

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2007-0826  
CALIFORNIA WATER CODE SECTION 13267  
FOR

CONTIGROUP COMPANIES, INC.  
FRENCH CAMP GRAIN ELEVATOR  
FRENCH CAMP, SAN JOAQUIN COUNTY

French Camp Grain Elevator is at 9504 Harlan Road, French Camp (site), approximately five miles south of Stockton. French Camp Grain Elevators, LLC currently owns and operates the grain elevator facility. ContiGroup Companies, Inc. (Discharger), a former owner and operator of the site, is conducting groundwater investigation and remediation. The first and second water-bearing zones at about 25 feet and about 70 feet below ground surface contain carbon tetrachloride and other volatile organic compounds. This pollution impaired the beneficial use of this water resource. In 2005, the Discharger injected zero-valent iron into the source areas pursuant to Waste Discharge Requirements R5-2004-0160, and in 2007 proposes to a pilot study to evaluate recirculation of groundwater through the iron injections.

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 and chloroform, emanating from the property resulting from the Discharger's past operation. 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. 5-00-858, which was issued December 2000. This MRP consists of two components: one section for groundwater monitoring of the plume, and one section for monitoring of a groundwater recirculation pilot study. When Central Valley Regional Water Quality Control Board staff concur that the groundwater recirculation pilot study is completed, this portion of the MRP may be discontinued.

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 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 appropriate schedule below. Some of the analyses required by the groundwater plume monitoring are duplicative of the groundwater recirculation system monitoring requirements. The Discharger is not required to obtain separate analyses when one analysis will satisfy multiple monitoring objectives.

### **GROUNDWATER MONITORING NETWORK**

As shown on Figure 1, there are 6 monitoring wells in the A zone (MW-1A, MW-2A, MW-3A, MW-4A, MW-5A, and MW-7A), 10 monitoring wells in the B zone (MW-1B, MW-2B, MW-3B, MW-4B, MW-5B, MW-7B, MW-8B, MW-9B, MW-10B, and proposed MW-13B), and 1 monitoring well in the C zone (MW-3C). As also shown on Figure 1, the groundwater recirculation system includes installation of two proposed extraction wells (EW-11B and EW-12B), and two proposed injection wells (IW-BH1 and IW-BH2A). The groundwater

monitoring program for the 17 groundwater monitoring wells and any monitoring wells installed subsequent to the issuance of this MRP for the purpose of groundwater plume delineation, shall follow the Groundwater Monitoring Schedule below. The groundwater recirculation system monitoring shall follow the Groundwater Recirculation Schedule until the pilot study has been completed. Sample collection and analysis shall follow standard EPA protocol.

### **GROUNDWATER MONITORING SCHEDULE**

Groundwater plume monitoring shall be conducted from monitoring wells MW-1A, MW-1B, MW-2A, MW-2B, MW-3A, MW-3B, MW-4A, MW-4B, MW-5A, MW-5B, MW-7A, MW-7B, MW-8B, MW-9B, MW-10B, and MW-3C semi-annually in the first (January-March) and third (July-September) quarters as described below.

<b>Constituents</b>	<b>Analytical Method</b>	<b>Maximum Detection Limit <sup>1</sup></b>	<b>Sampling Frequency</b>
Depth to Groundwater	---	---	Semi-annually <sup>2</sup>
Dissolved Organic Carbon	EPA 415	0.3 mg/l	Semi-annually <sup>2</sup>
Chloride	EPA 300	0.2 mg/l	Semi-annually <sup>2</sup>
Iron, Dissolved	EPA 200.7	0.2 mg/l	Semi-annually <sup>2</sup>
Volatile Organic Compounds	EPA 8260B	0.5 ug/l	Semi-annually <sup>2</sup>

<sup>1</sup>For nondetectable results.

<sup>2</sup> Semi-Annually in 1st (January-March) and 3rd (July-September) quarters.

### **GROUNDWATER RECIRCULATION SYSTEM MONITORING**

The groundwater recirculation system monitoring program is intended to evaluate the extent and degree of influence of the injection and extraction wells under steady state conditions. During the pilot study, initially extraction/injection well pair EW-11B and IW-BH2A will be operated for at least three months, then the operating well pair shall be switched to EW-12B and IW-BH1. Both pairs will not be operated concurrently. During the recirculation system pilot study, the following sample points shall be monitored: MW-3B, MW-4B, MW-9B, MW-10B, MW-13B, and groundwater extracted from the operating extraction well (EW-11B or EW-12B) from an above ground sample port. During the first operation of well pair EW-11B and IW-BH2A, water surface elevations shall be measured with a pressure transducer and recorded with a data logger until equilibrium is achieved, then water surface elevations shall be measured monthly. All listed constituents shall be analyzed in all listed wells within one month prior to starting the first extraction/injection well pair.

