California Regional Water Quality Control Board
Central Valley Region
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Arnold Schwarzenegger
Governor

30 June 2006

CERTIFIED MAIL
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Chris Littlefield
Kellogg Garden Products
12686 Locke Road
Lockeford, CA 95237

NOTICE OF ADOPTION
OF
REVISED WASTE DISCHARGE REQUIREMENTS ORDER
FOR
KELLOGG SUPPLY, INC.
SOIL AMENDMENT PACKAGING FACILITY
SAN JOAQUIN COUNTY

Waste Discharge Requirements (WDRs) Order No. R5-2006-0070 for the Kellogg Supply Inc. soil amendment packaging facility was adopted by the California Regional Water Quality Control Board, Central Valley Region, at its 23 June 2006 meeting.

Please note that the WDRs contain compliance schedules with specific timetables for submitting reports and conducting studies of the wastewater system. The first scheduled due date is **29 September 2006** when stormwater permitting application must be submitted and **1 January 2007** when the contact water pond total dissolved solids limit becomes 750 mg/L. Please note that the WDRs contain requirements for technical reports that must be submitted for the contact water pond improvements, and operation and maintenance of the contact water system. In addition, the WDRs contain a Monitoring and Reporting Program (MRP) that contains specified monitoring requirements for you to implement. Please review the MRP closely so that you may establish the appropriate sampling schedules and protocols. A copy of the Order must be maintained at the facility and must be accessible to anyone operating the wastewater (contact water) system.

In order to conserve paper and reduce mailing costs, a paper copy of the order has been sent only to the Discharger. Interested parties are advised that the full text of this order is available on the Regional Board's web site at http://www.swrcb.ca.gov/rwqcb5/adopted_orders. Anyone without access to the Internet who needs a paper copy of the order can obtain one by calling Regional Board staff.

If you have any questions regarding your revised WDRs, please call Tim O'Brien at (916) 464-4616.

MARK R. LIST, R.G., Chief
Waste Discharge to Land Unit

Enclosures - Adopted Waste Discharge Requirements (Discharger only)
Standard Provisions and Reporting Requirements (Discharger only)

cc w/o enc: Frances McChesney, Office of Chief Counsel, State Water Board, Sacramento
Gordon Innes, Division of Water Quality, State Water Board, Sacramento
Jerry Boles, Department of Water Resources, Red Bluff
San Joaquin County Planning Department, Stockton
Joe Spano, Department of Health Services, Stockton
Mike Huggins, San Joaquin County Environmental Health Department, Stockton
Tom Butler, Eco:Logic Engineering, Stockton

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2006-0070

WASTE DISCHARGE REQUIREMENTS
FOR
KELLOGG SUPPLY, INC.
SOIL AMENDMENT PACKAGING FACILITY
SAN JOAQUIN COUNTY

The California Regional Water Quality Control Board, Central Valley Region (hereafter Board), finds that:

1. Kellogg Supply, Inc. (hereafter Discharger) submitted a Report of Waste Discharge (RWD) dated 1 October 2001 for a packaging facility in Lockeford, San Joaquin County. Additional information was submitted on 24 March 2004, 28 April 2004, and 23 February 2006.

2. The RWD was submitted to revise Waste Discharge Requirements (WDRs) Order No. 5-00-227 that was adopted by the Regional Board on 27 October 2000. The revision is required as a result of changes made at the facility since the existing Order was adopted and to allow needed expansion of the wastewater system for increased production at the facility.

3. Kellogg Supply, Inc. owns the property and operates the business. The Discharger manufactures and packages garden soil products through a process of outdoor mixing and composting. The product is packaged for retail customers, primarily for residential use. Raw materials are exposed to rain during the winter months and therefore storm water quality is a concern at the site.

4. The facility is located at 12686 Locke Road, Lockeford. The facility is identified as Assessor's Parcel Number 051-320-02, and is in Section 36, T4N, R7E, MDB&M as shown on Attachment A, which is attached hereto and made part of the Order by reference.

Background

5. Activities at the site consist of receiving, mixing, composting, storing, packaging, warehousing, and shipping soil amendment products. The facility layout is presented in Attachment B, which is attached hereto and made part of this Order by reference.

6. Equipment used at the site falls into two general categories. The first category consists of wood materials sizing equipment that consists of conveying, grinding, and screening equipment. The second category consists of packaging equipment that includes conveyors, hoppers, bag filling and sealing, and pallet load stabilization (stretch wrapping) equipment.

7. Wastewater originates from stormwater falling on exposed raw materials. Stormwater that comes in contact with the raw materials is termed "contact water" and will be disposed of in a different manner than non-contact stormwater.

8. Outdoor storage and mixing of raw materials are currently performed within a 3.18 acre bermed outdoor storage area (composting area). The area is sloped to allow collection of contact water. The collected contact water flows by gravity through a pipe to the contact water pond.

9. Contact water can also be generated in the "conveyance area" that connects the composting area and the packaging facility. Contact water generated in the conveyance area is collected in a sump and is pumped to the composting area. The conveyance area (including ramps that lead to the composting area) consists of approximately 0.76 acre.

10. Wood fiber materials are stored outside the composting area. This practice is considered acceptable only when the wood materials have not contacted other admixtures such as manure. The wood storage area occupies approximately 0.5 acre.

11. Approximately one-half of the site is paved and three large areas are under sheet metal roofs. With the exception of the conveyance and composting areas, stormwater that falls on the paved portion of the site drains to the existing stormwater pond.

12. In approximately 2000, four vertical drains in the bottom of the stormwater pond were located and plugged by drilling out the drain casings and grouting the boreholes with sand/cement slurry.

Site Activities

13. Raw materials are blended using front-end loaders. The blended materials are stored outside to allow composting. Composting time varies by product from 0 to 12 weeks. The finished product is then packaged into plastic bags for retail sale. Anticipated admixtures that will be stored on-site are listed in the table below:

Admixture	Description	Units	Annual Usage	Average Inventory
Co-Compost	Biosolids based Compost	CY	11,645	540
Chicken Litter	Poultry Manure	CY	8,135	200
Bat Guano	Bat Manure	lbs.	38,756	3,058
Worm Castings	Worm Manure	CY	775	178
Potting Soil Fertilizer	Soil Nutrient	lbs.	63,655	8,018
Kelp Meal	Nutrient Additive	lbs.	38,756	3,058
Alfalfa Meal	Nutrient Additive	lbs.	2,102	359
Bone Meal	Nutrient Additive	lbs.	2,102	359
Ureaform	Nutrient Additive	lbs.	14,401	1,830
Dolomite	pH additive	lbs.	171,526	15,627
Perlite	Mineral Additive	CY	5,522	489
Ferrous Sulfate	Mineral Additive	lbs.	944,362	35,831
Oyster Shell	Mineral Additive	lbs.	188,792	17,752
Sand	Mineral Additive	CY	2,406	221
Sphagnum Peat Moss	Peat Moss	CY	6,120	579
Bale Material	Wood Fiber	CY	8,127	7,287
Sawdust	Wood Fiber	CY	56,210	6,683
Douglas Fir Bark	Bark Fiber	CY	28,485	2,861
Redwood Bark	Bark Fiber	CY	36,892	1,204
Rice Hulls	Processing Hulls	CY	14,934	1,350
High Carbon Ash (Fly Ash)	Bulking Agent	CY	8,791	100

Data from 2 August 2004 Comments on Tentative WDRs.
CY denotes Cubic Yards. lbs. denotes pounds.

