

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2010-0124

WASTE DISCHARGE REQUIREMENTS
FOR
BALDWIN CONTRACTING COMPANY INCORPORATED and SPRINGER FAMILY TRUST
HALLWOOD AGGREGATE FACILITY
YUBA COUNTY

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

1. Baldwin Contracting Company, Incorporated and Springer Family Trust (hereafter Discharger) submitted a Report of Waste Discharge (RWD) dated 10 January 2010 for expansion of an existing aggregate extraction, processing, and related activity facility.
2. The facility is located at 2965 Hooper Road, approximately five miles east-northeast of Marysville in Sections 25, 26, 27, 34, 35, and 36 of T16N, R4E, MDB&M. The facility location is shown on Attachment A which is attached hereto and made part of this Order by reference. The property is also identified by Assessor's Parcel Numbers as 06-100-126, 06-100-127, 06-100-128, 06-100-129, 06-150-011, 06-100-076, 06-100-077, 06-150-020, 06-120-022, 06-120-016, 06-120-035, and 06-120-021.
3. The aggregate excavation areas, processing and discharge areas, and the aggregate washing equipment are owned and operated by the Discharger on the existing facility. The Springer Family Trust owns the property in the expansion area.
4. The facility is located within the Yuba Goldfields. The existing excavation area was previously mined for aggregate and gold, the expansion area is currently in fruit orchards and has not been mined. The Discharger has been excavating and processing aggregate at this site since approximately 1955, most recently under Waste Discharge Requirements (WDRs) Order No. 5-00-101.

Facility Description

5. The Discharger will operate an aggregate mining and processing facility that will include a scale house, office, equipment shop, and equipment wash area.
6. The facility consists of existing and planned expansion areas. The existing facility consists of approximately 275 acres; the expansion area consists of approximately 200 acres. Aggregate reserves exist to a depth of approximately 75 feet in both areas.
7. Historic mining activities within the Yuba River watershed used mercury to amalgamate gold. Mercury was lost during this process, resulting in residual mercury within the sediments.

- a. Historically, gold mining may have occurred at the existing facility. As a result, mercury may be present in the facility sediment.
 - b. Reportedly the expansion area property was not previously mined. Elevated concentrations of mercury in sediment are not likely to exist.
8. A facility map is shown on Attachment B, which is attached hereto and made part of this Order by reference. The attachment approximately delineates the settling/recycling pond. All other ponds on the property are the result of excavating below the water table; those ponds are termed excavation ponds.

Mining/Processing Activities

9. There is an estimated 22 million tons of aggregate available at the expansion area. The production rate will vary with market demand. Excess product will be stockpiled for later sale.
10. Mining techniques may include, but are not limited to, scrapers, track-mounted excavators, draglines, and clam-shell bucket techniques. Extraction operations will be conducted to approximately 75 feet below the ground surface (approximately 55 feet below site groundwater levels).
11. Excavated materials are transported to the processing equipment using conveyor belts at the existing facility. At the expansion area, haul trucks will be used, a conveyor system may be added in the future.
12. Processing equipment generally consists of wash screens, crushers, and vibratory screens. Wastewater is discharged to settling/recycling ponds or excavation ponds.
13. The Discharger operates an asphaltic concrete mix plant capable of producing approximately 400 tons of asphalt per hour. The asphalt plant occasionally generates wastewater in the bag house for the purpose of removing aggregate dust. The wastewater generated does not come into contact with petroleum hydrocarbons and is discharged to the settling/recycling pond.
14. Presently, no concrete manufacturing using Portland cement occurs at the site. This Order requires submittal of a separate RWD for production of concrete, cement, or concrete products, or disposal of non-cured cement product wastewater.

Wastewater Generation, Quality, and Disposal

15. The primary water supply for the processing plant is the settling/recycling pond system. Wastewater is generated by washing fine-grained soil particles from the excavated aggregate. That turbid wastewater is discharged to the settling/recycling pond. Wastewater is recycled directly through reuse.

16. Wastewater flow rates for the years 2008 and 2009 were reviewed to characterize the flow rate. Monthly average for each year as well as monthly average and maximum flow rates for the two years reviewed are presented below:

<u>Month</u>	<u>Units</u>	<u>2008</u>	<u>2009</u>	<u>ave</u>	<u>max</u>
Jan	gpd	0	0	0	0
Feb	gpd	0	0	0	0
Mar	gpd	144,929	416,000	280,465	416,000
Apr	gpd	207,480	0	103,740	207,480
May	gpd	200,284	472,333	336,309	472,333
June	gpd	0	397,800	198,900	397,800
July	gpd	114,484	492,375	303,430	492,375
Aug	gpd	202,297	0	101,149	202,297
Sept	gpd	167,960	463,125	315,543	463,125
Oct	gpd	59,129	446,550	252,840	446,550
Nov	gpd	74,100	0	37,050	74,100
Dec	gpd	0	313,560	156,780	313,560

gpd denotes gallons per day. The values reported for 2008 and 2009 are monthly average gpd.

17. Wastewater quality has been characterized by regular sampling and analysis. The existing area is approximately 200 acres in size and several ponds exist across the property where excavation has occurred. Pond sampling was required by MRP No. 5-00-101 when wastewater was discharged to the pond, or when excavation in the pond was occurring. As a result, the Discharger maintains a sampling network across the site. The approximate sample locations are presented on Attachment C. Annual reports for the years 2008 and 2009 were reviewed to determine wastewater quality trends. The following observations were noted:

- a. A summary of electrical conductivity (EC) values is presented below. Samples were collected monthly from each of the sampling locations. Average, median, and maximum values are presented for each year.

<u>Location</u>	<u>Units</u>	<u>2008 Data</u>			<u>2009 Data</u>		
		<u>ave</u>	<u>med</u>	<u>max</u>	<u>ave</u>	<u>med</u>	<u>max</u>
Pond 1A	umhos/cm	204.2	205.0	220	195.0	190.0	220
Pond 1B	umhos/cm	200.0	200.0	220	188.3	190.0	200
Pond 1C	umhos/cm	192.5	200.0	210	182.5	190.0	200
Pond 2A	umhos/cm	160.8	160.0	210	155.8	160.0	180
Pond 2B	umhos/cm	159.2	160.0	180	153.3	150.0	180
Pond 2C	umhos/cm	147.5	150.0	160	154.2	155.0	180
Pond 3	umhos/cm	195.8	200.0	220	190.0	190.0	210
Pond 4	umhos/cm	168.3	170.0	190	139.2	135.0	170
Pond 5	umhos/cm	130.0	130.0	140	131.7	130.0	160
Pond 6	umhos/cm	113.3	110.0	130	106.7	110.0	120
Pond 7	umhos/cm	148.3	150.0	170	160.8	165.0	190
Pond 8	umhos/cm	169.2	170.0	220	175.8	175.0	200

The data indicates the water quality of the ponds is generally good with respect to EC values which are well below the potentially applicable regulatory limit of 700 umhos/cm (Agricultural Water Quality Goal).

- b. A summary of dissolved mercury data is presented below. Samples were collected semi-annually (every six months) at the indicated location and depths, and were filtered through a 0.45 micron filter prior to analysis.

Sample	Dept h	2008 Data (ng/L)				2009 Data (ng/L)			
		Date	Hg	Date	Hg	Date	Hg	Date	Hg
Pond 1A	Sur	1/28/2008	0.73	7/31/2008	<0.5	1/27/2009	0.8	10/12/2009	0.6
Pond 1A	12.5'	1/28/2008	0.64	7/31/2008	0.7	1/27/2009	1.0	10/12/2009	0.6
Pond 1B	Sur	1/28/2008	0.67	7/31/2008	<0.5	1/27/2009	0.9	10/12/2009	0.5
Pond 1B	10'	1/28/2008	0.73	7/31/2008	<0.5	1/27/2009	1.0	10/12/2009	0.6
Pond 1C	Sur	1/30/2008	<0.50	7/31/2008	<0.5	1/27/2009	0.7	10/12/2009	<0.5
Pond 1C	17.5'	1/30/2008	<0.50	7/31/2008	0.6	1/27/2009	0.7	10/12/2009	0.8
Pond 2A	Sur	1/30/2008	2.04	8/3/2008	1.2	1/20/2009	0.7	10/12/2009	0.5
Pond 2A	15'	1/30/2008	2.0	8/3/2008	0.8	1/20/2009	0.8	10/12/2009	0.9
Pond 2B	Sur	2/5/2008	1.87	8/3/2008	0.8	1/20/2009	0.8	10/12/2009	0.7
Pond 2B	15'	2/5/2008	1.96	8/3/2008	0.7	1/20/2009	0.7	10/12/2009	0.7
Pond 2C	Sur	2/5/2008	1.81	8/7/2008	0.7	1/20/2009	0.9	10/12/2009	1.1
Pond 2C	15'	2/5/2008	1.84	8/3/2008	0.7	1/20/2009	1	10/12/2009	1.5

Sur denotes Surface. Hg denotes Mercury. "<" denotes not detected (detection limit shown). ng/L denotes nanograms per liter (parts per trillion).

The data indicates the water quality of the ponds is generally good with respect to mercury concentrations, which are well below the potentially applicable regulatory limit of 2,000 ng/L (U.S. and Cal EPA Primary Maximum Contaminant Level).