**Monitoring Schedule for extraction/injection well pairs.**

When the initial well pair (EW-11B/IW-BH2A) has been operating and monitored for three consecutive months, all monitoring frequencies may be reduced to quarterly.

	<b>Extraction Well</b>	<b>MW-3B</b>	<b>MW-4B</b>	<b>MW-5B</b>	<b>MW-9B</b>	<b>MW-10B</b>	<b>MW-13B</b>
Water Surface Elevation <sup>1</sup>	monthly	monthly	monthly	monthly	monthly	monthly	monthly
Volatile organic compounds (EPA 8260B)	monthly	quarterly	quarterly	quarterly	quarterly	monthly	
Dissolved Iron (EPA 200.7)	monthly	quarterly				monthly	
Chloride (SM4500 or EPA 325.3)	monthly	quarterly				monthly	

<sup>1</sup> During initial startup of the well pair, water surface elevations shall be recorded with transducers and data loggers until equilibrium is reached. Then monthly water surface elevations shall be recorded. Water surface elevations may be conducted quarterly three months after initial operation.

When Regional Water Quality Control Board staff concur that the pilot study is completed, monitoring pursuant to the Groundwater Recirculation System Monitoring Program may be terminated.

**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 Central Valley Regional Water Quality Control Board staff within seven days of being notified of an unscheduled shutdown of any soil vapor and/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.

Semi-annual electronic data reports, which conform to the requirements of the California Code of Regulations, Title 23, Division 3, Chapter 30, shall be submitted electronically over the internet to the Geotracker database system by the **1st day of the second month following the end of each respective calendar quarter (i.e., by 1 May, and 1 November)**, until such time as the Executive Officer determines that the reports are no longer necessary.

**Within 30 days** of obtaining monthly water level data, monthly data reports shall be submitted to the Board. The data reports shall at a minimum contain groundwater elevation, constituent data arranged in tabular format, and a figure. The data reports may be transmitted electronically and should include a diagram illustrating site features and the relevant monitoring points.

Quarterly reports containing groundwater recirculation system performance data shall be submitted to the Board by the **1st day of the second month following the end of each calendar**

**quarter (i.e., by 1 February, 1 May, 1 August, and 1 November)** until Regional Water Quality Control Board staff concur that the pilot study has been completed. Each quarterly 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, an estimate of the radius of influence of the extraction and injection well, and whether the pollutants are being treated;
- (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, etc.;
- (c) maps identifying pollutant concentrations in the B-zone;
- (d) 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;
- (e) cumulative data tables containing the water quality analytical results and depth to groundwater;
- (f) a copy of the laboratory analytical data reports, which may be submitted on electronic media;
- (g) the status of groundwater recirculation, system operating time, the effectiveness of the remediation system, and any field notes pertaining to the operation and maintenance of the system; and
- (h) 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.

Semi-Annual Reports shall be submitted to the Board by **1 May and 1 November** of each year. This report shall contain an evaluation of the effectiveness and progress of the investigation and remediation, and may be substituted for the second and fourth quarter monitoring reports. The Semi-Annual Reports shall contain the following minimum information:

- (a) cumulative tabular summaries of all data obtained to date, and graphical summaries of key pollutant concentrations;
- (b) groundwater contour maps and pollutant concentration maps containing all constituent data obtained during the semi-annual sampling event;
- (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 plume is being captured by an extraction system or is continuing to spread;