14. Co-compost consists of wood chips and Class A biosolids.

15. Fly ash is added as a soil amendment for pH neutralization, soil color stabilization, and as a bulking agent. Ash is added to the product in two ways. Both methods result in approximately 5 to 10 percent of ash in the product by weight. In the first method, ash is applied to products via a hopper bin that adds ash to the product as it passes under the hopper on a conveyor belt. The other method of mixing ash involves storage of the ash on the composting area where it is mixed with a front-end loader within 24-hours of receipt of the ash.

16. The ash is produced in electrical cogeneration facilities that burn only vegetative debris; pressure treated or creosote soaked materials are not burned at the cogeneration facilities. The ash used at the facility has been characterized by the generator. A summary of the solid waste analytical data is presented below (note Waste Extraction Test [WET] results are presented in the next Finding). None of the values exceeded the Total Threshold Limit Concentration (TTLC) defined in CCR Section 66261.24, Title 22.

		Sample Name and Date				
		Lincoln	Lincoln	Lincoln	Sonora	
Constituent	Units	2003	12/18/2003	4/30/2004	12/31/2004	TTLC
Antimony	mg/kg	ND (1.0)	ND (1.0)	ND (1.0)	1.5	500
Arsenic	mg/kg	4.1	1.1	5.5	4.8	500
Barium	mg/kg	220	210	208	260	10,000
Beryllium	mg/kg	ND (0.4)	ND (0.4)	ND (0.4)	0.6	75
Boron	mg/kg	NR	NR	NR	50	NL
Cadmium	mg/kg	1.1	0.5	1.2	1.6	100
Chromium	mg/kg	9.3	5	10	18.9	2,500
Cobalt	mg/kg	2.1	ND (2.0)	3.2	6.5	8,000
Copper	mg/kg	20.8	10.8	19.8	71.2	2,500
Lead	mg/kg	6.6	2.7	8.2	15.5	1,000
Mercury	mg/kg	ND (0.03)	ND (0.03)	0.2	ND (0.03)	20
Molybdenum	mg/kg	1.1	ND (2.0)	1.8	ND (5.0)	3,500
Nickel	mg/kg	5.2	3.1	7.4	19.3	2,000
Potassium	mg/kg	NR	NR	NR	12,800	NL
Selenium	mg/kg	ND (0.5)	ND (0.5)	ND (0.5)	ND (2.0)	100
Silver	mg/kg	ND (0.08)	ND (0.08)	ND (0.08)	ND (4.0)	500
Sulfur	mg/kg	NR	NR	NR	512	NL
Thallium	mg/kg	ND (1.0)	ND (1.0)	ND (1.0)	ND (4.0)	700
Vanadium	mg/kg	11.4	6.2	16.2	26.2	2,400
Zinc	mg/kg	100	63.4	125	80.4	5,000

ND denotes Not Detected, detection limit shown in parentheses. NL denotes Not Listed. NR denotes Not Reported. TTLC denotes Total Threshold Limit Concentration.

17. The fly ash was also tested for soluble constituents using a modified WET test. It is noted that samples were only tested from one generator. The results were compared to Soluble Threshold Limit Concentrations (STLC) listed in Title 22 CCR Section 66261.24 and Recommended Waste Acceptance Limits (WAL) issued by the Regional Board. Due to the depth of groundwater and presence of fine-grained sediments in the subsurface, the values for high attenuation conditions are presented in the WAL column. None of the values exceeded the STLC criteria. Values presented in bold type exceeded the WAL criteria.

		Sample Name and Date				
Constituent	Units	Lincoln 2003	Lincoln 4/30/2004	Lincoln 12/23/2004	WAL	STLC
Antimony	ug/L	ND (4.0)	ND (4.0)	3.42	60	15,000
Arsenic	ug/L	ND (2.0)	**15**	**28.3**	0.04	5,000
Barium	ug/L	104	153	118	10,000	100,000
Beryllium	ug/L	ND (1.0)	ND (1.0)	ND (0.02)	10	750
Boron	ug/L	NR	NR	NR	NL	NL
Cadmium	ug/L	ND (1.0)	ND (1.0)	0.17	0.7	1,000
Chromium	ug/L	32	15	12.4	500	5,000
Cobalt	ug/L	ND (2.0)	ND (2.0)	0.07	500	80,000
Copper	ug/L	ND (1.0)	ND (1.0)	2.3	17,000	25,000
Lead	ug/L	ND (3.0)	ND (3.0)	ND (0.015)	200	5,000
Mercury	ug/L	ND (0.07)	ND (0.07)	ND (0.00015)	12	200
Molybdenum	ug/L	50	**136**	**101**	100	350,000
Nickel	ug/L	ND (1.0)	3	ND (0.04)	120	20,000
Potassium	ug/L	NR	NR	NR	NL	NL
Selenium	ug/L	ND (3.0)	10	12.9	200	1,000
Silver	ug/L	ND (1.0)	1	ND (0.015)	350	5,000
Sulfur	ug/L	NR	NR	NR	2,500,000 [1]	NL
Thallium	ug/L	ND (5.0)	ND (5.0)	ND (0.004)	1.0	7,000
Vanadium	ug/L	34	41	49	500	24,000
Zinc	ug/L	6	2	1.74	200,000	250,000

[1] WAL not listed for sulfur, value for sulfate is presented.

ND denotes Not Detected, detection limit shown in parentheses. NL denotes Not Listed. NR denotes Not Reported. WAL denotes Waste Acceptance Limit. STLC denotes Soluble Threshold Limit Concentration.

18. Review of the WET data revealed two constituents of concern: arsenic and molybdenum. Both of the constituents are present above the Regional Board's recommended waste acceptance limits for inorganics at Class III Landfills (WAL Guidance). The WAL Guidance was developed for protection of groundwater designated for use as Municipal, Domestic, and Agricultural Supply. The Discharger characterized wastewater in the Contact Water Quality Evaluation Report but neither arsenic nor molybdenum was characterized in that report. Further characterization of wastewater and groundwater quality is warranted to determine if the continued use of fly ash may degrade groundwater quality.

Wastewater (Contact Water) System

19. No process water is generated in the product handling, composting, and packaging activities. A small amount of water containing ferrous sulfate is sprayed on wood fibers as they are conveyed (on a belt) to a bulk storage pile. Wastewater (contact water) is generated as stormwater comes into contact with raw materials.

20. Presently, contact water flows into a native clay-lined 1.83 million gallon (Mgal) storage pond. Contact water is disposed of by water truck or sprinkler application to the composting materials, as well as by evaporation and percolation. Contact water is removed from the site, as it is reapplied to the composting soil amendment products to adjust soil moisture in the packaged product. The contact water is not treated nor is it applied to land application areas.