Although the dissolved mercury data presented above indicates very low mercury concentrations, a turbid water sample collected from the settling/recycling pond on 23 April 1999 was allowed to settle to separate the solid and liquid phases. The sediment portion of that sample contained a total mercury concentration of 0.167 mg/kg (167,000 ng/kg). The concentration reported is not considered an accurate characterization of total mercury in sediment, rather an indication of the presence of mercury at the facility. Additional characterization of mercury in sediment is required.

- c. A summary of total petroleum hydrocarbons data is presented below. Samples were collected semi-annually (every six months) from each of the sampling locations. All the samples were collected at the surface.

2008 Data (ug/L)								
<u>Sample</u>	<u>Date</u>	<u>TPHg</u>	<u>TPHd</u>	<u>TPH mo</u>	<u>Date</u>	<u>TPHg</u>	<u>TPHd</u>	<u>TPH mo</u>
Pond 1A	1/28/2008	<50	<50	NR	7/31/2008	<50	<50	NR
Pond 1B	1/28/2008	<50	<50	NR	7/31/2008	<50	<50	NR
Pond 1C	1/30/2008	<50	<50	NR	7/31/2008	<50	<50	NR
Pond 2A	1/30/2008	<50	<50	NR	8/3/2008	<50	<50	NR
Pond 2B	2/5/2008	<50	<50	NR	8/3/2008	<50	<50	NR
Pond 2C	2/5/2008	<50	<50	NR	8/3/2008	<50	<50	NR

2009 Data (ug/L)								
<u>Sample</u>	<u>Date</u>	<u>TPHg</u>	<u>TPHd</u>	<u>TPH mo</u>	<u>Date</u>	<u>TPHg</u>	<u>TPHd</u>	<u>TPH mo</u>
Pond 1A	1/27/2009	<50	<50	<200	10/12/2009	<50	68	<200
					9	<50	<50	<200
Pond 1B	1/27/2009	<50	<50	<200	10/12/2009	<50	<50	<200
					9	<50	<50	<200
Pond 1C	1/27/2009	<50	<50	<200	10/12/2009	<50	<50	<200
					9	<50	<50	<200
Pond 2A	1/20/2009	<50	<50	<200	10/12/2009	<50	<50	<200
					9	<50	<50	<200
Pond 2B	1/20/2009	<50	<50	<200	10/12/2009	<50	<50	<200
					9	<50	<50	<200
Pond 2C	1/20/2009	<50	<50	<200	10/12/2009	<50	<50	<200
					9	<50	<50	<200

TPHg denotes Total Petroleum Hydrocarbons as gasoline. TPHd denotes Total Petroleum Hydrocarbons as diesel. TPH mo denotes Total Petroleum Hydrocarbons as motor oil.

The data indicates the water quality of the ponds is generally good with respect to petroleum hydrocarbons, which are generally not detectable. Petroleum hydrocarbons were detected only once in two years of sampling; the detected concentration was 68 ug/L, which is below the taste and odor threshold of 100 ug/L.

18. The Discharger submitted a water balance that demonstrates sufficient capacity in the settling/recycling pond to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration using a return period of 100 years. The Discharger will reconfigure the settling/recycling pond as needed to maintain adequate capacity. This Order allows ponds to be constructed anywhere on the property as long as the Discharger is in compliance with this Order and any requirements imposed by other agencies.
19. The Discharger may propose the use of flocculants to settle fine-grained materials from the wastewater. Because different products may be proposed for use over the life of the project, the Discharger is required to obtain approval from the Executive Officer prior to using any flocculant.

Groundwater Considerations

20. Groundwater quality at the expansion area has been investigated by installation and sampling of groundwater monitoring wells. Some of the wells have already been excavated and therefore no longer exist. The details of groundwater monitoring well installations are not well documented. Therefore, this Order requires the Discharger to submit a groundwater monitoring well installation workplan to allow on-going monitoring of groundwater quality.
21. Depth to groundwater is approximately 15-20 feet below the ground surface. Groundwater flows to the west or southwest generally towards the Yuba River, but may be influenced locally by groundwater extraction or percolation from settling/recycling ponds. The stage of the Yuba River may also significantly change the groundwater elevation and flow direction.
22. A low permeability aquitard exists at a depth of approximately 70 feet below ground surface. The project will not excavate the aquitard.
23. Groundwater monitoring wells were installed by the Discharger at the expansion area without seeking review and/or approval of the monitoring locations, well construction, or analyte list from the Central Valley Water Board. The well installation and sampling results are poorly documented. As a result, the available data was averaged to characterize the groundwater quality across the expansion area. The locations of the groundwater monitoring wells are presented on Attachment C. A summary of groundwater quality is presented below.

Analyte	Units	GW-1	GW-2	GW-3	DH-1	DH-4	DH-6	DH-8	DH-9	DH-10	DH-11
Arsenic	mg/L	<0.10	<0.10	<0.10	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	0.62
Chromium	mg/L	<0.01	<0.01	<0.01	NR	NR	0.81	<0.0005	<0.0005	<0.0005	2.6
Iron	mg/L	<0.10	2.2	0.11	NR	NR	NR	NR	NR	NR	NR
Magnesium	mg/L	22	9.4	15	NR	NR	8.4	18	13	13	12
Manganese	mg/L	4.0	0.35	0.033	NR	NR	NR	NR	NR	NR	NR
Sodium	mg/L	10	5.8	6.4	NR	NR	3.4	11	5.2	4.9	7.7
Chloride	mg/L	10	19	3.8	NR	NR	1.6	2.5	2.4	1.8	2.4
Nitrate	mg/L	<1.0	<1.0	<1.0	NR	NR	NR	NR	NR	NR	NR
Nitrogen	mg/L	NR	NR	NR	NR	NR	0.15	0.34	0.21	0.15	0.82
Sulfate	mg/L	70	70	53	NR	NR	15	24	18	19	10
EC	mg/L	260	270	330	NR	NR	NR	NR	NR	NR	NR
pH	mg/L	6.8	6.9	6.9	NR	NR	7.0	7.3	7.3	7.1	7.6
TDS	mg/L	290	280	340	NR	NR	120	190	160	130	160
Mercury	ug/L	<0.20	<0.20	<0.20	<0.05	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050
					0	0					

EC denotes Electrical Conductivity. TDS denotes Total Dissolved Solids. NR denotes Not Reported.

The data indicates groundwater quality is good. However, because the source of the data is poorly documented, interpretation of the data is questionable.

24. Groundwater wells screened above and below the aquitard exist in the area. The closest known production wells to the facility are wells located approximately 2,000 feet southwest of the site that are used for supplying the Hallwood Cordura irrigation canal during drought conditions. There may be other smaller wells in the area as well.

Other Waste Streams

25. The Discharger may accept cured waste concrete and asphaltic concrete for crushing and recycling.
26. The Discharger does not presently perform gold recovery but is considering adding gold recovery in the future. Any gold recovery performed in activities described in this Order must only use gravimetric methods. No amalgamation or leaching processes can be used in the gold recovery process. Heavy sands recovered can be taken off-site for further processing if desired.
27. Potentially hazardous materials stored at the site are asphaltic oil, motor oil, hydraulic fluid, transmission fluid, lube grease, gear lube, and similar products. Asphaltic oil, fuel, and propane will be stored in aboveground storage tanks. The locations of the material storage are presented on Attachment C. Major equipment repair work is performed off-site. A list of the hazardous materials that will be stored on-site is presented below:

<u>Material</u>	<u>Max Amount</u>	<u>Location</u>
Diesel Fuel	10,400 gal	Fuel Containment Basin
Gasoline	1,200 gal	Fuel Containment Basin
Hydraulic/Gear/misc. Oils	(6) 55-gal drums	Shop Area
Motor Oil/Hydraulic Oil	(2) 560-gal	Shop Containment Basin
Waste Oil	560 gal	Shop Containment Basin
Asphaltic Cement	65,000 gal	Asphalt Containment Basin
Emulsified Asphalt	10,000 gal	Asphalt Containment Basin
Circulating Heat Transfer Oil	500 gal	Asphalt Plant Containment
Heat Transfer Oil	450 gal	Aggregate Plant Crushers
Heat Transfer Oil	1,200 gal	Pad mounted transformers

28. Domestic wastewater from the office and related buildings is discharged to one of two septic systems permitted by the Yuba County Environmental Health Department. In addition, portable chemical toilets are available at the facility.

Site Reclamation Activities

29. The Discharger anticipates aggregate processing will continue for approximately 20 years. The current reclamation plan is described in the January 2006 *Amended Reclamation Plan for the Hallwood Quarry Expansion Project*. The Plan was submitted to the California State Mining and Geology Board, which approved the Plan on 14 September 2006. The reclamation plan describes the following:
- a. One water body covering most of the property will be created in the existing area.

- b. Two water bodies that cover nearly all of the property will be created in the expansion area.
 - c. Vegetative land buffers will be created surrounding the properties.
 - d. Reclamation will occur concurrently as mining progresses.
30. A clarification of the reclamation plan was approved by Yuba County Community Development Department in October 1999. The clarification addressed the vegetation sequencing and that perimeter slope ratios would be 3 to 1 (horizontal to vertical).

