

APC



# California Regional Water Quality Control Board

## Los Angeles Region

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July 15, 2003

Mr. David Nelson, Vice-President  
Playa Capital Company, LLC  
12555 West Jefferson Boulevard, Suite 300  
Los Angeles, CA 90066

RFV

Dear Mr. Nelson:

**GENERAL WASTE DISCHARGE PERMIT ENROLLMENT (ORDER NO. R4-2002-0030: SERIES 032) FOR PROPOSED LACTATE AMENDMENT SOLUTION INJECTION TO GROUNDWATER AT FORMER HUGHES TEST SITE 2 – PLAYA VISTA PROJECT, 6775 CENTINELA AVENUE, LOS ANGELES, CALIFORNIA (CLEANUP AND ABATEMENT ORDER NO. 98-125, FILE NO. 98-192, SLIC NO. 0773, SITE ID NO. 2043W-00, CI-8609)**

We have completed our review of your application for enrollment under General Waste Discharge Requirements to inject lactate amendment solution to groundwater at the subject site for in-situ bioremediation to address the volatile organic compounds in groundwater.

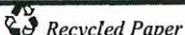
Playa Vista is a 1,087 acre residential development project located in the western area of the City of Los Angeles near the Los Angeles International Airport. The area designated as the former Test Site 2 is located in Phase I of Area D of the Playa Vista project at Latitude: N33° 58' 13", Longitude: W118° 25' 36". The name "Test Site 2" was originally established by Hughes Aircraft for the area that was used from the early 1950's to the mid 1980's for testing aircraft equipment. In November 1986, all facilities at Test Site 2 were demolished. The Test Site 2 area is currently vacant land. Since 1986, multiple phases of soil, soil gas and groundwater investigations have been completed at the Test Site 2 area. Based upon the available data, the Chemicals of Concern (COCs) are vinyl chloride (VC), *cis*-1, 2-dichloroethene (*cis*-1, 2-DCE), and 1,1-dichloroethene (1,1-DCE).

In a letter dated June 28, 2002, the Regional Board conditionally approved the Soil and Groundwater Remediation Plan for Test Site 2 (RP) dated March 5, 2002, prepared by Camp Dresser and McKee, Inc. (CDM). In a letter dated June 10, 2003, the Regional Board approved RP addenda prepared by CDM.

The primary remedial measure to address contamination was the excavation of contaminated soil. In-situ bioremediation is now planned for the Test Site 2 area via the operation of an injection gallery to deliver lactate amendment solution to the subsurface. After the contaminated soil excavation was completed to a depth of approximately 17 feet, the infiltration gallery was installed at the base of the soil excavation footprint area (approximately 130 feet by 180 feet). The infiltration gallery consists of a network of slotted piping placed on the base of the excavation area and surrounded with a layer of gravel with a geotextile liner placed over the gravel. Clean soil was then backfilled over the infiltration gallery. Two riser pipes from the infiltration gallery, one on the north side and one on the south side, serve as the two feed line ports for the injection of lactate

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\*\*\*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption\*\*\*  
\*\*\*For a list of simple ways to reduce demand and cut your energy costs, see the tips at: <http://www.swrcb.ca.gov/news/echallenge.html>\*\*\*



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Former Test Site 2 - Playa Vista Project

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amendment solution. The primary enhanced in-situ anaerobic bioremediation reaction is expected to occur within the upper and lower areas of the Bellflower Aquitard.

A groundwater extraction trench has been constructed approximately 70 feet from the footprint area around the perimeter of the infiltration gallery. The trench is approximately 21 feet deep and is backfilled with permeable sands. Four extraction wells have been installed within the trench. Groundwater collected in the trench will be pumped from the wells and injected with a lactate amendment solution (sodium lactate, phosphate buffer, vitamins, and yeast extract) that will be pumped to the two feed line ports and reinfiltated to groundwater via the infiltration gallery's slotted underground pipelines. The solution will mix with groundwater to promote the in-situ bioremediation and dechlorination of the COCs.

The bioremediation chemical feed/carrier water system is expected to operate at a flow rate of approximately 30 gallons per minute. The concentration of the lactate solution is not expected to exceed 2,000 milligrams per liter in the carrier groundwater that is returned to the injection gallery. The injection gallery bioremediation operation is expected to run 24 hours a day, 7 days a week for approximately three to five years. It is expected that the in-situ bioremediation and COC dechlorination will be complete and that the lactate product and its substrates will have been metabolized, without degradation of the groundwater.

