annual	All 19 wells
Specific conductance ²	field data	µmhos/cm	bi-annual	All 19 wells
Turbidity ²	field data	NTU	bi-annual	All 19 wells
pH ²	field data	pH Units	bi-annual	All 19 wells
Temperature ²	field data	°C or °F	bi-annual	All 19 wells
Groundwater elevation ²	field data	feet msl	bi-annual	All 19 wells
Volatile Organic Compounds (VOCs)	EPA 8260B	µg/L	bi-annual	All 19 wells
Permanganate concentrations	SM 4500	mg/L	bi-annual	All 19 wells
Total Organic Carbon (TOC)	EPA 9060M / SM 5310C	mg/L	bi-annual	All except ISCO monitoring wells
Total Dissolved Solids (TDS) and Total Suspended Solids (TSS)	SM2540C / D	mg/L	bi-annual	All except ISCO monitoring wells
Boron	EPA 200.7	mg/L	bi-annual	All except ISCO monitoring wells

Constituent	Analytical Method	Units ¹	Frequency	Well IDs
Major anions (bromide, chloride, sulfate, nitrate, nitrite, O-phosphate, sulfide)	EPA 300.0 / SM 4500	mg/L	bi-annual	All except ISCO monitoring wells
Major cations (barium, calcium, magnesium, manganese, potassium, sodium)	EPA 6010B	mg/L	bi-annual	All except ISCO monitoring wells
Metals (chromium, iron, zinc, antimony, arsenic, beryllium, cadmium, copper, lead, nickel, selenium, silver, thallium, mercury, hexavalent chromium)	EPA 6010B / 6020 / 7470A / 7199	mg/L or µg/L	bi-annual	All except ISCO monitoring wells

Notes:

¹ mg/L: milligrams per liter; µg/L: micrograms per liter; µmhos/cm: micromhos per centimeter; °C: degrees Celsius; °F: degrees Fahrenheit; NTU: Nephelometric Turbidity Units; msl: mean sea level.

² Field instruments will be used to test for this constituent during sampling event.

All groundwater monitoring reports must include, at a minimum, the following:

- a. Well identification, date, and time of sampling;
- b. Sampler and laboratory identification;
- c. Observation of groundwater levels recorded to 0.01 feet mean sea level and from these elevations, the interpreted groundwater flow direction.

III. MONITORING FREQUENCIES

Specifications in this monitoring program are subject to periodic revisions. Monitoring requirements may be modified or revised by the Executive Officer based on review of monitoring data submitted pursuant to this Order. Monitoring frequencies may be adjusted to a less frequent basis or parameters and locations dropped by the Executive Officer if the Discharger makes a request and the request is backed by statistical trends of monitoring data submitted.

IV. CERTIFICATION STATEMENT

Each report shall contain the following declaration:

"I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the

information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

Executed on the _____ day of _____ at _____.

(Signature)

(Title)