Site-Specific Conditions

31. The Discharger operates at least partially in the area known as the Yuba Goldfields. The surface sediments' ability to store and transmit groundwater has been significantly changed with historic mining activity. The present day aggregate excavation and processing activity and areas of disturbed sediments are separated from the well-established channel of the Yuba River. In considering similar aggregate facilities located at the Goldfields, the U.S. Army Corps of Engineers (Corps) identified the ephemeral ponds and channels created as being away from the Yuba River Channel and above the high water mark. The Corps, on behalf of the United States, subsequently determined that the ponds and channels within the Yuba Goldfields were not jurisdictional waters of the U.S. under the Clean Water Act (March, July, and November 1995 Corps letters to Cal Sierra, Western Aggregates, and Teichert respectively, and December 1998 letter to Legal and Safety Employee Research (LASER)).
32. The Corps exempts Goldfields ponds and channels from Clean Water Act jurisdiction under its industrial process exemption. Under this exemption, the Corps has interpreted the term "waters of the U.S." to not include artificial lakes or ponds created by excavating dry land (51 Fed. Reg. 41217). The Central Valley Water Board has concurred with the Corps' determination and has made a historical practice of issuing WDRs instead of NPDES permits for mining activities in the Yuba Goldfields.
33. Goldfields ponds and channels are man made and percolate to the groundwater. Under 40 CFR 122.2, EPA has drawn a distinction between natural and artificial ponds. As artificial, manmade ponds, the ponds located at the facility are not waters of the U.S. consistent with the waste treatment system exclusion of 40 CFR 122.2.
34. A majority of federal courts have concluded that groundwater, even if hydraulically connected to surface water, is not waters of the U.S. The Central Valley Water Board finds that the underground waters within the Yuba Goldfields qualify as such groundwater and are not waters of the U.S.
35. The August 2002 *Mercury Report*, prepared by the California Environmental Protection Agency states:

- a. Studies have shown methylation can occur both in the water column and in sediments, both by biological and abiotic processes.
 - b. In aquatic environments both methylmercury and inorganic divalent mercury preferentially partition to soil, sediment, and suspended matter (i.e., dissolved mercury concentration is far lower than the concentration in soil, sediment, and suspended matter).
 - c. Divalent mercury is reduced to the elemental species in the freshwater environment and may subsequently be removed from the water column by volatilization.
 - d. Most of the mercury in the water column is removed not by reduction to the elemental species, but by sedimentation of the particles to which divalent mercury and methylmercury are bound.
36. To establish a numerical value as a criterion for determining the need for additional investigation of mercury compounds in soil, information on background mercury soil concentrations was reviewed. The 10 March 2005, *Inorganic Chemicals in Groundwater and Soil, Background Concentrations at California Air Force Bases* was reviewed. The data set included 7,702 data points. The samples were considered to be from uncontaminated areas based on criteria regarding the lack of presence of organic compounds commonly found in the samples. The mercury concentration at the 95th percentile (the value in a data set that is greater than 95-percent of the data in the set) was calculated to be 0.3 mg/kg.
 37. The average annual precipitation is approximately 20.5 inches and the reference evapotranspiration rates average approximately 52.9 inches per year. The 100-year return annual precipitation is approximately 37.1 inches.
 38. Surrounding land uses are primarily industrial, agricultural, and residential.
 39. Stormwater that falls on the existing site is directed into the settling/recycling ponds or nearby excavation pond. At the expansion site stormwater will also be directed into the excavation and/or future settling/recycling ponds.
 40. Yuba River surface water quality has been characterized by regular sampling and analysis. Samples Loc 9 and Loc 10 were collected from the Yuba River upstream and downstream of the facility location respectively. Annual reports for the years 2008 and 2009 were reviewed to determine surface water quality trends.

<u>Location</u>	<u>Units</u>	<u>2008 Data</u>			<u>2009 Data</u>		
		<u>ave</u>	<u>med</u>	<u>max</u>	<u>ave</u>	<u>med</u>	<u>max</u>
Loc 9	umhos/cm	64.5	64.5	70	63.3	60.0	90
Loc 10	umhos/cm	74.5	74.5	80	56.7	60.0	70

The data indicates the water quality in the Yuba River is generally good and the electrical conductivity values are below the potentially applicable regulatory limit of 700 umhos/cm (Agricultural Water Quality Goal).

41. The facility is in the Lower Yuba River Hydrologic Basin (No. 515.30), as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.

Antidegradation Analysis

42. The Water Quality Control Plan, for the Sacramento 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 (State Water Board). Pursuant to Section 13263(a) of the California Water Code, waste discharge requirements must implement the Basin Plan.
43. Surface water drainage in the area is to numerous unnamed drainage ways and the Yuba River. The beneficial uses of the Yuba River between Englebright Dam and the Feather River are agricultural supply; hydropower generation; water contact recreation; non-contact recreation; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.
44. The beneficial uses of the underlying groundwater are domestic, industrial, and agricultural supply.
45. State Water Board Resolution No. 68-16 allows the degradation of groundwater quality if the Central Valley Water Board determines that:
- a. The degradation is consistent with the maximum benefit to the people of the State.
 - b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
 - c. The degradation does not cause exceedance of one or more water quality objectives; and
 - d. The discharger employs best practicable treatment and control to minimize degradation.
46. The treatment and control practices described herein provides commonly implemented treatment and control for the subject wastewater, and should prevent the discharge from creating a condition of pollution or nuisance, and maintain water quality. Settling ponds are routinely used in the aggregate mining industry to settle suspended solids.
47. The materials used in the Discharger's operation are natural earth materials subjected to a classification and separation process using recycled wastewater and site groundwater. Flocculants may be added to the wastewater pending Executive Officer approval.
48. Federal regulations for the stormwater discharges were promulgated by the U.S. Environmental Protection Agency on 16 November 1990 (40 CFR Parts 122, 123, and

124). The regulations require that specific categories of facilities which discharge stormwater associated with industrial activities obtain NPDES permits. The Discharger has not obtained a National Pollutant Discharge Elimination System Industrial Stormwater permit. This Order requires the Discharger to obtain the permit.

49. Section 13267(b) of California Water Code states 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 discharging, or who proposes to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste outside of its region that could affect the quality of the waters of the state 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 reports 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 monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. R5-2010-0124 are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.

50. The Basin Plan encourages reclamation.

CCR Title 27 Exemption

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 20005, et seq., (hereinafter Title 27). The exemption, pursuant to Section 20090(b) and 20090(h) is based on the following.
- a. For the exemption based on Section 20090(b):
 - i. The Central Valley Water Board is issuing waste discharge requirements,
 - ii. The discharge complies with the Basin Plan,
 - iii. The wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22, CCR as a designated or hazardous waste.
 - b. For the exemption based on Section 20090(h):
 - i. The Discharger will recycle the wastewater after treating the wastewater in the settling/recycling pond system. Settling of soil particles allows reuse of the

clarified wastewater. The solid fraction that settles to the pond bottom is inert waste and therefore is consistent with applicable provisions of the division.

- ii. The recycling will consist of reusing the water in the aggregate processing operations as well as groundwater recharge for later use both on- and off-site.

California Environmental Quality Act Considerations

52. Yuba County Community Development Department is the lead agency for this project under the California Environmental Quality Act (CEQA). An Environmental Impact Report (EIR) addressed the existing as well as expansion areas in the April 2006, *Baldwin Hallwood Mine Expansion Project, Final EIR*.
 - a. The Yuba County Planning Commission certified the final EIR on 19 April 2006. On 6 June 2006 the Yuba County Board of Supervisors adopted Resolution No. 2006-76 approving and certifying the project.
 - b. Appendix A of the Final EIR contained the Revised Reclamation Plan submitted to the California State Mining and Geology Board (SMGB). The SMGB approved the Revised Reclamation Plan and the Final EIR on 14 September 2006.
53. The following mitigation measures related to water quality were identified in the EIR:
 - a. Impact No. 4.5.1, states temporary and permanent excavation slopes could be subject to failure due to liquefaction. The mitigation measure requires repair of damage caused by exposed, unengineered, or saturated mine slopes.

Discharge Specification B.4 requires newly constructed or rehabilitated berms to be designed and constructed under the supervision of a California Registered Civil Engineer.
 - b. Impact No. 4.7.2, states excavating operations could substantially degrade groundwater quality. The mitigation measure requires use of best management practices to prevent hazardous materials from entering the lakes and ponds. The Spill Prevention Control and Countermeasures Plan (SPCCP) shall be used in case a spill occurs.

The potential for groundwater degradation is discussed in Findings No. 20 through 24. The Antidegradation Policy is discussed in Findings 42 through 50. BPTC is discussed in Findings No. 18, 26, 27, 39, 46, and 51. Discharge Specification B.15 states, "Neither the treatment nor the discharge shall cause a nuisance or condition of pollution as defined by the California Water Code, Section 13050." The SPCCP is required by Provision E.1.c of this Order.

Public Notice

54. 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.
55. 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.
56. In a public meeting, all comments pertaining to the discharge were heard and considered.

IT IS HEREBY ORDERED that Order No. 5-00-101 is rescinded and pursuant to Section 13263 and 13267 of the California Water Code, Baldwin Contracting Company, Inc. and Springer Family Trust, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted there under, shall comply with the following:

Note: Other prohibitions, conditions, definitions, and the method 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. The discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Bypass around, or overflow from, the settling/recycling pond(s) or excavation pond(s) is prohibited.
3. Discharge of domestic waste to any area or facility other than the Yuba County permitted septic tank system or regularly serviced portable toilets is prohibited.
4. Discharge of any industrial waste (including aggregate wastewater, assay wastes, laboratory wastes, or vehicle maintenance wastes) to the septic system is prohibited.
5. Discharge of waste classified as 'hazardous,' as defined in Chapter 15, Sections 2521(a) of Title 23, CCR, Section 2510, et seq., (hereinafter Chapter 15), or 'designated,' as defined in Section 13173 of the California Water Code, is prohibited.
6. The discharge or deposit of waste at this site from sources other than from the sand and gravel or asphalt concrete operations is prohibited. Processing¹ recycled materials

¹ Processing includes receiving, storage, and the physical manipulation required to manufacture saleable products. Physical manipulation may include crushing, washing to remove fines, grinding, heating, etc. Processing does not include accepting uncured Portland cement or concrete, or washout from uncured

such as cured concrete or asphalt pavement, which can be used to produce saleable materials consistent with the existing activities at the site is acceptable.