The approved RAP does include the option for ex-situ treatment with the use of an ultraviolet/oxidation (Advanced Oxidation Process - AOP) treatment system for the remediation of extracted groundwater at Test Site 2. The treated water would be discharged into the sanitary sewer in accordance with an Industrial Wastewater Permit issued by the Los Angeles Department of Public Works Bureau of Sanitation. However, most groundwater flow captured by the extraction trench is expected to be used as amendment carrier water which is returned to the infiltration gallery operation. Consequently, the Discharger will only operate the AOP to treat extracted groundwater that is not reinfiltated.

The injection activities are expected to start on July 18, 2003. Any potential adverse water quality impacts that may result will be localized, of short-term duration, and will not impact any existing or prospective uses of groundwater. Groundwater quality will be monitored to verify no long-term adverse impact to water quality. The Discharger is required per Monitoring and Reporting Program No. CI-8609 to document the quantities of lactate injected. There may be small increases associated with soluble gases such as methane, ethane, ethene, and carbon dioxide.

Regional Board staff have reviewed the information provided and have determined that the proposed discharge meets the conditions specified in Regional Board Order No. R4-2002-0030, "General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound Impacted Sites," adopted by this Regional Board on January 24, 2002.

Enclosed are your Waste Discharge Requirements, consisting of Regional Board Order No. R4-2002-0030 (Series 032), Monitoring and Reporting Program No. CI-8609, and Standard Provisions. Please note that the discharge limits in Attachment A (DWR Basin No. 4-11 (West Basin)) of this Order No. R4-2002-0030 are not applicable to your discharge.

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Former Test Site 2 - Playa Vista Project

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The "Monitoring and Reporting Program" requires you to implement the monitoring program on the effective date of this enrollment (July 15, 2003) under Regional Board Order No. R4-2002-0030. All monitoring reports should be sent to the Regional Board, ATTN: Information Technology Unit.

When submitting monitoring or technical reports to the Regional Board per these requirements, please include a reference to "Compliance File No. CI-8609", which will assure that the reports are directed to the appropriate file and staff. Also, please do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

We are sending a copy of Order No. R4-2002-0030 and the Standard Provisions only to the applicant. A copy of the Order will be furnished to anyone who requests it.

If you have any questions, please contact Kwang-il Lee at (213) 620-2269, or Gary Schultz at (213) 620-2264.

Sincerely,



Dennis A. Dickerson  
Executive Officer

Enclosures

Board Order No. R4-2002-0030  
Monitoring and Reporting Program No. CI-8609  
Standard Provisions Applicable to Waste Discharge Requirements

cc: See Attached Mailing List

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Former Test Site 2 - Playa Vista Project

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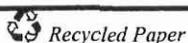
July 15, 2003

### MAILING LIST

Ms. Elizabeth Adams, United States Environmental Protection Agency, Region IX  
Ms. Rachel Loftin, United States Environmental Protection Agency, Region IX  
Mr. Gerald Hiatt, United States Environmental Protection Agency, Region IX  
Ms. Betsy Curnow, United States Environmental Protection Agency, Region IX  
Mr. Michael Lauffer, Office of Chief Counsel, State Water Resources Control Board  
Mr. Robert Sams, Office of Chief Counsel, State Water Resources Control Board  
Ms. Dorothy Rice, Department of Toxic Substances Control – Sacramento  
Ms. Florence Gharibian, Department of Toxic Substances Control - Glendale  
Ms. Raymond Chan, City of Los Angeles, Department of Building and Safety  
Ms. Colin Kumabe, City of Los Angeles, Department of Building and Safety  
Mr. David Hsu, City of Los Angeles, Department of Building and Safety  
Mr. Jose Reynosa, Los Angeles County, Department of Health Services  
Mr. Bob Weinberger, Playa Capital Company, LLC  
Mr. Dave Chernik, Playa Capital Company, LLC  
Mr. Dave Chamberlin, Camp Dresser & McKee Inc.  
Mr. Jay Accashian, Camp Dresser & McKee Inc.  
Ms. Patricia McPherson, Grassroots Coalition  
Ms. Kathy Knight, Spirit of the Sage Council  
Ms. Jane Williams Californians Against Toxics  
Mr. Joe Lyou, California Environmental Rights Alliance

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

**MONITORING AND REPORTING PROGRAM NO. CI-8609  
FOR  
PLAYA CAPITAL COMPANY, LLC  
FORMER TEST SITE 2 – PLAYA VISTA PROJECT**

**ENROLLMENT UNDER GENERAL WDR ORDER NO. R4-2002-0030 (SERIES NO. 032)  
SLIC NO. 0773**

**I. REPORTING REQUIREMENTS**

- A. Playa Capital Company, LLC, (hereinafter Discharger) shall implement this monitoring program on the effective date of this enrollment (July 15, 2003) under Regional Board Order No. R4-2002-0030 (Series No. 032). The first monitoring report under this Program is due by October 15, 2003.