21. Contact water has been characterized by quarterly sampling performed from January 2001 to December 2005. A summary of analytical results including average, maximum, and minimum concentrations is presented below:

Constituent	Units	Average	Max.	Min.	WQO
Biochemical Oxygen Demand	mg/L	51	280	5.0	NL
Dissolved Oxygen	mg/L	3.1	19.5	0.2	NL
pH	Std. Units	7.3	8.9	5.9	6.5-8.4 [1]
Total Dissolved Solids	mg/L	1,081	3,090	257	450 [1]
Nitrate as Nitrogen	mg/L	0.3	0.5	0.1	10 [2]
Total Kjeldahl Nitrogen	mg/L	31	60	19	NL
Ammonia as Nitrogen	mg/L	4.5	10	0.2	1.5 [3]
Sodium	mg/L	43	48	39	69 [1]
Alkalinity as CaCO3	mg/L	233	280	160	NL
Chloride	mg/L	43	73	3.0	106 [1]
Sulfate	mg/L	110	184	10	250 [4]

WQO denotes Water Quality Objective. [1.] Agricultural Water Quality Goals [2.] Primary Maximum Contaminant Level (Drinking Water) [3.] Taste and Odor Threshold [4.] Secondary Maximum Contaminant Level (Drinking Water)

22. Total dissolved solids concentrations historically were evapoconcentrated in the contact water pond. The Discharger was informed of staff's concern regarding TDS concentrations in a 9 September 2004 correspondence. To lower TDS concentrations in the contact water pond the Discharger began pumping stormwater from the stormwater pond to the contact water pond. When stormwater is no longer available, well water is added to the contact water pond. The changes, which began in June 2005, have resulted in lower contact water pond TDS concentrations. A summary of analytical data collected before and after the improvements were completed is presented below:

		January 2001 to June 2005			July 2005 to December 2005			
Date	Units	Average	Max.	Min.	Average	Max.	Min.	WQO
BOD	mg/L	54	280	5	43.1	95.0	11.0	NL
DO	mg/L	3.6	19.5	0.2	1.1	1.6	0.6	NL

		January 2001 to June 2005			July 2005 to December 2005			
Date	Units	Average	Max.	Min.	Average	Max.	Min.	WQO
pH	Std. Units	7.5	8.9	5.9	6.8	7.4	6.4	6.5-8.4 [1]
TDS	mg/L	1,164	3,090	257	764	950	560	450 [1]
Nitrate as N	mg/L	0.3	0.47	0.1	ND (0.1)	ND (0.1)	ND (0.1)	10 [2]
TKN	mg/L	42	60	24	20	21	19	NL
NH_3 as N	mg/L	4.1	10	0.2	6.4	9.0	3.8	1.5 [3]
Sodium	mg/L	42	42	42	44	48	39	69 [1]
Alk as CaCO3	mg/L	160	160	160	270	280	260	NL
Chloride	mg/L	73.0	73	73	28	52	3	106 [1]
Sulfate	mg/L	184	184	184	73	136	10	250 [4]

BOD denotes Biochemical Oxygen Demand. DO denotes Dissolved Oxygen. TDS denotes Total Dissolved Solids. N denotes Nitrogen. NH_3 as N denotes Ammonia as Nitrogen. TKN denotes Total Kjeldahl Nitrogen. Alk denotes Alkalinity. WQO denotes Water Quality Objective. [1.] Agricultural Water Quality Goals [2.] Primary Maximum Contaminant Level (Drinking Water) [3.] Taste and Odor Threshold [4.] Secondary Maximum Contaminant Level (Drinking Water)

23. The 28 April 2004 RWD Addendum includes a water balance that shows the contact water pond will go dry in both normal and 100-year return precipitation years. The contact water pond will be managed in a way that allows the pond to go dry on an annual basis.

24. To maintain lower contact water pond TDS concentrations in average rainfall years, dilution water (obtained from either the on-site supply well or collected stormwater) may be added to the contact pond; in 100-year return total years, precipitation provides enough clean water that dilution may not be required.

Enforcement Actions

25. A Notice of Violation (NOV) was issued on 5 April 2001 as a result of a site inspection in which the discharge of contact water to the stormwater pond was observed. In addition, the Discharger had failed to submit certain technical reports. After reevaluating its wastewater system, the Discharger reported insufficient capacity due to construction of the composting area larger in size than stated in the RWD, construction of a smaller contact water pond than planned, and the generation of contact water in the conveyance area. Staff subsequently requested that the Discharger submit a RWD to correct its lack of wastewater storage capacity.

26. During the 2001 inspection, staff noted manured product spilled on the concrete pavement in the conveyance area. At that time, stormwater that fell on the area created contact water that then discharged to the stormwater pond. The Discharger implemented interim measures to prevent contact water from discharging to the stormwater pond and installed a sump and pump station to pump contact water from the conveyance area to the contact pond.

Planned Changes in Discharge

27. In four to five years, the Discharger plans to expand facility production as well as expand the composting area by 4.02 acres, resulting in a total composting area of 7.2 acres. This larger area will generate more contact water. Therefore, the Discharger has designed an expanded

wastewater storage pond. Neither the conveyance area nor the wood storage area will be increased in size for the facility production expansion.

28. To increase facility production the Discharger may increase the size of the contact water pond to provide a total storage capacity (with two feet of freeboard) of 5.0 Mgal. The RWD included a water balance that employed the 100-year return annual total rainfall amount and the surface area of the composting area plus the conveyance area, and showed that the proposed pond volume is adequate. Should the Discharger decide to increase the contact water pond size, it should be done in accordance with the RWD water balance. Changes in the size of the composting and/or conveyance areas require Executive Officer approval.

29. To protect groundwater, the entire expanded pond (existing and new portions) will be lined with a minimum of a 60-mil thick, synthetic HDPE liner placed on compacted native material to provide a hydraulic conductivity of 1 x 10^{-6} cm/sec or less.

Groundwater Conditions

30. Four groundwater monitoring wells were installed at the site in June 2001. The locations of the monitoring wells are presented on Attachment B. The Discharger has monitored groundwater quarterly since the wells were installed. However, Wells No. MW-1, -2, and -3 have gone dry intermittently, and therefore three new groundwater monitoring wells (MW-1R, MW-2R, and MW-3R) were constructed. A total of seven groundwater monitoring wells now exist at the site. Four of the wells are designated as both groundwater quality and elevation monitoring points; three of the wells are designated for monitoring groundwater elevation only. Three wells were renamed and replaced with wells that should allow groundwater sampling more reliability. A summary of the wells is provided below:

Well Name	Former Name	Installation Date	Use	Screened Interval (ft. bgs)	Screened Interval (ft. msl)
P-1	MW-1	6/11/01	Elev.	95-115	-4.0 to –24.0
P-2	MW-2	6/12/01	Elev.	79-99	12.5 to –7.6
P-3	MW-3	6/13/01	Elev.	90-110	0.6 to –19.4
MW-4	MW-4	6/14/01	Elev./Quality	88-108	2.8 to –17.3
MW-1R	NA	6/15/05	Elev./Quality	107-122	-13.1 to –28.1
MW-2R	NA	6/14/05	Elev./Quality	135-155	-41.5 to –61.5
MW-3R	NA	6/16/05	Elev./Quality	108-123	-13.9 to –28.9

NA denotes Not Applicable. Elev. Denotes Elevation. bgs denotes Below Ground Surface. msl denotes Mean Sea Level.

31. The depth to groundwater is variable across the site, ranging from approximately 86 to 112 feet below ground surface. The significant difference in groundwater elevation results in non-typical groundwater contour maps. The following information on groundwater elevation is available presently:

- Wells screened below an elevation of approximately –20 feet mean sea level (msl) possess groundwater elevations that are consistent with the regional groundwater flow direction (based on San Joaquin County Flood Control maps).

- Wells P-2, P-3, and MW-4 are screened in shallower saturated zones. If the data from those wells is not included in determining groundwater flow direction, the flow direction is to the southwest. Wells P-1, P-2, and P-3 have gone dry intermittently, which may indicate a perched nature of the zones the wells are screened in.
- The Discharger's consultant prepared groundwater contour maps using all the groundwater elevation data available. Those maps indicate the local flow direction varies spatially and is generally towards the east in the northern portion of the property, and towards the southwest in the southern portion of the property.