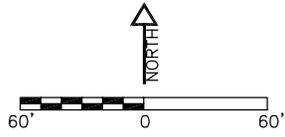
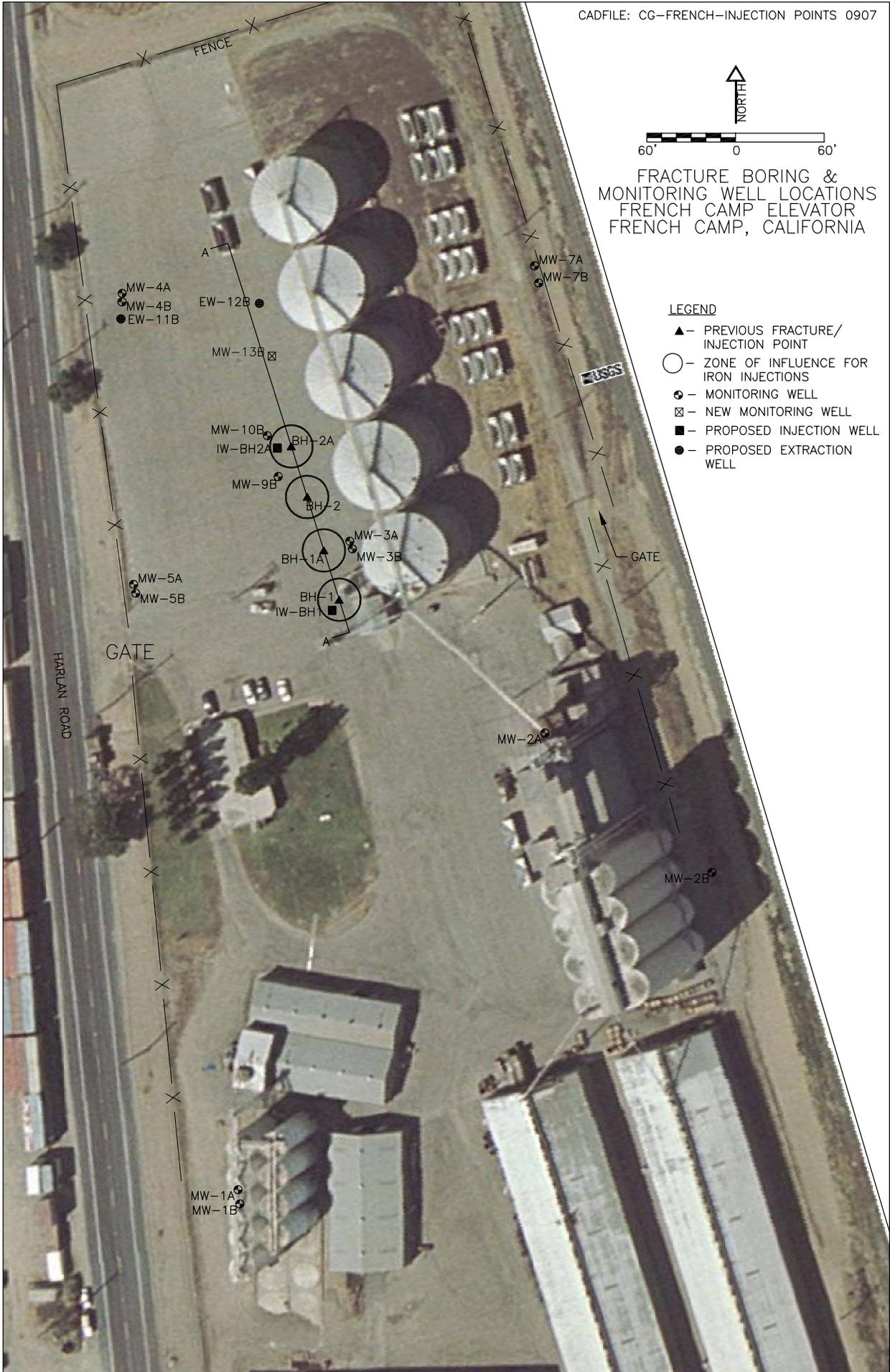
- (e) a description of all remedial activities conducted during the calendar year, an analysis of their effectiveness in removing the pollutants, and, if warranted, plans to improve remediation system effectiveness;
- (f) an identification of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;
- (g) 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 Board. The Discharger shall implement the above monitoring program as of the date of the Order.

Ordered by: \_\_\_\_\_  
PAMELA C. CREEDON, Executive Officer

5 December 2007

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FRACTURE BORING & MONITORING WELL LOCATIONS  
FRENCH CAMP ELEVATOR  
FRENCH CAMP, CALIFORNIA

LEGEND

- ▲ - PREVIOUS FRACTURE/ INJECTION POINT
- - ZONE OF INFLUENCE FOR IRON INJECTIONS
- - MONITORING WELL
- ⊠ - NEW MONITORING WELL
- - PROPOSED INJECTION WELL
- - PROPOSED EXTRACTION WELL