Monitoring reports shall be received by the dates in the following schedule:

<u>Reporting Period</u>	<u>Report Due</u>
January – March	April 15
April – June	July 15
July – September	October 15
October – December	January 15

- B. If there is no discharge or injection, during any reporting period, the report shall so state. Monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.
- C. By March 1 of each year, 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.
- D. 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 waste discharge requirements. 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.

July 15, 2003

- E. The Discharger shall comply with requirements contained in Section G. of Order No. R4-2002-0030 "*Monitoring and Reporting Requirements*" in addition to the aforementioned requirements.

## II. LACTATE INJECTION MONITORING REQUIREMENTS

The quarterly reports shall contain the following information regarding injection activities:

1. Location Map showing groundwater extraction trench wells and injection points used for the lactate amendment solution:
2. Written and tabular summary defining quantity of lactate amendment solution and buffer solution injected per month to the infiltration gallery and summary describing the days on which the injection system has been operating.

## III. GROUNDWATER MONITORING PROGRAM

A groundwater monitoring program shall be implemented to detect and evaluate the impacts beyond the infiltration gallery zone (Monitoring Well Nos. C133 (Ballona Well 1), C134 (Ballona Well 2), and C128). Groundwater monitoring shall also be implemented to evaluate the effectiveness of the lactate injection activities and the insitu bioremediation in the infiltration gallery operational zone (Monitoring Well Nos. PZ-1,2,3(a,b,c,d) and IG-1 through 8). The monitoring data required for Monitoring Well Nos. PZ-1,2,3(a,b,c,d) and IG-1 through 8 will also be included in the Quarterly Progress Reports noted below in section IV and will be evaluated by the Remediation Section. The following table shall constitute the monitoring program for these wells (see Figure 1).

<u>CONSTITUENT</u>	<u>UNITS*</u>	<u>TYPE OF SAMPLE</u>	<u>MINIMUM FREQUENCY OF ANALYSIS</u>
Chlorinated Volatile Organic Compounds (EPA Method 8260B)	µg/l	grab	Quarterly
Total Organic Carbon (EPA Method 9060 Modified)	mg/l	grab	Quarterly
Total Dissolved Solids	mg/l	grab	Quarterly
pH	pH units	grab	Quarterly
Oxidation-Reduction Potential	millivolts	grab	Quarterly
Groundwater Elevation	Feet, below ground surface (bgs)	In situ	Quarterly
Dissolved Oxygen	mg/l	grab	Quarterly
Major Anions (chloride, sulfate, nitrate, nitrite, sulfide, phosphate, carbonate)	µg/l	grab	Quarterly
Major Cations (Calcium, magnesium, potassium, sodium)	mg/l	grab	Quarterly
Methane, Ethene, Ethane, Carbon Dioxide	mg/l	grab	Quarterly

\* µg/l - micrograms per liter  
 mg/l - milligrams per liter

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

- a. Well identification, date and time of sampling;
- b. Sampler identification, and laboratory identification;
- c. Quarterly observation of groundwater levels, recorded to 0.01 feet mean sea level and groundwater flow direction.

IV. REMEDIAL PLAN QUARTERLY PROGRESS REPORTS

The Regional Board Remediation Section requires Quarterly Progress Reports (QPRs) from the Discharger. The QPRs are to describe the Discharger's efforts and overall status in meeting the Remedial Plan as approved for former Test Site 2. The QPRs include most of the monitoring data required above and other monitoring data which is beyond the scope of this monitoring program.

V. CERTIFICATION STATEMENT

Each report shall contain the following completed 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)"

VI. MONITORING FREQUENCIES

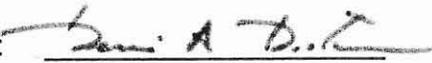
Specifications in this monitoring program are subject to periodic revisions. Monitoring requirements may be modified or revised by the Executive Officer based on review of monitoring data submitted pursuant to this Order. Monitoring frequencies may be adjusted to a less frequent basis or parameters and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

Playa Capital Company, LLC  
Former Test Site 2, Playa Vista Project  
General WDR Order No. R4-2002-0030 (Series No. 032)  
Monitoring and Reporting Program No. CI-8609

