

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2006-0814
CALIFORNIA WATER CODE SECTION 13267
FOR
PIONEER AMERICAS LLC
TRACY, SAN JOAQUIN COUNTY

Pioneer Americas LLC (Discharger) leases and operates a 15-acre manufacturing facility at 26700 South Banta Road in Tracy, San Joaquin County (Site). The Discharger acquired the lease for the Site upon the acquisition of the All-Pure Chemical Company (All-Pure) in 1989. The previous owner of All-Pure (and current owner of the Site property) purchased the property in 1975 from Anderson Tire Recapping Company. Anderson Tire Recapping Company developed the Site in 1945, before which the Site was used for alfalfa production. The Discharger currently produces sodium hypochlorite (liquid bleach) from chlorine and caustic, and repackages chlorine gas into 150 and 2,000 pound cylinders. Also, the Discharger purchases calcium hypochlorite from another company, which it warehouses and distributes for sale at the Site. The Site previously had a sulfuric acid repackaging line and a truck maintenance shop. Groundwater at the Site is about 15 feet below the ground surface. Waste constituents in groundwater from the Site include carbon tetrachloride, chloroform, and various inorganic compounds. This pollution impaired the beneficial uses of this water resource.

This Monitoring and Reporting Program (MRP) is issued pursuant to Section 13267 of the California Water Code and is necessary to delineate groundwater pollutant plumes and determine whether remediation efforts are effective. Existing data and information about the Site show the presence of various chemicals, including carbon tetrachloride, chloroform, and various inorganic compounds, emanating from the property under the control of the Discharger at concentrations in excess of the applicable Water Quality Objectives. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer. This MRP replaces the requirements listed in MRP No. 5-00-846, which was issued on 17 November 2000.

Prior to construction of any new groundwater monitoring or extraction wells, and prior to destruction of any groundwater monitoring or extraction wells, the Discharger shall submit plans and specifications to the California Regional Water Quality Control Board, Central Valley Region (Regional Water Board) for review and approval. Once installed, all new wells shall be added to the monitoring program and shall be sampled and analyzed according to the schedule below.

GROUNDWATER MONITORING

As shown on Figure 1, there are eighteen monitoring wells screened across three water bearing zones, three industrial water supply wells, and four private domestic water supply wells. Fifteen of the monitor wells are owned and maintained by the Discharger, one of the wells is an industrial production water supply well that has been converted by the Discharger to a monitor well, and two of the wells are monitor wells owned and operated by the U.S. Department of Defense Logistics Agency at their distribution depot located approximately

1,000 feet northwest of the Site. The three industrial water supply wells are located on the Site. The four domestic water supply wells are located approximately 40 to 100 feet north of the Site. The groundwater monitoring program for the 18 monitoring wells, three industrial supply wells, four domestic supply wells, and any wells installed or added subsequent to the issuance of this MRP, shall follow the schedule below. Sample collection and analysis shall follow standard U.S. EPA protocol. Volumes of groundwater extracted from each of the three production wells shall be recorded monthly.

Table 1		
Required Laboratory Analytical Methods and Practical Quantitation Limits		
Constituent	USEPA Laboratory Analytical Method	Maximum Practical Quantitation Limit¹ (milligrams per liter)
Volatile Organic Compounds	8021 or 8260B	0.0005
General Constituents	Chloride	300
	Sodium	6010
	Total Organic Carbon	415.1
	Total Dissolved Solids	160.1
	Nitrate & nitrite	300
	Sulfate	300
	Sulfite	377.1
	Total Iron	6010A
	Dissolved Iron	6010A
	Ferrous Iron	Direct Field Measurement
	Total Alkalinity	310.1

¹ For non-detectable results, all concentrations between the Method Detection Limit and the Practical Quantitation Limit shall be reported as trace.

