CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2008-0816
CALIFORNIA WATER CODE SECTION 13267
FOR
WESTERN FARM SERVICE, INC., AND AGRIUM
MODESTO FACILITY
STANISLAUS COUNTY

Western Farm Service Inc. is owned by Agrium (Discharger) and operates a retail fertilizer facility at 3348 Claus Road in Stanislaus County. Historical operations at the site have resulted in release of nitrogen, fumigants, and herbicides to groundwater. This pollution impaired the beneficial use of this water resource. In 2004 and 2006, Western Farm Service removed soil source areas containing pollutants, and in 2006 graded the site, installed stormwater basins, and underlay the operations areas with an engineered liner and asphalt. Groundwater is first encountered at about 35 feet below ground surface.

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 nitrogen, 1,2,3-trichloropropane, dinoseb and bromacil, emanating from the property under the control of the Discharger. 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. R5-2002-0823, which was issued on 27 August 2002.

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.

GROUNDWATER MONITORING

As shown on Figure 1, there are 10 monitoring wells in the first water-bearing zone (MMW-01R, MMW-02, MMW-03, MMW-13, MMW-14, MMW-16, MMW-17, MMW-18, MMW-19, and MMW-21), three monitoring wells in the second water-bearing zone (MMW-20, MMW-22, and MMW-23), one well in the third water-bearing zone (MMW-15), and an off-site water supply well at Starr Lumber (MDW-06). The groundwater monitoring program for the 14 monitoring wells, the Starr Lumber water supply well and any wells installed subsequent to the issuance of this MRP, shall follow the schedule below. Sample collection and analysis shall follow standard EPA protocol.

Table 1. Monitoring Frequency[1] for A-Zone Monitoring Wells

A-Zone Wells	MMW-01R	MMW-02	MMW-03	MMW-13	MMW-14	MMW-16	MMW-17	MMW-18	MMW-19	MMW-21
Groundwater Elevation	S	S	S	S	S	S	S	S	A (4th)	S
Nitrate + Nitrite (as N)	S	S	S	S	S	S	S	S		S
Ammonium	S	S	S	S	S	S	S	S		S
Fumigants (EDB, DBCP)	S	S	S	S	S	S	S	S		S
1,2,3-trichloropropane	S	S	B (2nd)	B (2nd)	S	B (2nd)	S	A (2nd)		S
Triazine Pesticides	A (4th)	A (4th)	A (4th)	A (4th)	A (4th)		A (4th)	A (4th)		
Volatile Organic Compounds	A (2nd)		A (2nd)	A (2nd)		A (2nd)	A (2nd)	A (2nd)		A (2nd)
Carbamate/ Urea Pesticides	A (4th)									
Chlorinated Herbicides	A (4th)									

[1] S = Semi-annually, in the 2nd and 4th quarters (April-June, and October-December).
A (2nd) = Annually in the 2nd quarter (April-June). A (4th) = Annually in the 4th quarter (October-December).
B (2nd) = Biennially, odd numbered years in 2nd quarter

Table 2. Monitoring Frequency[1] for B-Zone, C-Zone, and Water Supply Well

B-zone, C-zone and Water Supply Well	MMW-20 (B-zone)	MMW-22 (B-zone)	MMW-23 (B-zone)	MMW-15 (C-zone)	Starr Lumber Supply Well
Groundwater Elevation	A (2nd)	A (2nd)	A (2nd)	B (2nd)	
Nitrate + Nitrite (as N)	A (2nd)				B (2nd)
1,2,3-trichloropropane					B (2nd)

[1] S = Semi-annually, in the 2nd and 4th quarters (April-June, and October-December).
A (2nd) = Annually in the 2nd quarter (April-June). B (2nd) = Biennially, odd numbered years in 2nd quarter.

Table 3. Analytical Methods

	Analytical Method	Maximum Detection Limit[1]
Nitrate + Nitrite (as N)	SM4500	0.1 mg/L
Ammonium	SM4500	0.1 mg/L
Fumigants (EDB, DBCP)	EPA 504.1	0.02 ug/L
1,2,3-trichloropropane[2]	EPA 504.1 SRL 524M	0.02 ug/L 0.005 ug/L
Triazine Pesticides	EPA 507	0.1 ug/L
Volatile Organic Compounds	EPA 8260B	1 ug/L
Carbamate/ Urea Pesticides	EPA 632	4 ug/L
Chlorinated Herbicides	EPA 8151A	5 ug/L

See Footnotes on following page.

Footnotes to Table 3.

[1] For nondetectable results. All concentrations between the Method Detection Limit and the Practical Quantitation Limit shall be reported as trace.

[2] If 1,2,3-trichloropropane is not detected using Method SRL 524M for two consecutive monitoring events, then EPA Method 504.1 may be used and the monitoring frequency may be reduced to Annually in the 2nd quarter (April-June).

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.

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.

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 semi-annual period (i.e., 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 Board by the **1st day of the second month following the end of each semi-annual period (i.e., 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 plume(s) is 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, etc.

(c) Groundwater contour maps for all groundwater zones, if applicable.

(d) Figures for all groundwater zones with summaries of analytical results posted next to respective monitoring wells.

(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 (if applicable) flow directions and gradients.

(g) Cumulative data tables containing the water quality analytical results and depth to groundwater.

(h) A copy of the laboratory analytical data reports, which may be submitted on electronic media.

(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.