7. An independent WDRs Order shall control discharge of any concrete or cement related wastewater. Discharge of any noncured concrete or cement related wastewater under this Order is prohibited.
8. Chemical methods to recover gold such as amalgamation, cyanide leach, or any other chemical method are prohibited.

B. Discharge Specifications:

1. All industrial wastewater shall be recycled to the extent possible.
2. The monthly average discharge flow to the settling/recycling pond shall not exceed 2.0 mgd.
3. In any pond in which excavation is occurring, pond water shall not be pumped to lower floating excavation equipment (e.g., a dredge), to reduce the amount of sediment in the pond, or for other reasons unless all pumped water is contained within an existing settling/recycling pond or excavation pond consistent with all of the requirements of this Order.
4. Newly constructed or rehabilitated berms or levees (excluding filter barriers between ponds within the settling/recycling ponds area) that contain or control the flow of water shall be designed and constructed under the supervision of a California Registered Civil Engineer.
5. The discharge shall remain within the property boundaries at all times.
6. Additional settling/recycling ponds may be constructed within the property boundaries as described in Finding No. 18.
7. The discharge shall not cause the settling/recycling ponds or excavation ponds to have a pH less than 6.5 or greater than 8.5.
8. If wastewater or pond water samples collected from the settling/recycling pond or any excavation pond contain concentrations equal to or above the following numeric standards, additional investigation as described in Provision E.1.f is required. The numeric standards are listed below:
 - a. For sediment samples, the total mercury concentration shall not exceed 0.30 mg/kg.

- b. For aqueous² mercury samples, the dissolved mercury concentration shall not exceed 50 ng/L.
9. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or a mass that causes violation of the Groundwater Limitations.
10. All stockpiled products shall be managed to prevent erosion of sediment to surface water drainage courses.
11. The Discharger shall operate all systems and equipment to maximize treatment of the wastewater and optimize the quality of the discharge.
12. Freeboard shall never be less than two feet in any pond, as measured vertically from the water surface to the lowest point of overflow.
13. The settling/recycling ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation. 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.
14. On or about 1 November of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications No. B.12 and B.13.
15. Neither the treatment nor the discharge shall cause a nuisance or condition of pollution as defined by the California Water Code, Section 13050.
16. The Discharger shall comply with all applicable sections of the Aboveground Petroleum Storage Tank Regulations (Section 25270, Health and Safety Code).
17. Any waste material derived from gold recovery or quantification operations (such as laboratory assay) shall be contained and disposed of off-site at an appropriate facility.
18. At least **90-days** prior to scheduled use of flocculants the Discharger shall submit a technical report that describes the proposed flocculants, the application rate, and the fate and transport of the flocculants and any daughter products in the environment. The Discharger must obtain written approval from the Executive Officer prior to use of flocculants.
19. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the activity area.
20. All ponds shall be managed to prevent breeding of mosquitoes. In particular:

² Aqueous samples include any liquid sample collected at the site, they may include wastewater, groundwater, stormwater, or other sample matrix composed primarily of water. Aqueous samples shall represent the dissolved phase and shall be filtered using a 0.45 micron filter prior to digestion and analysis.

- a. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.
- b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
- c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
- d. Coordination with the local Mosquito Abatement District to minimize the potential for mosquito breeding can supplement the measures described above in cases where other methods are infeasible.

C. Solids Disposal:

1. Collected screenings, sludge, and other solids removed from liquid wastes shall 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 in the next monthly monitoring report.
3. Disposal of septage shall comply with existing Federal, State, and local laws and regulations, including permitting requirements and technical standards included in 40 CFR 503.

D. Groundwater Limitations:

1. The discharge shall not cause underlying groundwater to contain waste constituents in concentrations statistically greater than background water quality except as allowed by State Water Board Resolution No. 68-16 and this Order. Background groundwater quality shall be calculated using the methods provided in Title 27 Section 20415(e)(10).

E. Provisions:

1. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. As required by law, technical reports must bear the signature and/or seal of the registered professional. The following reports shall be submitted pursuant to Section 13267 of the California Water Code:
 - a. By **11 March 2011**, the Discharger shall obtain coverage under the following stormwater program permits:

- i. 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.
- b. By **11 March 2011**, the Discharger shall submit a *Groundwater Monitoring Well Installation Workplan*. The workplan shall describe a plan to install groundwater monitoring wells to allow evaluation of the groundwater quality upgradient and downgradient of the facility as well as downgradient of the settling/recycling pond. Monitoring wells shall be constructed to yield representative samples from the first saturated interval and shall comply with applicable well standards. The workplan shall be consistent with, and include the items listed in Section 1 of Attachment D, "*Items to be Included in a Monitoring Well Installation Workplan and a Monitoring Well Installation Report of Results.*"
- c. By **11 April 2011**, the Discharger shall submit an *Operations and Maintenance Plan*, including (a) notification procedures and actions to be taken when the wastewater in the ponds fail to meet specified requirements for freeboard, pH, or creates a condition of pollution or nuisance, (b) weed abatement measures, vector control practices, and burrowing animal control (c) a berm inspection and maintenance program, and (d) best management practices to prevent hazardous materials from entering the lakes and ponds described in a *Spill Prevention Control and Countermeasures Plan*. This plan shall also describe spill response that will be implemented in the event of a hazardous material spill or wastewater discharge off-site.
- d. By **10 June 2011**, the Discharger shall submit a *Groundwater Monitoring Well Installation Report*. The report shall be consistent with, and include the items listed, in Section 2 of Attachment D.
- e. By **15 September 2017**, the Discharger shall submit a *Groundwater Quality Investigation Report* that characterizes background groundwater quality if an interwell approach is selected; or presents a statistical analysis that determines existing groundwater quality at each well if an intrawell approach is selected. The analysis must be consistent with the methods provided in Title 27 Section 20415(e)(10)
- f. If, as a result of the monitoring conducted by MRP No. R5-2010-0124, the first time concentrations of mercury in a settling/recycle pond or excavation pond water equals or exceeds either of the numeric standards listed in Discharge Specification B.8, then within **90 days** the Discharger shall submit the following:
 - i. A workplan to characterize mercury in the water, sediment, and groundwater. Within **120 days** of approval of the workplan, the Discharger shall submit a report describing the results.
 - ii. If the report finds that mercury is present at concentrations that may result in groundwater degradation or bioaccumulation at unacceptable levels,

then within **120 days**, the Discharger shall submit a technical report evaluating alternatives to reduce mercury concentrations, prevent transport, control exposure, or other remedial alternative. The report shall include an implementation schedule.

- iii. Upon request of the Executive Officer, the Discharger shall create a financial assurance account (as described in Title 27 of the CCR) to mitigate degradation or bioaccumulation effects.

If a new criterion different than presented in Discharge Specification B.8 is promulgated by the Central Valley Water Board, the State Water Resources Control Board, or the U.S. Environmental Protection Agency, then this Order may be reopened and staff may reevaluate the need for characterization of mercury concentrations in the water and/or sediment at the facility.