32. Groundwater sampling from June 2001 to December 2005 has characterized groundwater quality. Based on the San Joaquin County Flood Control Maps, Well MW-3R is considered an upgradient well. Average concentrations for each analyte are presented below:

Well ID	Units	P-1	MW-1R	P-2	MW-2R	P-3	MW-3R	MW-4	WQO
pH	std.	7.3	7.1	7.1	7.2	7.1	6.5	6.9	6.5-8.4 [1]
TCO	MPN/100mL	2.1	3.6	12.5	1.1	2.0	ND (1.1)	7.5	2.2 [2]
TDS	mg/L	273	280	429	207	323	167	235	450 [1]
NO_3 as N	mg/L	1.5	0.9	3.3	0.3	3.5	0.1	0.7	10 [3]
TKN	mg/L	1.8	1.0	8.6	0.6	NS (dry)	0.7	1.0	NL
NH_3 as N	mg/L	0.3	ND (0.2)	0.6	0.2	0.2	ND (0.2)	0.4	1.5 [4]
Sodium	mg/L	23	34	28	20	35	12	26	69 [1]
Alkalinity	mg/L	150	177	200	117	165	100	130	NL
Chloride	mg/L	16	10	36	3	15	4	6	106 [1]
Sulfate	mg/L	16.3	9	29	12	21	6	30	250 [5]

TCO denotes Total Coliform Organisms. TDS denotes Total Dissolved Solids. NO_3 as N denotes Nitrate as Nitrogen. TKN denotes Total Kjeldahl Nitrogen. NH_3 as N denotes Ammonia as Nitrogen. Alkalinity reported as calcium carbonate. NS (dry) denotes Not Sampled due to insufficient groundwater. [1.] Agricultural Water Quality Goals [2.] Basin Plan Water Quality Objective [3.] Primary Maximum Contaminant Level (Drinking Water) [4.] Taste and Odor Threshold [5.] Secondary Maximum Contaminant Level (Drinking Water)

33. These WDRs require continued monitoring of shallow groundwater conditions, including background water quality and direction of groundwater movement throughout the year.

34. Water for domestic use and fire protection is supplied by an on-site production well drilled in 1988. The well is approximately 340 feet deep; a surface sanitary seal exists to a depth of 78 feet below ground surface. The on-site well was sampled for chemical analysis. A summary of the analytical results is presented below:

		Sample Date		
Analyte	Units	8/10/00	3/30/05	8/30/05
Hardness	mg/L	73	74	74.5
Total Alkalinity ($CaCO_3$)	mg/L	100	90	90
Chloride	mg/L	5.8	7	6
Sulfate	mg/L	7.0	4	5
Calcium	mg/L	15	15	15
Copper	mg/L	ND (0.01)	ND (0.01)	NS
Iron	mg/L	ND (0.1)	ND (0.05)	ND (0.05)

		Sample Date		
Analyte	Units	8/10/00	3/30/05	8/30/05
Magnesium	mg/L	8.9	9	9
Manganese	mg/L	ND (0.01)	ND (0.01)	NS
Sodium	mg/L	14	4	15
Zinc	mg/L	ND (0.02)	0.02	NS
BOD	mg/L	ND (5.0)	NS	NS
Nitrate (as N)	mg/L	0.56	0.7	0.9
TDS	mg/L	220	180	180
pH	Std.	7.4	7.44	NS
Electrical Cond.	µmhos/cm	220	281	NS
VOCs	mg/L	Not Detected	NS	NS
TPH-Gasoline	mg/L	ND (0.05)	NS	NS
TPH-Diesel	mg/L	ND (0.05)	NS	NS
BTEX	mg/L	ND (0.0005)	NS	NS

BOD denotes Biochemical Oxygen Demand. N denotes Nitrogen. TDS denotes Total Dissolved Solids. VOCs denotes Volatile Organic Compounds. TPH-G denotes Total Petroleum Hydrocarbons as Gasoline. TPH-D denotes Total Petroleum Hydrocarbons as Diesel. BTEX denotes Benzene, Toluene, Ethyl Benzene, and Xylenes. ND denotes Not Detected, detection limit shown in parentheses. NS denotes Not Sampled.

Site Specific Conditions

35. The site topography is relatively flat. According to the United States Department of Agriculture, San Joaquin County Soil Survey, four soil types exist at the facility. They are: San Joaquin Loam, Bruella Sandy Loam, Kindon Fine Sandy Loam, and Tokay Fine Sandy Loam. Minimum infiltrations rates published in the Soil Survey are 0.6 in/hr.

36. Average annual rainfall for the Lockeford area is 16.95 in/year; the 100-year return annual total rainfall is 30.65 in/year; the evapotranspiration rate for the area is 65.28 in/year.

37. The facility is within the Lower Mokelumne Hydrologic Area (No. 531.20), as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.

38. The facility is outside the 100-year flood zone.

39. Domestic wastewater is piped to the Lockeford wastewater treatment system.

Basin Plan, Beneficial Uses, and Regulatory Considerations

40. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board. Pursuant to §13263(a) of the California Water Code (CWC), waste discharge requirements must implement the Basin Plan.

41. The nearest surface water drainage to the facility is the Mokelumne River.

42. The beneficial uses of the Mokelumne River from Camanche Reservoir to the Sacramento San Joaquin Delta are agricultural supply; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.

43. The beneficial uses of underlying groundwaters are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.

44. State Water Resources Control Board (State Board) Resolution No. 68-16 (the Antidegradation Policy) requires that the Board, in regulating the discharge of waste, must maintain the high quality of waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Board's policies (e.g., quality that exceeds water quality objectives). Resolution No. 68-16 also requires that waste discharged to high quality waters be required to meet waste discharge requirements that will result in the best practicable treatment or control of the discharge.

45. The Discharger has not submitted any information showing that it should be allowed to degrade the groundwater as described in State Board Resolution No. 68-16, and therefore no degradation is allowed. This discharge of waste should not degrade surface water or groundwater quality because it will be contained in a lined pond. In addition, groundwater monitoring wells have been installed to allow monitoring of groundwater quality. Based on the result of the scheduled tasks, this Order may be reopened to reconsider effluent limitations and other requirements to comply with Resolution 68-16.

46. California Water Code (CWC) §13267(b) provides that: "*In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.*"

    The technical reports required by this Order and the attached "Monitoring and Reporting Program No. ___" are necessary to assure compliance with these waste discharge requirements. The Discharger owns and operates the facility that generates the waste subject to this Order.

47. California Department of Water Resources standards for the construction and destruction of groundwater wells is described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to CWC §13801, apply to all monitoring wells.

48. On 12 July 2000, the San Joaquin County Community Development Department adopted a Negative Declaration for this facility in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code 21000, et. seq.) and the State CEQA guidelines. The action to adopt WDRs for this existing facility is exempt from the provisions of CEQA, in accordance with Title 14, California Code of Regulations (CCR), Section 15301.

49. State regulations that prescribe procedures for detecting and characterizing the impact of waste constituents from waste management units on groundwater are found in Title 27. While the facility is exempt from Title 27, the data analysis methods of Title 27 may be appropriate for determining whether the discharge complies with the terms for protection of groundwater specified in this Order.

50. Federal regulations for storm water discharges were promulgated by the U.S. Environmental Protection Agency on 16 November 1990 (40 CFR Parts 122, 123, and 124). The State Board adopted Order No. 97-03-DWQ (General Permit No. CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. The Discharger has not yet obtained coverage under General Permit No. CAS000001 and is required to do so.

51. This discharge is exempt from the requirements of *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste,* as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 2005, et seq., (hereafter Title 27). The exemption pursuant to Section 20090(b), is based on the following:

    a. The Board is issuing waste discharge requirements,

    b. The discharge complies with the Basin Plan, and

    c. The wastewater (contact water) does not need to be managed according to Title 22 CCR, Division 4.5, and Chapter 11, as a hazardous waste.

