

## INFORMATION SHEET

ORDER NO. R5-2011-XXXX  
TRIANGLE ROCK PRODUCTS, INC.  
FLORIN ROAD AGGREGATE PLANT  
SACRAMENTO COUNTY

### **Background**

Triangle Rock, Inc. (Discharger) submitted a Report of Waste Discharge (RWD) on 23 August 2010. The Discharger is expanding the mining operations at its Florin Road Aggregate Plant (Facility) located at 11501 Florin Road, Sacramento County to include an additional 121 acres to the existing 413-acre mining site. The Discharger owns and operates the processing plant. Waste Discharge Requirements (WDRs) Order No. R5-2004-0135 was issued for excavation of 249 acres of the 413-acre mining site. This revision to the WDRs is necessary to include a description of the 121-acre expansion area (Expansion area).

Approximately 98 acres of the Expansion Area will be for mining purposes and the remaining 23 acres, including Laguna Creek, will serve as a wildlife habitat corridor. The Expansion Area is located across Florin Road on property identified as APN 067-0120-074. The Discharger will excavate to a depth of approximately 70 – 75 feet below ground surface. No aggregate stockpiling, processing or waste discharge will occur on the Expansion Area. Temporary stockpiling and overburden stockpiles will occur on the Expansion Area for reclamation purposes. The mined aggregate will be processed at the existing processing plant. The processing, discharge system and discharge volumes will remain the same.

The total mining operation will comprise of 534 acres and includes 339 acres to be mined, the existing processing plant, original mining site, office, fuel/oil storage area and the Expansion Area. All of the property is owned by the Discharger.

No concrete manufacturing using Portland cement occurs at the site. The site was not historically mined for gold. Any gold recovered by the Discharger is from the aggregate by gravity separation only.

### **Wastewater Generation, Flow Rate, and Quality**

The source of all wash water is the on-site wastewater settling ponds, with makeup water (water lost to evaporation or retained in the gravel) provided by the supply wells. Continued excavation will increase storage capacity as the sand and gravel is removed from the site. The Order allows ponds to be constructed within the confines of the excavation areas of the original mining site and outside of the 100-year floodplain in compliance with the Order and any requirements imposed by other agencies.

The wastewater is regularly monitored as required by the existing WDRs. No chemicals are added to the aggregate washing process. Polymers are added to the washing wastewater in the clarifier to enhance solids settling. On average, the wastewater quality is similar to that of the groundwater obtained from the supply wells. This condition is discussed further below.

### **Groundwater Conditions**

Historical data from the California Department of Water Resources Groundwater Level Data for Well No. 03N07E3IJ001M, located to the east between the South Folsom Canal and Sunrise

Boulevard, was included in the RWD. The data indicates that the water table elevation has been decreasing since the 1950s. The depth to groundwater (distance from the ground surface to the water level in the well) has increased from about 50 feet to the current depth of about 108 feet as measured in April 2010.

Groundwater quality at the Facility has been investigated by sampling supply well, Well 1. A summary of the groundwater monitoring in comparison with the wastewater (sediment slurry from the clarifier) monitoring from 2004 through 2010 data is shown below:

Constituents	Wastewater		Groundwater		Units
	Average	Range	Average	Range	
Chloride	17.2	0.5 - 49	7.6	7.1 – 8.8	mg/L
Electrical Conductivity	214	140 - 380	217	180 - 320	µs/cm
pH	7.1	6.4 – 7.8	7.0	6.5 – 7.5	pH units
Total Dissolved	195	110 - 350	181	160 - 210	mg/L

The data indicates on average, that the wastewater has not contributed significant levels of waste constituents to the groundwater. However, the data indicates that there is a potential for groundwater to be impacted by chloride concentrations and other constituents of total dissolved solids.

Groundwater monitoring at the Expansion Area is not necessary, since all excavated aggregate will be processed at the existing processing plant. The Order prohibits the operation of and/or discharge of waste from aggregate processing in the Expansion Area. Temporary soil and overburden stockpiles will be maintained at the Expansion Area for site reclamation purposes.

### **Surface Water**

Laguna Creek traverses the Facility. The natural drainage features direct stormwater of the unmined areas to the creek. Therefore continued monitoring of the creek is included in the Order.

### **Other Waste Streams**

The following waste streams associated with aggregate processing facilities are described below:

Any gold recovery by the Discharger is performed by gravity separation of the aggregate. The Order prohibits the use of chemical gold recovery methods including amalgamation, cyanide leaching, or any other chemical method.

Potentially hazardous materials stored at the site are petroleum fuel, motor oil, hydraulic fluid, and similar products. A 10,000 gallon above ground storage tank provides on-site fuel storage. The tank is double-walled with secondary containment. Waste oil is stored in drums within bermed secondary containment area. Motor oil and hydraulic fluids are stored in double-walled tanks.

Domestic wastewater from the office is discharged to septic systems permitted by the Sacramento County Environmental Management Environmental.

### **Site Reclamation**

The Discharger anticipates aggregate processing will continue to 2033 depending on market conditions and available mining resources. Reclamation will occur concurrently as mining progresses. The current reclamation plan will result in rolling grazing land. A Reclamation Plan Amendment was approved by the County of Sacramento on 25 February 2009.

### **Site Specific Conditions**

Soils beneath the original mining site are deposits of the Laguna Formation. The upper soil (overburden) is a discrete clay layer approximately 25 feet thick underlain by approximately 40 feet of sandy gravels and cobbles which the Discharger mines. Below the gravel layer is a discrete clay layer up to 15 feet thick, which will not be disturbed by mining operations. Similar soil conditions are anticipated at the Expansion Area. The Facility is bounded on the east by the Folsom South Canal, a concrete lined channel. Both Laguna Creek and Frye Creek traverse the original mining site. Laguna Creek traverses the Expansion Area.