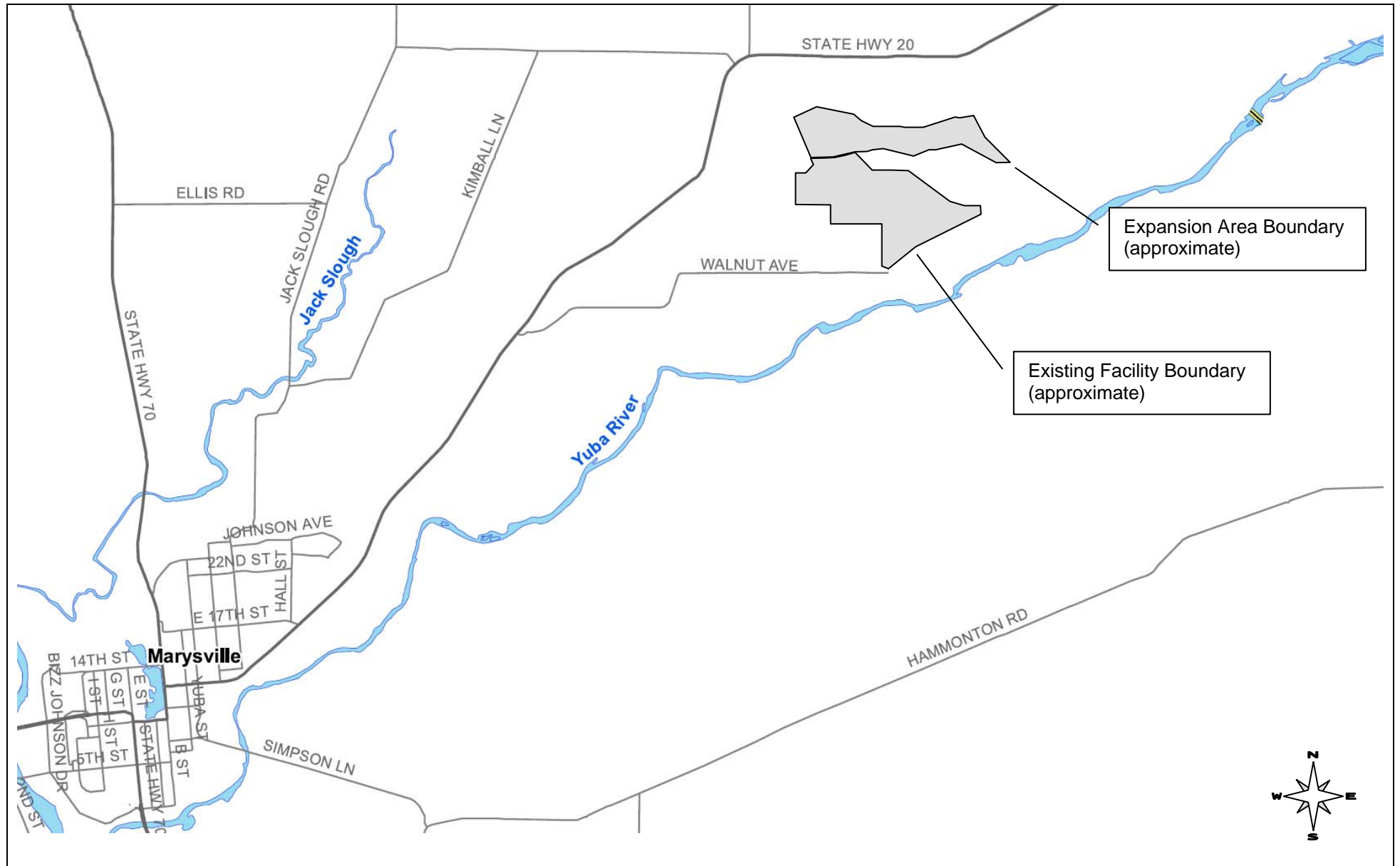
- g. At least **90 days** prior to initiating discharge, the Discharger shall submit an RWD for the manufacture of ready mix concrete or any use or disposal of non-cured concrete or cement related wastewater.
 - h. At least **90 days** prior to initiating discharge to a new settling/recycling pond or excavation pond the Discharger must submit a technical report describing how the discharge will comply with the requirements prior to beginning the discharge.
2. The Discharger shall comply with Monitoring and Reporting Program No. R5-2010-0124, which is a part of this Order, and any revisions thereto as ordered by the Executive Officer.
 3. 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)."
 4. The Discharger shall submit to the Central Valley Water 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.
 5. The Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.
 6. 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 Central Valley Water 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.

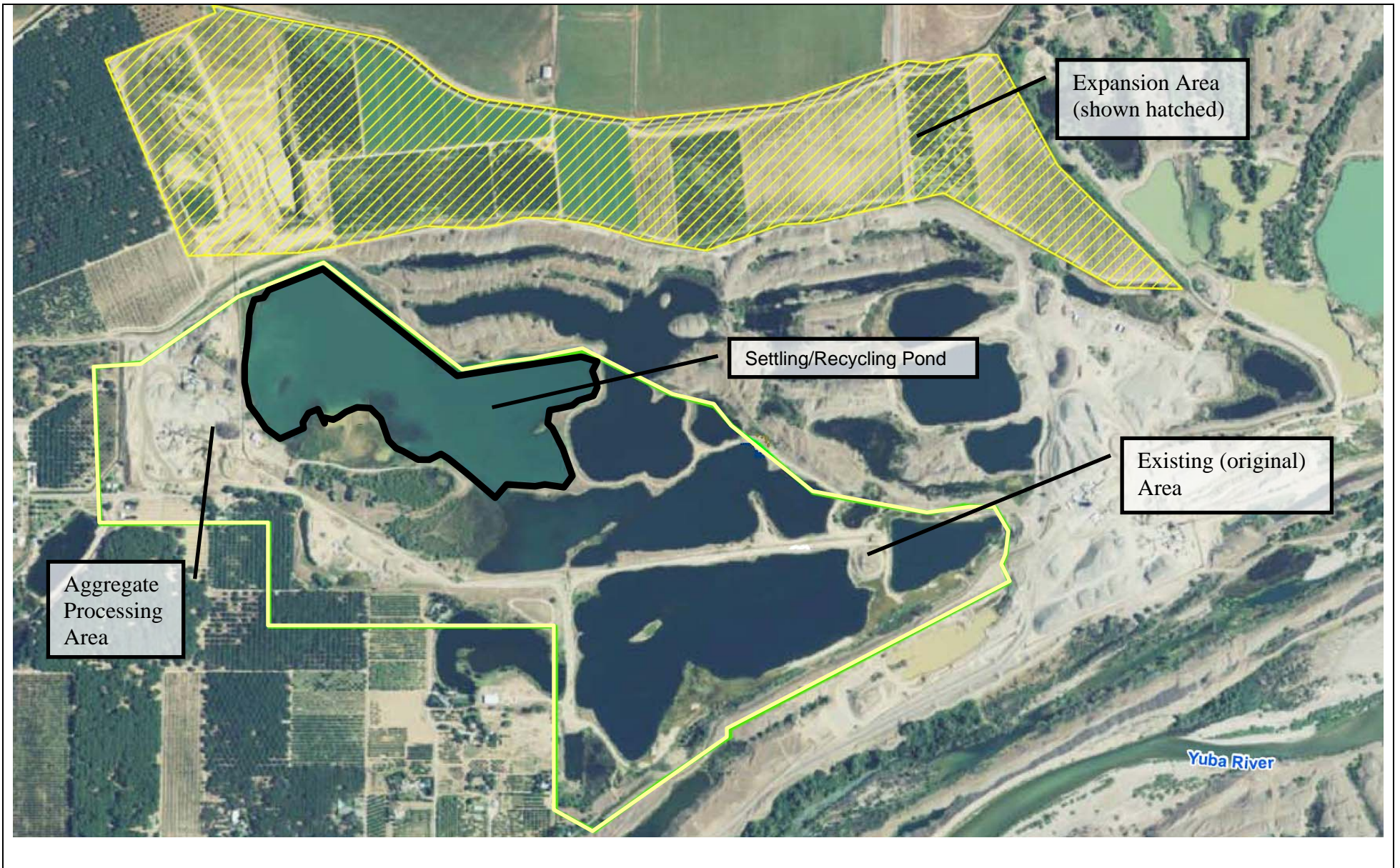
7. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
8. 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.
9. The Central Valley Water Board will review this Order periodically and 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 10 December 2010.

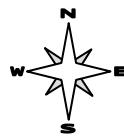
PAMELA C. CREEDON, Executive Officer



<p>Approximate Scale</p> <p>1 in ≈ 1 mile</p>	<p>Drawing Reference:</p> <p>Modified from Figure 1</p> <p>10 June 2010 Burlison Consulting, Inc.</p> <p>Hallwood Facility Mercury Monitoring Letter Report</p>	<p>SITE LOCATION MAP</p> <p>Baldwin Contracting Company and Springer Family Trust</p> <p>2965 Hooper Road, Marysville, Yuba County</p>
---	---	---