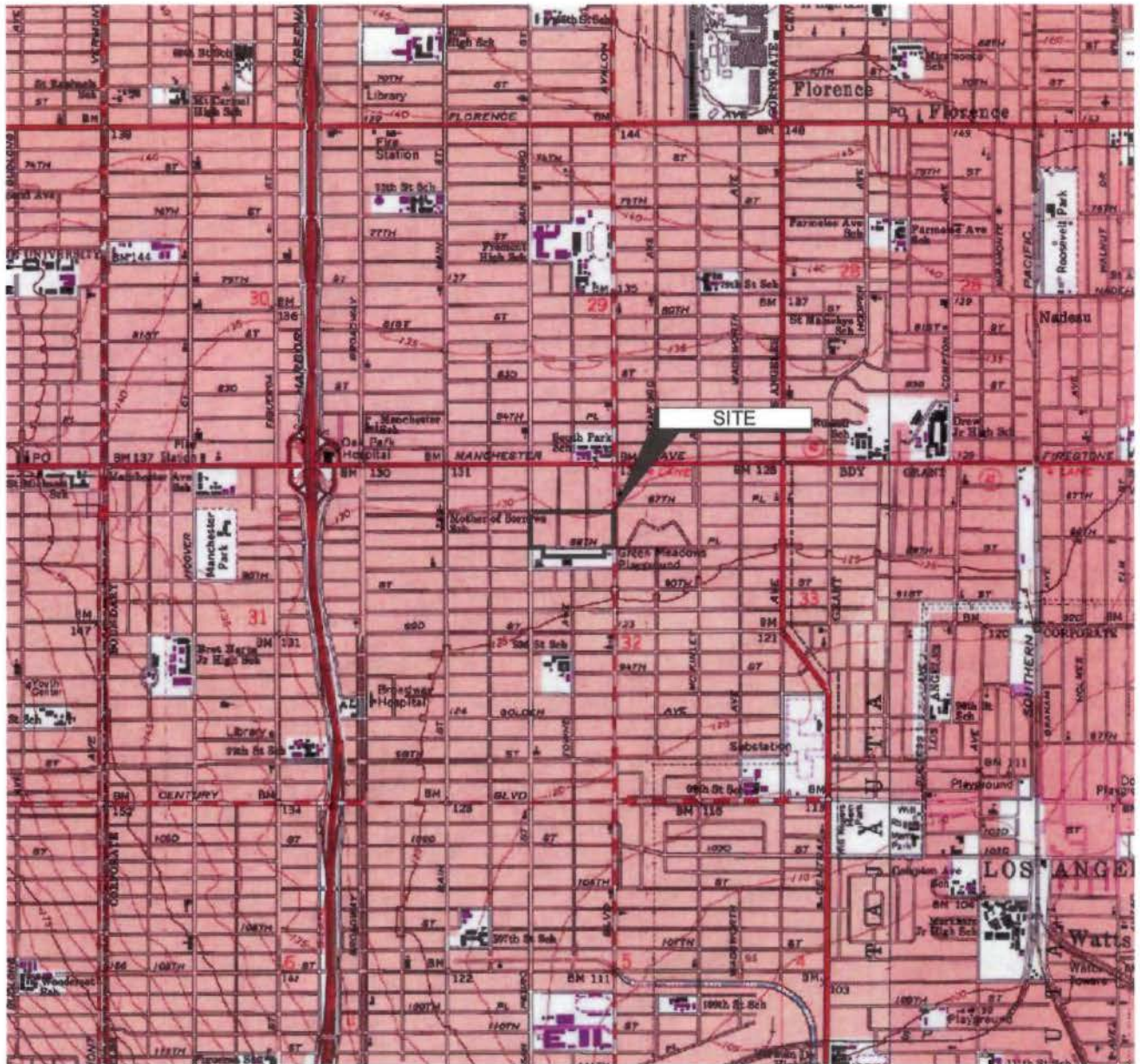
V. ELECTRONIC SUBMITTAL OF INFORMATION (ESI) TO GEOTRACKER

The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the MRP, including groundwater monitoring data, discharge location data, correspondence, and pdf monitoring reports to the State Water Resources Control Board GeoTracker database under Global ID WDR 100001088.

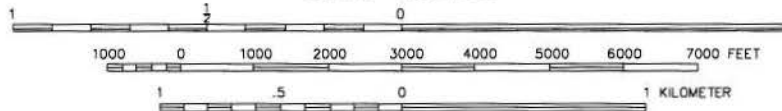
All records and reports submitted in compliance with this Order are public documents and will be made available for inspection during business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region, upon request by interested parties. Only proprietary information, and only at the request of the Discharger, will be treated as confidential.

Ordered by: Samuel Unger
Samuel Unger, P.E.
Executive Officer

Date: August 24, 2012



SCALE 1: 24,000



Portion of 7.5-minute Series (Topographic) Map
 United States Department of the Interior
 Geological Survey
 , California Quadrangle