Natural drainage features direct storm water from the unmined portion of Phases V through VIII to Laguna Creek. Mining operations will ultimately eliminate drainage from the mined areas because they will be reclaimed at elevations below the surrounding grade. Drainage from properties north of Jackson Highway currently flows across the site.

The Army Corps of Engineers constructed 100-year floodplain protection along the eastern bank of Laguna Creek when the creek was realigned. This berm provides floodplain protection for Phase I and II. With the exception of Phase X, the remainder of the site is outside of the 100-year floodplain.

Surrounding land uses is primarily agricultural. Stormwater that falls on the site is directed into a pond.

### **Basin Plan and Beneficial Uses**

*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 Board. Pursuant to Section 13263(a) of the California Water Code, waste discharge requirements must implement the Basin Plan.

Surface water drainage in the vicinity of the facility is to Laguna Creek, which is a tributary to the Cosumnes River. The beneficial uses of the Cosumnes River are municipal and domestic supply; agricultural supply; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.

The beneficial uses of the underlying groundwater are municipal and domestic, industrial service supply, industrial process supply, and agricultural supply.

### **Antidegradation Analysis**

State Water Resources Control Board (State Board) Resolution No. 68-16 allows the degradation of groundwater quality if the Central Valley Water Board determines that:

- The degradation is consistent with the maximum benefit to the people of the State.
- The degradation will not unreasonably affect present and anticipated future beneficial uses.
- The degradation does not cause exceedance of one or more water quality objectives.
- The discharger employs best practicable treatment and control to minimize degradation.

The treatment and control practices described herein provide 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. The following treatment and control practices are implemented at the site:

- Settling ponds are routinely used in the aggregate mining industry to settle suspended solids.
- The Discharger directly recycles clarified wastewater and skims excess water from the settling ponds, therefore reducing the potential from evapoconcentration and potential migration through the underlying clay at those areas.
- The Order requires monitoring of the sediment slurry and water supply.

The materials used in the Discharger's operation are natural earth materials subjected to a classification and separation process using recycled wastewater (wash water) and site groundwater. Polymers are added to enhance solids settling. Based on the information submitted in the RWD and supplemental information, the wastewater quality is similar to that of the groundwater quality sampled from the supply well, therefore indicating that the added polymers do not significantly impact groundwater quality. It is also noted that the Basin Plan encourages reclamation.

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 National Pollutant Discharge Requirements (NPDES) permits. The Discharger has filed a Notice of Intent to obtain coverage for the Facility under the State Board's Water Quality Order No. 97-03-DWQ NPDES, General Permit No. CAS 000001, WDRs for Discharges of Storm Water Associated with Industrial Activities (excluding construction activities). The Discharger shall submit a Notice of Intent for a change of information and coverage of the Expansion Area.

### **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.

- For the exemption based on Section 20090(b):
  - The Central Valley Water Board is issuing waste discharge requirements,
  - The discharge complies with the Basin Plan, and
  - The wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22, CCR as a designated or hazardous waste.
  
- For the exemption based on Section 20090(h):
  - The Discharger will recycle the wastewater after treating the wastewater in the 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.
  - 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. Settled soil particles will be used as fill for reclamation purposes.

The Order establishes terms and conditions of discharge to ensure that the discharge does not unreasonably affect present and anticipated uses of groundwater. The Order requires regular groundwater monitoring of the supply well and a *Groundwater Quality Investigation Report* to determine if wastewater has contributed significant levels of waste constituents to groundwater quality. The Discharger has implemented typical industry best practicable treatment and control measures to minimize degradation.

### **California Environmental Quality Act**

Mitigation measures that have not been addressed as contained in the Supplemental Final Environmental Impact Report (FEIR) approved on 5 February 2003 by Sacramento County are the following

- Completion of flood control berm along the western bank of Laguna Creek prior to commencing Phase X.
- Diverting storm water drainage from lands north of Jackson Highway to discharge directly to Laguna Creek, rather than the mining site:

A Notice of Determination was filed by Sacramento County on 27 February 2009 to add the additional 121-acre Expansion Area. Mitigation Measures of the Sacramento County Use Permit 2007-CZB-UPB-REB-00397 were made a condition of the approval to protect water quality.

### **Effluent Limitations**

The Discharger has submitted data to indicate that the aggregate processing operation and the use of polymers to enhance solids settling have not contributed significant levels of waste constituents to the groundwater. The Discharger recycles the wastewater, therefore evapoconcentration and dissolution of salt is likely to occur. Some dilution of the pond water would be expected seasonally as a result of precipitation. Therefore, no effluent limitations have been set.

### **Other Requirements**

The following reports were included in the RWD: Waste Discharge Operation and Maintenance Plan, Stormwater Pollution Prevention Plan, and Spill Prevention, Control, and Countermeasure Plan. The Provisions require that the Discharger comply with the following requirements and submit the following technical reports:

- Properly permit the Expansion Area under the stormwater permitting program, Order No. 97-03-DWQ, Discharges of Storm Water Associated with Industrial Activities.
- A *Salinity Reduction Feasibility Study* that investigates further salinity reduction best practicable treatment and controls (BPTCs) to reduce the levels of salinity constituents within the wastewater and an analysis, to the extent feasible, of the costs and benefits of implementing the BPTCs.
- A *Groundwater Quality Investigation Report* for groundwater quality evaluation and verification of the Discharger's Antidegradation Analysis assertions that wastewater has not contributed significant levels of waste constituents to groundwater quality.