Approximate Scale
1 inch = 1,000 feet

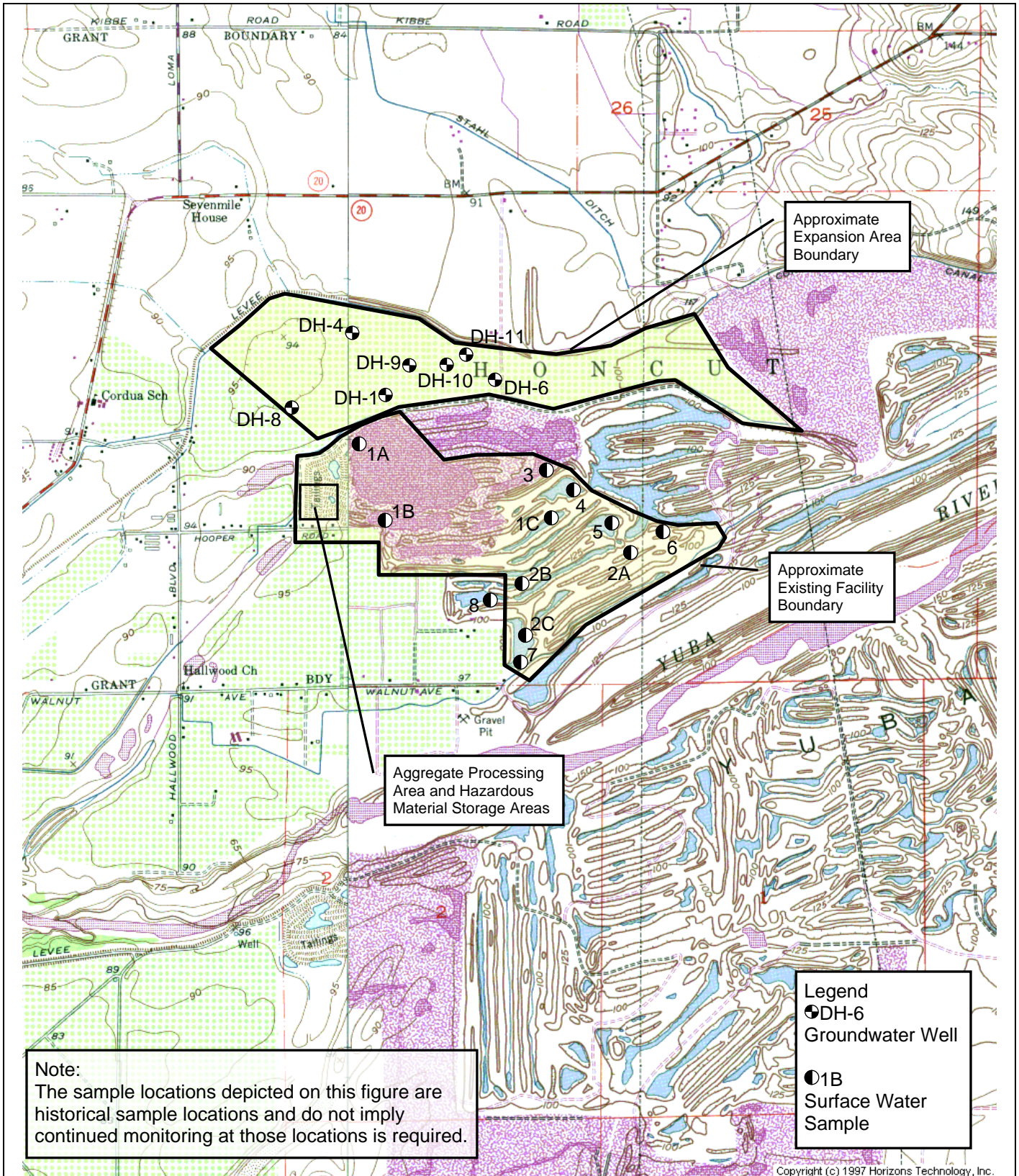


Drawing Reference:

Modified from Figure 2,
Hallwood Surface Water Monitoring Rpt
Burluson Consulting, 6/21/10

SITE PLAN

Baldwin Hallwood Aggregate Facility
Pond Configuration, June 2009



Copyright (c) 1997 Horizons Technology, Inc.

Drawing Reference:
 U.S.G.S.
 Browns Valley
 Topographic Map

SITE FACILITY MAP
 Baldwin Contracting Company and Springer Family Trust
 2965 Hooper Road, Marysville, Yuba County

approx. scale
 1 in. ≈ 2,300 ft.



California Regional Water Quality Control Board Central Valley Region

Katherine Hart, Chair



Arnold
Schwarzenegger
Governor

Linda Adams
Secretary for
Environmental
Protection

11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Phone (916) 464-3291 • FAX (916) 464-4645
<http://www.waterboards.ca.gov/centralvalley>

WDRs ORDER NO. R5-2010-0124 ATTACHMENT D REQUIREMENTS FOR MONITORING WELL INSTALLATION WORKPLANS AND MONITORING WELL INSTALLATION REPORTS

Prior to installation of groundwater monitoring wells, the Discharger shall submit a workplan containing, at a minimum, the information listed in Section 1, below. Wells may be installed after staff approve the workplan. Upon installation of the monitoring wells, the Discharger shall submit a well installation report which includes the information contained in Section 2, below. All workplans and reports must be prepared under the direction of, and signed by, a registered geologist or civil engineer licensed by the State of California.

SECTION 1 - Monitoring Well Installation Workplan and Groundwater Sampling and Analysis Plan

The monitoring well installation workplan shall contain the following minimum information:

A. General Information:

- Purpose of the well installation project
- Brief description of local geologic and hydrogeologic conditions
- Proposed monitoring well locations and rationale for well locations
- Topographic map showing facility location, roads, and surface water bodies
- Large scaled site map showing all existing on-site wells, proposed wells, surface drainage courses, surface water bodies, buildings, waste handling facilities, utilities, and major physical and man-made features

B. Drilling Details:

- On-site supervision of drilling and well installation activities
- Description of drilling equipment and techniques
- Equipment decontamination procedures
- Soil sampling intervals (if appropriate) and logging methods

C. Monitoring Well Design (in narrative and/or graphic form):

- Diagram of proposed well construction details
 - Borehole diameter
 - Casing and screen material, diameter, and centralizer spacing (if needed)
 - Type of well caps (bottom cap either screw on or secured with stainless steel screws)
 - Anticipated depth of well, length of well casing, and length and position of perforated interval
 - Thickness, position and composition of surface seal, sanitary seal, and sand pack
 - Anticipated screen slot size and filter pack

California Environmental Protection Agency

- D. Well Development (not to be performed until at least 48 hours after sanitary seal placement):
Method of development to be used (i.e., surge, bail, pump, etc.)
Parameters to be monitored during development and record keeping technique
Method of determining when development is complete
Disposal of development water
- E. Well Survey (precision of vertical survey data shall be at least 0.01 foot):
Identify the Licensed Land Surveyor or Civil Engineer that will perform the survey
Datum for survey measurements
List well features to be surveyed (i.e. top of casing, horizontal and vertical coordinates, etc.)
- F. Schedule for Completion of Work
- G. Appendix: Groundwater Sampling and Analysis Plan (SAP)
The Groundwater SAP shall be included as an appendix to the workplan, and shall be utilized as a guidance document that is referred to by individuals responsible for conducting groundwater monitoring and sampling activities.

Provide a detailed written description of standard operating procedures for the following:

- Equipment to be used during sampling
- Equipment decontamination procedures
- Water level measurement procedures
- Well purging (include a discussion of procedures to follow if three casing volumes cannot be purged)
- Monitoring and record keeping during water level measurement and well purging (include copies of record keeping logs to be used)
- Purge water disposal
- Analytical methods and required reporting limits
- Sample containers and preservatives
- Sampling
 - o General sampling techniques
 - o Record keeping during sampling (include copies of record keeping logs to be used)
 - o QA/QC samples
- Chain of Custody
- Sample handling and transport

SECTION 2 - Monitoring Well Installation Report

The monitoring well installation report must provide the information listed below. In addition, the report must also clearly identify, describe, and justify any deviations from the approved workplan.

- A. General Information:
- Purpose of the well installation project
 - Brief description of local geologic and hydrogeologic conditions encountered during installation of the wells
 - Number of monitoring wells installed and copies of County Well Construction Permits
 - Topographic map showing facility location, roads, surface water bodies

Scaled site map showing all previously existing wells, newly installed wells, surface water bodies, buildings, waste handling facilities, utilities, and other major physical and man-made features.

B. Drilling Details (in narrative and/or graphic form):

On-site supervision of drilling and well installation activities

Drilling contractor and driller's name

Description of drilling equipment and techniques

Equipment decontamination procedures

Soil sampling intervals and logging methods

Well boring log

- Well boring number and date drilled
- Borehole diameter and total depth
- Total depth of open hole (same as total depth drilled if no caving or back-grouting occurs)
- Depth to first encountered groundwater and stabilized groundwater depth
- Detailed description of soils encountered, using the Unified Soil Classification System

C. Well Construction Details (in narrative and/or graphic form):

Well construction diagram, including:

- Monitoring well number and date constructed
- Casing and screen material, diameter, and centralizer spacing (if needed)
- Length of well casing, and length and position of perforated interval
- Thickness, position and composition of surface seal, sanitary seal, and sand pack
- Type of well caps (bottom cap either screw on or secured with stainless steel screws)

E. Well Development:

Date(s) and method of development

How well development completion was determined

Volume of water purged from well and method of development water disposal

Field notes from well development should be included in report

F. Well Survey (survey the top rim of the well casing with the cap removed):

Identify the coordinate system and datum for survey measurements

Describe the measuring points (i.e. ground surface, top of casing, etc.)

Present the well survey report data in a table

Include the Registered Engineer or Licensed Surveyor's report and field notes in appendix

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2010-0124

FOR
BALDWIN CONTRACTING COMPANY INCORPORATED and SPRINGER FAMILY TRUST
HALLWOOD AGGREGATE FACILITY
YUBA COUNTY

This monitoring and reporting program (MRP) incorporates requirements for monitoring settling/recycling ponds, excavation ponds, and groundwater; the 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.

Prior to implementation of sampling activities, Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff shall approve specific sample station locations. Sample collection stations shall be established such that samples collected are representative of the volume and nature of the discharge or matrix of material(s) sampled. The person collecting the sample shall be identified along with the time, date, and location of each sample on the sample chain of custody form.

Field test instruments (such as those used to measure temperature, pH, EC, and dissolved oxygen) may be used provided that:

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

SETTLING/RECYCLING POND MONITORING

The settling/recycling pond shall be sampled as described below. All samples shall be collected when the Discharger is actively discharging to the pond. Samples collected for mercury sediment analysis shall be collected at a location of maximum pond water turbidity.

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Flow Rate	Million gpd	Weekly	Monthly
Freeboard	0.1 feet	Weekly	Monthly
pH	Std. Units	Monthly	Monthly
Electrical Conductivity	umhos/cm	Monthly	Monthly
Mercury (aqueous) ^{1,2,3}	ng/L	Semi-Annual	Semi-Annual
Mercury (sediment) ⁴	ng/kg	Semi-Annual	Semi-Annual

¹ Aqueous (liquid) samples collected for mercury analysis shall be filtered using a 0.45-micron filter prior to digestion and analysis or equivalent.

² Mercury samples shall be collected using the methods described in *Sampling Ambient Water for Trace Metals* (EPA Method 1669) or equivalent.

- ³ Samples for mercury analysis in wastewater and sediment shall be collected semi-annually (every six months).
- ⁴ Mercury sediment samples shall be collected from the wastewater pond and the sediment separated from the liquid by settling, centrifuge, or other appropriate method.