LOS ANGELES UNIFIED SCHOOL DISTRICT
 PROPOSED SOUTH REGION HIGH SCHOOL #12
 LOS ANGELES, CALIFORNIA

SITE LOCATION MAP



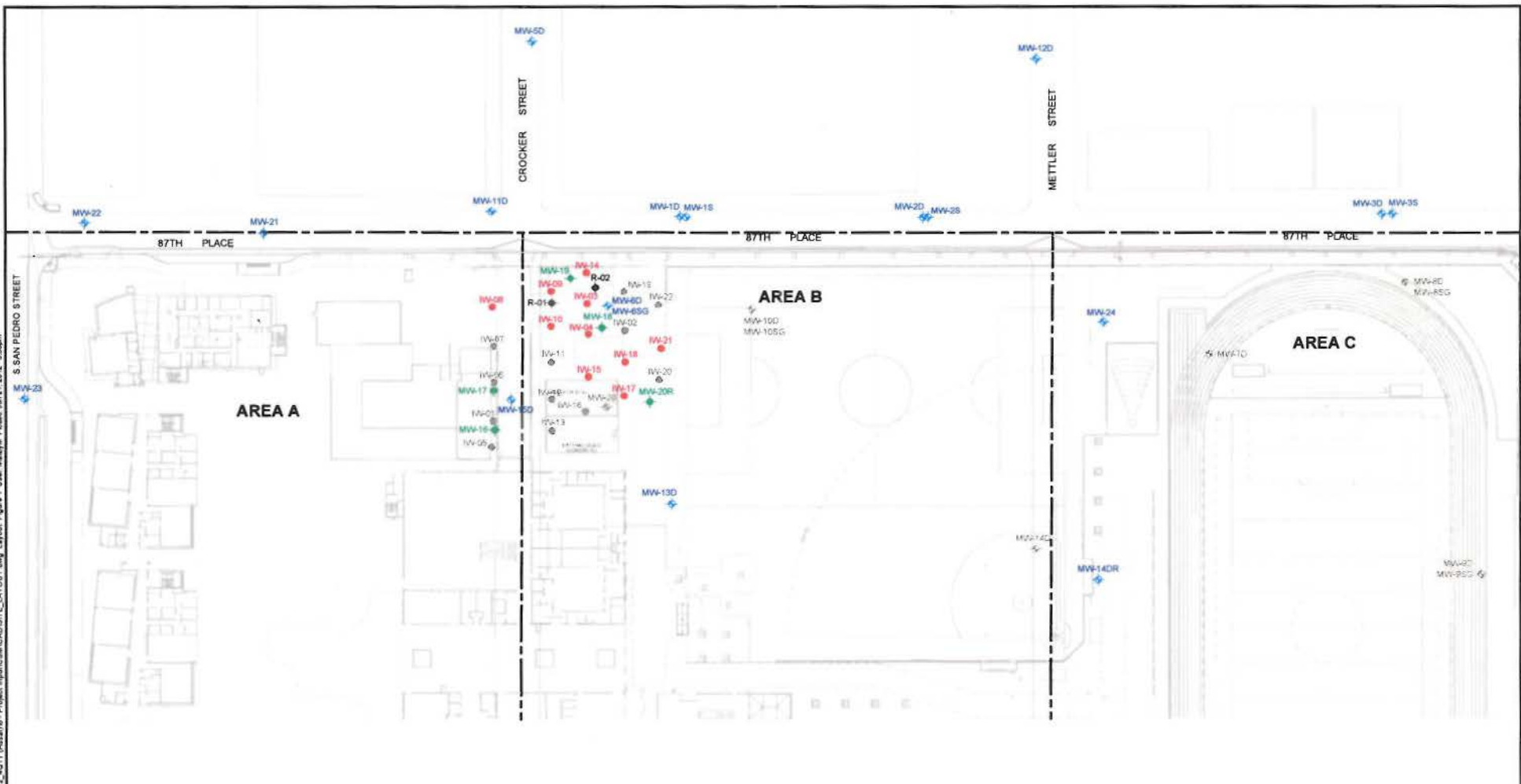
PROJECT NO
60238306

DRAWN BY
JLC

DATE
04/12

FIGURE 1

File: \\usgblp003\projects\LAUSD\PROJECTS\RHHS-12_4011 (Asst)\06 - Project Input\CMCAD\SITE_LAYOUT.dwg Layout Figure 1 User: MalbyM Plotted: Jan 21, 2012 - 5:36pm

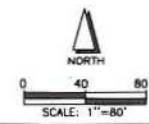


LEGEND

- MW-24 MONITORING WELL
- MW-18 ISCO MONITORING WELL
- R-02 EXISTING RECIRCULATION WELL
- IW-21 ISCO INJECTION WELL
- MW-20 ABANDONED MONITORING WELL
- IW-22 ABANDONED INJECTION WELL
- CENTERLINE

NOTES

1. THE DEVELOPMENT FEATURES SHOWN ARE PER INPUT FROM LAUSD DATED JANUARY 15, 2012.
- D DEEP
R RELOCATED
S SHALLOW



LOS ANGELES UNIFIED SCHOOL DISTRICT
PROPOSED SOUTH REGION HIGH SCHOOL #12
LOS ANGELES, CALIFORNIA

**SITE LAYOUT
FIRST QUARTER 2012**

PROJECT NO. 60238306	DRAWN BY JLC	DATE 04/12	FIGURE 2
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