52. Pursuant to California Water Code §13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

Public Notice

53. All the above and the supplemental information and details in the attached Information Sheet, incorporated by reference herein, were considered in establishing the following conditions of discharge.

54. The Discharger and interested agencies and persons were notified of the intent to prescribe WDRs for this discharge and provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

55. In a public meeting, all comments pertaining to the discharge were heard and considered.

IT IS HEREBY ORDERED that Order No. 5-00-227 is rescinded and pursuant to Sections 13263 and 13267 of the California Water Code, Kellogg Supply, Inc., its agents, successors, and assigns, in order

to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

[Note: Other prohibitions, conditions, definitions, and some methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991].

A. Discharge Prohibitions:

1. Discharge of contact water from the facility to surface waters or surface water drainage courses is prohibited.

2. Discharge of contact water to the Lockeford wastewater treatment system is prohibited without approval from the Lockeford Community Service District.

3. Discharge of contact water to the non-contact water stormwater pond is prohibited.

4. Overflow of water from the contact water pond is prohibited.

5. Storage of any bulk (unpackaged) raw materials, other than under roofed areas, outside the composting area is prohibited. Virgin wood chips, stumps, and fiber (wood products not contaminated by product admixtures) can be stored outside the composting area uncovered.

6. All fly ash shall be stored only on a concrete pad in good condition with a cover to prevent stormwater from contacting the ash, or on the composting area where it will be mixed with soil amendments within 24-hours.

7. Use of fly ash generated by burning anything other than natural vegetative matter is prohibited (that is, no treated, painted, or glue laminated products).

8. Discharge of waste classified as hazardous, as defined in Sections 2521(a) of Title 23, CCR, Section 2510, et seq., (hereafter Chapter 15), or 'designated', as defined in Section 13173 of the California Water Code, is prohibited.

B. Discharge Specifications:

1. Prior to any increase in the size of the composting or conveyance areas as described in Findings 27, 28, and 29, that will generate more contact water, the contact water pond must be increased as described in Finding No. 28 to comply with the storage requirements in this Order. The Discharger must obtain written approval from the Executive Officer before any expansion of composting or conveyance areas are used to store product.
2. Beginning 1 January 2007, wastewater in the contact water storage pond shall not contain a TDS concentration greater than the following limits:
    a. A monthly average of 1,000 mg/L.

b. An annual average of 750 mg/L. (The annual average shall be calculated over 12 successive months beginning in January).

3. The treatment; discharge; or storage of water, raw materials, composting materials, or packaged product shall not cause a condition of pollution or nuisance as defined by the California Water Code, Section 13050.

4. No waste constituent shall be released, discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitation.

5. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the facility.

6. As a means of discerning compliance with Discharge Specification No. 5, the dissolved oxygen content in the upper zone (1 foot) of the contact water pond shall not be less than 1.0 mg/l.

7. The contact water pond shall not have a pH of less than 6.5 or greater than 10.0.

8. The contact water pond shall be managed to prevent the breeding of mosquitoes. In particular,

   a. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the waste surface.

   b. Weeds shall be minimized through control of water depth, harvesting, and/or herbicides.

   c. Dead algae, vegetation, and debris shall not accumulate on the water surface.

9. The Discharger's contact water pond shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

10. The freeboard in the contact water pond shall never be less than two feet as measured vertically from the water surface to the lowest point of overflow.

11. The contact water pond shall have sufficient capacity to accommodate allowable contact water flow and design seasonal precipitation, including any supplemental water that is seasonally added to control TDS concentrations below specified limits. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with the historical rainfall patterns.

12. As of **1 November 2006**, the contact water pond shall be constructed and maintained to minimize percolation of contact water to the unsaturated zone beneath the pond. A vertical hydraulic conductivity of less than 1×10^{-6} cm/sec is considered appropriate for this storage pond.

13. The composting area shall be bermed and sloped to drain contact water to a drain connected to the contact water holding pond.

14. The conveyance area shall be equipped with a pump and sump adequate to control all contact water generated in the conveyance area.

15. The source of fly ash shall initially be limited to the Sierra Pacific cogeneration facilities in Lincoln and Sonora, California. Other similar quality fly ash may be approved by submittal of a technical report that demonstrates the fly ash, when used as a soil admixture, will not degrade groundwater quality. The Discharger must obtain written approval from the Executive Officer prior to accepting fly ash from any new facility or if the waste character changes from that described in the findings.

C. Solids Disposal Requirements:

1. Collected screenings, sludge, and other solids removed from the contact stormwater pond shall be reused in the soil amendment products or be disposed of in a manner approved by the Executive Officer, and consistent with *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste,* as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq.

2. Any proposed change in sludge use or disposal practice from a previously approved practice shall be reported to the Executive Officer 30 days prior to the disposal activity.

D. Groundwater Limitations:

The discharge, in combination with other sources, shall not cause underlying groundwater to contain waste constituents in concentrations statistically greater than natural background water quality.

E. Provisions:

1. All of the following reports shall be submitted pursuant to Section 13267 of the CWC, and prepared by a California registered professional as described in Provision E.2.

    a. After **1 January 2007**, if the contact water pond TDS concentration exceeds 750 mg/L as a monthly average, then the Discharger shall perform a Salinity Reduction Study. The Study shall evaluate all sources of salinity to the contact water pond, present recommendations to reduce the salinity and include an implementation schedule for improvements to be completed. The Salinty Reduction Study shall be completed within **one year** of the month in which the contact water pond TDS exceeded 750 mg/L as a monthly average.

    b. By **29 September 2006**, the Discharger shall either apply for coverage or submit a Notice of Non Applicability for Order No. 97-03-DWQ, *Discharges of Storm Water Associated With Industrial Activities*.

    c. **At least 30 days prior to liner installation**, the Discharger shall submit a *Pond Liner Design Report*. The report shall present contract drawings that specifically depict liner anchorage and pipe boot details, and construction specifications that detail subgrade preparation requirements, liner material specifications, liner placement requirements, and liner seaming specifications.

d. **At least 30 days prior to liner installation**, the Discharger shall submit a *Pond Liner System Construction Quality Assurance (CQA) Plan*. The CQA Plan shall set forth a detailed program of inspection and testing to ensure that the liner system is constructed as designed and is free from defects whether the result of manufacture or damage during installation. At a minimum, the CQA Plan shall include the following:

1. Procedures for review of the liner manufacturer's quality control data to determine acceptance of the material.
2. Procedures for verifying and documenting appropriate shipping, handling, and storage requirements to ensure protection of the liner material prior to installation.
3. Procedures for inspection and documentation of final subgrade preparation and acceptance prior to liner installation.
4. Procedures for inspection and documentation of liner placement, anchorage, and seaming, including trial seams.
5. Procedures for testing and documentation of nondestructive testing of all liner seams and penetrations.
6. Procedures for identifying and repairing faulty seams and construction damage and documenting the repairs.
7. Procedures for testing and documentation of testing of all liner repairs.
8. Inspection forms to be used for documenting all of the above and the final inspection for acceptance of the liner system.

e. By **29 September 2006**, the Discharger shall submit a revised *Operation and Management Plan* (*O&M Plan*) that addresses operation of the contact water pond. At a minimum, the *O&M Plan* will describe (a) the daily operation and maintenance of the system, (b) the practices used to control the buildup of dissolved solids in the pond, (c) the locations of sampling points, (d) quality control sampling procedures necessary to obtain representative samples, (e) methods of wood storage outside the composting area, (f) methods of fly ash storage, (g) management of the conveyance area to control any contact water generated there, and (h) anticipated Contact Water Pond levels through the year with a schedule for adding stormwater and/or well water. A copy of the *O&M Plan* shall be kept at the facility for reference by operating personnel and they shall be familiar with its contents.