(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 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 substituted for the second semi-annual monitoring report. The Annual Report shall contain all the information required in the Semi-Annual report in addition to the following minimum information:

(a) Graphical time series plots of groundwater elevations and nitrate concentrations;

(b) Groundwater contour maps containing all groundwater elevation data obtained in the first water bearing zone during the past two monitoring events;

(c) A discussion of the long-term trends in the concentrations of the pollutants in the groundwater monitoring wells;

(d) 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;

(e) An identification of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;

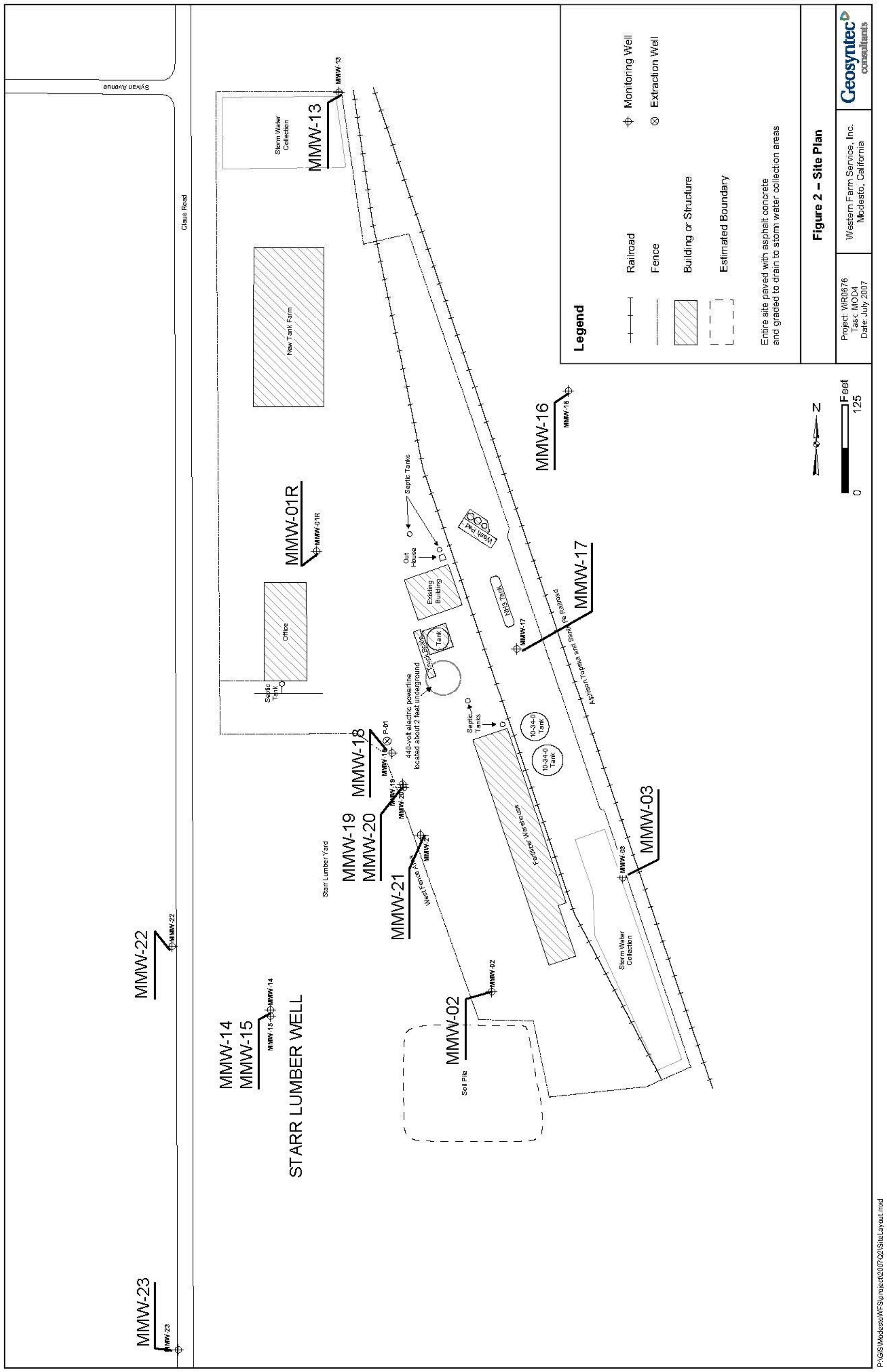
(f) If desired, a proposal and rationale for any revisions to the groundwater sampling plan frequency and/or list of analytes.

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

_____25 July 2008 _____


Legend
Railroad
Fence
Building or Structure
Estimated Boundary
Monitoring Well
Extraction Well
Entire site paved with asphalt concrete
and graded to drain to storm water collection areas
Figure 2 – Site Plan
Project: WR0676
Task: MOD4
Date: July 2007
Western Farm Service, Inc.
Modesto, California
Geosyntec consultants
N
0
125
Feet
Sylvan Avenue
Claus Road
Storm Water Collection
New Tank Farm
Office
Septic Tank
Septic Tanks
Out House
Existing Building
Truck Scale
Tank
Wash Pad
NH3 Tank
Fertilizer Warehouse
10-34-0 Tank
10-34-0 Tank
440-volt electric powerline
located about 2 feet underground
Atchison Topeka and Santa Fe Railroad
Starr Lumber Yard
West Fence
Soil Pile
STARR LUMBER WELL
MMW-01R
MMW-02
MMW-03
MMW-13
MMW-14
MMW-15
MMW-16
MMW-17
MMW-18
MMW-19
MMW-20
MMW-21
MMW-22
MMW-23
P-01
P:\GIS\Modesto\WFS\project\2007\Q2\SiteLayout.mxd