EXCAVATION AREA POND MONITORING

The Discharger shall collect grab water samples from all excavation area ponds that have been subject to an activity (such as excavation, pumping water, adding sediment, etc.) during the previous calendar month. Excavation area pond monitoring shall include, at a minimum, the following:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Pond Status (list all ponds)	--	Monthly	Monthly
Freeboard	0.1 feet	Weekly	Monthly
pH	Std. Units	Monthly	Monthly
Electrical Conductivity	umhos/cm	Monthly	Monthly
Mercury (aqueous) ^{1,2,3}	ng/L	Semi-Annual	Semi-Annual
Mercury (sediment) ⁴	ng/kg	Semi-Annual	Semi-Annual

- ¹ Aqueous (liquid) samples collected for mercury analysis shall be filtered using a 0.45-micron filter prior to digestion and analysis or equivalent.
- ² Mercury samples shall be collected using the methods described in *Sampling Ambient Water for Trace Metals* (EPA Method 1669) or equivalent.
- ³ Samples for mercury analysis in wastewater and sediment shall be collected semi-annually (every six months).
- ⁴ Mercury sediment samples shall be collected from the wastewater pond and the sediment separated from the liquid by settling, centrifuge, or other appropriate method.

GROUNDWATER MONITORING

Prior to construction of any new groundwater monitoring wells, the Discharger shall submit a Groundwater Monitoring Well Installation Workplan to the Central Valley Water Board for review and approval. Groundwater monitoring shall occur in the first saturated zone with adequate groundwater to allow monitoring.

The groundwater monitoring well network shall be determined by an approved groundwater monitoring workplan and approved revisions thereafter. Any additional monitoring wells installed at the site shall be added to the monitoring well network unless the wells are required under another governmental order not related to the discharge of wastewater. Prior to sampling, the depth to groundwater shall be measured at each well to the nearest 0.01 foot, and each well shall be purged of at least three well volumes or until measurements of pH and electrical conductivity have stabilized. Samples shall be collected using standard EPA methods. Groundwater monitoring shall include, at a minimum, the following:

<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Depth to Groundwater	0.01 foot	Semi-Annually	Semi-Annually
Groundwater Elevation	0.01 foot	Semi-Annually	Semi-Annually
Groundwater Gradient	Feet/Feet	Semi-Annually	Semi-Annually
Groundwater Flow Direction	Map Bearing	Semi-Annually	Semi-Annually
pH	Std. Units	Semi-Annually	Semi-Annually
Electrical Conductivity	umhos/cm	Semi-Annually	Semi-Annually
Mercury ^{1,2,3}	ng/L	Semi-Annually	Semi-Annually

¹ Groundwater samples collected for mercury analysis shall be filtered using a 0.45-micron filter prior to digestion and analysis or equivalent.

² Mercury groundwater samples shall be collected using the methods described in *Sampling Ambient Water for Trace Metals* (EPA Method 1669) or equivalent.

³ Semi-Annual samples shall be collected twice per year.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., settling/recycling pond, groundwater, excavation pond), and reported analytical result for each sample are readily discernible. The data shall be summarized 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 to the Central Valley Water Board.

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 Engineer or Professional Geologist and signed/stamped by the registered professional.

A. Monthly Reports

All sample data collected during the month shall be reported in the monthly monitoring report. Monthly Reports shall be submitted to the Central Valley Water Board **by the first day of the second month following the month of sampling** (e.g., the January monthly report is due by 1 March). At a minimum, the reports shall include the following:

1. The results of all settling/recycling pond and excavation area pond monitoring.
2. A scale map that identifies all excavation ponds with identifiers to allow determination of the activity status of the pond.
3. A comparison of the monitoring data to the discharge specifications, provisions, and groundwater limitations and an explanation of any violation of these requirements.

4. A calibration log of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program.
5. Copies of the laboratory analytical report(s).

B. Semi-Annual Monitoring Report

In addition to the monthly report described above, the Discharger shall establish a semi-annual (twice per year) sampling schedule for groundwater monitoring such that samples are obtained approximately every six months. The data shall be included in semi-annual monitoring reports which shall be submitted to the Central Valley Water Board by the **1st day of the second month after the reporting period** (e.g. the January-June semi-annual report is due by August 1st). As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, groundwater monitoring reports shall be prepared under the supervision of a California licensed engineer or geologist. The Semi-Annual Report shall include the following:

1. Results of groundwater monitoring.
2. A scaled map showing relevant structures and features of the facility.
3. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities. 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.
4. Calculation of groundwater elevations and discussion of seasonal trends.
5. A narrative discussion of the analytical results including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable).
6. A comparison of the monitoring data to groundwater limitations, and an explanation of any violation of those requirements.
7. Summary data tables of historical and current water table elevations and all analytical results.
8. A scaled map showing the locations of groundwater monitoring wells and groundwater elevation contours referenced to mean sea level datum.
9. Copies of laboratory analytical report(s). This submittal may be made on electronic media, appropriately labeled to indicate the associated monitoring report. If this option is selected, include a copy of the complete report (in portable document format (pdf) or equivalent) in the submittal.

C. Annual Monitoring Report

In addition to the monthly and semi-annual reports described above, an Annual Monitoring Report shall be submitted by **1 February of each year**. At a minimum, the Annual Monitoring Report shall include the following:

1. A written summary of the all significant actions taken during the year.
2. A tabular summary of the all data reported in the Monthly Monitoring Reports.
3. Tabular summaries of all monitoring data obtained during the previous year. Data showing trends, such as groundwater elevation or quality, shall be presented in graphs.
4. A statement of the approximate volume of recycled materials, type of recycled material (broken asphalt pavement, concrete, etc.), and the storage location of the recycled materials.
5. A map showing the current location of the settling/recycling pond and active excavation pond locations.
6. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements.
7. 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. The letter shall include a discussion of violations discovered 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 and Reporting Program as of the date of this Order.

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

(Date)

INFORMATION SHEET
ORDER NO. R5-2010-0124
BALDWIN CONTRACTING COMPANY INCORPORATED and SPRINGER FAMILY TRUST
HALLWOOD AGGREGATE FACILITY
YUBA COUNTY

Background

Baldwin Contracting Company, Incorporated and Springer Family Trust (hereafter Discharger) submitted a Report of Waste Discharge for expansion of an existing aggregate facility. The facility is located at 2965 Hooper Road, approximately five miles east-northeast of Marysville.

The facility consists of existing and expansion areas. The existing facility consists of approximately 275 acres; the expansion area consists of approximately 200 acres. Aggregate reserves exist to a depth of 75 feet in both areas. The processing facility includes a scale house, office, equipment shop, and equipment wash area. Processing equipment generally consists of wash screens, crushers, and vibratory screens. The aggregate washing equipment is owned and operated by the Discharger. The Springer Family Trust owns the property in the expansion area.

The facility is located within the Yuba Goldfields. The existing excavation area was previously mined for aggregate and gold, the expansion area is currently in fruit orchards and has not been mined. The Discharger has been excavating and processing aggregate at this site since approximately 1955. Historic mining activities within the Yuba River watershed used mercury to amalgamate gold. Mercury was lost during this process, resulting in residual mercury within the sediments. Historically, gold mining may have occurred at the existing facility; as a result, mercury may be present in the sediment. Reportedly, the expansion area was not previously mined; elevated concentrations of mercury are not likely to exist in sediment.

Wastewater is discharged to settling/recycling ponds or excavation ponds. The Discharger also operates an asphaltic concrete mix plant. The asphalt plant occasionally generates wastewater in the bag house for the purpose of removing aggregate dust. The wastewater generated does not come into contact with petroleum hydrocarbons and is discharged to the settling/recycling pond.

Presently, no concrete manufacturing using Portland cement occurs at the site. The Order requires submittal of a separate RWD for production of concrete, cement, concrete products, or disposal of non-cured cement product wastewater.

Wastewater Generation, Flow Rate, and Quality

The primary water supply for the processing plant is the settling/recycling pond system. Wastewater is generated by washing fine-grained soil particles from the excavated aggregate, and the turbid wastewater is discharged to the settling/recycling ponds. Wastewater is recycled directly through reuse. Wastewater flow rates vary with the season. Maximum flows are generally less than 0.5 million gallons per day (Mgpd) and are highest from March through October. There is often no discharge in January and February.

Wastewater quality has been characterized by regular sampling and analysis. The water quality data is summarized below:

BALDWIN CONTRACTING COMPANY INCORPORATED and SPRINGER FAMILY TRUST
HALLWOOD AGGREGATE FACILITY
YUBA COUNTY

- The electrical conductivity (EC) values in wastewater range from 200 to 220 umhos/cm and are well below the potentially applicable regulatory limit of 700 umhos/cm (Agricultural Water Quality Goal).
- The dissolved mercury concentrations are well below the potentially applicable regulatory limit of 2,000 ng/L (U.S and Cal EPA Primary Maximum Contaminant Level). Although the dissolved mercury data indicates very low mercury concentrations, a sediment sample separated from a turbid water sample collected from the settling/recycling pond on 23 April 1999 contained a total mercury concentration of 0.167 mg/kg. The concentration reported is not considered an accurate characterization of total mercury in sediment, rather an indication of the presence of mercury at the facility.
- The data indicates petroleum hydrocarbons are generally not detectable. Petroleum hydrocarbons were detected only once in two years of sampling; the detection concentration (68 ug/L) is below the taste and odor threshold (100 ug/L).

The Discharger submitted a water balance that demonstrates sufficient capacity in the settling/recycling pond to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration using a return period of 100 years. The Discharger will reconfigure the settling/recycling pond as needed to maintain adequate capacity. The Order allows ponds to be constructed anywhere on the property as long as the Discharger is in compliance with the Order and any requirements imposed by other agencies.