f. By **2 January 2007**, the Discharger shall submit a *Contact Water Pond Upgrade Report* that shows that the pond system was constructed to comply with all requirements of this Order. The report shall document implementation of the CQA Plan in narrative form and shall provide signed and dated inspection forms for all elements of the CQA program. It shall include stamped, as-built drawings of the pond and liner system, and shall include results of the post-construction leak testing program.

g. By **19 October 2007**, the Discharger shall submit a *Contact Water Quality Evaluation Report Addendum* that further characterizes the Contact Water pond and groundwater for the waste constituents identified in fly ash. The evaluation shall consider the site specific conditions and the manner in which the waste is managed, to determine if the material has

degraded or is likely to degrade groundwater quality. The Addendum shall include a determination of whether the waste should be classified as "designated waste" or not.

h. By **19 October 2007**, the Discharger shall submit a *Background Groundwater Quality Study Report*. For each groundwater monitoring parameter/constituent identified in the MRP, the report shall present a summary of monitoring data, calculation of the concentration in background monitoring wells, and a comparison of background groundwater quality to that in wells used to monitor the contact water pond. Determination of background quality shall be made using the methods described in Title 27, §20415(e)(10), or equivalent, and shall be based on data from at least eight consecutive quarterly (or more frequent) groundwater monitoring events. For each monitoring parameter/constituent, the report shall compare measured concentrations for compliance monitoring wells with the calculated background concentration. The report shall be prepared by or under the direction of an engineer or geologist registered to practice in California pursuant to California Business and Professions Code §6735, 7835, and 7835.1.

   If the *Background Groundwater Quality Study Report* shows that the wastewater (contact water) discharge has degraded, or is likely to degrade groundwater quality, then upon request of the Executive Officer, the Discharger shall submit *Groundwater Mitigation Plan* which shall evaluate contaminant control alternatives, describe a preferred alternative, and propose a timeline to meet the Groundwater Limitations of this Order. The selected contaminant control alternative must comply with State Water Resources Control Board Resolution No. 68-16 and be consistent with the most recent Basin Plan.

2. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain the professional's signature and/or stamp of the seal.

3. The Discharger shall comply with the Monitoring and Reporting Program No. R5-2006-0070, which is a part of this Order, and any revisions thereto as ordered by the Executive Officer.

4. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and by reference a part of this Order. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."

5. The Discharger shall submit to the Board on or before each compliance report due date the specified document, or if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is reported, then the Discharger shall state the reasons for noncompliance and shall provide a schedule to come into compliance.

6. The Discharger shall use the best practicable cost-effective control technique(s) currently available to comply with the requirements specified in this order.

7. The Discharger shall report promptly to the Board any material change or proposed change in the character, location, area, or volume of the raw material storage or contact water storage or disposal.

8. In the event of any change in control or ownership of the facility or wastewater disposal areas, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Regional Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved by the Executive Officer.

9. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

10. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

11. The Board will review this Order periodically and may revise requirements when necessary.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 23 June 2006.

Original Signed by
PAMELA C. CREEDON, Executive Officer

TRO: 5/30/06

AMENDED

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2006-0070

FOR
KELLOGG SUPPLY, INC.,
SOIL AMENDMENT PACKAGING FACILITY
SAN JOAQUIN COUNTY

This monitoring and reporting program (MRP) incorporates requirements for monitoring of the contact water storage pond, stormwater pond, fly ash, and groundwater. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All samples should be representative of the volume and nature of the discharge. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. Field test instruments (such as those used to measure pH and dissolved oxygen) may be used provided that:

1. The operator is trained in the proper use of the instrument;
2. The instruments are field calibrated prior to each use;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

CONTACT WATER POND MONITORING

Samples shall be collected from an established sampling station located in an area that will provide a sample representative of the water in the contact water pond. Freeboard shall be measured vertically from the surface of the pond water to the lowest elevation of the surrounding berm and shall be measured to the nearest 0.1 foot. Monitoring of the pond shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Freeboard	feet (±0.1)	Measurement	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Dissolved Oxygen[1]	mg/L	Grab	Weekly[2]	Monthly
pH[1]	Std. Unit	Grab	Weekly[2]	Monthly
Electrical Conductance	µmhos/cm	Grab	Weekly[2]	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly[2,3]	Monthly
Dilution Water Added to Pond	Gallons	Measured	Monthly	Monthly
Water Removed from Pond	Gallons	Measured	Monthly	Monthly
BOD_5	mg/L	Grab	Monthly[2]	Monthly
Nitrate (as N)	mg/L	Grab	Monthly[2]	Monthly
Ammonia (as N)	mg/L	Grab	Monthly[2]	Monthly
Arsenic	mg/L	Grab	Monthly[2,4]	Monthly
Molybdenum	mg/L	Grab	Monthly[2,4]	Monthly
Hexavalent Chromium	mg/L	Grab	Monthly[2,4]	Monthly
Liner Inspection	NA	Observation	Annually[5]	Annually

[1] Samples shall be collected at a depth of one foot from each pond in use, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.
[2] Samples shall be collected when water is present. If no water is present, the report shall so state.
[3] If TDS concentration exceeds 750 mg/L, additional samples may be collected within the reporting period. All values shall be presented and averaged in the monitoring report.
[4] Contact water samples for metals analysis shall be filtered with a maximum 0.45-micron filter prior to digestion and analysis.
[5] Liner inspection shall be performed when pond is dry or as close to dry as possible.

STORMWATER POND MONITORING

Samples shall be collected from an established sampling station located in an area that will provide a sample representative of the water in the stormwater pond. Freeboard shall be measured vertically from the surface of the pond water to the lowest elevation of the surrounding berm and shall be measured to the nearest 0.1 foot. Monitoring of the pond shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Freeboard	feet (±0.1)	Measurement	Monthly[1]	Monthly
Odors	--	Observation	Monthly[1]	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly[1]	Monthly

[1] Samples shall be collected when water is present. If no water is present, the report shall so state.

FLY ASH MONITORING

A composite sample shall be collected from fly ash stored at the site. All samples shall be collected prior to mixing with soil products using approved EPA methods and shall be tested by the Waste Extraction Test using deionized water for soluble constituents. Monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Arsenic	µg/L	Composite	Monthly	Monthly
Molybdenum	µg/L	Composite	Monthly	Monthly
Hexavalent Chromium	µg/L	Composite	Monthly	Monthly
Title 22 Metals [1]	µg/L	Composite	Annually	Annually

Title 22 Metals shall consist of antimony and/or antimony compounds, arsenic and/or arsenic compounds, asbestos, barium and/or barium compounds (excluding barite), beryllium and/or beryllium compounds, cadmium and/or cadmium compounds, chromium VI compounds, chromium and/or chromium (III) compounds, cobalt and/or cobalt compounds, copper and/or copper compounds, fluoride salts, lead and/or lead compounds, mercury and/or mercury compounds, molybdenum and/or molybdenum compounds, nickel and/or nickel compounds, selenium and/or selenium compounds, silver and/or silver compounds, thallium and/or thallium compounds, vanadium and/or vanadium compounds, and zinc and/or zinc compounds.

GROUNDWATER MONITORING

Prior to construction and/or sampling of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Board for approval. For the purpose of groundwater monitoring at the site the following wells will be sampled for groundwater elevation and quality: MW-1R, MW-2R, MW-3R, and MW-4; the following wells will be sampled only for groundwater elevation data: P-1, P-2, and P-3.