SLIC No. 0773

#### VII. PUBLIC DOCUMENTS

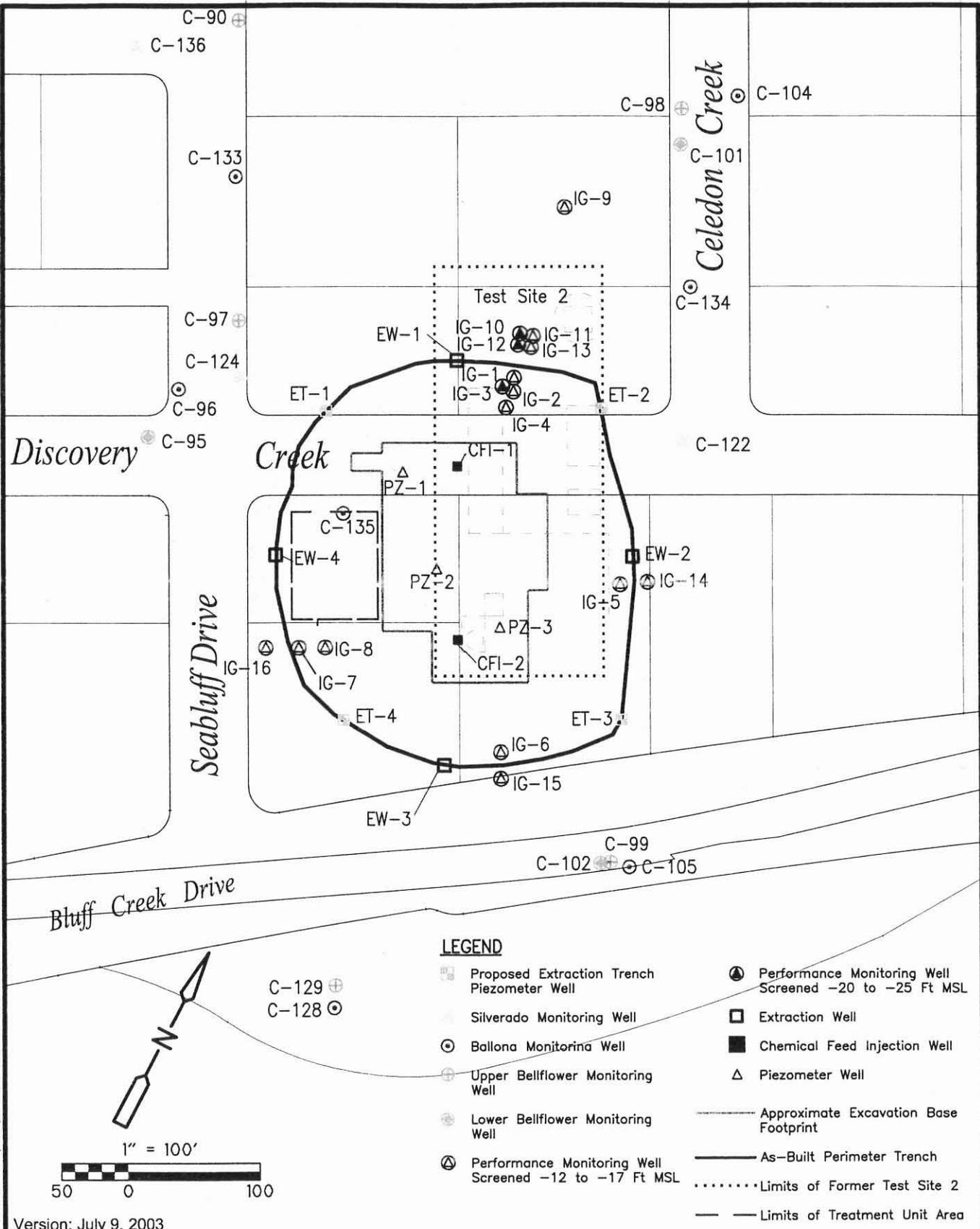
These records and reports are public documents and shall be made available for inspection during normal business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region.

Ordered by:   
Dennis A. Dickerson  
Executive Officer

Date: July 15, 2003

/GS

DATE: Jul 09, 2003 5:05pm  
 DWG: N:\10610\36346-TS2MCPwells\CAD\SitePlan-TS2Rem-SurrndWells\_070803a.dwg  
 XREFS: MF-VOC-Backgroud MF-VOC-productbndy  
 sitebase USER: negretegd



Version: July 9, 2003

PLAYA VISTA  
 WASTE DISCHARGE REQUIREMENTS APPLICATION FOR FORMER TEST SITE 2 REMEDIATION SYSTEM

**Test Site 2 Remediation System  
 and Surrounding Well Locations**



Figure 1