Groundwater Conditions

Groundwater quality at the expansion area has been investigated by installation and sampling of groundwater monitoring wells. In general, depth to groundwater is approximately 15-20 feet below the ground surface. Groundwater flows to the west or southwest towards the Yuba River, but may be influenced locally by groundwater extraction or percolation from settling/recycling ponds. The stage of the Yuba River may also significantly change the groundwater elevation and flow direction. A low permeability aquitard exists at a depth of approximately 75 feet below ground surface. The project will not excavate the aquitard.

The data indicates groundwater quality is good for the analytes tested. At the existing area, EC values (samples were collected from ponds in contact with groundwater) range from 120-220 umhos/cm, well below the Agricultural Water Quality Objective (700 umhos/cm). At the expansion area, Total Dissolved Solids (TDS) values (EC values were not reported) ranged from 120 to 340 mg/L, well below the Agricultural Water Quality Objective (450 mg/L). Dissolved mercury was not detected (detection limits ranged from 0.20 to 0.050 ug/L).

Other Waste Streams

Aggregate processing facilities typically generate associated waste streams. They are described below:

- Recycling of broken concrete, asphalt pavement, road base, etc. is commonly returned to aggregate plants for recycling into salable products consistent with the site activities. The

BALDWIN CONTRACTING COMPANY INCORPORATED and SPRINGER FAMILY TRUST
HALLWOOD AGGREGATE FACILITY
YUBA COUNTY

Discharger may accept cured waste concrete and asphaltic concrete for crushing and recycling.

- The Discharger does not presently perform gold recovery but is considering adding gold recovery in the future. Any gold recovery activities at the site must only use gravimetric methods. (No amalgamation or leaching processes can be used in the gold recovery process.)
- Potentially hazardous materials stored at the site are asphaltic oil, motor oil, hydraulic fluid, transmission fluid, lube grease, gear lube, and similar products. Asphaltic oil, fuel, and propane are stored in aboveground storage tanks. Major equipment repair work is performed off-site.
- Domestic wastewater from the office and related buildings is discharged to one of two septic systems permitted by the Yuba County Environmental Health Department. In addition, portable chemical toilets are available at the facility.

Site Reclamation

The Discharger anticipates aggregate processing will continue for approximately 20 years depending on market conditions. Reclamation will occur concurrently as mining progresses. The current reclamation plan will result in one large lake in the existing area and two lakes in the expansion area. The reclamation plan was submitted to the California State Mining and Geology Board, which approved the Plan on 14 September 2006.

Site Specific Conditions

The Discharger operates at least partially in the area known as the Yuba Goldfields. The surface sediments' ability to store and transmit groundwater has been significantly changed with historic mining activity. The present day aggregate excavation and processing activity and areas of disturbed sediments are separated from the well-established channel of the Yuba River. In considering similar aggregate facilities located at the Goldfields, the U.S. Army Corps of Engineers (Corps) identified the ephemeral ponds and channels created as being away from the Yuba River Channel and above the high water mark. The Corps, on behalf of the United States, subsequently determined that the ponds and channels within the Yuba Goldfields were not jurisdictional waters of the U.S. under the Clean Water Act. The Central Valley Water Board has concurred with the Corps' determination and has made a historical practice of issuing WDRs instead of NPDES permits for mining activities in the Yuba Goldfields.

Stormwater that falls on the existing site is directed into the settling/recycling ponds or nearby excavation pond. At the expansion site stormwater will also be directed into the excavation and/or future settling/recycling ponds.

Basin Plan, Beneficial Uses, and Water Quality Objectives

Surface water drainage in the area is to numerous unnamed drainage ways and the Yuba River. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan) designates beneficial uses, establishes water

BALDWIN CONTRACTING COMPANY INCORPORATED and SPRINGER FAMILY TRUST
HALLWOOD AGGREGATE FACILITY
YUBA COUNTY

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. The Basin Plan establishes narrative water quality objectives for chemical constituents, tastes and odors, and toxicity in groundwater. It also sets forth numeric objectives for pH and total coliform organisms.

Antidegradation Analysis

The treatment and control practices (primarily settling ponds) implemented at the facility are common for sand and aggregate operations, and should prevent the discharge from creating a condition of pollution or nuisance. The data collected to date does not indicate significant groundwater quality degradation has occurred and water quality parameters are well below the water quality objectives.

California Code of Regulations Title 27 Exemption

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 20005, et seq., (hereinafter Title 27). The exemption, pursuant to Section 20090(b) and 20090(h) is based on the following.

- a. For the exemption based on Section 20090(b):
 - i. The Central Valley Water Board is issuing waste discharge requirements,
 - ii. The discharge complies with the Basin Plan,
 - iii. The wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22, CCR as a designated or hazardous waste.
- b. For the exemption based on Section 20090(h):
 - i. The Discharger will recycle the wastewater after treatment in the settling/recycling pond system. Settling of soil particles allows reuse of the clarified wastewater. The solid fraction that settles to the pond bottom is inert waste and therefore is consistent with applicable provisions of the division.
 - ii. The recycling will consist of reusing the water in the aggregate processing operations as well as groundwater recharge for later use both on- and off-site.

The Order establishes terms and conditions of discharge to ensure that the discharge does not unreasonably affect present and anticipated uses of groundwater and includes sediment and groundwater criteria that, if exceeded, trigger additional studies of the source and control of mercury. The Order requires regular groundwater monitoring to determine if groundwater is degraded by the discharge. The Discharger has implemented typical industry best practicable treatment and control measures to minimize degradation.

California Environmental Quality Act

An Environmental Impact Report (EIR) addressed the existing as well as expansion areas in the April 2006, *Baldwin Hallwood Mine Expansion Project, Final EIR*. The Yuba County Planning Commission certified the final EIR on 19 April 2006. On 6 June 2006 the Yuba

BALDWIN CONTRACTING COMPANY INCORPORATED and SPRINGER FAMILY TRUST
HALLWOOD AGGREGATE FACILITY
YUBA COUNTY

County Board of Supervisors adopted Resolution No. 2006-76 approving and certifying the project. Appendix A of the Final EIR contained the Revised Reclamation Plan submitted to the California State Mining and Geology Board (SMGB). The SMGB approved the Revised Reclamation Plan and the Final EIR on 14 September 2006. The following mitigation measures related to water quality were identified in the EIR:

- Impact No. 4.5.1, states temporary and permanent excavation slopes could be subject to failure due to liquefaction. The mitigation measure requires repair of damage caused by exposed, unengineered, or saturated mine slopes.

Discharge Specification B.4 requires newly constructed or rehabilitated berms to be designed and constructed under the supervision of a California Registered Civil Engineer.

- Impact No. 4.7.2, states excavating operations could substantially degrade groundwater quality. The mitigation measure requires use of best management practices to prevent hazardous materials from entering the lakes and ponds. The Spill Prevention Control and Countermeasures Plan (SPCCP) shall be used in case a spill occurs.

The potential for groundwater degradation is discussed in Findings No. 20 through 24. The Antidegradation Policy is discussed in Findings 42 through 50. BPTC is discussed in Findings No. 18, 26, 27, 39, 46, and 51. Discharge Specification B.15 states, "Neither the treatment nor the discharge shall cause a nuisance or condition of pollution as defined by the California Water Code, Section 13050." An updated SPCCP is required in the Operations and Maintenance Plan requirement of WDR Provision E.1.c.

Effluent Limitations

Despite the fact that the Discharger recycles wastewater from the settling/recycling pond, the wastewater quality data does not indicate salinity increase is a significant issue at the site. Pond water Samples 1A and 1B were taken from the settling/recycling pond and the electrical conductivity values from 2008 and 2009 were reviewed. The data is presented in Finding No. 17 of the WDRs. The maximum EC value reported over that time period was 220 umhos/cm, and the highest average value was 204 umhos/cm. The values are well below the potentially applicable water quality objective of 700 umhos/cm.

Wastewater concentrations of mercury in pond water Samples 1A and 1B were also low. The highest concentration of mercury reported was 0.73 ng/L. The value is well below the inorganic mercury maximum contaminant level established by the U.S. EPA (2,000 ng/L). Because the samples were filtered to remove suspended solids, mercury that may be adsorbed to soil particles was not reported in the results. To investigate the quality of sediment in the wastewater, the Order includes a requirement to sample wastewater, separate the sediment portion, and analyze the sediment separately.

Other Requirements

The Provisions require that the Discharger submit the following technical reports:

- Properly permit the site activity under the stormwater permitting program. The Discharger shall obtain coverage under the industrial stormwater permit or submit a notice of non-applicability.
- A *Groundwater Monitoring Well Installation Workplan* for groundwater quality evaluation.
- An *Operations and Maintenance Plan*, the document shall include a *Spill Prevention Control and Countermeasures Plan* to comply with a CEQA mitigation measure.
- A *Groundwater Monitoring Well Installation Report* describing installation of the groundwater monitoring wells.
- A Groundwater Quality Investigation Report that characterizes groundwater quality upgradient and downgradient of the facility.
- If groundwater and/or sediment quality criteria are exceeded, a workplan to further investigate mercury at the facility. A technical report describing the investigation results, and if needed, an mercury control alternatives report with an implementation schedule.
- Prior to initiating discharge of cement wastewater, an RWD for the activity is required.
- Prior to initiating discharge to a new settling/recycling pond or excavation pond, a technical report describing the discharge is required.

TRO: 12/15/10