Once installed, any new wells shall be added to the monitoring network of the existing wells and shall be sampled and analyzed according to the schedule below. All samples shall be collected using approved EPA methods. Water table elevations shall be calculated to determine groundwater gradient and direction of flow.

Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged of at least three well volumes until temperature, pH, and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Depth to Groundwater	±0.01 feet	Measurement	Quarterly	Quarterly
Groundwater Elevation[1]	±0.01 feet	Calculated	Quarterly	Quarterly
Gradient	feet/foot	Calculated	Quarterly	Quarterly
Gradient Direction	Degrees	Calculated	Quarterly	Quarterly
pH	pH units	Grab	Quarterly	Quarterly
Nitrate as Nitrogen	mg/L	Grab	Quarterly	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly
Total Coliform Organisms	MPN/100 mL	Grab	Quarterly	Quarterly
Standard Minerals[2]	mg/L	Grab	Annual[3]	Annual
Arsenic	mg/L	Grab	Annual[3,4]	Annual
Molybdenum	mg/L	Grab	Annual[3,4]	Annual
Hexavalent Chromium	mg/L	Grab	Annual[3,4]	Annual

[1] Groundwater elevation shall be determined based on depth-to-water measurements from a surveyed measuring point elevation on each well.

[2] Standard Minerals shall include at least the following compounds: boron, calcium, iron, magnesium, manganese, potassium, sodium, chloride, sulfate, total alkalinity (including alkalinity series), and total hardness as $CaCO_3$

[3] Annual sample event shall occur in the fourth quarter of the year.

[4] Groundwater samples for metals analysis shall be filtered with a maximum 0.45-micron filter prior to digestion and analysis

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., contact water pond, stormwater pond, or groundwater monitoring well, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner as to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all groundwater monitoring reports shall be prepared under the supervision of a registered professional engineer or geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board by the **1st day of the second month** following the end of the reporting period (i.e. the January monthly report is due by 1 March). Monthly reports for the months of March, June, September, and December may be submitted as part of the Quarterly Monitoring Report, if desired. The monthly reports shall include the following:

1. Results of contact water pond, stormwater pond, and fly ash monitoring;
2. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format;
3. If requested by staff, copies of laboratory analytical report(s);
4. A calibration log verifying calibration of all hand held monitoring instruments and devices used to comply with the prescribed monitoring program;

B. Quarterly Monitoring Reports

The Discharger shall establish a sampling schedule for groundwater monitoring such that samples are obtained approximately every three months. Quarterly monitoring reports shall be submitted to the Regional Board by the **1st day of the second month after the quarter** (i.e. the January-March quarter is due by May 1st) each year. The Quarterly Report shall include the following:

1. Results of groundwater monitoring.
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged.
3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any.
4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable).
5. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements.
6. Summary data tables of historical and current water table elevations and analytical results.
7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum.
8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

An Annual Report shall be prepared as the Fourth Quarter monitoring report. The Annual Report shall be submitted to the Regional Board by **1 February** each year. In addition to the data normally presented, the

Annual Report shall include the following:

1. The contents of the regular monthly and quarterly monitoring report for the last quarter of the year.
2. The annual fly ash and groundwater monitoring.
3. An evaluation of compliance with the requirements of Provision 1.a, a summary of monthly TDS concentrations, and an annual average value calculated for the time period from January through December.
4. The results of the contact water pond liner inspection.
5. If requested by staff, tabular and graphical summaries of all data collected during the year.
6. An evaluation of the effectiveness of the past year's wastewater (contact water) storage and disposal management in terms of odor control and groundwater protection, including consideration of reapplication management practices (i.e.: salinity buildup in the contact water pond, reapplication of contact water to the product, measures implemented to prevent contamination of stormwater with soil amendments), and groundwater monitoring data.
7. An evaluation of the groundwater quality at the facility. The evaluation shall include presentation and discussion of the analytes collected once per year (standard minerals, arsenic, molybdenum, and hexavalent chromium) as well as all other analytes required by the MRP.
8. A discussion of compliance and corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into compliance with the waste discharge requirements.
9. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain a statement by the discharger, or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: Original Signed by
PAMELA C. CREEDON, Executive Officer

June 23, 2006
(Date)

TRO: 5/30/06

AMENDED

INFORMATION SHEET

ORDER NO. R5-2006-0070
KELLOGG SUPPLY, INC.
SAN JOAQUIN COUNTY

Kellogg Supply, Inc. operates a soil amendment processing facility to stockpile, mix, compost, package and warehouse soil amendment products primarily for residential use. No wastewater is generated in the business activities; however, stormwater that falls on stockpiled raw materials, including fertilizer amendments, generates "contact water." Raw materials are stockpiled on a paved outdoor bermed storage area that is equipped with floor drains that direct contact water into the contact water pond. A second area where contact water is generated is the conveyance area, in which composted materials are conveyed from the outdoor bermed storage area to the packaging area. The conveyance area is equipped with berms, a sump, and a pump to discharge contact water to the contact water pond.

The Discharger has completed and is planning to make improvements to the existing contact water pond system. The completed improvements include revised piping configurations to allow addition of stormwater and potable water in the contact water pond to reduce total dissolved solids concentrations, and a system to allow application of contact water to the composting product. The proposed improvements include a plan to line the existing contact water pond with a 60-mil thick HDPE liner to minimize percolation of contact water. The liner will be installed in 2006.

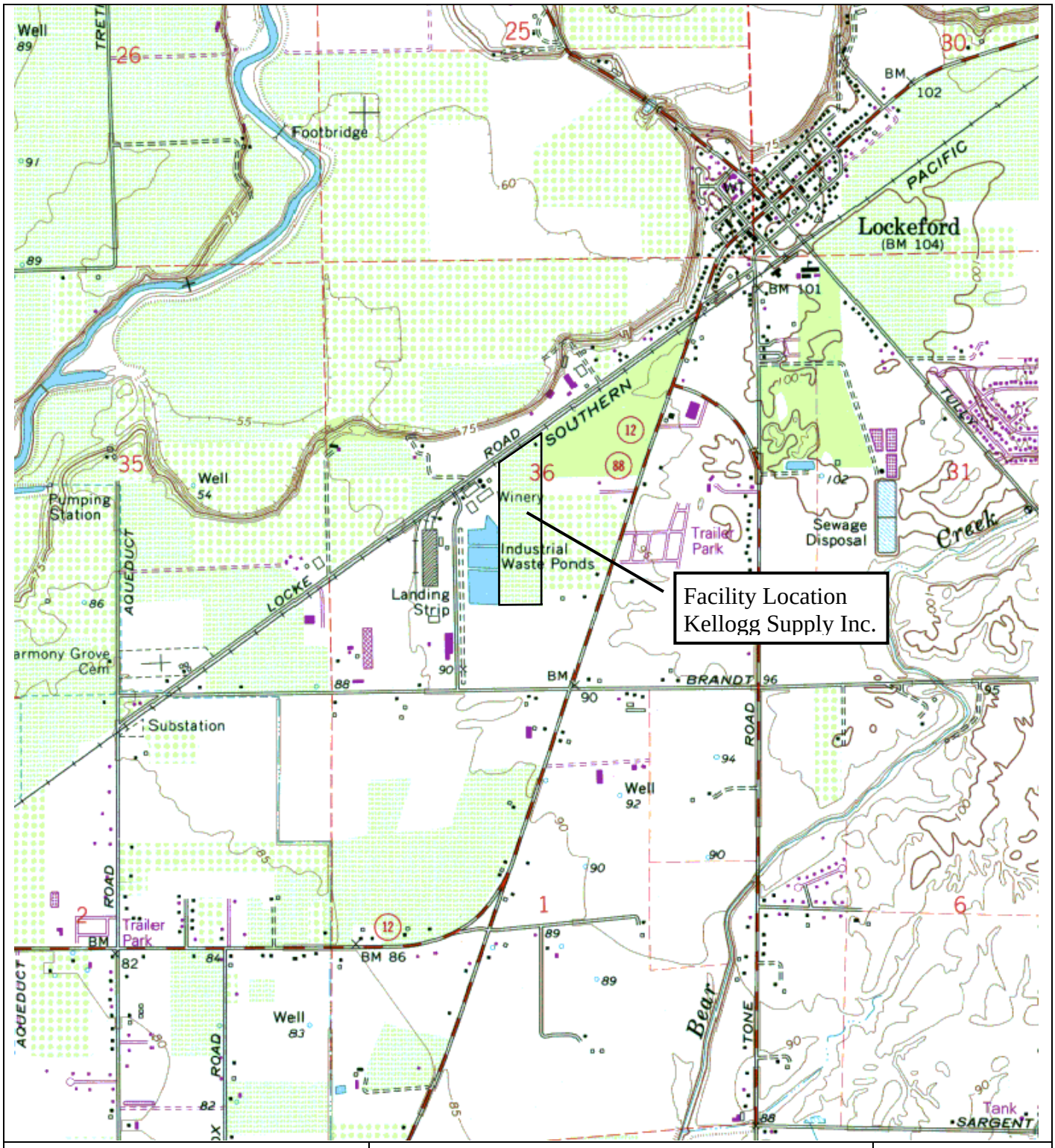
The Discharger is planning to increase the production of the facility in the future. That will be accomplished by increasing the bermed outdoor storage area to a total area of 7.2 acres, and increasing the contact water storage pond to 5.0 million gallons of storage (with two feet of freeboard). The outdoor storage area will be paved with asphalt; the contact water pond will be constructed with a compacted clay liner and a 60-mil thick HDPE liner. Prior to an increase in the size of the processing capacity, the Discharger must obtain written approval from the Executive Officer per Discharge Specification B.1.

