

INFORMATION SHEET
ORDER NO. R5-2010-_____
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:

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- 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

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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

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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

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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: 9/21/10