Table 2					
Required Frequencies:					
Water Level Measurements, Laboratory Chemical Analyses, and Water Supply Well Flow Recordings					
Well Name	Quarterly Depth to Water	Quarterly VOC¹ Analysis	Semi-Annual² General Constituent³ Analysis	Annual⁴ VOC Analysis	Monthly Flow Recording
MW-1	X	X	X		
MW-2	X	X	X		
MW-3	X	X	X		
MW-4	X	X	X		

Table 2, continued Required Frequencies: Water Level Measurements, Laboratory Chemical Analyses, and Water Supply Well Flow Recordings					
Well Name	Quarterly Depth to Water	Quarterly VOC ¹ Analysis	Semi-Annual ² General Constituent ³ Analysis	Annual ⁴ VOC Analysis	Monthly Flow Recording
MW-5	X	X	X		
MW-6	X	X	X		
MW-7	X	X	X		
MW-8	X	X	X		
MW-9	X	X	X		
MW-10	X	X	X		
MW-11	X	X	X		
MW-12	X	X	X		
MW-13	X	X	X		
MW-14	X	X	X		
MW-15	X	X	X		
LM151B	X	X	X		
LM177B	X	X	X		
AP-2	X	X	X		
Pombo		X			
Homestead		X			
Reed		X			
Medina		X			
AP-1		X			X
Banta #1				X	X
Banta #2				X	X

¹ Volatile organic compounds specified in Table 1.

² Samples collected during the first and third quarters.

³ General constituents specified in Table 1.

⁴ Samples collected during the third quarter.

REPORTING

When reporting the data, the Discharger shall arrange the information in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner as to illustrate clearly the compliance with this Order. In addition, the Discharger shall notify the Regional Water Board verbally within 48 hours of any

unscheduled shutdown of any soil vapor extraction, wellhead treatment, or groundwater extraction system.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all reports shall be prepared by a registered professional or their subordinate and signed by the registered professional.

The Discharger shall submit semi-annual electronic data reports, which conform to the requirements of the California Code of Regulations, Title 23, Division 3, Chapter 30. The semi-annual reports shall be submitted electronically over the internet to the Geotracker database system by **1 February and 1 August** until such time as the Executive Officer determines that the reports are no longer necessary.

Semi-Annual reports shall be submitted to the Regional Water Board by the by **1 February and 1 August** until such time as the Executive Officer determines that the reports are no longer necessary. Each semi-annual report shall include the following minimum information:

- (a) a description and discussion of the groundwater sampling event and results, including trends in the concentrations of pollutants and groundwater elevations in the wells, how and when samples were collected, and whether the pollutant plumes are delineated;
- (b) field logs that contain, at a minimum, water quality parameters measured before, during, and after purging, method of purging, depth of water, volume of water purged, and time of purging and sampling;
- (c) groundwater contour maps for all groundwater horizons monitored;
- (d) isocontour pollutant concentration maps for all groundwater horizons monitored;
- (e) a table showing well construction details such as well number, groundwater zone being monitored, coordinates (longitude and latitude), ground surface elevation, reference elevation, elevation of screen, elevation of bentonite, elevation of filter pack, and elevation of well bottom;
- (f) a table showing historical lateral and vertical flow directions and gradients;
- (g) cumulative data tables containing all previous water quality analytical results and depths to groundwater;
- (h) a copy of the laboratory analytical data report;
- (i) if applicable, the status of any ongoing remediation, including cumulative information on the mass of pollutant removed from the subsurface, system operating time, the effectiveness of the remediation system, and any field notes pertaining to the operation and maintenance of the system; and

- (j) if applicable, the reasons for and duration of all interruptions in the operation of any remediation system, and actions planned or taken to correct and prevent interruptions.

An Annual Report shall be submitted to the Regional Water Board by **1 February** of each year. This report shall contain an evaluation of the effectiveness and progress of the investigation and remediation, and may be combined with the second semi-annual monitoring report. The Annual Report shall contain the following minimum information:

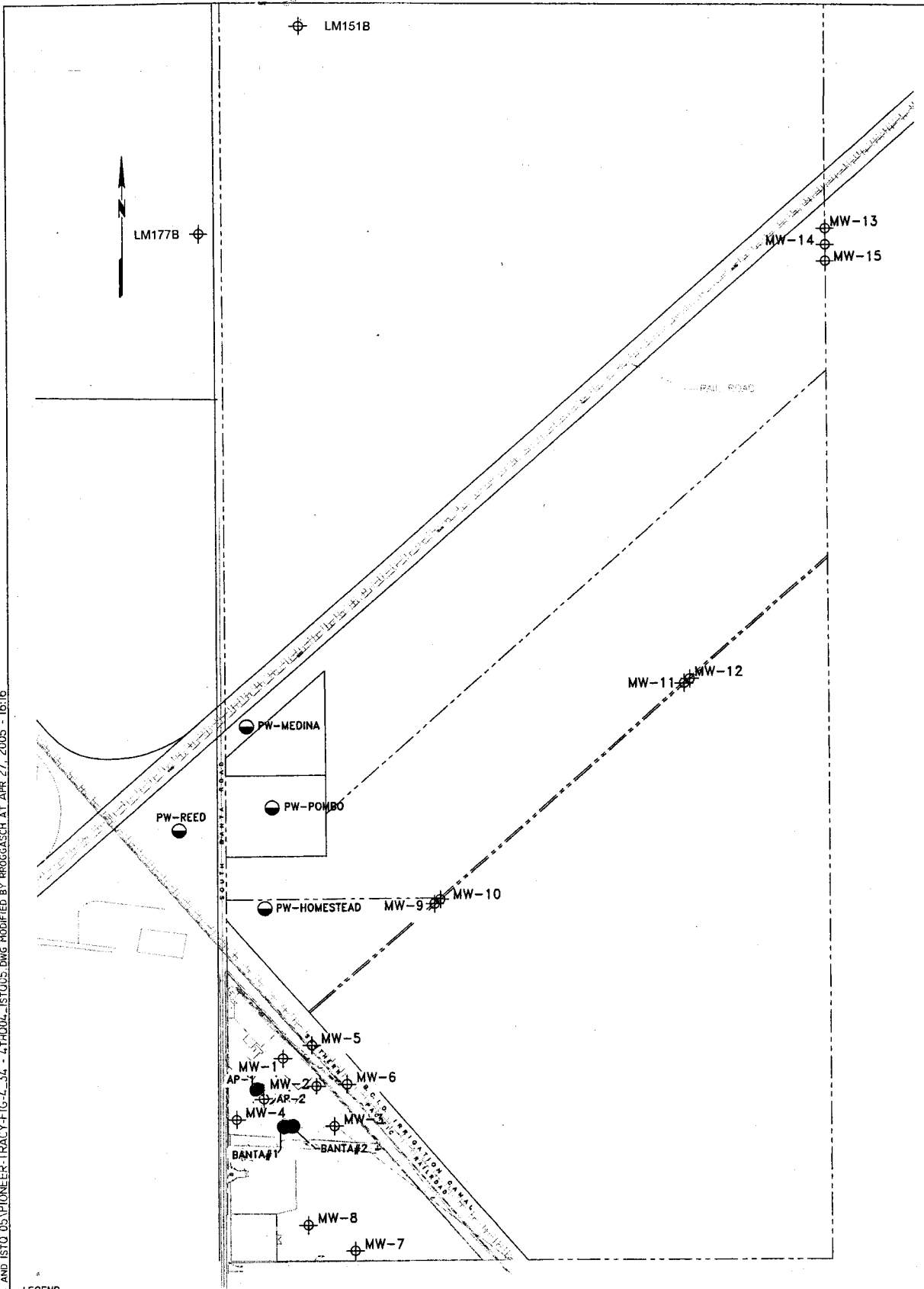
- (a) both tabular and graphical summaries of all data obtained during the year;
- (b) groundwater contour maps and pollutant concentration maps containing all data obtained during the previous year;
- (c) a discussion of the long-term trends in the concentrations of the pollutants in the groundwater monitoring wells;
- (d) an analysis of whether the pollutant plumes are being captured by any extraction systems or water supply wells, or are continuing to spread;
- (e) a description of all remedial activities conducted during the year, an analysis of their effectiveness in removing the pollutants, and plans to improve remediation system effectiveness;
- (f) the anticipated date for completion of cleanup activities;
- (g) an identification of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program; and
- (h) if desired, a proposal and rationale for any revisions to the groundwater sampling plan frequency and/or list of analytes.

The results of any monitoring done more frequently than required at the locations specified in the MRP also shall be reported to the Regional Water Board. The Discharger shall implement the above monitoring program as of the date of the Order.

Ordered by: original signed by Jack E. Del Conte, for
PAMELA C. CREEDON, Executive Officer

2 February 2007
(Date)

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LEGEND

- ⊕ MONITORING WELL
- PRIVATE DOMESTIC SUPPLY WELL
- INDUSTRIAL SUPPLY WELL



Modified from
Secor: 2004

DRAWN	RRR
APPR	EH
DATE	30 SEPT 2004
JOB NO.	05OT.50144.00.0001

FIGURE 1
PIONEER AMERICAS LLC
26700 SOUTH BANTA RD.
TRACY, CALIFORNIA

SITE PLAN