Contact water that is discharged to the contact water pond is reapplied to the composting products on the bermed outdoor storage area. Fresh water is added to the contact water pond as needed to limit the concentration of dissolved solids. The fresh water sources will include stormwater collected in the stormwater retention pond and groundwater from a groundwater production well.

Stormwater that falls on other areas of the facility, where soil amendment products are not exposed to the weather, is directed to a stormwater retention pond. Therefore, that stormwater is good quality and possesses a low total dissolved solids concentration. Approximately half of the facility is covered with buildings or paved areas.

This Order also requires the Discharger to submit an application for coverage under the stormwater permitting program, a Pond Liner Design Report, a Pond Liner System Construction Quality Assurance Plan, a revised Operation and Management Plan, a Contact Water Pond Upgrade Report, Contact Water Quality Evaluation Report Addendum, and a Background Groundwater Quality Study Report.

Groundwater wells exist at the facility but the monitoring results to date do not produce a clear characterization of groundwater quality. Groundwater exists at approximately 100 feet below ground surface, and flows to the southwest. Surface water drainage in the area is to the Mokelumne River.



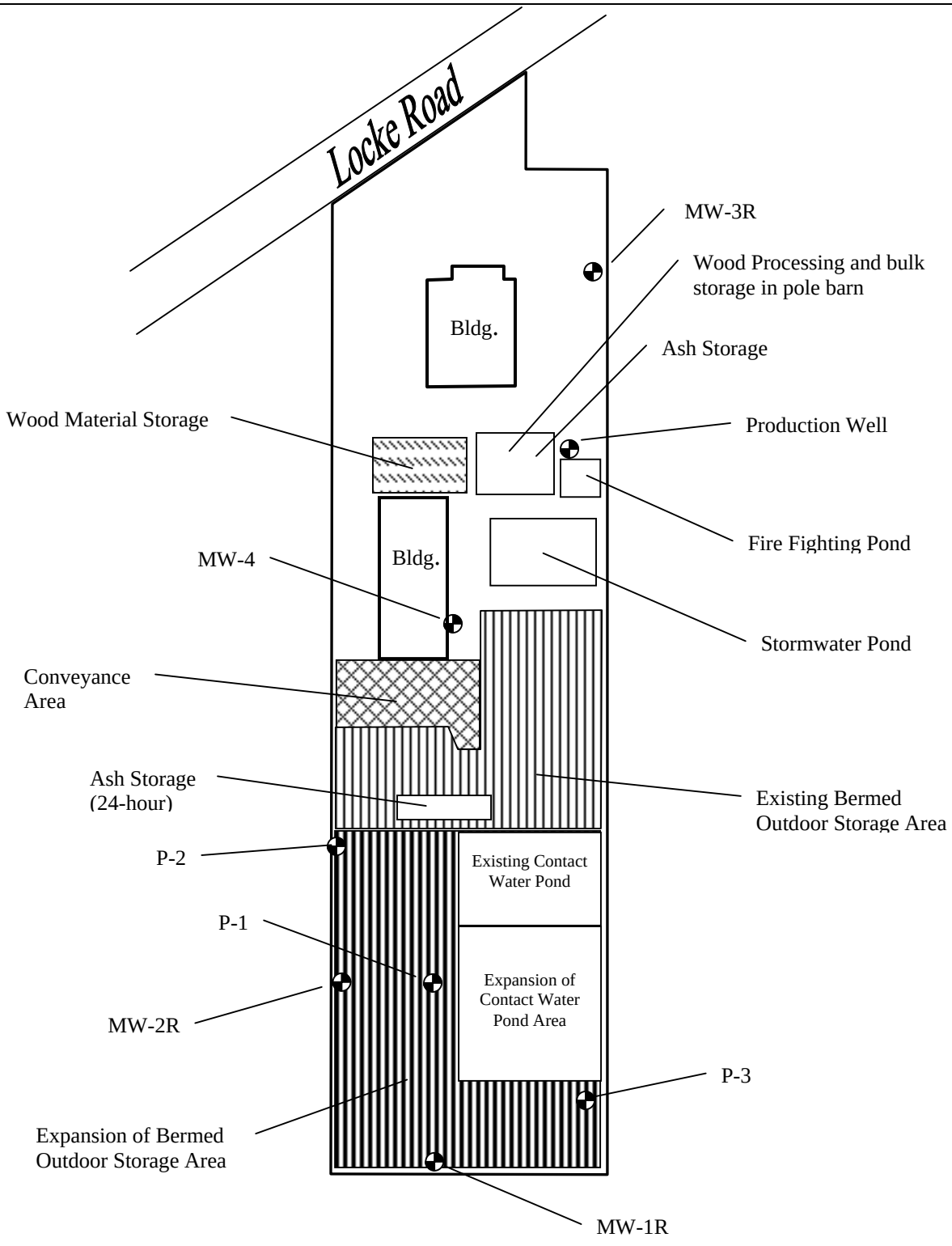
Drawing Reference:
LOCKEFORD, CALIF.
U.S.G.S TOPOGRAPHIC MAP
7.5 MINUTE QUADRANGLE
Prepared 1953

SITE LOCATION MAP

KELLOGG SUPPLY INC.
12686 LOCKE ROAD
LOCKEFORD, SAN JOAQUIN COUNTY

N
W E
S

approx. scale
1 in. = 1,750 ft.



Drawing Reference: Site Plan Report of Waste Discharge Eco:Logic, 2004	**SITE PLAN** KELLOGG SUPPLY INC. 12686 LOCKE ROAD LOCKEFORD, SAN JOAQUIN COUNTY	N W E S Not to Scale